

Power Defense™ Molded Case Circuit Breakers

# Power Defense™

## Molded Case Circuit Breaker

630~1600A



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# Power Defense™ Molded Case Circuit Breakers

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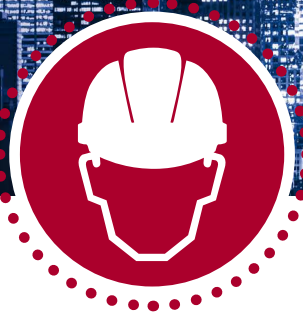
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Eaton's globally accepted Power Defense™ molded case circuit breakers (MCCBs) can safely and reliably distribute, switch, and control electrical energy through innovative protecting concept, and are widely used in industry, buildings and machinery manufacturing, bringing you more optimized solutions.

## Power Defense molded case circuit breakers, a globally rated platform from Eaton.





## SAFELY PROTECTED

Arcflash Reduction Maintenance System helps protect operators by reducing dangerous and potential arc flash incident energy levels, and enabling operator to activate this system from a safe distance without altering critical protection settings of the circuit breaker.

Zone Selective Interlock (ZSI) technology protects equipment by intelligently selecting faster trip times in coordinated systems, an advantage which can keep operators safe and productive.

Power Xpert® Release (PXR) electronic trip units are equipped with the latest microprocessor technology including advanced algorithms that notify you when your power distribution system needs to be maintained or replaced, **keeping your facility and equipment online, safe, and productive.**



## EASILY COMMUNICATED

Power Defense MCCBs equipped with Power Xpert Release electronic trip units feature built-in communications allowing you to use fewer components and a simplified design while keeping your system connected, and customers informed. With the optional second independent communications channel through an external module, you have unprecedented connectivity options.

The PXR trip unit family has different models that will cover all of your needs, including fully programmable models that enable ultimate customizability and flexibility, as well as basic models that offer all of the benefits of electronic trip units, with simple set-up and coordination.

PXR technology provides the embedded ability to accurately measure energy consumption with no additional meters or equipment, delivering critical data about your power distribution system and energy use in your facility. PXR trip units record time-stamp captured events, and store critical data and waveforms associated with each event for fault analysis and timeline reconstruction.



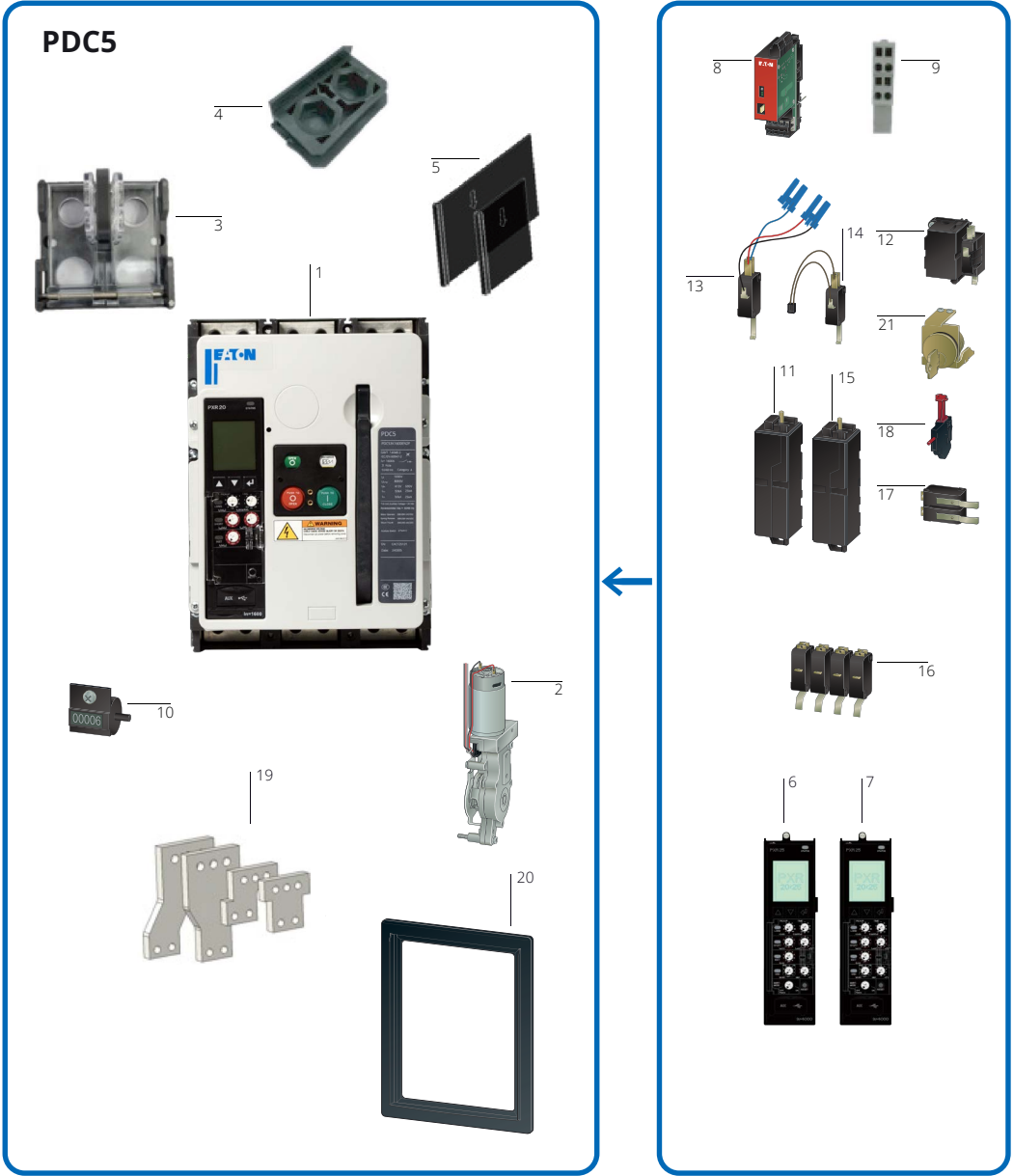
## GLOBALLY CERTIFIED

Power Defense MCCBs are globally certified to meet your local requirements while empowering you to design and build systems that can be used anywhere in the world. Wherever Eaton does business, Power Defense MCCBs are there, backed by Eaton's global support and fulfillment network, with the right resources in place to minimize your project lead-time and maximize your uptime.

Integrating new products can be a challenge, which is why the Power Defense MCCBs are available with online instructions, support, and product selector: **these tools help you engineer work more efficiently and deliver your projects quickly and safely.**

Power Defense Molded Case Circuit Breaker  
System Overview

PDC5 System Overview



## Power Defense Molded Case Circuit Breaker System Overview

|    |                                                                                                                                                                 |    |                                                                                                                                      |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------|
| 1  | <b>PDC5 circuit breaker basic device</b>                                                                                                                        | 12 | <b>Closing release</b><br>Closes the circuit breaker via the secondary control circuit                                               |
| 2  | <b>Motor operator</b><br>Automatic charging of the spring force storage for remote or local opening/closing operations                                          | 13 | <b>Latch check switch (LCS)</b><br>For external signals                                                                              |
| 3  | <b>Button cover</b><br>Plastic or metal, with optional padlock                                                                                                  | 14 | <b>Latch check switch (LCS)</b><br>Wired to closing release                                                                          |
| 4  | <b>Wiring terminal cover</b>                                                                                                                                    | 15 | <b>Under-voltage release</b><br>Opens the circuit breaker by a voltage drop in the secondary control circuit                         |
| 5  | <b>Phase barrier</b>                                                                                                                                            | 16 | <b>Standard auxiliary contact</b><br>Circuit breaker's ON/OFF signal contact.<br>2 ONs and 2 OFFs standard, 4 ONs and 4 OFFs maximum |
| 6  | <b>Trip unit</b><br>PXR20 trip unit, current metering<br>C - Onboard Modbus communication<br>G - Ground protection<br>M - Arcflash Reduction Maintenance System | 17 | <b>Trip signal auxiliary contact (OTS)</b><br>Trip signal contact initiated by the trip unit, 2 ONs and 2 OFFs                       |
| 7  | <b>Electronic trip unit</b><br>PXR25 trip unit, power metering                                                                                                  | 18 | <b>Red-pop trip indicator</b><br>Red-pop trip indicator signals a trip by the trip unit                                              |
| 8  | <b>Communication modules</b><br>External communication modules, rail mounting                                                                                   | 19 | <b>Extended board</b>                                                                                                                |
| 9  | <b>Secondary circuit wiring terminal</b>                                                                                                                        | 20 | <b>Door escutcheon</b><br>Mounted on the switchgear door.<br>IP41 and IP55 door escutcheons available for circuit breaker            |
| 10 | <b>Operations counter</b><br>Count the number of circuit breaker's opening and closing operations                                                               | 21 | <b>OFF position safety lock</b><br>Key lock<br>Locks the circuit breaker in OFF position                                             |
| 11 | <b>Shunt release</b><br>Opens the circuit breaker via the secondary control circuit                                                                             |    |                                                                                                                                      |

## Interruption Ratings

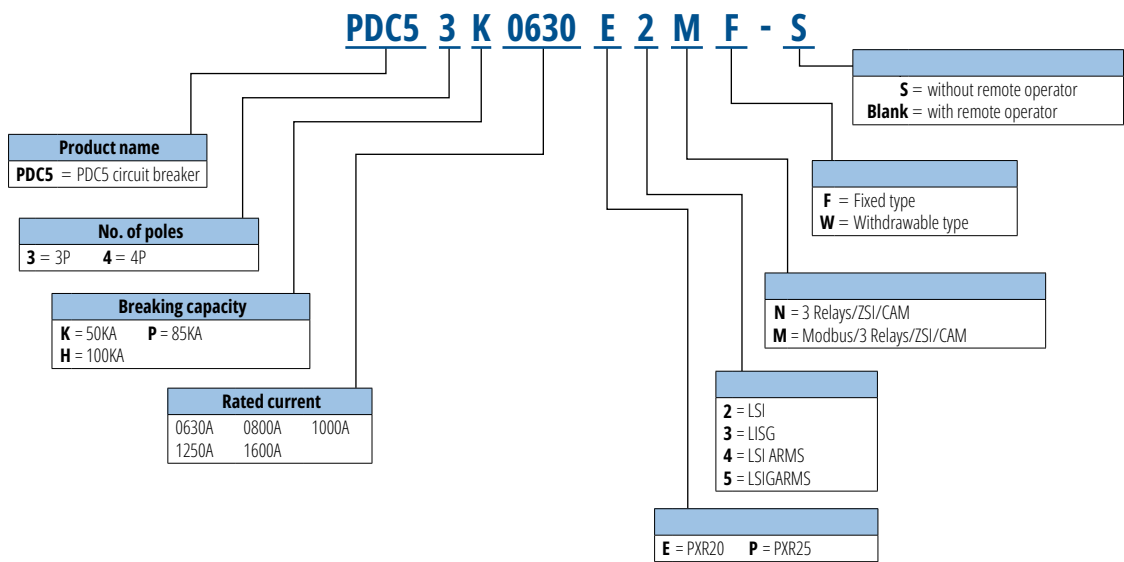
The Power Defense molded case circuit breaker line is marketed and sold worldwide, with multiple interruption ratings across a broad range of voltage levels. These interruption ratings are optimized for power distribution system and meet the broadest range of application needs. Refer to below table for the specific interruption levels.

|         |         |          |
|---------|---------|----------|
| K: 50kA | P: 85kA | H: 100kA |
|---------|---------|----------|

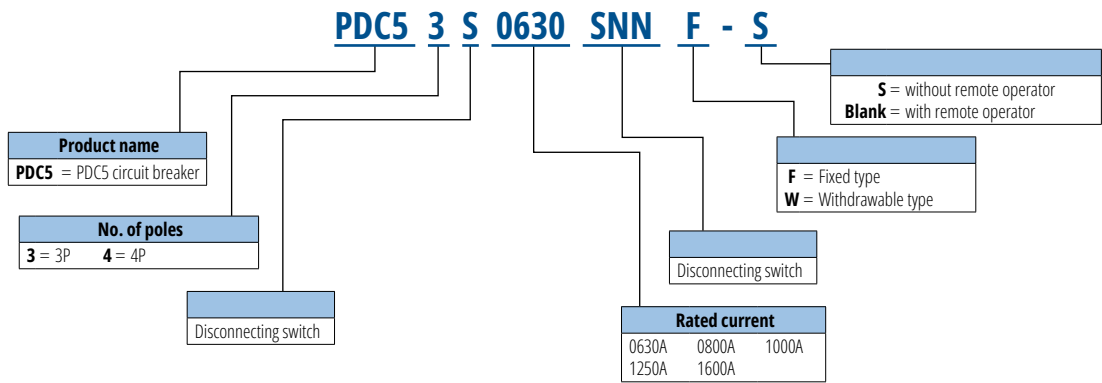
# Power Defense Molded Case Circuit Breaker

## Product Selection

### PDC5 Electronic Type (Equipped as Standard with Motor Operator, Shunt Release and Closing Release)



### PDC5 Disconnecting Switch (Equipped as Standard with Motor Operator, Shunt Release and Closing Release)



### Circuit Breaker

| PDC5                                         |                           |          |                     |
|----------------------------------------------|---------------------------|----------|---------------------|
| Max. rated current $I_n$ , A                 | 630 - 1600                |          |                     |
| No. of poles                                 | 3 & 4                     |          |                     |
| Breaking capacity (kA rms) Vac 50-60 Hz      |                           |          |                     |
| EC 60947-2                                   | 380-415 Vac               | $I_{cu}$ | 50      85      100 |
|                                              |                           | $I_{cs}$ | 50      85      100 |
|                                              | 660-690 Vac               | $I_{cu}$ | 25                  |
|                                              |                           | $I_{cs}$ | 25                  |
| $I_{cm}$ rated short-circuit making capacity | 220-240 Vac               | $I_{cm}$ |                     |
|                                              | 380-415 Vac               | $I_{cm}$ |                     |
|                                              | 440 Vac                   | $I_{cm}$ |                     |
|                                              | 660-690Vac                | $I_{cm}$ | 40                  |
|                                              | 125-250 Vdc               | $I_{cm}$ |                     |
| Rated short-time withstand capacity          | kA                        | $I_{cw}$ | 20                  |
| Rated current range                          | A                         |          | 630 - 1600          |
| Utilization category                         | A                         |          |                     |
| Certificates                                 | CE/CCC                    |          |                     |
| Max. rated current                           | 630 - 1600                |          |                     |
| Rated insulation voltage to IEC 60947-2      |                           |          |                     |
| Main circuit V                               | 1000                      |          |                     |
| Auxiliary circuit V                          | 600                       |          |                     |
| Rated impulse withstand voltage $U_{imp}$    |                           |          |                     |
| Main circuit (kV)                            | 8                         |          |                     |
| Auxiliary circuit (kV)                       | 4                         |          |                     |
| Rated operating voltage $U_e$ IEC/CCC, Vac   | 690                       |          |                     |
| Storage temperature                          | -25°C to 85°C             |          |                     |
| Operating temperature                        | -25°C to 70°C             |          |                     |
| Product complies with IEC 60068 Shock Test   |                           |          |                     |
| Mechanical life                              | 10000 without maintenance |          |                     |
|                                              | 20000 with maintenance    |          |                     |
| Electrical life to IEC/EN60947-4 Part B      | AC-1 @415V                |          | 3000                |
| Product dimensions (inches) H x W x D        |                           |          |                     |
| 3P                                           | 291*210*189               |          |                     |
| 4P                                           | 291*280*189               |          |                     |
| Mounting method                              | Fixed type                |          |                     |
| IP degree                                    | IP20                      |          |                     |
| Pollution level                              | III                       |          |                     |
| Over-voltage category                        | III                       |          |                     |

# Power Defense Molded Case Circuit Breaker

## Secondary Wiring Diagrams

### Control Circuit Terminal Assignment

|     |     |      |       |       |    |      |      |    |      |        |      |      |      |      |      |       |       |      |      |     |     |    |    |    |    |    |    |
|-----|-----|------|-------|-------|----|------|------|----|------|--------|------|------|------|------|------|-------|-------|------|------|-----|-----|----|----|----|----|----|----|
| 1   | 3   | 5    | 7     | 9     | 11 | 13   | 15   | 17 | 19   | 21     | 23   | 25   | 27   | 29   | 31   | 33    | 35    | 37   | 39   | 41  | 43  | 45 | 47 | 49 | 51 | 53 | 55 |
| ST1 | UV1 | OT1C | OT1B  | ACC2  | N1 | ALMC | ALM2 | G1 | +24V | ZIN    | ZCOM | CMM1 | CMM3 | PTVA | PTVC | MODBA | MODBG | ACC5 | ACC7 | E01 | SR1 | C1 | B1 | C2 | C3 | B3 | C4 |
| 2   | 4   | 6    | 8     | 10    | 12 | 14   | 16   | 18 | 20   | 22     | 24   | 26   | 28   | 30   | 32   | 34    | 36    | 38   | 40   | 42  | 44  | 46 | 48 | 50 | 52 | 54 | 56 |
| ST2 | UV2 | OT1M | ACCY1 | ACCY3 | N2 | ALM1 | ALM3 | G2 | AGND | ARMSIN | ZOUT | CMM2 | CMM4 | PTVB | PTVN | MODBB | ACC4  | ACC6 | SC   | E02 | SR2 | A1 | B2 | A2 | A3 | B4 | A4 |

1, 2 – Shunt release

3, 4 – Under-voltage release/2nd shunt release

5~7 – Trip signal auxiliary contact (OTS) (5-COM, 6-N.O., 7-N.C.)

8~10 – Trip signal auxiliary contact 2 (OTS) (8-COM, 9-N.O., 10-N.C.)

11, 12 – External neutral sensor

13~16 – Alarm

17, 18 – Ground circuit sensor

19, 20 – 24V DC control voltage

21, 23, 24 – Zone selectivity ZSI

20, 22 – Arcflash Reduction Maintenance System

25- 28 – External CAM communication module

29~32 – Voltage metering module

33~35 – Onboard Modbus

36 – ACCY4 (Reserved)

37~39 – Latch check switch (37-COM, 35-N.O., 39-N.C.)

40 – Charging spring status indication contact

41, 42 – Motor operator

43, 44 – Closing release

45~56 – Auxiliary contact (C-COM, A-N.O., B-N.C.)



# I Introduction to Trip Units I

# The new generation electronic trip unit platform: Power Xpert Release (PXR)

- LCD display equipped as standard, and with support for Chinese language
- Current metering on PXR20 and power metering on PXR25
- Extended range for pickup values and delay timing settings
- Ground protection (G) and instantaneous protection (I) can be turned off via a rotary button.
- Integrated Modbus communication capability within trip unit (standard on PXR25 and optional on PXR20)
- MicroUSB interface for computer connection
- PXR Configuration and Test Tool to remotely configure and test the trip unit via a USB connection
  - Trip test
  - Waveform capture
  - Diagnostics
  - Long delay curve setting
  - ZSI/Thermal Memory on/off



PXR electronic trip unit

## Comprehensive Communication Solutions

With the respective communication module—including onboard Modbus, external PCAM (Profibus-DP), MCAM (Modbus), or ECAM (Ethernet) modules - every circuit breaker of the IZM series (or Power Defense series?) is equipped for modern communication. The databus not only allows to transmit information, but also to receive commands/settings and configure the circuit breaker's settings.

Onboard Modbus communication is standard on the PXR25 trip unit and optional on the PXR20 trip unit upon order.

Additional PCAM, MCAM or ECAM module can be installed externally for both PXR20 and PXR25 to expand the communication capability. (No more than one external communication module can be installed). Remote opening and closing control can also be achieved through external CAM modules.



## Arcflash Reduction Maintenance System™

The Arcflash Reduction Maintenance System (ARMS) technology provides maintenance personnel operate in a safer environment. When a short circuit fault or dangerous arc flash occurs, a circuit breaker with the ARMS function enabled can interrupt the fault current more quickly, significantly reducing the destructive energy of the incident.

The Arcflash Reduction Maintenance System ARMS technology can interrupt the current faster than instantaneous protection, thanks to its unique low-latency analog circuit. In contrast, ordinary protection functions typically require a microprocessor to process information and send commands, which can take tens of milliseconds.

The Arcflash Reduction Maintenance System function can be activated either through the rotary button on the trip unit or remotely through communication.

The Arcflash Reduction Maintenance System is optional on both PXR20 and PXR25 trip units.



## Advanced Software Features - PXP

Eaton's Power Xpert Protection Manager (PXP) is a Microsoft®

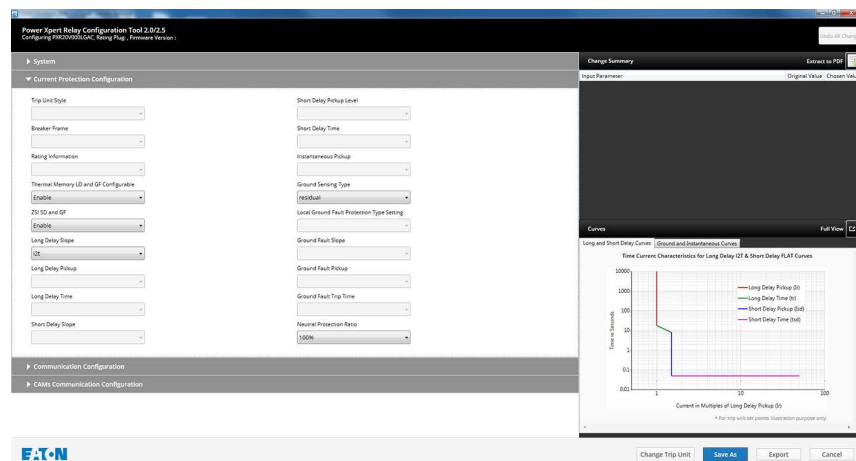
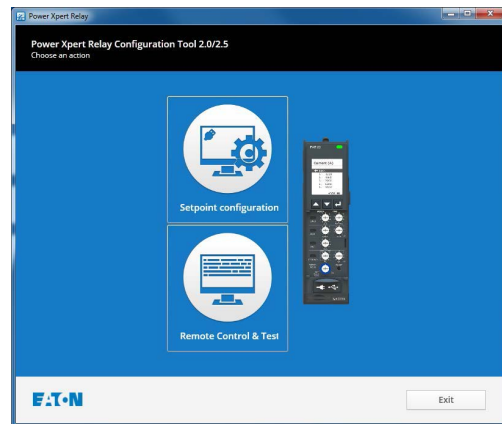
Windows-based software that configures, controls, monitors and tests Eaton's PXR trip units. The user can create, modify, and save configurations for a PXR trip unit. The software further allows user to reset trip units, adjust trip unit's date and time, capture current or voltage waveforms, and perform trip or no-trip tests.

The software is available as a download from the following link:

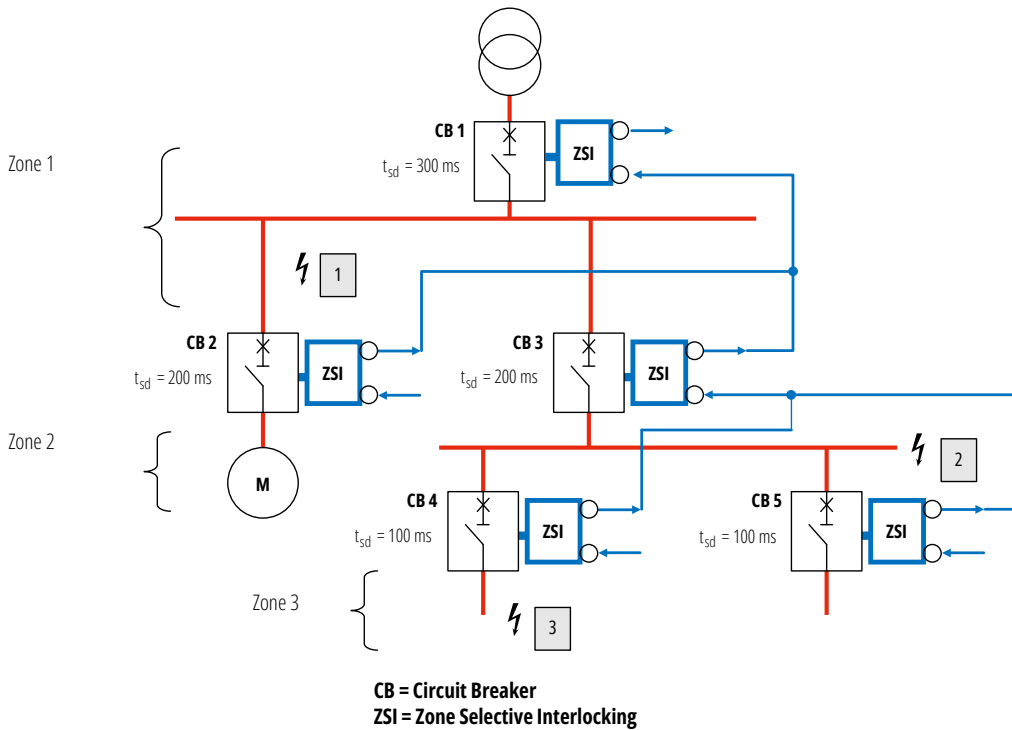
<http://www.eaton.com/PXP>

The PXR trip unit can be connected to a PC through the MicroUSB interface. By running Eaton's Power Xpert Release PC tool, you can perform the following operations:

- Configure zone interlocking or thermal memory switches
- Conduct on-site LSIG tests to check if the switch is in normal condition (recording trip multiples and times)
- Record and read waveforms during faults (up to 6 waveforms)
- Automatically export reports (including all settings and tests performed on the circuit breakers)



### Zone Selectivity Interlocking



#### Zone Selective Interlocking (ZSI)

- The ZSI function does not require additional functional modules. It can be achieved simply by connecting the circuit breakers in series with a set of cables. The ZSI function ensures that the upstream circuit breaker closest to the fault point quickly interrupts the current without delay in case of a malfunction.
- Compared to conventional selective power systems that rely on setting different delay times, zone selective interlocking (ZSI) can significantly reduce the interruption time, thereby minimizing the impact of short circuits on the system.
- For additional safety of maintenance staff, we recommend combining ZSI functionality with Arcflash Reduction Maintenance System to further reduce the release of destructive energy.

#### Zone Selective Interlocking Example

##### Example A – Short-circuit at Position 3

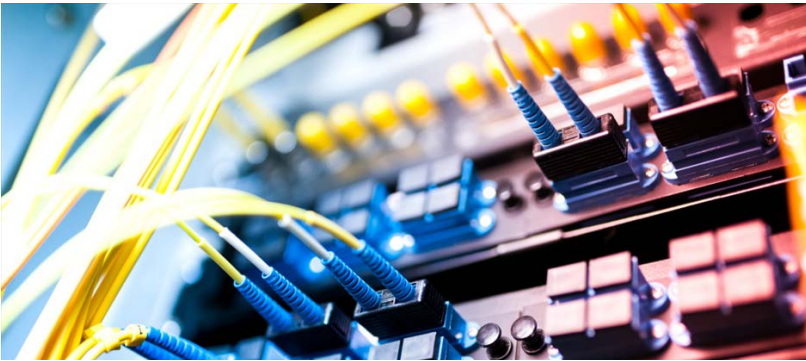
- Circuit-breakers CB1, CB3, CB4 all see the short circuit current and initiate a short delay pick-up.
- Circuit breaker CB4 sends a ZSI output blocking signal to CB3 ZSI input. CB3 sends a ZSI output blocking signal to CB1 ZSI input. CB1 sends a ZSI output signal that is not wired. This signal could be wired to a MV relay on the other side of the transformer with a compatible ZSI model.
- CB1 receives the ZSI input signal and starts its timer for 300ms. CB3 receives the ZSI input signal and starts its timer for 200ms. CB4 gets no input from any lower zone circuit breaker. This breaker will then trip immediately without any time delay. CB4 interrupts the fault and CB1 and CB3 stop short delay timing because the fault current is gone.
- If for some reason CB4 does not open and interrupt the fault, then at the end of its short delay time CB3 will open and interrupt the fault.

##### Example B – Short-circuit at Position 2

- Circuit-breakers CB1, CB3, see the short circuit current and initiate a short delay pick-up. CB4 and CB5 do not see the fault current and do not send a ZSI output.
- Circuit breaker CB3 sends a ZSI blocking signal to CB1 ZSI input. CB1 sends a ZSI output signal. In this example that signal is not wired.
- CB1 receives the ZSI input signal and starts a timer for 300ms. CB3 gets no input from any lower zone circuit breaker. This breaker will then trip immediately without any time delay. CB3 interrupts the fault and CB1 stops short delay timing because the fault current is gone. The clearance time is reduced with the ZSI function by approximately 150ms.

##### Example C – Short-circuit at Position 1

- Only Circuit breaker CB1 sees the short circuit current and initiates a short delay pick-up. CB2, CB3, CB4 and CB5 do not see the fault current and do not send ZSI outputs.
- CB1 sends a ZSI output signal. In this example that signal is not wired.
- CB1 gets no input from any lower zone circuit breaker. This breaker will then trip immediately without any time delay. CB1 interrupts the fault and the clearance time is reduced by approximately 250ms.



## General Purpose Relay Mapping

The PXR family supports three general purpose relay contacts. Any relay in the PXR can be configured to any one of the functions. The mapping is conveniently done using the Power Xpert Protection Manager software. Relays require auxiliary power to operate.

| Function Name           | Description of Relay Operation:<br>“The relay will close when ...”                                                     | Description of Relay Operation:<br>“The relay will open when ...”                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Overload Trip           | there is a Long Delay or Over-temperature trip                                                                         | RESET button is pressed or communications reset command received                               |
| Neutral Current Trip    | there is a Neutral Current trip                                                                                        | RESET button is pressed or communications reset command received                               |
| Short Delay Trip        | there is a Short Delay trip                                                                                            | RESET button is pressed or communications reset command received                               |
| Instantaneous Trip      | there is an Instantaneous trip or MCR trip                                                                             | RESET button is pressed or communications reset command received                               |
| Short Circuit Trip      | there is a Short, Instantaneous or High Instantaneous trip                                                             | RESET button is pressed or communications reset command received                               |
| Ground Fault Trip       | there is a Ground Fault trip                                                                                           | RESET button is pressed or communications reset command received                               |
| Maintenance Mode Trip   | there is a Maintenance Mode trip                                                                                       | RESET button is pressed or communications reset command received                               |
| All Trips               | there is any type of protective trip (Overload, Neutral Current, Short Delay, Instantaneous, Ground, Maintenance Mode) | RESET button is pressed or communications reset command received                               |
| High Load 1             | current flow is greater than set point (adjustable from 50% to 120% of $I_r$ )                                         | current flow falls 5% below the set point                                                      |
| High Load 2             | current flow is greater than set point (adjustable from 50% to 120% of $I_r$ )                                         | current flow falls 5% below the set point                                                      |
| Over Temperature        | temperature exceeds SC below the level of the over temperature trip setting                                            | temperature falls 5C below the trip setting                                                    |
| Ground Fault Pre-Alarm  | ground current is greater than the set point (adjustable from 50% to 100%)                                             | ground current falls 5% below the set point                                                    |
| Thermal Memory          | the Thermal Memory value is greater than the set point (adjustable from 50% to 100%)                                   | the Thermal Memory value falls 5% below the sept point                                         |
| Watchdog                | auxiliary power is active and the trip unit is healthy and operating.                                                  | there is an error in the trip unit detected from any of the self-diagnostic methods            |
| Low Battery             | the battery is below 1 bar (20%)                                                                                       | the battery value is 1 bar (20%) or higher                                                     |
| Internal (HW) Fault     | there is an internal fault detected                                                                                    | RESET button is pressed or communications reset command received                               |
| Setpoint Mismatch       | a setpoint in the trip unit does not match the CAM's copy                                                              | RESET button is pressed or communications reset command received                               |
| Breaker Health Alarm    | the health value is below 25%                                                                                          | the health value is at or above 25%                                                            |
| Communication Fault     | any external communications error occurs                                                                               | RESET button is pressed or communications reset command received                               |
| All Fault               | Any Internal Fault, Setpoint Mismatch, Breaker Health Alarm or Communication Fault is active                           | Any Internal Fault, Setpoint Mismatch, Breaker Health Alarm or Communication Fault is inactive |
| Auxiliary Contact       | breaker is closed                                                                                                      | breaker is open                                                                                |
| Trip Contact            | breaker is tripped                                                                                                     | breaker is not tripped (open or closed)                                                        |
| Maintenance Mode Active | the trip unit is in the Maintenance Mode                                                                               | when the trip unit exits the Maintenance Mode                                                  |
| ZSI Active              | the ZSI function active                                                                                                | ZSI is not active                                                                              |
| ZSI Input Received      | a ZSI INPUT signal is received                                                                                         | RESET button is pressed or communications reset command received                               |
| ZSI Output Sent         | a ZSI OUTPUT signal is sent                                                                                            | RESET button is pressed or communications reset command received                               |
| Open Breaker Pulse      | an OPEN breaker command from any of the communications channels is received                                            | 2 seconds after the OPEN breaker command is received                                           |
| Close Breaker Pulse     | a CLOSE breaker command from any of the communications channels is received                                            | 2 seconds after the CLOSE breaker command is received                                          |
| Output                  | an Output Active command for the specified relay is received on any communication channel                              | an Output Inactive command for the specified relay is received on any communication channel    |
| OFF                     | the relay is disabled                                                                                                  | the relay is disabled                                                                          |

# Power Defense Molded Case Circuit Breaker

## Technical Data



**PXR20**



**PXR25**

|                                                                      |                                                     |                                                     |
|----------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| Long delay protection (L)                                            |                                                     |                                                     |
| Long delay pickup ( $I_L$ ), $\times I_n$                            | 0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 0.98, 1.0 | 0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 0.98, 1.0 |
| Long delay time $t_L$ ( $6 \times I_L$ )                             | 0.5, 1, 2, 4, 7, 10, 12, 15, 20, 24 s               | 0.5, 1, 2, 4, 7, 10, 12, 15, 20, 24 s               |
| Short delay protection (S)                                           |                                                     |                                                     |
| Short delay pickup ( $I_{sd}$ ), $\times I_L$                        | 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10                   | 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10                   |
| Short delay time $t_{sd}$ – Fixed time Flat                          | 0.0, 0.1, 0.2, 0.3, 0.4, 0.5 s <sup>1)</sup>        | 0.0, 0.1, 0.2, 0.3, 0.4, 0.5 s <sup>1)</sup>        |
| Short delay time $t_{sd}$ – Inverse time $I^2t$ (at $8 \times I_L$ ) | 0.1, 0.3, 0.4, 0.5 s                                | 0.1, 0.3, 0.4, 0.5 s                                |
| Instantaneous protection (I)                                         |                                                     |                                                     |
| Instantaneous pickup ( $I_i$ ), $\times I_n$                         | OFF, 2, 4, 5, 6, 7, 8, 10, 12, 15                   | OFF, 2, 4, 5, 6, 7, 8, 10, 12, 15                   |
| Ground fault protection (G), optional                                |                                                     |                                                     |
| Ground fault alarm pickup ( $A$ ), $\times I_n$                      | 0.2, 0.4, 0.6, 1.0                                  | 0.2, 0.4, 0.6, 1.0                                  |
| Ground fault trip pickup ( $I_g$ ), $\times I_n$                     | OFF, 0.2, 0.4, 0.6, 0.8, 1.0                        | OFF, 0.2, 0.4, 0.6, 0.8, 1.0                        |
| Ground fault delay $t_g$ – Fixed time Flat                           | 0.1, 0.2, 0.3, 0.4, 0.5 s                           | 0.1, 0.2, 0.3, 0.4, 0.5 s                           |
| Ground fault delay $t_g$ – Inverse time $I^2t$                       | 0.1, 0.2, 0.3, 0.4, 0.5 s                           | 0.1, 0.2, 0.3, 0.4, 0.5 s                           |
| Over temperature trip                                                | ●                                                   | ●                                                   |
| Thermal memory                                                       | ●                                                   | ●                                                   |
| Zone selective interlocking (ZSI)                                    | ●                                                   | ●                                                   |
| Making current release (MCR)                                         | ●                                                   | ●                                                   |
| Trip unit functions                                                  |                                                     |                                                     |
| System diagnosis                                                     |                                                     |                                                     |
| Status / Overload LED display                                        | ●                                                   | ●                                                   |
| Trip signal indicator                                                | ●                                                   | ●                                                   |
| Trip current amplitude                                               | ●                                                   | ●                                                   |
| High load or ground alarm contact                                    | ●                                                   | ●                                                   |
| System monitoring                                                    |                                                     |                                                     |
| LCD display                                                          | ● <sup>2)</sup>                                     | ● <sup>2)</sup>                                     |
| Current metering accuracy                                            | $\pm 1\%$ of reading                                | $\pm 1\%$ of reading                                |
| Current harmonics THD                                                | –                                                   | $\pm 10\%$ of reading <sup>4)</sup>                 |
| Line voltage metering accuracy                                       | –                                                   | $\pm 1\%$ of reading <sup>3)</sup>                  |
| Voltage harmonics THD                                                | –                                                   | $\pm 10\%$ of reading <sup>4)</sup>                 |
| Power and energy metering accuracy                                   | –                                                   | $\pm 2\%$ of reading <sup>3)</sup>                  |
| Apparent power kVA                                                   | –                                                   | ● <sup>3)</sup>                                     |
| Reactive power kVAR                                                  | –                                                   | ● <sup>3)</sup>                                     |
| Power factor                                                         | –                                                   | ● <sup>3)</sup>                                     |
| Communication                                                        |                                                     |                                                     |
| Onboard integration (Modbus)                                         | ○                                                   | ●                                                   |
| External (CAM Module)                                                | ○                                                   | ○                                                   |
| Power supply                                                         | +24 VDC, optional                                   | +24 VDC, optional                                   |
| Other functions                                                      |                                                     |                                                     |
| Trip test                                                            | Integral                                            | Integral                                            |
| Maintenance mode<br>(Arcflash Reduction Maintenance System TM)       | ○                                                   | ○                                                   |
| Trip logging                                                         | ●                                                   | ●                                                   |
| Electronic counter                                                   | ●                                                   | ●                                                   |
| Wave capturing                                                       | ●                                                   | ●                                                   |
| Circuit breaker health monitoring                                    | ●                                                   | ●                                                   |

Notes:

1) 0.1s: trip time is 0.06s to 0.1s; 0s: nominal clear time is 60ms with external power and 120ms without.

2) Requires external 24VDC control voltage supply when continuous current below 20% of  $I_n$

3) Requires external voltage module (IZMC2-PXR-PTM-2) to provide voltage singlet to trip unit; each PTM can connect up to 16 molded case circuit breakers

4) Only on PXR 02.02 and higher version

● Standard ○ Optional – Not available

## Protection and Metering Features

### Trip Unit Features

Table 1. Trip unit feature

| Trip unit type | Protection type | High load alarm | Ground fault | Maintenance mode | Modbus RTU |
|----------------|-----------------|-----------------|--------------|------------------|------------|
| PXR 20         | LSI             | •               |              |                  |            |
|                | LSIG            |                 | •            |                  |            |
|                | LSIGR           |                 | •            | •                | •          |
|                | LSIR            | •               |              | •                | •          |
| PXR 25         | LSIR            | •               |              | •                | •          |
|                | LSIGR           |                 | •            | •                | •          |

### Protection Features

Table 2. Protection features

| Protection                                    |                                                               |                       | PXR 20                                                                 | PXR 25                                                                 |
|-----------------------------------------------|---------------------------------------------------------------|-----------------------|------------------------------------------------------------------------|------------------------------------------------------------------------|
| Long delay protection (L)                     | Slope                                                         |                       | I <sup>2</sup> t, I <sup>4</sup> t, I <sup>0.5</sup> t, I <sup>t</sup> | I <sup>2</sup> t, I <sup>4</sup> t, I <sup>0.5</sup> t, I <sup>t</sup> |
|                                               | Long delay pickup (I <sub>p</sub> )                           | x (I <sub>n</sub> )   | 0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 0.98, 1.0                    | 0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 0.95, 0.98, 1.0                    |
|                                               | Long delay time @ 6 x (I <sub>p</sub> )                       | Sec                   | 0.5, 1, 2, 4, 7, 10, 12, 15, 20, 24 <sup>ⓐ</sup>                       | 0.5, 1, 2, 4, 7, 10, 12, 15, 20, 24 <sup>ⓐ</sup>                       |
|                                               | Thermal memory                                                |                       | Included                                                               | Included                                                               |
|                                               | High load alarm                                               | % x (I <sub>p</sub> ) | Fixed at 85%                                                           | Fixed at 85%                                                           |
| Short delay protection (S)                    | Short delay slope                                             |                       | Flat, I <sup>2</sup> t                                                 | Flat, I <sup>2</sup> t                                                 |
|                                               | Short delay pickup                                            | x (I <sub>p</sub> )   | 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10                                      | 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 10                                      |
|                                               | Short delay time 8 x (I <sub>p</sub> ) I <sup>2</sup> t       | Sec                   | 0.1, 0.3, 0.4, 0.5                                                     | 0.1, 0.3, 0.4, 0.5                                                     |
|                                               | Short delay time – Flat                                       | Sec                   | 0.0, 0.1, 0.2, 0.3, 0.4, 0.5                                           | 0.0, 0.1, 0.2, 0.3, 0.4, 0.5                                           |
|                                               | ZSI                                                           |                       | Enable/Disable                                                         | Enable/Disable                                                         |
| Instantaneous protection (I)                  | Instantaneous                                                 | x (I <sub>n</sub> )   | Off, 2, 4, 5, 6, 7, 8, 10, 12, 15                                      | Off, 2, 4, 5, 6, 7, 8, 10, 12, 15                                      |
| Neutral protection                            | 4 <sup>th</sup> pole or external neutral trip                 | % x (I <sub>p</sub> ) | 0 (Off), 60, 100                                                       | 0 (Off), 60, 100                                                       |
| Ground fault protection (Option G)            | Ground fault pickup                                           | x (I <sub>n</sub> )   | Off, 0.2, 0.4, 0.6, 0.8, 1.0                                           | Off, 0.2, 0.4, 0.6, 0.8, 1.0                                           |
|                                               | Ground fault alarm                                            | x (I <sub>n</sub> )   | 0.2, 0.4, 0.6, 1.0                                                     | 0.2, 0.4, 0.6, 1.0                                                     |
|                                               | Ground fault delay 0.625 x (I <sub>n</sub> ) I <sup>2</sup> t | Sec                   | 0.1, 0.2, 0.3, 0.4, 0.5                                                | 0.1, 0.2, 0.3, 0.4, 0.5                                                |
|                                               | Ground fault delay - Flat                                     | Sec                   | 0.1, 0.2, 0.3, 0.4, 0.5                                                | 0.1, 0.2, 0.3, 0.4, 0.5                                                |
|                                               | ZSI                                                           |                       | Enable/Disable                                                         | Enable/Disable                                                         |
|                                               | Thermal memory                                                |                       | Included                                                               | Included                                                               |
| Maintenance mode protection (ARMS) (Option R) | Pickup                                                        |                       | Enable or Disable/Remote                                               | Enable or Disable/Remote                                               |
|                                               | Relay contact for remote mode indication                      |                       | Included                                                               | Included                                                               |
|                                               | Maintenance mode pickup                                       | x (I <sub>n</sub> )   | 2.5, 4.0, 6.0, 8.0, 10.0                                               | 2.5, 4.0, 6.0, 8.0, 10.0                                               |
| General                                       | Over temperature trip                                         | Degrees               | Fixed at 85 ° C (185 ° F)                                              | Fixed at 85 ° C (185 ° F)                                              |

ⓐ Not all time values are selectable when the slope is set to I<sup>4</sup>t. Refer to the Time-Current Curves.

# Power Defense Molded Case Circuit Breaker

## Technical Data

### Metered Current and Voltage Data

Table 3. Metered current and voltage data

| Current metering              | Unit    | Accuracy <sup>①</sup> | Note                             |
|-------------------------------|---------|-----------------------|----------------------------------|
| IA, IB, IC, IN, IG            | Amperes | ± 1% of reading       |                                  |
| Min IA, IB, IC, IN, IG        | Amperes | ± 1% of reading       | Retain group values until reset  |
| Max IA, IB, IC, IN, IG        | Amperes | ± 1% of reading       | Retain group values until reset  |
| THD IA, IB, IC, IN, IG        |         | ± 1% of reading       | Firmware Version 02.02 and later |
| Voltage metering <sup>③</sup> | Unit    | Accuracy <sup>②</sup> | Note                             |
| VAB, VBC, VCA                 | Volts   | ± 1% of reading       | Line voltage                     |
| Min VAB, VBC, VCA             | Volts   | ± 1% of reading       | Retain group values until reset  |
| Max VAB, VBC, VCA             | Volts   | ± 1% of reading       | Retain group values until reset  |
| THD VAB, VBC, VCA             |         | ± 1% of reading0%     | Firmware Version 02.02 and later |
| VAN, VBN, VCN                 | Volts   | ± 1% of reading       | Phase voltage                    |
| Min VAN, VBN, VCN             | Volts   | ± 1% of reading       | Retain group values until reset  |
| Max VAN, VBN, VCN             | Volts   | ± 1% of reading       | Retain group values until reset  |
| THD VAN, VBN, VCN             |         | ± 1% of reading0%     | Firmware Version 02.02 and later |

① Accuracy applies to 10% to 120% of I<sub>n</sub> at 25°C (77°F).

② Accuracy applies to 34 to 690Vac voltage range at 25°C (77°F).

③ Only available on PXR25

## Metered Power and Energy Data

Table 4. Metered power and energy data

| Power metering <sup>③</sup>  | Unit  | Accuracy <sup>①②</sup> | Note                                                                |
|------------------------------|-------|------------------------|---------------------------------------------------------------------|
| Active power                 | kW    | ± 2% of reading        | Approximately updated every second                                  |
| Apparent power               | kVA   | ± 2% of reading        | Approximately updated every second                                  |
| Reactive power               | kvar  | ± 2% of reading        | Approximately updated every second                                  |
| Active demand                | kW    | ± 2% of reading        | 5-minute fixed window                                               |
| Apparent demand              | kVA   | ± 2% of reading        | 5-minute fixed window                                               |
| Reactive demand              | kvar  | ± 2% of reading        | 5-minute fixed window                                               |
| Active demand (peak)         | kW    | ± 2% of reading        | Retain group values until reset                                     |
| Apparent demand (peak)       | kVA   | ± 2% of reading        | Retain group values until reset                                     |
| Reactive demand (peak)       | kvar  | ± 2% of reading        | Retain group values until reset                                     |
| Power factor <sup>④</sup>    | -     |                        | Approximately updated every second                                  |
| Energy metering <sup>③</sup> | Unit  | Accuracy <sup>①②</sup> | Note                                                                |
| Active energy total          | kWh   | ± 2% of reading        | Forward + Reverse                                                   |
| Active energy net            | kWh   | ± 2% of reading        | Forward - Reverse                                                   |
| Active energy forward        | kWh   | ± 2% of reading        | Supplied from power source to load                                  |
| Active energy reverse        | kWh   | ± 2% of reading        | Supplied from load to power source                                  |
| Apparent energy              | kVAh  | ± 2% of reading        | Energy                                                              |
| Reactive energy received     | kvarh | ± 2% of reading        | Reactive power in the 1 <sup>st</sup> and 2 <sup>nd</sup> quadrants |
| Reactive energy sent         | kvarh | ± 2% of reading        | Reactive power in the 3 <sup>rd</sup> and 4 <sup>th</sup> quadrants |
| Reactive energy net          | kvarh | ± 2% of reading        | kvarh sent - kvarh received                                         |
| Reactive energy total        | kvarh | ± 2% of reading        | kvarh sent + kvarh received                                         |

① Accuracy applies to 10% to 120% of I<sub>n</sub> at 25° C (77° F).

② Accuracy applies to 34 to 690Vac voltage range at 25° C (77° F).

③ Only available on PXR25

④ In Firmware version 02.02 and higher, you can select the power factor calculator method as IEC, IEEE or Alternate IEEE in the 'Edit Settings' menu.

## Time-Current Curves

Refer to the Time-Current Curves (TCC) in PXR20/25 catalogues to set protection values. These protection values should be set to recommendations of professional engineers in charge of the equipment. Use the following link/path to access the Time-Current Curve on Eaton website: <http://www.eaton.com/TCC>

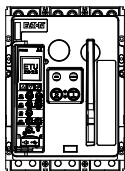




## I Ordering - Basic Device I

# Power Defense Molded Case Circuit Breaker

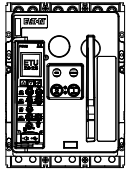
## Basic Device



### PDC5 K:50KA (Equipped as Standard with Motor Operator, Shunt Release, and Closing Release)

Electronic trip unit  
Fixed mounting

| Trip unit                | Rated current | Trip unit protection | Trip unit's internal accessory | 3P             |             |
|--------------------------|---------------|----------------------|--------------------------------|----------------|-------------|
|                          |               |                      |                                | Part No.       | Article No. |
| Breaking capacity K:50KA |               |                      |                                |                |             |
| PXR20                    | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53K0630E2NF | PDC520001   |
|                          | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53K0800E2NF | PDC520002   |
|                          | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53K1000E2NF | PDC520003   |
|                          | 1250          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53K1250E2NF | PDC520004   |
|                          | 1600          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53K1600E2NF | PDC520005   |
|                          | 0630          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53K0630E3NF | PDC520006   |
|                          | 0800          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53K0800E3NF | PDC520007   |
|                          | 1000          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53K1000E3NF | PDC520008   |
|                          | 1250          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53K1250E3NF | PDC520009   |
|                          | 1600          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53K1600E3NF | PDC520010   |
|                          | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0630E4MF | PDC520031   |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0800E4MF | PDC520032   |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1000E4MF | PDC520033   |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1250E4MF | PDC520034   |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1600E4MF | PDC520035   |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0630E5MF | PDC520036   |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0800E5MF | PDC520037   |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1000E5MF | PDC520038   |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1250E5MF | PDC520039   |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1600E5MF | PDC520040   |
| PXR25                    | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0630P4MF | PDC520051   |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0800P4MF | PDC520052   |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1000P4MF | PDC520053   |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1250P4MF | PDC520054   |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1600P4MF | PDC520055   |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0630P5MF | PDC520056   |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0800P5MF | PDC520057   |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1000P5MF | PDC520058   |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1250P5MF | PDC520059   |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1600P5MF | PDC520060   |



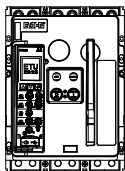
### PDC5 K:50KA (Without Motor Operator, Shunt Release, and Closing Release)

Electronic trip unit  
Fixed mounting

| Trip unit                | Rated current | Trip unit protection | Trip unit's internal accessory | 3P               |             |
|--------------------------|---------------|----------------------|--------------------------------|------------------|-------------|
|                          |               |                      |                                | Part No.         | Article No. |
| Breaking capacity K:50KA |               |                      |                                |                  |             |
| PXR20                    | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53K0630E2NF-S | PDC520001S  |
|                          | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53K0800E2NF-S | PDC520002S  |
|                          | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53K1000E2NF-S | PDC520003S  |
|                          | 1250          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53K1250E2NF-S | PDC520004S  |
|                          | 1600          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53K1600E2NF-S | PDC520005S  |
|                          | 0630          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53K0630E3NF-S | PDC520006S  |
|                          | 0800          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53K0800E3NF-S | PDC520007S  |
|                          | 1000          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53K1000E3NF-S | PDC520008S  |
|                          | 1250          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53K1250E3NF-S | PDC520009S  |
|                          | 1600          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53K1600E3NF-S | PDC520010S  |
|                          | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0630E4MF-S | PDC520031S  |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0800E4MF-S | PDC520032S  |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1000E4MF-S | PDC520033S  |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1250E4MF-S | PDC520034S  |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1600E4MF-S | PDC520035S  |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0630E5MF-S | PDC520036S  |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0800E5MF-S | PDC520037S  |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1000E5MF-S | PDC520038S  |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1250E5MF-S | PDC520039S  |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1600E5MF-S | PDC520040S  |
| PXR25                    | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0630P4MF-S | PDC520051S  |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0800P4MF-S | PDC520052S  |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1000P4MF-S | PDC520053S  |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1250P4MF-S | PDC520054S  |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1600P4MF-S | PDC520055S  |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0630P5MF-S | PDC520056S  |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K0800P5MF-S | PDC520057S  |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1000P5MF-S | PDC520058S  |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1250P5MF-S | PDC520059S  |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53K1600P5MF-S | PDC520060S  |

# Power Defense Molded Case Circuit Breaker

## Basic Device



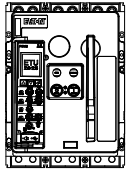
### PDC5 K:50KA (Equipped as Standard with Motor Operator, Shunt Release and Closing Release)

Electronic trip unit  
Fixed mounting

| Trip unit                | Rated current | Trip unit protection | Trip unit's internal accessory | 4P             |             |
|--------------------------|---------------|----------------------|--------------------------------|----------------|-------------|
|                          |               |                      |                                | Part No.       | Article No. |
| Breaking capacity K:50KA |               |                      |                                |                |             |
| PXR20                    | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54K0630E2NF | PDC520181   |
|                          | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54K0800E2NF | PDC520182   |
|                          | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54K1000E2NF | PDC520183   |
|                          | 1250          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54K1250E2NF | PDC520184   |
|                          | 1600          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54K1600E2NF | PDC520185   |
|                          | 0630          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54K0630E3NF | PDC520186   |
|                          | 0800          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54K0800E3NF | PDC520187   |
|                          | 1000          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54K1000E3NF | PDC520188   |
|                          | 1250          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54K1250E3NF | PDC520189   |
|                          | 1600          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54K1600E3NF | PDC520190   |
|                          | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0630E4MF | PDC520211   |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0800E4MF | PDC520212   |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1000E4MF | PDC520213   |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1250E4MF | PDC520214   |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1600E4MF | PDC520215   |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0630E5MF | PDC520216   |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0800E5MF | PDC520217   |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1000E5MF | PDC520218   |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1250E5MF | PDC520219   |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1600E5MF | PDC520220   |
| PXR25                    | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0630P4MF | PDC520231   |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0800P4MF | PDC520232   |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1000P4MF | PDC520233   |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1250P4MF | PDC520234   |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1600P4MF | PDC520235   |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0630P5MF | PDC520236   |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0800P5MF | PDC520237   |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1000P5MF | PDC520238   |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1250P5MF | PDC520239   |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1600P5MF | PDC520240   |

# Power Defense Molded Case Circuit Breaker

## Basic Device



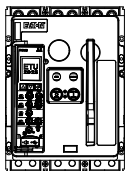
### PDC5 K:50KA (Without Motor Operator, Shunt Release and Closing Release)

Electronic trip unit  
Fixed mounting

|                          |               |                      |                                | 4P               |             |
|--------------------------|---------------|----------------------|--------------------------------|------------------|-------------|
| Trip unit                | Rated current | Trip unit protection | Trip unit's internal accessory | Part No.         | Article No. |
| Breaking capacity K:50KA |               |                      |                                |                  |             |
| PXR20                    | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54K0630E2NF-S | PDC520181S  |
|                          | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54K0800E2NF-S | PDC520182S  |
|                          | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54K1000E2NF-S | PDC520183S  |
|                          | 1250          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54K1250E2NF-S | PDC520184S  |
|                          | 1600          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54K1600E2NF-S | PDC520185S  |
|                          | 0630          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54K0630E3NF-S | PDC520186S  |
|                          | 0800          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54K0800E3NF-S | PDC520187S  |
|                          | 1000          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54K1000E3NF-S | PDC520188S  |
|                          | 1250          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54K1250E3NF-S | PDC520189S  |
|                          | 1600          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54K1600E3NF-S | PDC520190S  |
|                          | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0630E4MF-S | PDC520211S  |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0800E4MF-S | PDC520212S  |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1000E4MF-S | PDC520213S  |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1250E4MF-S | PDC520214S  |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1600E4MF-S | PDC520215S  |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0630E5MF-S | PDC520216S  |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0800E5MF-S | PDC520217S  |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1000E5MF-S | PDC520218S  |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1250E5MF-S | PDC520219S  |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1600E5MF-S | PDC520220S  |
| PXR25                    | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0630P4MF-S | PDC520231S  |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0800P4MF-S | PDC520232S  |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1000P4MF-S | PDC520233S  |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1250P4MF-S | PDC520234S  |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1600P4MF-S | PDC520235S  |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0630P5MF-S | PDC520236S  |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K0800P5MF-S | PDC520237S  |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1000P5MF-S | PDC520238S  |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1250P5MF-S | PDC520239S  |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54K1600P5MF-S | PDC520240S  |

# Power Defense Molded Case Circuit Breaker

## Basic Device

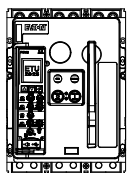


### PDC5 P:85KA (Equipped as Standard with Motor Operator, Shunt Release and Closing Release)

Electronic trip unit

Fixed mounting

| Trip unit                | Rated current | Trip unit protection | Trip unit's internal accessory | 3P             | Article No. |
|--------------------------|---------------|----------------------|--------------------------------|----------------|-------------|
|                          |               |                      |                                | Part No.       |             |
| Breaking capacity P:85KA |               |                      |                                |                |             |
| PXR20                    | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53P0630E2NF | PDC520061   |
|                          | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53P0800E2NF | PDC520062   |
|                          | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53P1000E2NF | PDC520063   |
|                          | 1250          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53P1250E2NF | PDC520064   |
|                          | 1600          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53P1600E2NF | PDC520065   |
|                          | 0630          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53P0630E3NF | PDC520066   |
|                          | 0800          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53P0800E3NF | PDC520067   |
|                          | 1000          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53P1000E3NF | PDC520068   |
|                          | 1250          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53P1250E3NF | PDC520069   |
|                          | 1600          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53P1600E3NF | PDC520070   |
|                          | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0630E4MF | PDC520091   |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0800E4MF | PDC520092   |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1000E4MF | PDC520093   |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1250E4MF | PDC520094   |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1600E4MF | PDC520095   |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0630E5MF | PDC520096   |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0800E5MF | PDC520097   |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1000E5MF | PDC520098   |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1250E5MF | PDC520099   |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1600E5MF | PDC520100   |
| PXR25                    | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0630P4MF | PDC520111   |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0800P4MF | PDC520112   |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1000P4MF | PDC520113   |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1250P4MF | PDC520114   |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1600P4MF | PDC520115   |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0630P5MF | PDC520116   |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0800P5MF | PDC520117   |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1000P5MF | PDC520118   |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1250P5MF | PDC520119   |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1600P5MF | PDC520120   |



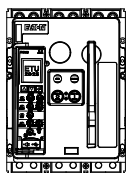
### PDC5 P:85KA (Without Motor Operator, Shunt Release and Closing Release)

Electronic trip unit  
Fixed mounting

| Trip unit                | Rated current | Trip unit protection | Trip unit's internal accessory | 3P<br>Part No.   | Article No. |
|--------------------------|---------------|----------------------|--------------------------------|------------------|-------------|
| Breaking capacity P:85KA |               |                      |                                |                  |             |
| PXR20                    | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53P0630E2NF-S | PDC520061S  |
|                          | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53P0800E2NF-S | PDC520062S  |
|                          | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53P1000E2NF-S | PDC520063S  |
|                          | 1250          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53P1250E2NF-S | PDC520064S  |
|                          | 1600          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53P1600E2NF-S | PDC520065S  |
|                          | 0630          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53P0630E3NF-S | PDC520066S  |
|                          | 0800          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53P0800E3NF-S | PDC520067S  |
|                          | 1000          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53P1000E3NF-S | PDC520068S  |
|                          | 1250          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53P1250E3NF-S | PDC520069S  |
|                          | 1600          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53P1600E3NF-S | PDC520070S  |
|                          | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0630E4MF-S | PDC520091S  |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0800E4MF-S | PDC520092S  |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1000E4MF-S | PDC520093S  |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1250E4MF-S | PDC520094S  |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1600E4MF-S | PDC520095S  |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0630E5MF-S | PDC520096S  |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0800E5MF-S | PDC520097S  |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1000E5MF-S | PDC520098S  |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1250E5MF-S | PDC520099S  |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1600E5MF-S | PDC520100S  |
| PXR25                    | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0630P4MF-S | PDC520111S  |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0800P4MF-S | PDC520112S  |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1000P4MF-S | PDC520113S  |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1250P4MF-S | PDC520114S  |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1600P4MF-S | PDC520115S  |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0630P5MF-S | PDC520116S  |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P0800P5MF-S | PDC520117S  |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1000P5MF-S | PDC520118S  |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1250P5MF-S | PDC520119S  |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53P1600P5MF-S | PDC520120S  |

# Power Defense Molded Case Circuit Breaker

## Basic Device

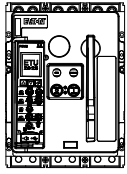


### PDC5 P:85KA (Equipped as Standard with Motor Operator, Shunt Release and Closing Release)

Electronic trip unit

Fixed mounting

| Trip unit                | Rated current | Trip unit protection | Trip unit's internal accessory | 4P             | Article No. |
|--------------------------|---------------|----------------------|--------------------------------|----------------|-------------|
|                          |               |                      |                                | Part No.       |             |
| Breaking capacity P:85KA |               |                      |                                |                |             |
| PXR20                    | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54P0630E2NF | PDC520241   |
|                          | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54P0800E2NF | PDC520242   |
|                          | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54P1000E2NF | PDC520243   |
|                          | 1250          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54P1250E2NF | PDC520244   |
|                          | 1600          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54P1600E2NF | PDC520245   |
|                          | 0630          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54P0630E3NF | PDC520246   |
|                          | 0800          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54P0800E3NF | PDC520247   |
|                          | 1000          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54P1000E3NF | PDC520248   |
|                          | 1250          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54P1250E3NF | PDC520249   |
|                          | 1600          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54P1600E3NF | PDC520250   |
|                          | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0630E4MF | PDC520271   |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0800E4MF | PDC520272   |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1000E4MF | PDC520273   |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1250E4MF | PDC520274   |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1600E4MF | PDC520275   |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0630E5MF | PDC520276   |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0800E5MF | PDC520277   |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1000E5MF | PDC520278   |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1250E5MF | PDC520279   |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1600E5MF | PDC520280   |
| PXR25                    | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0630P4MF | PDC520291   |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0800P4MF | PDC520292   |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1000P4MF | PDC520293   |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1250P4MF | PDC520294   |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1600P4MF | PDC520295   |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0630P5MF | PDC520296   |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0800P5MF | PDC520297   |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1000P5MF | PDC520298   |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1250P5MF | PDC520299   |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1600P5MF | PDC520300   |



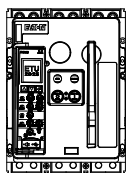
**PDC5 P:85KA (Without Motor Operator, Shunt Release and Closing Release)**

Electronic trip unit  
Fixed mounting

| Trip unit                | Rated current | Trip unit protection | Trip unit's internal accessory | 4P<br>Part No.   | Article No. |
|--------------------------|---------------|----------------------|--------------------------------|------------------|-------------|
| Breaking capacity P:85KA |               |                      |                                |                  |             |
| PXR20                    | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54P0630E2NF-S | PDC520241S  |
|                          | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54P0800E2NF-S | PDC520242S  |
|                          | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54P1000E2NF-S | PDC520243S  |
|                          | 1250          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54P1250E2NF-S | PDC520244S  |
|                          | 1600          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54P1600E2NF-S | PDC520245S  |
|                          | 0630          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54P0630E3NF-S | PDC520246S  |
|                          | 0800          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54P0800E3NF-S | PDC520247S  |
|                          | 1000          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54P1000E3NF-S | PDC520248S  |
|                          | 1250          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54P1250E3NF-S | PDC520249S  |
|                          | 1600          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54P1600E3NF-S | PDC520250S  |
|                          | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0630E4MF-S | PDC520271S  |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0800E4MF-S | PDC520272S  |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1000E4MF-S | PDC520273S  |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1250E4MF-S | PDC520274S  |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1600E4MF-S | PDC520275S  |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0630E5MF-S | PDC520276S  |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0800E5MF-S | PDC520277S  |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1000E5MF-S | PDC520278S  |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1250E5MF-S | PDC520279S  |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1600E5MF-S | PDC520280S  |
| PXR25                    | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0630P4MF-S | PDC520291S  |
|                          | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0800P4MF-S | PDC520292S  |
|                          | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1000P4MF-S | PDC520293S  |
|                          | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1250P4MF-S | PDC520294S  |
|                          | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1600P4MF-S | PDC520295S  |
|                          | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0630P5MF-S | PDC520296S  |
|                          | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P0800P5MF-S | PDC520297S  |
|                          | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1000P5MF-S | PDC520298S  |
|                          | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1250P5MF-S | PDC520299S  |
|                          | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54P1600P5MF-S | PDC520300S  |

# Power Defense Molded Case Circuit Breaker

## Basic Device

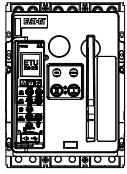


### PDC5 H:100KA (Equipped as Standard with Motor Operator, Shunt Release and Closing Release)

Electronic trip unit

Fixed mounting

| Trip unit                 | Rated current | Trip unit protection | Trip unit's internal accessory | 3P             | Article No. |
|---------------------------|---------------|----------------------|--------------------------------|----------------|-------------|
|                           |               |                      |                                | Part No.       |             |
| Breaking capacity H:100KA |               |                      |                                |                |             |
| PXR20                     | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53H0630E2NF | PDC520121   |
|                           | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53H0800E2NF | PDC520122   |
|                           | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53H1000E2NF | PDC520123   |
|                           | 1250          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53H1250E2NF | PDC520124   |
|                           | 1600          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53H1600E2NF | PDC520125   |
|                           | 0630          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53H0630E3NF | PDC520126   |
|                           | 0800          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53H0800E3NF | PDC520127   |
|                           | 1000          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53H1000E3NF | PDC520128   |
|                           | 1250          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53H1250E3NF | PDC520129   |
|                           | 1600          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC53H1600E3NF | PDC520130   |
|                           | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0630E4MF | PDC520151   |
|                           | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0800E4MF | PDC520152   |
|                           | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1000E4MF | PDC520153   |
|                           | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1250E4MF | PDC520154   |
|                           | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1600E4MF | PDC520155   |
|                           | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0630E5MF | PDC520156   |
|                           | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0800E5MF | PDC520157   |
|                           | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1000E5MF | PDC520158   |
|                           | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1250E5MF | PDC520159   |
|                           | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1600E5MF | PDC520160   |
| PXR25                     | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0630P4MF | PDC520171   |
|                           | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0800P4MF | PDC520172   |
|                           | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1000P4MF | PDC520173   |
|                           | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1250P4MF | PDC520174   |
|                           | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1600P4MF | PDC520175   |
|                           | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0630P5MF | PDC520176   |
|                           | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0800P5MF | PDC520177   |
|                           | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1000P5MF | PDC520178   |
|                           | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1250P5MF | PDC520179   |
|                           | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1600P5MF | PDC520180   |



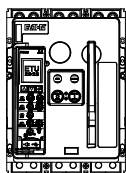
**PDC5 H:100KA (Without Motor Operator, Shunt Release and Closing Release)**

Electronic trip unit  
Fixed mounting

| Trip unit                 | Rated current | Trip unit protection | Trip unit's internal accessory | 3P<br>Part No.   | Article No. |
|---------------------------|---------------|----------------------|--------------------------------|------------------|-------------|
| Breaking capacity H:100KA |               |                      |                                |                  |             |
| PXR20                     | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53H0630E2NF-S | PDC520121S  |
|                           | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53H0800E2NF-S | PDC520122S  |
|                           | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53H1000E2NF-S | PDC520123S  |
|                           | 1250          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53H1250E2NF-S | PDC520124S  |
|                           | 1600          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC53H1600E2NF-S | PDC520125S  |
|                           | 0630          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53H0630E3NF-S | PDC520126S  |
|                           | 0800          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53H0800E3NF-S | PDC520127S  |
|                           | 1000          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53H1000E3NF-S | PDC520128S  |
|                           | 1250          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53H1250E3NF-S | PDC520129S  |
|                           | 1600          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC53H1600E3NF-S | PDC520130S  |
|                           | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0630E4MF-S | PDC520151S  |
|                           | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0800E4MF-S | PDC520152S  |
|                           | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1000E4MF-S | PDC520153S  |
|                           | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1250E4MF-S | PDC520154S  |
|                           | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1600E4MF-S | PDC520155S  |
|                           | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0630E5MF-S | PDC520156S  |
|                           | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0800E5MF-S | PDC520157S  |
|                           | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1000E5MF-S | PDC520158S  |
|                           | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1250E5MF-S | PDC520159S  |
|                           | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1600E5MF-S | PDC520160S  |
| PXR25                     | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0630P4MF-S | PDC520171S  |
|                           | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0800P4MF-S | PDC520172S  |
|                           | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1000P4MF-S | PDC520173S  |
|                           | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1250P4MF-S | PDC520174S  |
|                           | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1600P4MF-S | PDC520175S  |
|                           | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0630P5MF-S | PDC520176S  |
|                           | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H0800P5MF-S | PDC520177S  |
|                           | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1000P5MF-S | PDC520178S  |
|                           | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1250P5MF-S | PDC520179S  |
|                           | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC53H1600P5MF-S | PDC520180S  |

# Power Defense Molded Case Circuit Breaker

## Basic Device

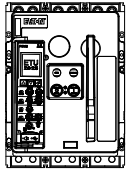


### PDC5 H:100KA (Equipped as Standard with Motor Operator, Shunt Release and Closing Release)

Electronic trip unit

Fixed mounting

| Trip unit                 | Rated current | Trip unit protection | Trip unit's internal accessory | 4P             | Article No. |
|---------------------------|---------------|----------------------|--------------------------------|----------------|-------------|
|                           |               |                      |                                | Part No.       |             |
| Breaking capacity H:100KA |               |                      |                                |                |             |
| PXR20                     | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54H0630E2NF | PDC520301   |
|                           | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54H0800E2NF | PDC520302   |
|                           | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54H1000E2NF | PDC520303   |
|                           | 1250          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54H1250E2NF | PDC520304   |
|                           | 1600          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54H1600E2NF | PDC520305   |
|                           | 0630          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54H0630E3NF | PDC520306   |
|                           | 0800          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54H0800E3NF | PDC520307   |
|                           | 1000          | 3:LISG               | N: 3 Relays/ZSI/CAM            | PDC54H1000E3NF | PDC520308   |
|                           | 1250          | 4:LSI ARMS           | N: 3 Relays/ZSI/CAM            | PDC54H1250E3NF | PDC520309   |
|                           | 1600          | 4:LSI ARMS           | N: 3 Relays/ZSI/CAM            | PDC54H1600E3NF | PDC520310   |
|                           | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0630E4MF | PDC520331   |
|                           | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0800E4MF | PDC520332   |
|                           | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1000E4MF | PDC520333   |
|                           | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1250E4MF | PDC520334   |
|                           | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1600E4MF | PDC520335   |
|                           | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0630E5MF | PDC520336   |
|                           | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0800E5MF | PDC520337   |
|                           | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1000E5MF | PDC520338   |
|                           | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1250E5MF | PDC520339   |
|                           | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1600E5MF | PDC520340   |
| PXR25                     | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0630P4MF | PDC520351   |
|                           | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0800P4MF | PDC520352   |
|                           | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1000P4MF | PDC520353   |
|                           | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1250P4MF | PDC520354   |
|                           | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1600P4MF | PDC520355   |
|                           | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0630P5MF | PDC520356   |
|                           | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0800P5MF | PDC520357   |
|                           | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1000P5MF | PDC520358   |
|                           | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1250P5MF | PDC520359   |
|                           | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1600P5MF | PDC520360   |



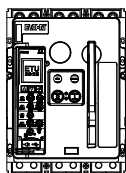
**PDC5 H:100KA (Without Motor Operator, Shunt Release and Closing Release)**

Electronic trip unit  
Fixed mounting

| Trip unit                 | Rated current | Trip unit protection | Trip unit's internal accessory | 4P<br>Part No.   | Article No. |
|---------------------------|---------------|----------------------|--------------------------------|------------------|-------------|
| Breaking capacity H:100KA |               |                      |                                |                  |             |
| PXR20                     | 0630          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54H0630E2NF-S | PDC520301S  |
|                           | 0800          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54H0800E2NF-S | PDC520302S  |
|                           | 1000          | 2:LSI                | N: 3 Relays/ZSI/CAM            | PDC54H1000E2NF-S | PDC520303S  |
|                           | 1250          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54H1250E2NF-S | PDC520304S  |
|                           | 1600          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54H1600E2NF-S | PDC520305S  |
|                           | 0630          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54H0630E3NF-S | PDC520306S  |
|                           | 0800          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54H0800E3NF-S | PDC520307S  |
|                           | 1000          | 3:LSIG               | N: 3 Relays/ZSI/CAM            | PDC54H1000E3NF-S | PDC520308S  |
|                           | 1250          | 4:LSI ARMS           | N: 3 Relays/ZSI/CAM            | PDC54H1250E3NF-S | PDC520309S  |
|                           | 1600          | 4:LSI ARMS           | N: 3 Relays/ZSI/CAM            | PDC54H1600E3NF-S | PDC520310S  |
|                           | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0630E4MF-S | PDC520331S  |
|                           | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0800E4MF-S | PDC520332S  |
|                           | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1000E4MF-S | PDC520333S  |
|                           | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1250E4MF-S | PDC520334S  |
|                           | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1600E4MF-S | PDC520335S  |
|                           | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0630E5MF-S | PDC520336S  |
|                           | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0800E5MF-S | PDC520337S  |
|                           | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1000E5MF-S | PDC520338S  |
|                           | 1250          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1250E5MF-S | PDC520339S  |
|                           | 1600          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1600E5MF-S | PDC520340S  |
| PXR25                     | 0630          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0630P4MF-S | PDC520351S  |
|                           | 0800          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0800P4MF-S | PDC520352S  |
|                           | 1000          | 4:LSI ARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1000P4MF-S | PDC520353S  |
|                           | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1250P4MF-S | PDC520354S  |
|                           | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1600P4MF-S | PDC520355S  |
|                           | 0630          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0630P5MF-S | PDC520356S  |
|                           | 0800          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H0800P5MF-S | PDC520357S  |
|                           | 1000          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1000P5MF-S | PDC520358S  |
|                           | 1250          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1250P5MF-S | PDC520359S  |
|                           | 1600          | 5:LSIGARMS           | M: Modbus /3 Relays/ZSI/CAM    | PDC54H1600P5MF-S | PDC520360S  |

# Power Defense Molded Case Circuit Breaker

## Basic Device

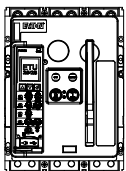


### PDC5 S Disconnect (Equipped as Standard with Motor Operator, Shunt Release and Closing Release)

Disconnecting switch  
Fixed mounting

|                                       |               | 3P             |             |
|---------------------------------------|---------------|----------------|-------------|
|                                       | Rated current | Part No.       | Article No. |
| <b>Breaking capacity S disconnect</b> |               |                |             |
| SWD                                   | 0630          | PDC53S0630SNNF | PDC510001   |
|                                       | 0800          | PDC53S0800SNNF | PDC510002   |
|                                       | 1000          | PDC53S1000SNNF | PDC510003   |
|                                       | 1250          | PDC53S1250SNNF | PDC510004   |
|                                       | 1600          | PDC53S1600SNNF | PDC510005   |

|                                       |               | 4P             |             |
|---------------------------------------|---------------|----------------|-------------|
|                                       | Rated current | Part No.       | Article No. |
| <b>Breaking capacity S disconnect</b> |               |                |             |
| SWD                                   | 0630          | PDC54S0630SNNF | PDC510006   |
|                                       | 0800          | PDC54S0800SNNF | PDC510007   |
|                                       | 1000          | PDC54S1000SNNF | PDC510008   |
|                                       | 1250          | PDC54S1250SNNF | PDC510009   |
|                                       | 1600          | PDC54S1600SNNF | PDC510010   |

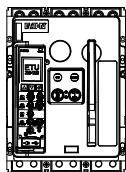


### PDC5 S Disconnect (Without Motor Operator, Shunt Release and Closing Release)

Disconnecting switch  
Fixed mounting

|                                       |               | 3P               |             |
|---------------------------------------|---------------|------------------|-------------|
|                                       | Rated current | Part No.         | Article No. |
| <b>Breaking capacity S disconnect</b> |               |                  |             |
| SWD                                   | 0630          | PDC53S0630SNNF-S | PDC510001S  |
|                                       | 0800          | PDC53S0800SNNF-S | PDC510002S  |
|                                       | 1000          | PDC53S1000SNNF-S | PDC510003S  |
|                                       | 1250          | PDC53S1250SNNF-S | PDC510004S  |
|                                       | 1600          | PDC53S1600SNNF-S | PDC510005S  |

|                                       |               | 4P               |             |
|---------------------------------------|---------------|------------------|-------------|
|                                       | Rated current | Part No.         | Article No. |
| <b>Breaking capacity S disconnect</b> |               |                  |             |
| SWD                                   | 0630          | PDC54S0630SNNF-S | PDC510006S  |
|                                       | 0800          | PDC54S0800SNNF-S | PDC510007S  |
|                                       | 1000          | PDC54S1000SNNF-S | PDC510008S  |
|                                       | 1250          | PDC54S1250SNNF-S | PDC510009S  |
|                                       | 1600          | PDC54S1600SNNF-S | PDC510010S  |



### PDC5 S Disconnect (Equipped as Standard with Motor Operator, Shunt Release and Closing Release)

Disconnecting switch  
Drawout mounting

|                                       |               | 3P*            |             |
|---------------------------------------|---------------|----------------|-------------|
|                                       | Rated current | Part No.       | Article No. |
| <b>Breaking capacity S disconnect</b> |               |                |             |
| SWD                                   | 0630          | PDC53S0630SNNW | PDC510011   |
|                                       | 0800          | PDC53S0800SNNW | PDC510012   |
|                                       | 1000          | PDC53S1000SNNW | PDC510013   |
|                                       | 1250          | PDC53S1250SNNW | PDC510014   |
|                                       | 1600          | PDC53S1600SNNW | PDC510015   |

\*Product is not available in the market yet

|                                       |               | 4P*            |             |
|---------------------------------------|---------------|----------------|-------------|
|                                       | Rated current | Part No.       | Article No. |
| <b>Breaking capacity S disconnect</b> |               |                |             |
| SWD                                   | 0630          | PDC54S0630SNNW | PDC510016   |
|                                       | 0800          | PDC54S0800SNNW | PDC510017   |
|                                       | 1000          | PDC54S1000SNNW | PDC510018   |
|                                       | 1250          | PDC54S1250SNNW | PDC510019   |
|                                       | 1600          | PDC54S1600SNNW | PDC510020   |

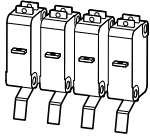
\*Product is not available in the market yet



## I Ordering - Accessories I

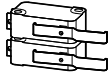
# Power Defense Molded Case Circuit Breaker

## Accessories



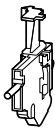
### Standard Auxiliary Contact

| Product description                                                                                              | Frame for use with | Part No.        | Article No. | Units per package | Note                                                                                                           |
|------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|-------------|-------------------|----------------------------------------------------------------------------------------------------------------|
| The basic device is equipped as standard with 2 normally open (NO) and 2 normally closed (NC) auxiliary contacts |                    |                 |             |                   |                                                                                                                |
| Additional 2 NO and 2 NC auxiliary contacts                                                                      | PDC5               | IZMC1-AS22-16-2 | YC-500188   | 1                 | The 1st and 2nd pairs of auxiliary contacts are interchangeable to the 3rd and 4th pairs of auxiliary contacts |



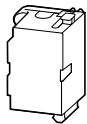
### Trip Signal Auxiliary Contact

| Product description                         | Frame for use with | Part No.      | Article No. | Units per package | Note |
|---------------------------------------------|--------------------|---------------|-------------|-------------------|------|
| Additional 2 NO and 2 NC auxiliary contacts | PDC5               | IZMC1-OTS16-2 | YC-500163   | 1                 |      |



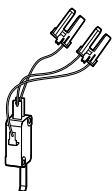
### Trip Indicator

| Product description                                                                                                                                                                    | Frame for use with | Part No.     | Article No. | Units per package | Note |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------|-------------|-------------------|------|
| Interlocking trip indicator:<br>After tripping, it must be reset before it can be reclosed. It can be used in combination with OTS and remote reset. INX load switch is not available. | PDC5               | IZMC1-RA16-2 | YC-500162   | 1                 |      |



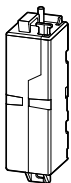
### Closing Release

| Product description                      | Frame for use with | Part No.        | Article No. | Units per package | Note                                                                                                                           |
|------------------------------------------|--------------------|-----------------|-------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Latch check switch (LCS) is not included |                    |                 |             |                   |                                                                                                                                |
| 24 V DC                                  | PDC5               | IZMC1-SR24DC-2  | YC-500176   | 1                 | 220-240V closing release is supplied as standard. If other voltage levels are required, need to order and replace and mounting |
| 48 V DC                                  | PDC5               | IZMC1-SR48DC-2  | YC-500177   | 1                 |                                                                                                                                |
| 110 - 125 V AC/DC                        | PDC5               | IZMC1-SR110AD-2 | YC-500178   | 1                 |                                                                                                                                |
| 220 - 240 V AC/DC                        | PDC5               | IZMC1-SR230AD-2 | YC-500179   | 1                 |                                                                                                                                |



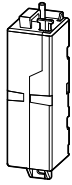
### Latch Check Switch

| Product description                                                                                    | Frame for use with | Part No.       | Article No. | Units per package | Note                                              |
|--------------------------------------------------------------------------------------------------------|--------------------|----------------|-------------|-------------------|---------------------------------------------------|
| Latch check switch = Latch check signal with 1 convertible contact (1CO), must install closing release | PDC5               | IZMC1-LCS-2    | YC-500186   | 1                 | For connecting external signal to closing release |
|                                                                                                        | PDC5               | IZMC1-LCS-SR-2 | YC-500187   | 1                 |                                                   |



### Shunt Release

| Product description                                                                                  | Frame for use with | Part No.        | Article No. | Units per package | Note                                                                                                                          |
|------------------------------------------------------------------------------------------------------|--------------------|-----------------|-------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Includes 2 normally open (NO) and 2 normally closed (NC) contacts. INX load switch is not available. |                    |                 |             |                   |                                                                                                                               |
| 24 V DC                                                                                              | PDC5               | IZMC1-ST24DC-2  | YC-500172   | 1                 | 220-240V closing release is supplied as standard. If other voltage levels are required, need to order separately for mounting |
| 48 V DC                                                                                              | PDC5               | IZMC1-ST48DC-2  | YC-500173   | 1                 |                                                                                                                               |
| 110 - 125 V AC/DC                                                                                    | PDC5               | IZMC1-ST110AD-2 | YC-500174   | 1                 |                                                                                                                               |
| 220 - 240 V AC/DC                                                                                    | PDC5               | IZMC1-ST230AD-2 | YC-500175   | 1                 |                                                                                                                               |

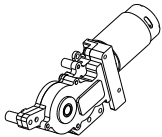


### Under-Voltage Release

| Product description                           | Frame for use with | Part No.         | Article No. | Units per package | Note                                                                                               |
|-----------------------------------------------|--------------------|------------------|-------------|-------------------|----------------------------------------------------------------------------------------------------|
| Can not be used with the second shunt release |                    |                  |             |                   |                                                                                                    |
| 24 V DC                                       | PDC5               | IZMC1-UVR24DC-2  | YC-500180   | 1                 | If ordered separately for upgrade, need to order a separate secondary terminal block. See Page 12. |
| 48 V DC                                       | PDC5               | IZMC1-UVR48DC-2  | YC-500181   | 1                 |                                                                                                    |
| 110 - 125 V AC/DC                             | PDC5               | IZMC1-UVR110AD-2 | YC-500182   | 1                 |                                                                                                    |
| 220 - 240 V AC/DC                             | PDC5               | IZMC1-UVR220AD-2 | YC-500183   | 1                 |                                                                                                    |

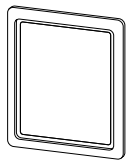
### Under-Voltage Time Delay Module

| Product description                                                                           | Frame for use with | Part No.           | Article No. | Units per package | Note                                  |
|-----------------------------------------------------------------------------------------------|--------------------|--------------------|-------------|-------------------|---------------------------------------|
| When for use with under-voltage release, time setting is 0.1 s, 0.5 s, 1.0 s, 2.0 s. 230 V AC | PDC5               | IZMC1-UVR-TD-230AC | YC-500206   | 1                 | Use in combination with IZMX-UVR220AD |



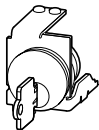
### Motor Operator

| Product description                                                                                                    | Frame for use with | Part No.          | Article No. | Units per package | Note                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|-------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Charge the spring force storage mechanism for remote or local actuation. Spring charging status indicator is included. |                    |                   |             |                   |                                                                                                                                             |
| 110 - 127 V AC 50/60 Hz<br>110 - 125 V DC                                                                              | PDC5               | IZMC1-M16-110AD-2 | YC-500170   | 1                 | Equipped as standard with YC-500171 motor; If other voltage levels are required, need to order separately, remove and replace for mounting. |
| 208 - 240 V AC 50/60 Hz<br>220 - 250 V DC                                                                              | PDC5               | IZMC1-M16-230AD-2 | YC-500171   | 1                 |                                                                                                                                             |
| 24 V DC                                                                                                                | PDC5               | IZMC1-M16-24DC-2  | YC-500168   | 1                 |                                                                                                                                             |
| 48 V DC                                                                                                                | PDC5               | IZMC1-M16-48DC-2  | YC-500169   | 1                 |                                                                                                                                             |



### Fixed Type Door Escutcheon

| Product description                        | Frame for use with | Part No.        | Article No. | Units per package | Note |
|--------------------------------------------|--------------------|-----------------|-------------|-------------------|------|
| Fixed circuit breaker IP41 door escutcheon | PDC5               | IZMC1-DEG91-F-2 | YC-500202   | 1                 |      |



### OFF Position Safety Lock

| Product description | Frame for use with | Part No.     | Article No. | Units per package | Note                                                     |
|---------------------|--------------------|--------------|-------------|-------------------|----------------------------------------------------------|
|                     | PDC5               | IZMC1-1L1K   | YC-500193   | 1                 | Kirk installation kit with lock cylinder and key, A type |
|                     | PDC5               | IZMC1-1L1K-B | YC-500194   | 1                 | Kirk installation kit with lock cylinder and key, B type |
|                     | PDC5               | IZMC1-1L1K-C | YC-500195   | 1                 | Kirk installation kit with lock cylinder and key, C type |

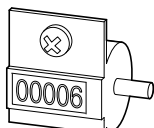
# Power Defense Molded Case Circuit Breaker

## Accessories

### Communication Module

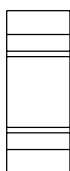
| Product description                         | Frame for use with | Part No.     | Article No. | Units per package | Note                                        |
|---------------------------------------------|--------------------|--------------|-------------|-------------------|---------------------------------------------|
| External Ethernet communication module      | PDC5               | IZMC2-ECAM-2 | YC-500121   | 1                 | Rail mounting<br>Separate ordering required |
| External ModBus communication module        | PDC5               | IZMC2-MCAM-2 | YC-500119   | 1                 |                                             |
| External Profi tBUS DP communication module | PDC5               | IZMC2-PCAM-2 | YC-500120   | 1                 |                                             |

### Operations Counter



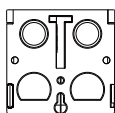
| Product description                                                                                                | Frame for use with | Part No.     | Article No. | Units per package | Note |
|--------------------------------------------------------------------------------------------------------------------|--------------------|--------------|-------------|-------------------|------|
| To record the number of ON-OFF operations conducted by the circuit breaker. It is not wired to any motor operator. | PDC5               | IZMC1-OC16-2 | YC-500185   | 1                 |      |

### Power Module



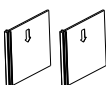
| Product description                                                                                                                                                     | Frame for use with | Part No.        | Article No. | Units per package | Note                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|-------------|-------------------|------------------------------------------------------------------------------------|
| External voltage metering module<br>To provide voltage metering signal to PXR25 trip unit; one module can connect to up to 16 units, with a max. distance of 75 meters. | PDC5               | IZMC2-PXR-PTM-2 | YC-500160   | 1                 | Rail mounting<br>Separate ordering required<br>Not included in the PXR25 Trip unit |

### Button Cover



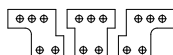
| Product description                         | Frame for use with | Part No.         | Article No. | Units per package | Note |
|---------------------------------------------|--------------------|------------------|-------------|-------------------|------|
| (With optional padlock) Sealed button cover |                    |                  |             |                   |      |
| P = Plastic cover                           | PDC5               | IZMC1-PLPC16-P-2 | YC-500190   | 1                 |      |
| M = Metal cover                             | PDC5               | IZMC1-PLPC16-M-2 | YC-500191   | 1                 |      |

### Phase Barrier



| Product description  | Frame for use with | Part No.      | Article No. | Units per package | Note |
|----------------------|--------------------|---------------|-------------|-------------------|------|
| Phase barrier 100 3P | PDC5               | PDC5XIB3PL100 | PDC720085   | 2                 |      |
| Phase barrier 200 3P | PDC5               | PDC5XIB3PL200 | PDC720086   | 2                 |      |
| Phase barrier 100 4P | PDC5               | PDC5XIB4PL100 | PDC720087   | 3                 |      |
| Phase barrier 200 4P | PDC5               | PDC5XIB4PL200 | PDC720088   | 3                 |      |

### Extension Board



| Product description                    | Frame for use with | Part No.          | Article No. | Units per package | Note |
|----------------------------------------|--------------------|-------------------|-------------|-------------------|------|
| 95MM phase spacing extension board 3P  | PDC5               | PDC5X3TSP1600W95  | PDC720089   | 3                 |      |
| 116MM phase spacing extension board 3P | PDC5               | PDC5X3TSP1600W116 | PDC720090   | 3                 |      |
| 95MM phase spacing extension board 4P  | PDC5               | PDC5X4TSP1600W95  | PDC720091   | 4                 |      |
| 116MM phase spacing extension board 3P | PDC5               | PDC5X4TSP1600W116 | PDC720092   | 4                 |      |

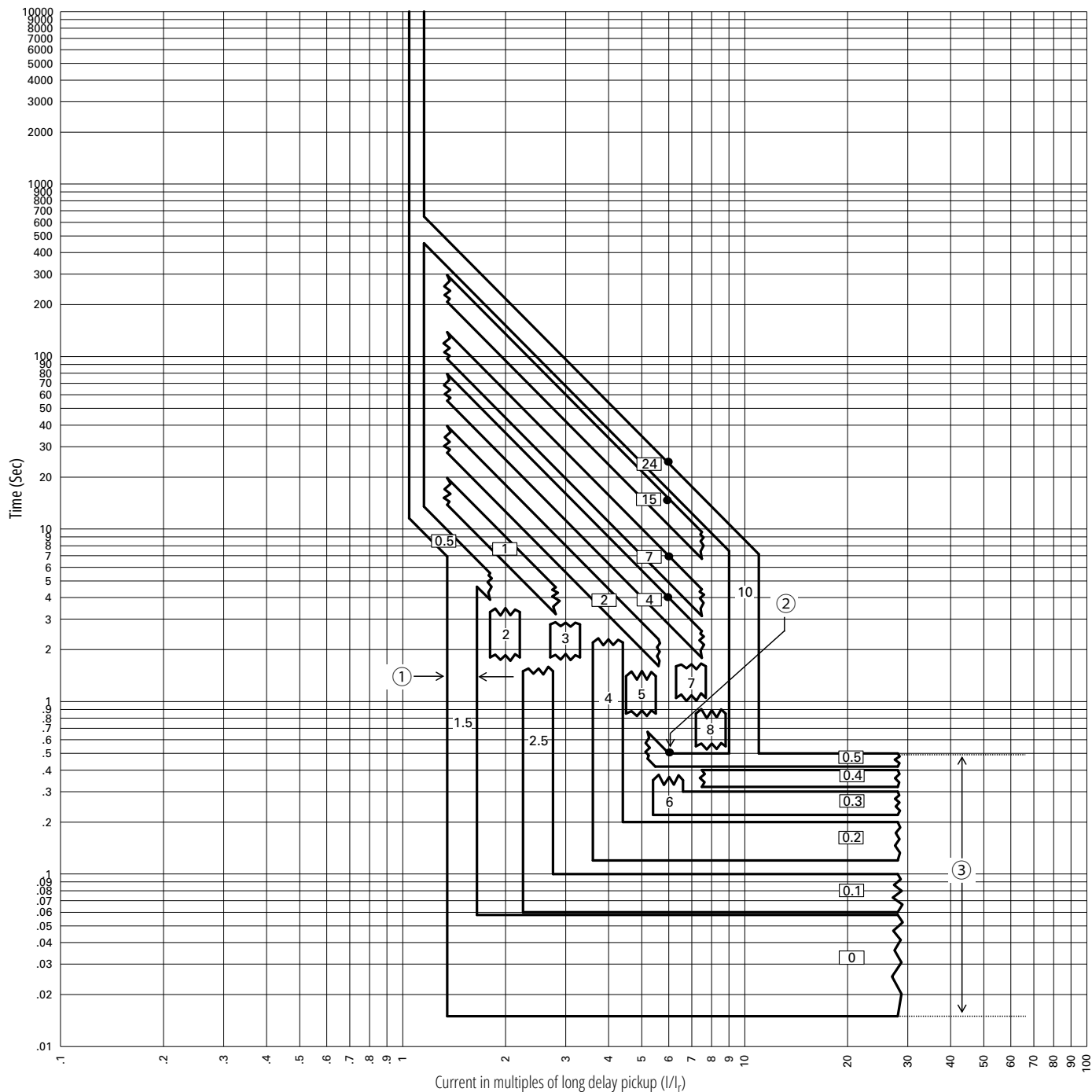


## I Features and Data I

## Tripping Characteristics

### PXR20/25 Long Delay (L) and Short Delay (S) Curves

**L-Protection:** I<sup>2</sup>t characteristic curve; **S-Protection:** Flat characteristic curve

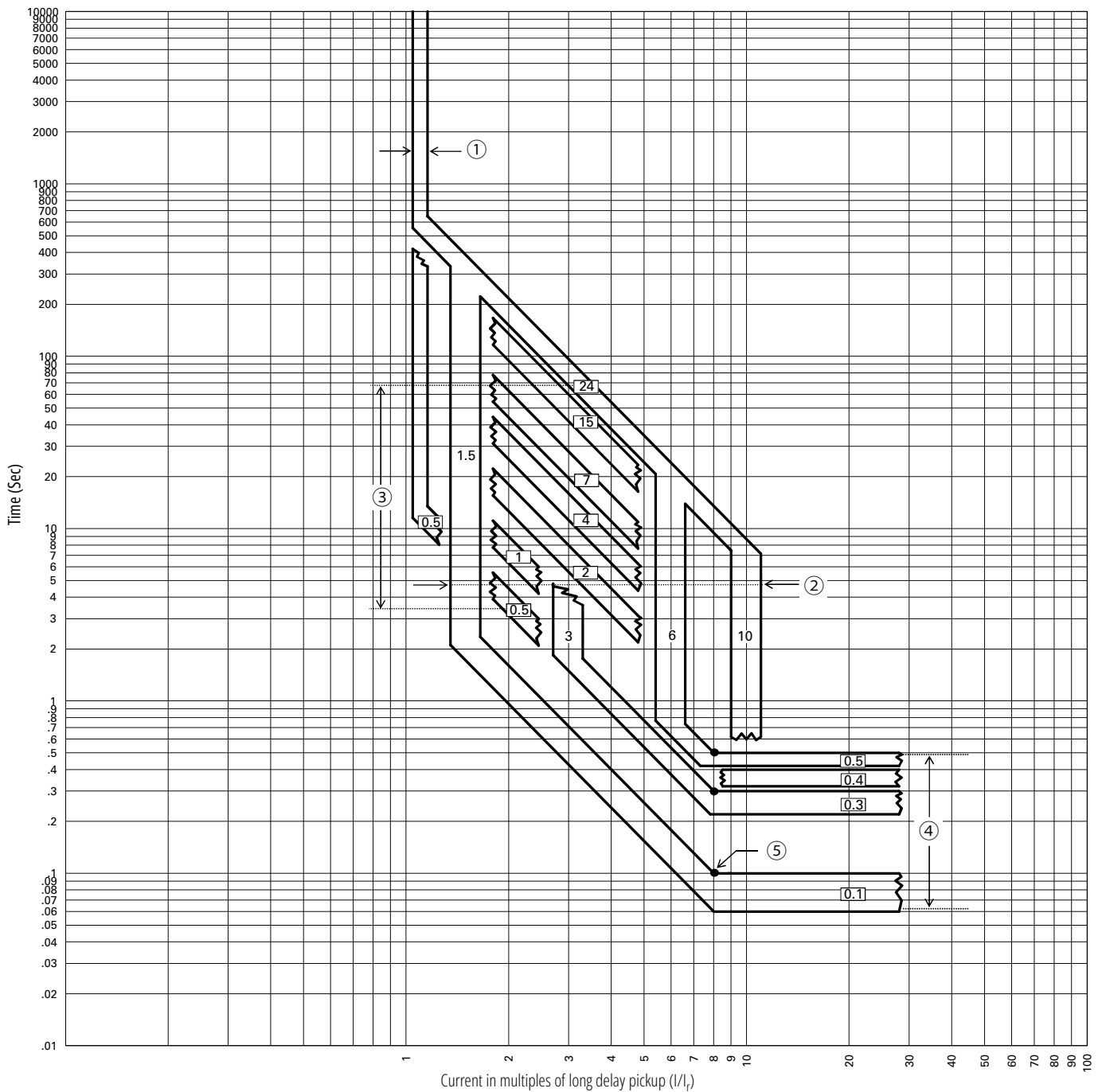


Notes:

1. Short delay pickup, the actual pickup point has 100%±10% tolerance.
2. Long delay I<sup>2</sup>T slopes flattens out at 6x of I<sub>r</sub>.
3. Short time delay from 0 (50ms) to 0.5s, with +0 / -80ms tolerance except 0.1s and 0s setting;  
0.1s setting, has tolerance of 0.06s to 0.1s;  
0s setting, nominal clear time is 60ms with auxiliary power or 120ms without.
4. If long delay thermal memory is enabled, trip times may be shorter than indicated in this chart.
5. Curves applies from -20°C to +50°C ambient. Temperatures above +85°C will cause over temperature trip.
6. This curve is for 50Hz, 60Hz applications.
7. The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

## Power Defense Molded Case Circuit Breaker

### PXR20/25 Long Delay (L) and Short Delay (S) Curves



Notes:

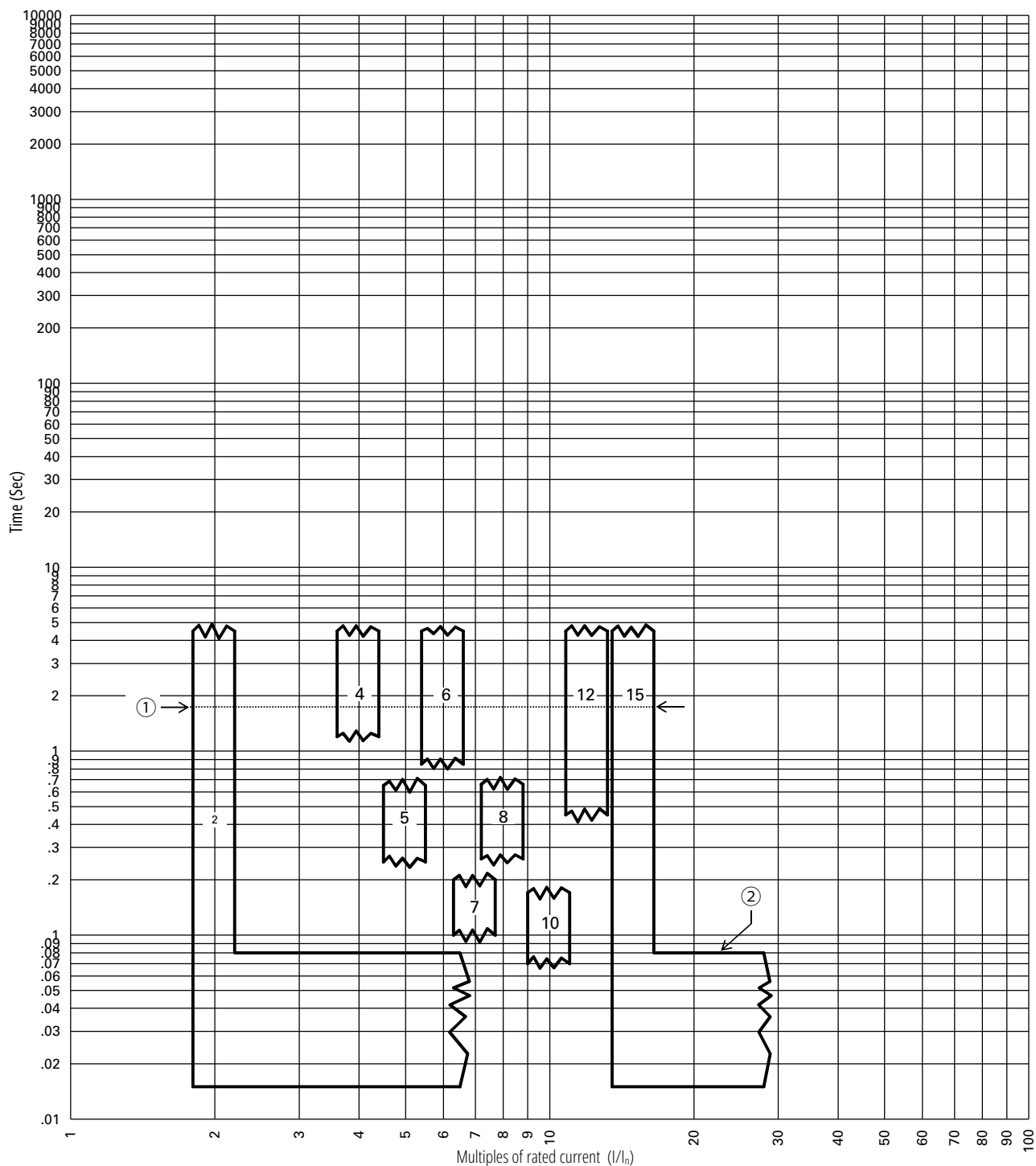
1. This curve shown as a multiple of the LONG PU setting ( $I_r$ ). The actual pickup point occurs at 110% of the  $I_r$  with  $\pm 5\%$  tolerance.
2. Short Delay Pickup (SDPU) =  $1.5 \times$  to  $10 \times$  of  $I_r$ , have  $\pm 10\%$  tolerance.
3. Long Delay Time = 0.5s to 24s, have +0 / -30% tolerance.
4. Short Delay Slope =  $I^2T$ . The short delay pickup values have  $\pm 10\%$  tolerance.  
Time setting from 0.1s to 0.5s, with steps of 0.1s, except 0.2s.  
Tolerance is 100% +0 / -30% except 0.1s has tolerance 100% +0 / -40%.
5. The  $I^2T$  curves intersect the top of the flat time tolerance band at  $8 \times$  of  $I_r$ . The bottom of the flat time tolerance band projects to the intersection point of the  $I^2T$  curves, determining the curve shape
6. If long delay thermal memory is enabled, trip times may be shorter than indicated in this chart.
7. Curves applies from -20°C to +50°C ambient. Temperatures above +85°C will cause over temperature trip.
8. This curve is for 50Hz, 60Hz applications.  
The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

# Power Defense Molded Case Circuit Breaker

## Tripping Characteristics

### PXR20/25 Instantaneous Trip (I) Curve

I-Protection: Adjustable



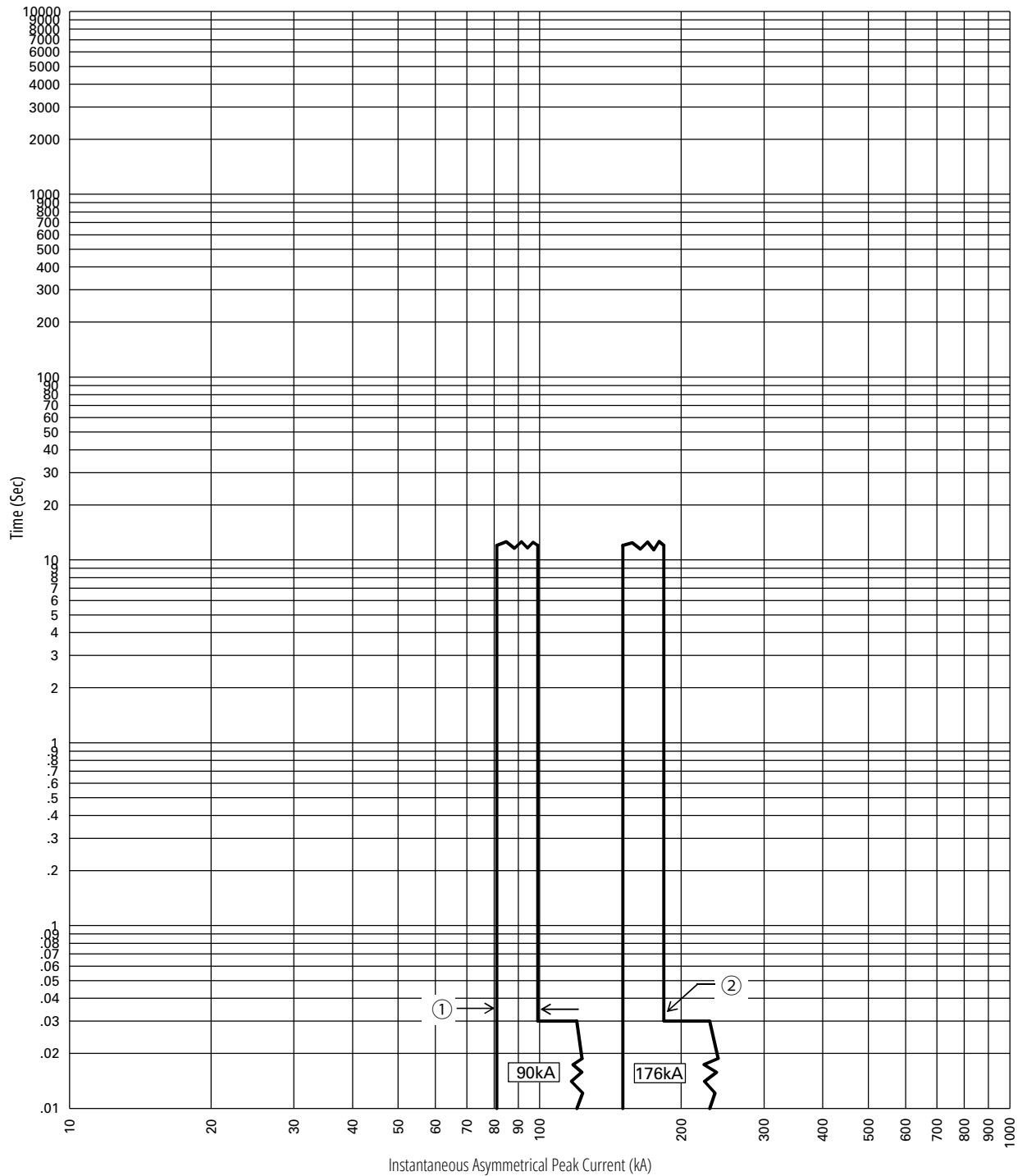
#### Notes:

1. The Instantaneous trip curve has  $\pm 10\%$  tolerance.
2. The nominal Instantaneous trip time is 80ms with external power supply or 100ms without.
3. Instantaneous protection could be disabled via the rotary button.
4. The pickup values for Instantaneous protection shown as multiples of  $I_n$ .
5. The end of the curve is determined by the interrupting rating of the circuit breaker.
6. Curves applies from  $-20^\circ\text{C}$  to  $+50^\circ\text{C}$  ambient. Temperatures above  $+85^\circ\text{C}$  will cause over temperature trip.
7. This curve is for 50Hz, 60Hz applications.
8. The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

# Power Defense Molded Case Circuit Breaker

## Tripping Characteristics

### PXR20/25 Instantaneous Trip (I) Curve High Fault Current Instantaneous Trip (High Instantaneous)



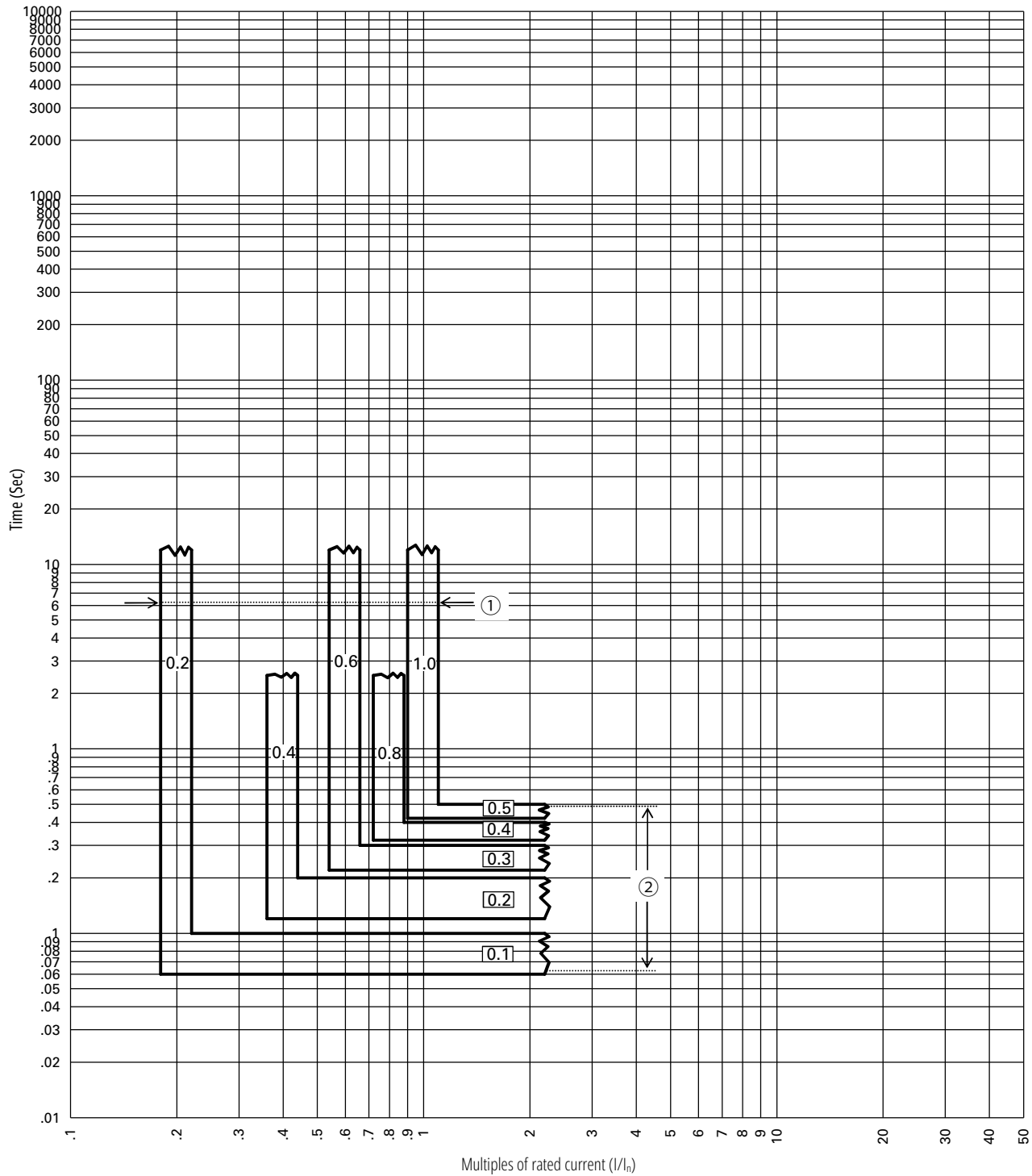
#### Notes:

1. High Instantaneous Trip function of the breaker is set as fixed 90kA peak current, with  $\pm 10\%$  tolerance.
2. This protection is functional even when the High Instantaneous is set to the OFF position.
3. The PXR trip unit will light the Instantaneous LED for a High Instantaneous trip.
4. The Instantaneous clearing times shown are conservative and consider the maximum response times of the trip unit, the circuit breaker opening, and the interruption of the current under factors that contribute to worst case conditions, like: maximum rated current, single phase interruption, and minimum power factor. Faster clearing times are possible depending on the specific system conditions and settings.

# Power Defense Molded Case Circuit Breaker

## Tripping Characteristics

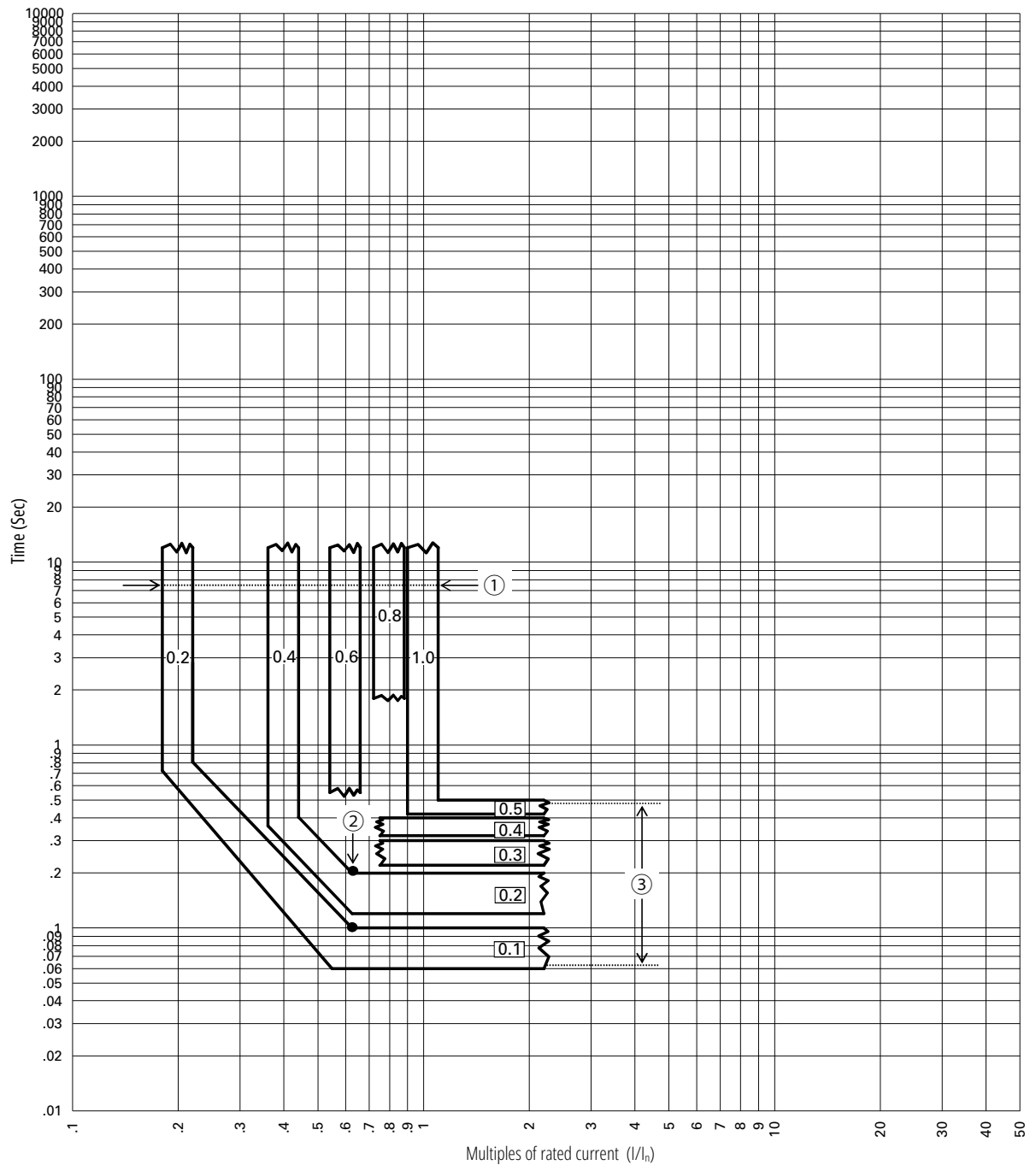
### PXR20/25 Ground Protection (G) Curve G: Ground Protection - Flat Characteristic Curve



#### Notes:

1. Ground PU setting from 0.2 to 1.0 of  $I_n$  with steps of 0.2, have tolerance of  $\pm 10\%$ .
2. Ground Flat time from 0.1s to 0.5s, with 0.1s increments.
3. Ground slope: Flat, trip time tolerance is  $+0 / -80\text{ms}$  for all settings except 0.1s setting is 0.06s to 0.1s.
4. The pickup values for Ground protection shown as multiples of  $I_n$ .
5. The end of the curve is determined by the interrupting rating of the circuit breaker.
6. Curves applies from  $-20^\circ\text{C}$  to  $+50^\circ\text{C}$  ambient. Temperatures above  $+85^\circ\text{C}$  will cause over temperature trip.
7. This curve is for 50Hz, 60Hz applications.
8. The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

**PXR20/25 Ground Protection (G) Curve**  
**G: Ground Fault Protection -  $I^2t$  Characteristic curve**



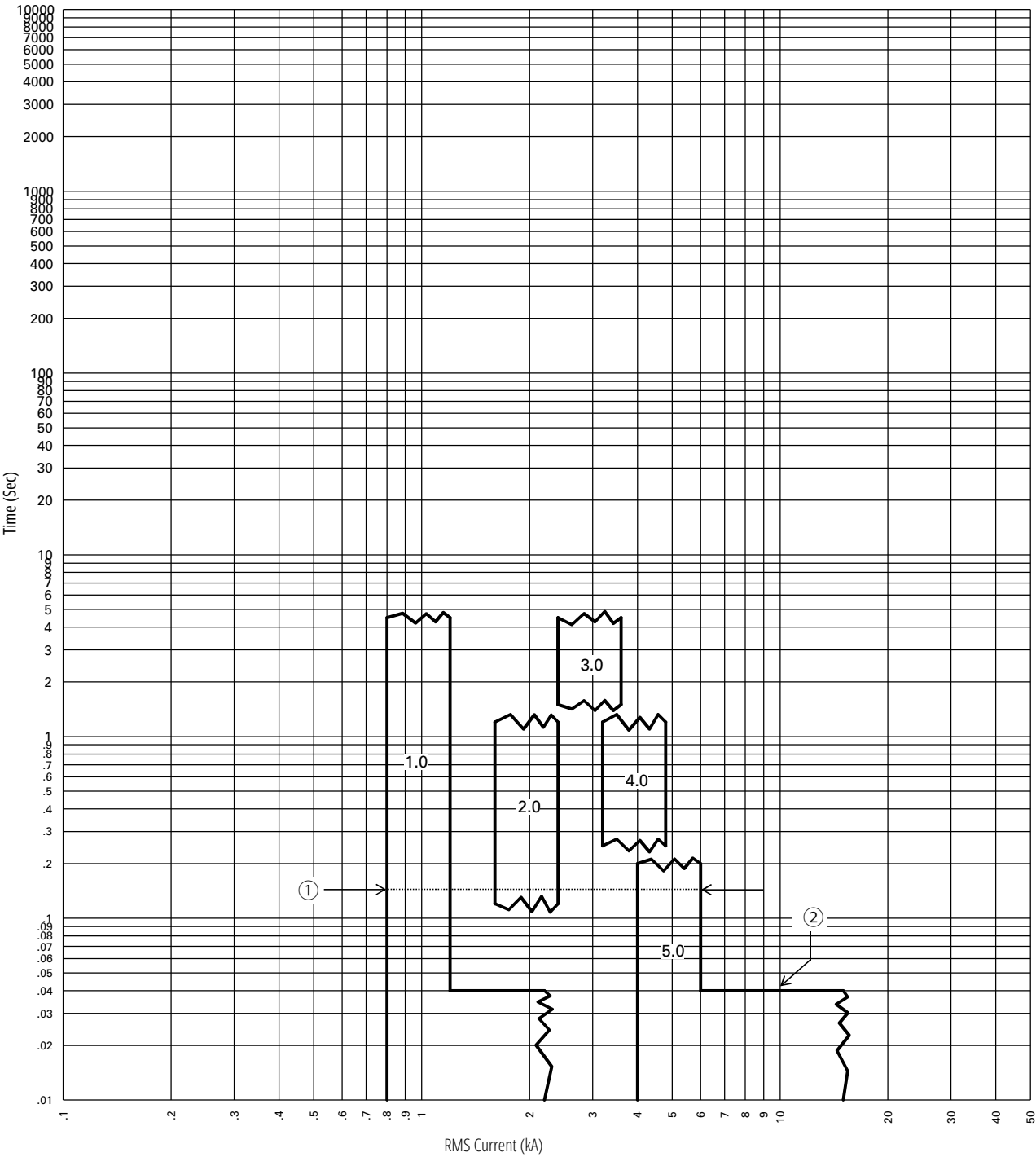
Notes:

1. Ground PU setting from 0.2 to 1.0 of  $I_n$  with steps of 0.2, have tolerance of  $\pm 10\%$ .
2. Break points at  $0.625 \times I_n$  to flat out.
3. Ground  $I^2t$  time from 0.1s to 0.5s, with 0.1s increments.
4. Ground slope: Flat, trip time tolerance is  $+0 / -80\text{ms}$  for all settings except 0.1s setting is 0.06s to 0.1s.  
 Ground slope:  $I^2t$ , tolerance is  
 0.1s, 0.2s :  $+0 / -40\%$   
 0.3s, 0.4s, 0.5s :  $+0 / -30\%$
5. The Ground pickup values shown as multiples of the Current Rating ( $I_n$ ).
6. The end of the curve is determined by the interrupting rating of the circuit breaker.
7. Curves applies from  $-20^\circ\text{C}$  to  $+50^\circ\text{C}$  ambient. Temperatures above  $+85^\circ\text{C}$  will cause over temperature trip.
8. This curve is for 50Hz, 60Hz applications.
9. The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

# Power Defense Molded Case Circuit Breaker

## Tripping Characteristics

### PXR20/25 Maintenance Mode Curve ArcFlash Reduction Maintenance Mode

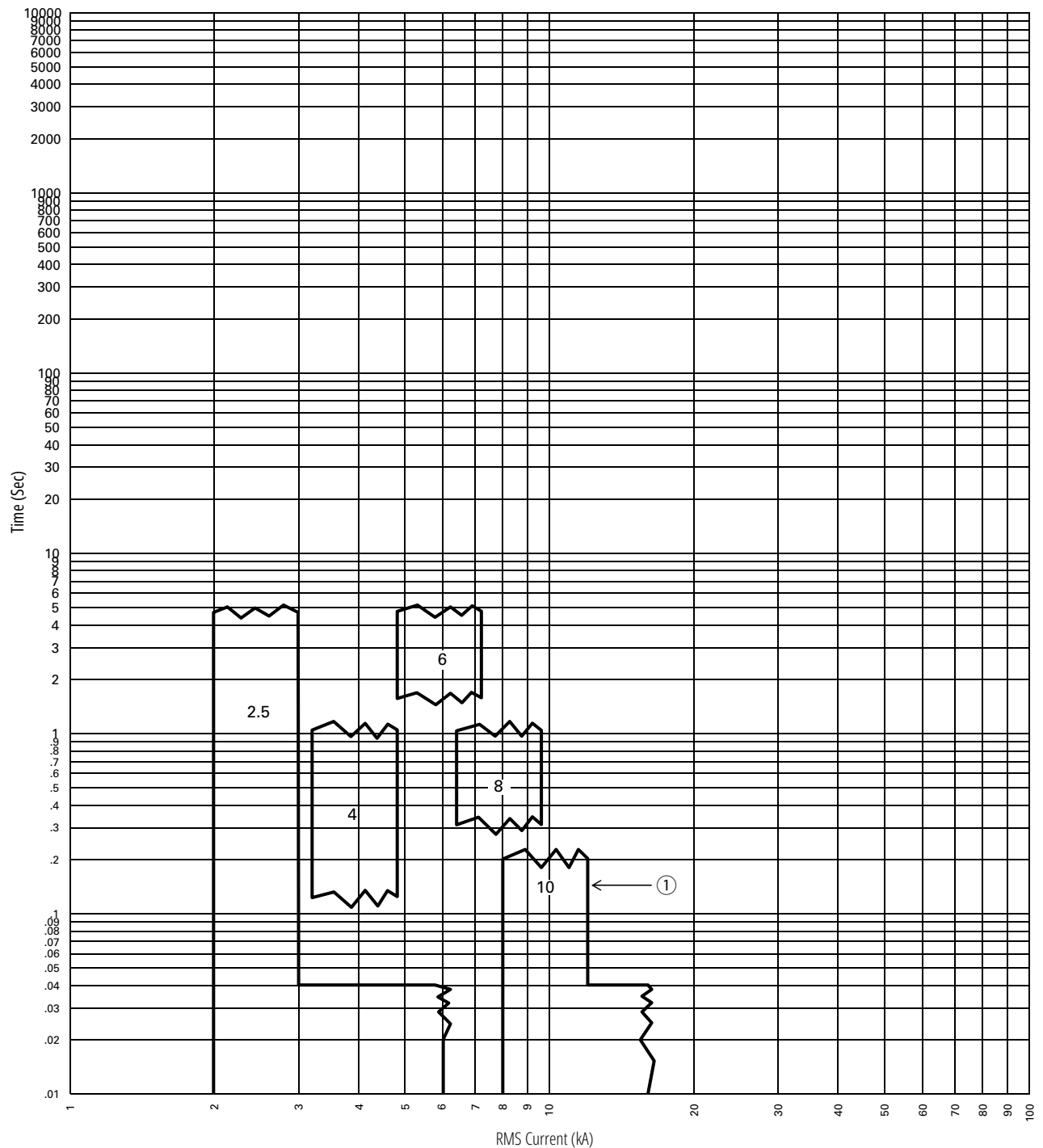


- Notes:
1. Nominal action values have tolerance of  $\pm 20\%$ .
  2. The nominal Maintenance Mode trip time is 40ms with external power supply.
  3. The Maintenance Mode feature must be ENABLED via setting Maintenance Mode rotary switch on the trip unit to ON position, remote switch, or communications. The circuit breaker is in Maintenance Mode being shown by blue LED lit on the Maintenance Mode rotary button.
  4. The PXR trip unit will light the Instantaneous LED for a Maintenance Mode Trip.
  5. The end of the curve is determined by the interrupting rating of the circuit breaker.
  6. Curves applies from -20°C to +50°C ambient. Temperatures above +85°C will cause over temperature trip.
  7. This curve is for 50Hz ,60Hz applications.
  8. The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

# Power Defense Molded Case Circuit Breaker

## Tripping Characteristics

### PXR20/25 Maintenance Mode Curve Arcflash Reduction Maintenance Mode



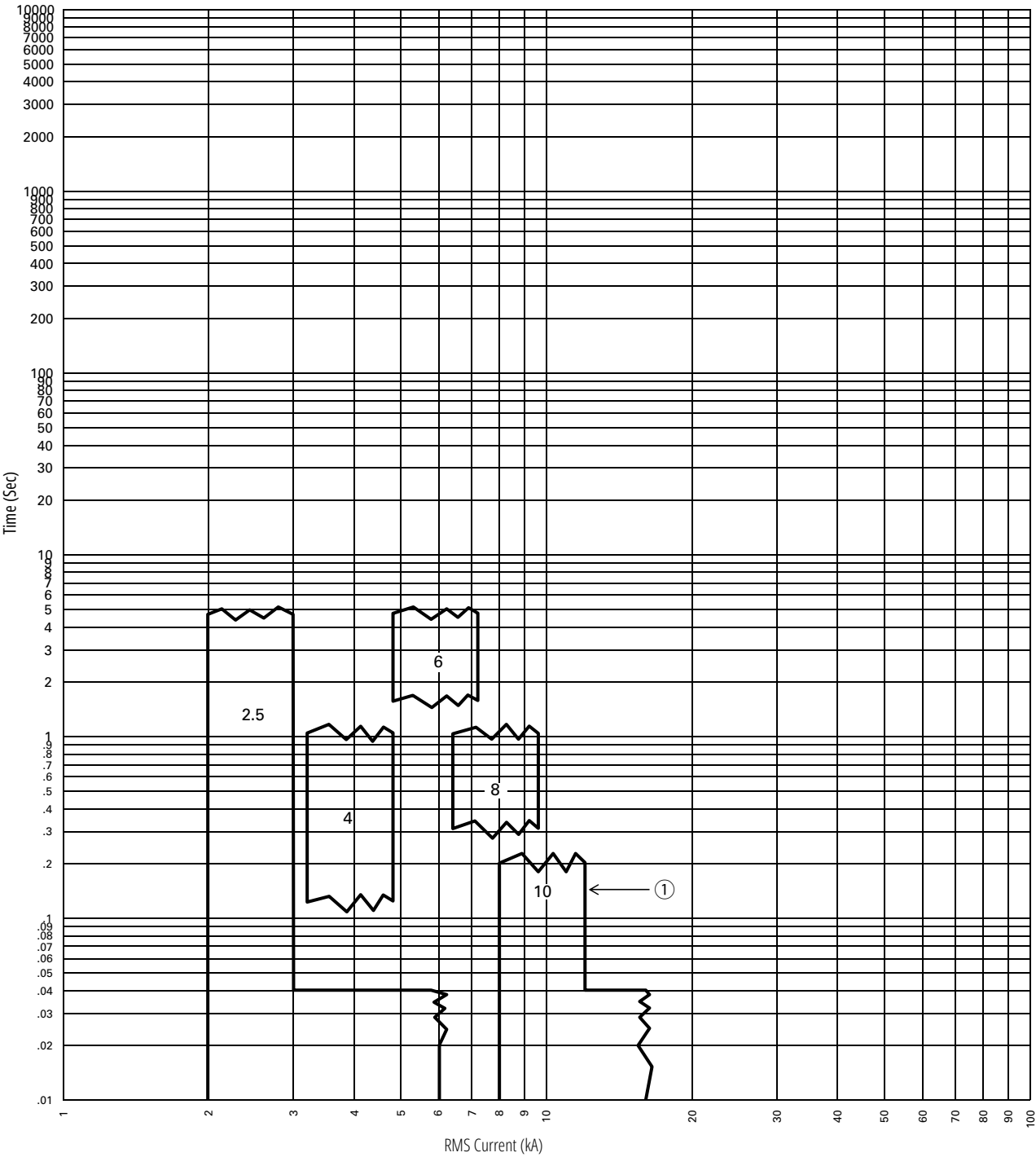
#### Notes:

1. Nominal action values have tolerance of  $\pm 20\%$ .
2. The nominal Maintenance Mode trip time is 40ms with external power supply.
3. The Maintenance Mode feature must be ENABLED via setting Maintenance Mode rotary switch on the trip unit to ON position, remote switch, or communications. The circuit breaker is in Maintenance Mode being shown by blue LED lit on the Maintenance Mode rotary button.
4. The PXR trip unit will light the Instantaneous LED for a Maintenance Mode Trip.
5. The end of the curve is determined by the interrupting rating of the circuit breaker.
6. Curves applies from  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  ambient. Temperatures above  $+85^{\circ}\text{C}$  will cause over temperature trip.
7. This curve is for 50Hz, 60Hz applications.
8. The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

# Power Defense Molded Case Circuit Breaker

## Tripping Characteristics

### PXR20/25 Maintenance Mode Curve ArcFlash Reduction Maintenance Mode

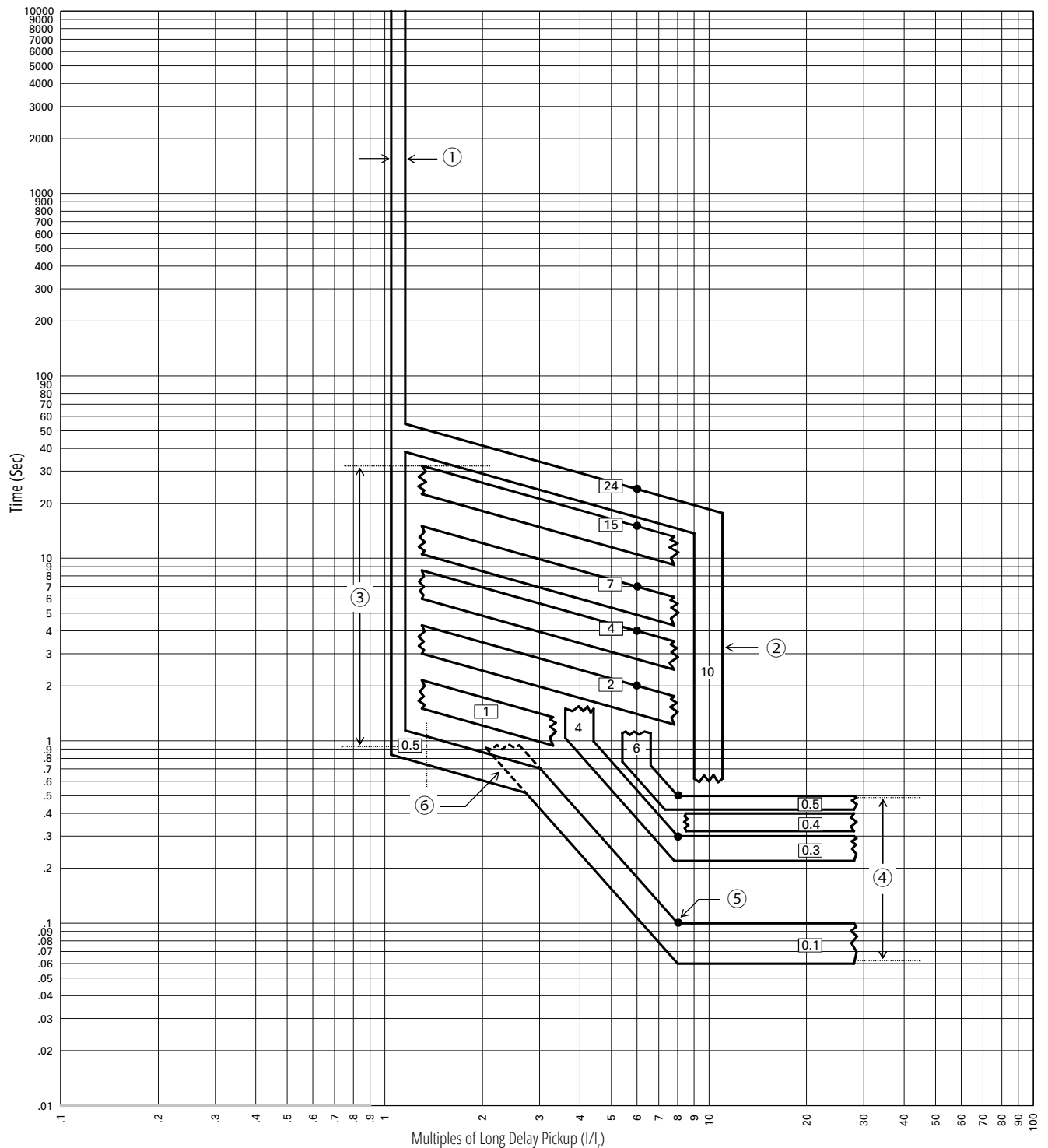


- Notes:
1. Nominal action values have tolerance of  $\pm 20\%$ .
  2. The nominal Maintenance Mode trip time is 40ms with external power supply.
  3. The Maintenance Mode feature must be ENABLED via setting Maintenance Mode rotary switch on the trip unit to ON position, remote switch, or communications. The circuit breaker is in Maintenance Mode being shown by blue LED lit on the Maintenance Mode rotary button.
  4. The PXR trip unit will light the Instantaneous LED for a Maintenance Mode Trip.
  5. The end of the curve is determined by the interrupting rating of the circuit breaker.
  6. Curves applies from  $-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  ambient. Temperatures above  $+85^{\circ}\text{C}$  will cause over temperature trip.
  7. This curve is for 50Hz, 60Hz applications.
  8. The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

# Power Defense Molded Case Circuit Breaker

## Tripping Characteristics

### PXR20/25 Long Delay (L) Curve L-Protection: $I^{0.5}t$ Characteristic Curve



#### Notes:

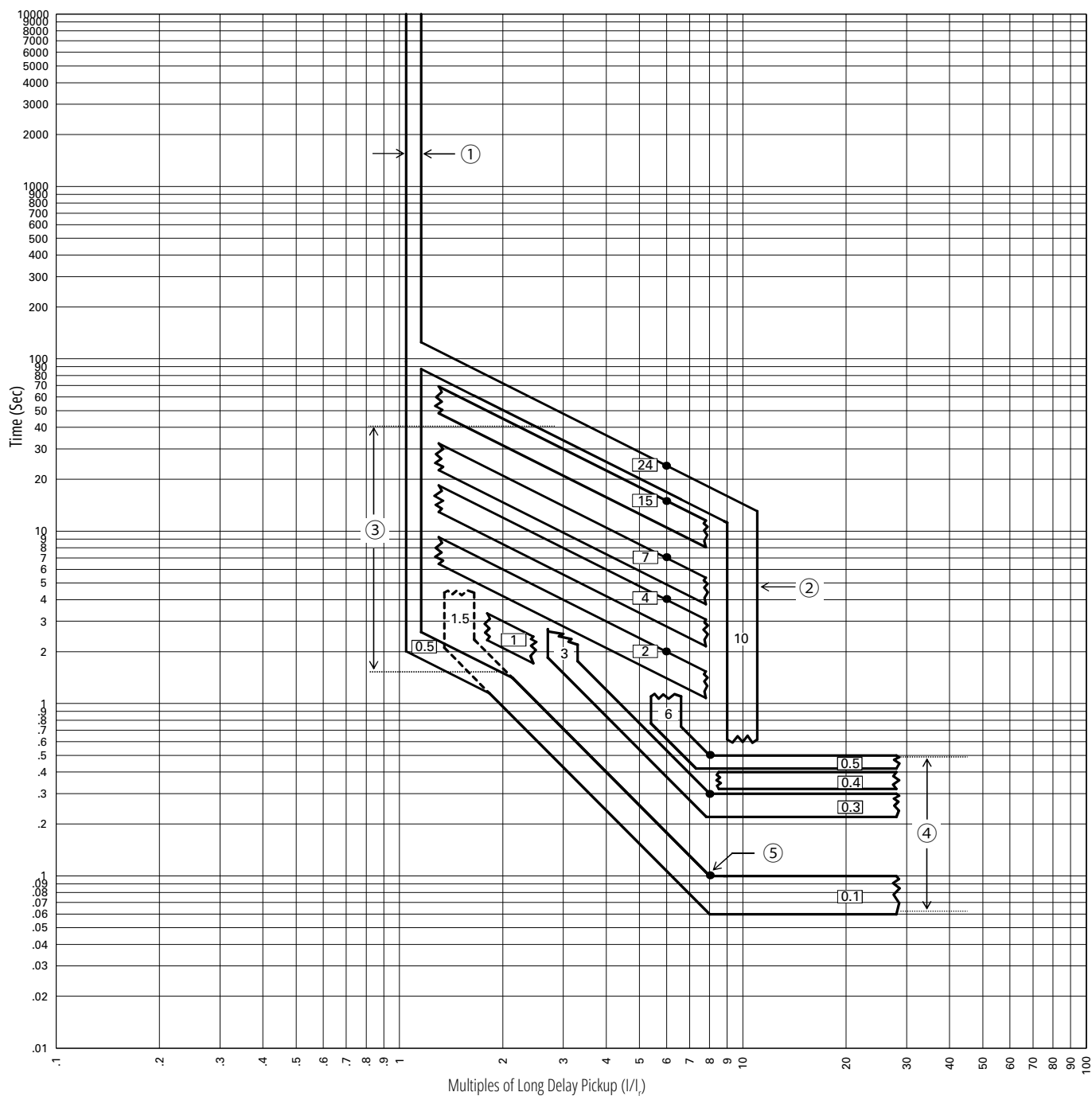
- This curve shown as a multiple of the LONG PU setting ( $I_r$ ). The actual pickup point occurs at 110% of the  $I_r$  with  $\pm 5\%$  tolerance.
- SDPU = 1.5x to 10x of  $I_r$ , have  $\pm 10\%$  tolerance.
- LD Time = 0.5s to 24s, have +0 / -30% tolerance.
- SD Slope =  $I^2T$ . The short pickup points have  $\pm 10\%$  tolerance. time setting from 0.1s to 0.5s, with steps of 0.1s, except 0.2s.  
Tolerance is +0 / -30% except 0.1s has +0 / -40% tolerance.
- The  $I^2T$  curves intersect the top of the flat time tolerance band at 8x of  $I_r$ . The bottom of the flat time tolerance band projects to the intersection point of the  $I^2T$  curves, determining the curve shape.
- If the short delay time is longer than long delay time, the short delay trip time will follow the long time setting.
- If long delay thermal memory is enabled, trip times may be shorter than indicated in this chart.
- Curves applies from -20°C to +50°C ambient. Temperatures above +85°C will cause over temperature trip.
- This curve is for 50Hz, 60Hz applications.
- The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

# Power Defense Molded Case Circuit Breaker

## Tripping Characteristics

### PXR20/25 Long Delay (L) Curve

### L-Protection: $I^2t$ Characteristic Curve



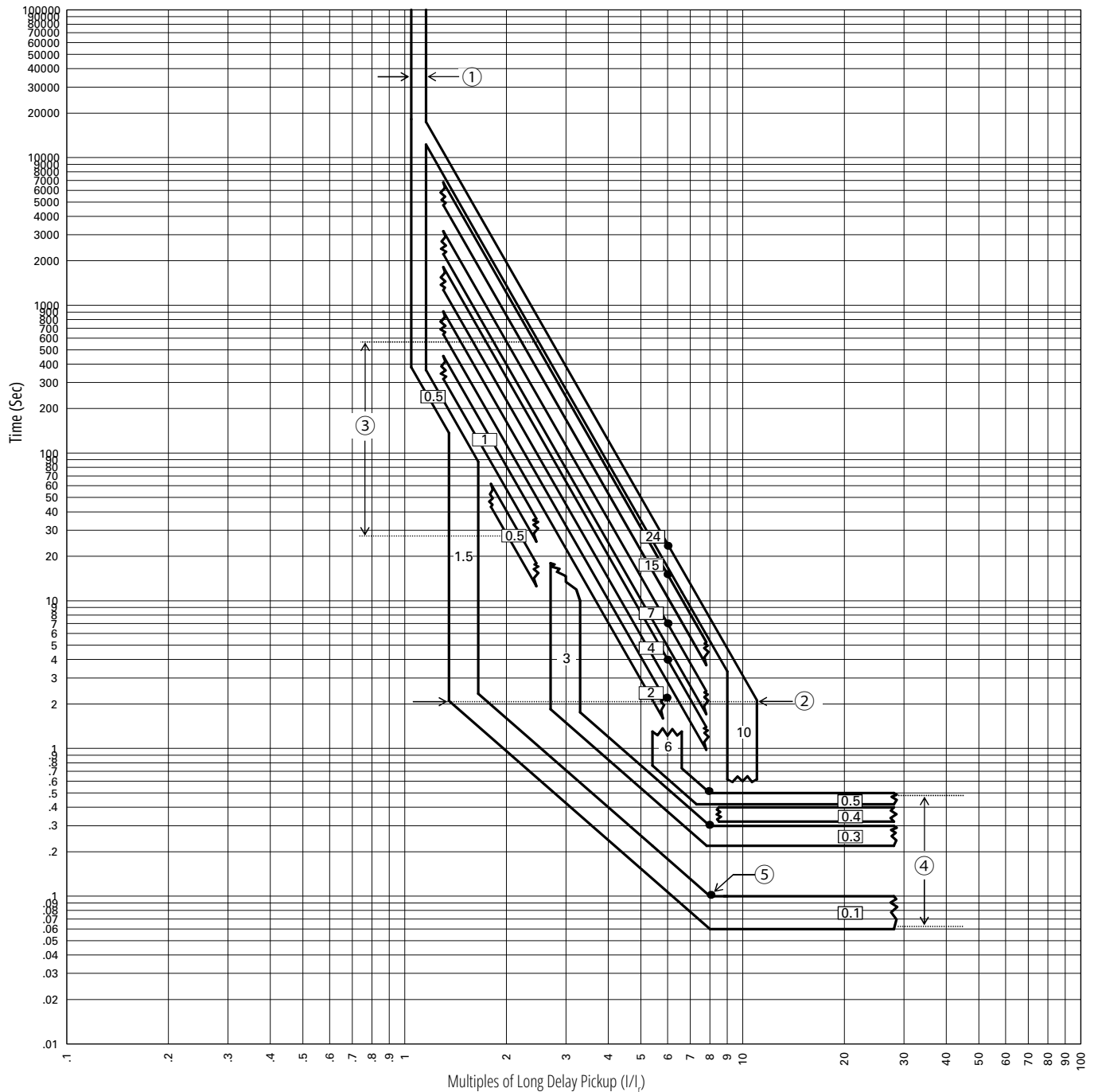
#### Notes:

1. This curve shown as a multiple of the LONG PU setting ( $I_r$ ). The actual pickup point occurs at 110% of the  $I_r$  with  $\pm 5\%$  tolerance.
2. SDPU =  $1.5 \times$  to  $10 \times$  of  $I_r$ , have  $\pm 10\%$  tolerance.
3. LD Time = 0.5s to 24s, have  $+0 / -30\%$  tolerance.
4. SD Slope =  $I_r T$ . The short pickup points have  $\pm 10\%$  tolerance.  
Time setting from 0.1s to 0.5s, with steps of 0.1s, except 0.2s.  
Tolerance is  $+0 / -30\%$  except 0.1s has  $+0 / -40\%$  tolerance.
5. The  $I^2T$  curves intersect the top of the flat time tolerance band at  $8 \times$  of  $I_r$ . The bottom of the flat time tolerance band projects to the intersection point of the  $I^2T$  curves, determining the curve shape.
6. If long delay thermal memory is enabled, trip times may be shorter than indicated in this chart.
7. Curves applies from  $-20^\circ\text{C}$  to  $+50^\circ\text{C}$  ambient. Temperatures above  $+85^\circ\text{C}$  will cause over temperature trip.
8. This curve is for 50Hz, 60Hz applications.
9. The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

# Power Defense Molded Case Circuit Breaker

## Tripping Characteristics

### PXR20/25 Long Delay (L) Curve L-Protection: $I^2t$ curve

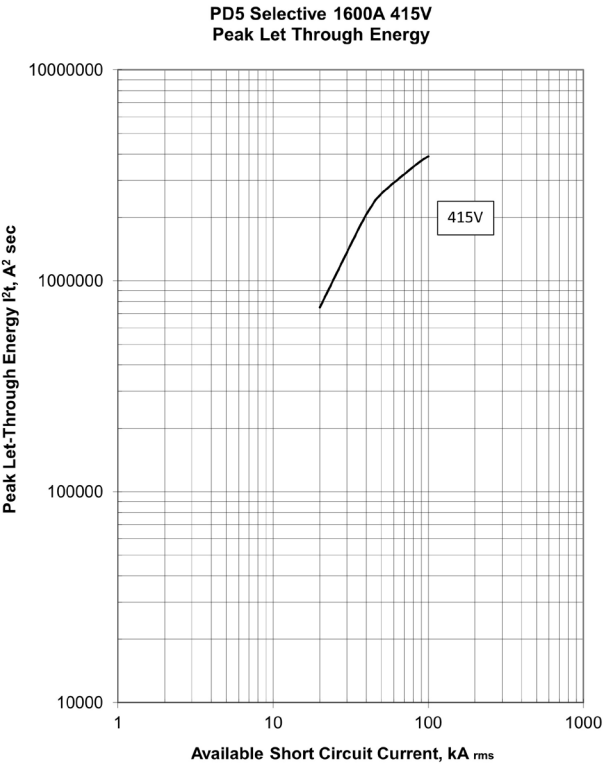
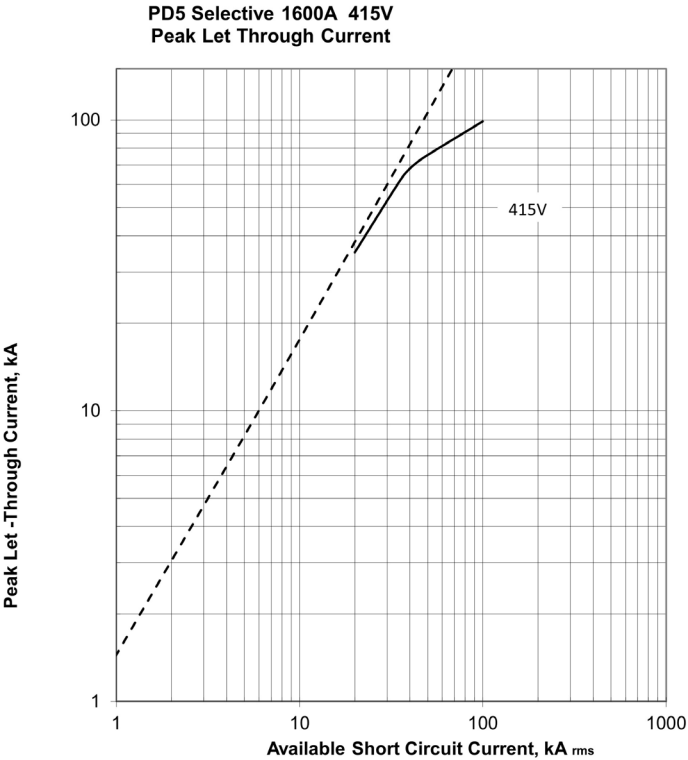


#### Notes:

1. This curve shown as a multiple of the LONG PU setting ( $I_r$ ). The actual pickup point occurs at 110% of the  $I_r$  with  $\pm 5\%$  tolerance.
2. SDPU = 1.5x to 10x of  $I_r$ , have  $\pm 10\%$  tolerance.
3. LD Time = 0.5s to 24s, have +0 / -30% tolerance.
4. SD Slope =  $I_r T$ . The short pickup points have  $\pm 10\%$  tolerance.  
Time setting from 0.1s to 0.5s, with steps of 0.1s, except 0.2s.  
Tolerance is +0 / -30% except 0.1s has +0 / -40% tolerance.
5. The  $I^2T$  curves intersect the top of the flat time tolerance band at 8x of  $I_r$ . The bottom of the flat time tolerance band projects to the intersection point of the  $I^2T$  curves, determining the curve shape.
6. If long delay thermal memory is enabled, trip times may be shorter than indicated in this chart.
7. Curves applies from -20°C to +50°C ambient. Temperatures above +85°C will cause over temperature trip.
8. This curve is for 50Hz, 60Hz applications.
9. The total clearing times shown include the response time for trip unit, the breaker opening and the interruption of the current.

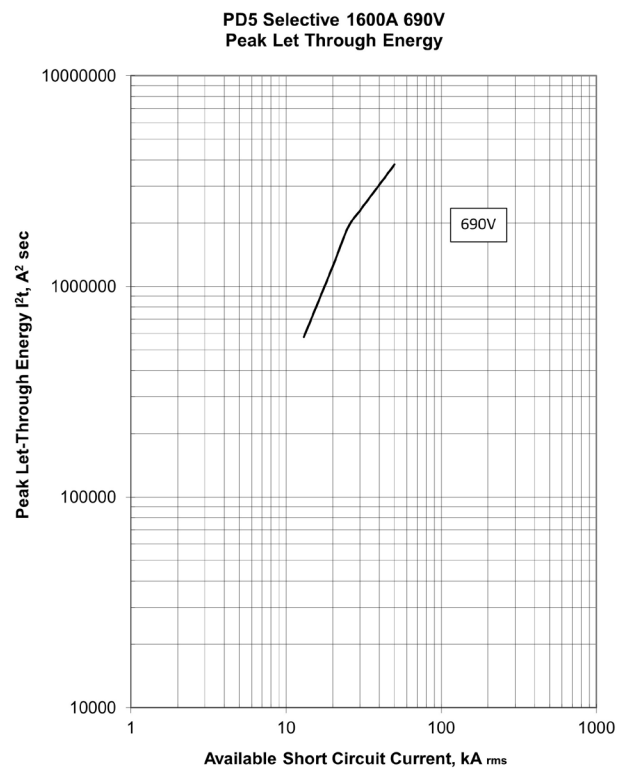
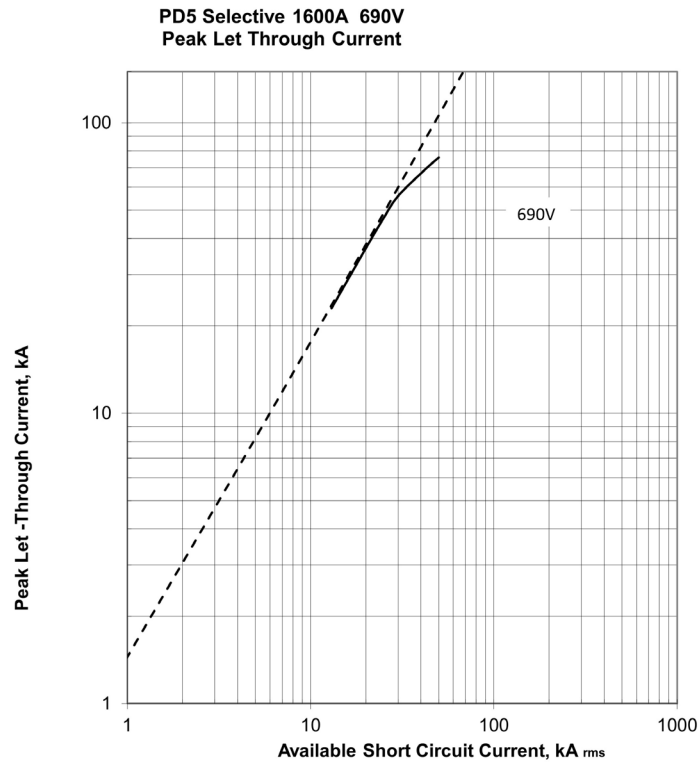
Power Defense Molded Case Circuit Breaker

Let Through Characteristics



# Power Defense Molded Case Circuit Breaker

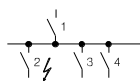
## Let Through Characteristics



# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

### Selective Protection between Incoming Circuit Breaker PDC...and Outgoing Circuit Breaker FAZ-B(C)... PKZ... PDC... NZM...



Incoming circuit breaker

Selectivity 415 V AC

Between circuit-breakers it enables the separate disconnection of faulty system sections. Selectivity exists between incoming circuit breaker 1 and outgoing circuit-breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit. System sections 3 and 4 remain operational.

Outgoing circuit breaker

| Nr of entries                                           | Upstream        | PDC1 A-A TMTU<br>I <sub>cu</sub> = 25 (36) kA |                              |     |      |      |      |     | PDC2 A-A TMTU<br>I <sub>cu</sub> = 70kA |      |     |      |     |
|---------------------------------------------------------|-----------------|-----------------------------------------------|------------------------------|-----|------|------|------|-----|-----------------------------------------|------|-----|------|-----|
|                                                         |                 | I <sub>n</sub> [A]                            | 16-40                        | 50  | 63   | 80   | 100  | 125 | 160                                     | 125  | 160 | 200  | 250 |
|                                                         |                 | II(I <sub>cu</sub> )                          |                              |     |      |      |      |     |                                         |      |     |      |     |
| <b>MCBs</b>                                             | <b>FAZ -B/C</b> | <b>I<sub>n</sub> [A]</b>                      | <b>I<sub>cu</sub> (415V)</b> |     |      |      |      |     |                                         |      |     |      |     |
| FAZ<br>All types with characteristic B, C<br>15 - 25kA  | FAZ -B/C        | 0.5                                           | T                            | T   | T    | T    | T    | T   | T                                       | T    | T   | T    | T   |
|                                                         | FAZ -B/C        | 1                                             | T                            | T   | T    | T    | T    | T   | T                                       | T    | T   | T    | T   |
|                                                         | FAZ -B/C        | 1.5                                           | 2                            | T   | T    | T    | T    | T   | T                                       | T    | T   | T    | T   |
|                                                         | FAZ -B/C        | 2                                             | 1.2                          | 2   | 3    | 3    | 10   | T   | T                                       | T    | T   | T    | T   |
|                                                         | FAZ -B/C        | 2.5                                           | 1.2                          | 2   | 3    | 3    | 8    | T   | T                                       | T    | T   | T    | T   |
|                                                         | FAZ -B/C        | 3                                             | 1.2                          | 2   | 2.5  | 3    | 5    | 10  | 10                                      | T    | T   | T    | T   |
|                                                         | FAZ -B/C        | 3.5                                           | 1.2                          | 1.5 | 2    | 2    | 4    | 10  | 10                                      | T    | T   | T    | T   |
|                                                         | FAZ -B/C        | 4                                             | 1                            | 1.5 | 2    | 2    | 4    | 10  | 10                                      | T    | T   | T    | T   |
|                                                         | FAZ -B/C        | 5                                             | 1                            | 1.2 | 1.5  | 2    | 3    | 8   | 8                                       | 12.5 | T   | T    | T   |
|                                                         | FAZ -B/C        | 6                                             | 0.8                          | 1.2 | 1.5  | 1.5  | 3    | 8   | 8                                       | 11   | 13  | T    | T   |
|                                                         | FAZ -B/C        | 8                                             | 0.7                          | 1.2 | 1.5  | 1.5  | 3    | 7   | 7                                       | 11   | 13  | T    | T   |
|                                                         | FAZ -B/C        | 10                                            | -                            | 1.2 | 1    | 1.5  | 2    | 6   | 6                                       | 7.5  | 10  | 12.5 | T   |
|                                                         | FAZ -B/C        | 13                                            | -                            | -   | 1    | 1.5  | 2    | 5   | 5                                       | 7.5  | 9   | 12   | T   |
| <b>FAZ -D</b><br>FAZ<br>All types with Characteristic D | <b>FAZ -D</b>   | <b>25</b>                                     |                              |     |      |      |      |     |                                         |      |     |      |     |
|                                                         | v               | 32                                            | 9                            | T   | T    | T    | T    | T   | T                                       | T    | T   | T    | T   |
|                                                         | FAZ -D          | 40                                            | 0.5                          | 0.7 | 1.1  | 1.9  | 4.2  | T   | T                                       | T    | T   | T    | T   |
|                                                         | FAZ -D          | 1.5                                           | 0.3                          | 0.6 | 0.8  | 1.1  | 1.6  | 2.6 | 2.6                                     | T    | T   | T    | T   |
|                                                         | FAZ -D          | 2                                             | 0.3                          | 0.5 | 0.75 | 0.95 | 1.4  | 2.4 | 2.4                                     | T    | T   | T    | T   |
|                                                         | FAZ -D          | 2.5                                           | 0.3                          | 0.5 | 0.75 | 0.95 | 1.3  | 2.3 | 2.3                                     | T    | T   | T    | T   |
|                                                         | FAZ -D          | 3                                             | 0.3                          | 0.5 | 0.7  | 0.9  | 1.3  | 2.1 | 2.1                                     | T    | T   | T    | T   |
|                                                         | FAZ -D          | 3.5                                           | 0.3                          | 0.5 | 0.7  | 0.9  | 1.3  | 2   | 2                                       | T    | T   | T    | T   |
|                                                         | FAZ -D          | 4                                             | 0.3                          | 0.5 | 0.7  | 0.9  | 1.3  | 1.9 | 1.9                                     | T    | T   | T    | T   |
|                                                         | FAZ -D          | 5                                             | 0.3                          | 0.5 | 0.7  | 0.9  | 1.3  | 1.9 | 1.9                                     | T    | T   | T    | T   |
|                                                         | FAZ -D          | 6                                             | 0.3                          | 0.5 | 0.6  | 0.9  | 1.3  | 1.8 | 1.8                                     | T    | T   | T    | T   |
|                                                         | FAZ -D          | 8                                             | 0.3                          | 0.3 | 0.6  | 0.75 | 1    | 1.3 | 1.3                                     | T    | T   | T    | T   |
|                                                         | FAZ -D          | 10                                            | 0.3                          | 0.3 | 0.6  | 0.75 | 0.95 | 1.2 | 1.2                                     | T    | T   | T    | T   |
| <b>PDC breakers</b>                                     | <b>FAZ -D</b>   | <b>25</b>                                     |                              |     |      |      |      |     |                                         |      |     |      |     |
|                                                         | PDC1 A-A        | 16-40                                         | -                            |     | 0.5  | 0.7  | 0.8  | 1.5 | 1.5                                     | 1.5  | 1.5 | 2    | 3   |
|                                                         | PDC1 A-A        | 50                                            | -                            |     | -    | 0.6  | 0.8  | 1.5 | 1.5                                     | 1.5  | 1.5 | 2    | 3   |
|                                                         | PDC1 A-A        | 63                                            | -                            |     | -    | -    | 0.8  | 1.5 | 1.5                                     | 1.5  | 1.5 | 2    | 3   |
|                                                         | PDC1 A-A        | 80                                            | -                            |     | -    | -    | -    | 1.5 | 1.5                                     | 1.5  | 1.5 | 2    | 3   |
|                                                         | PDC1 A-A        | 100                                           | -                            |     | -    | -    | -    | 1.5 | -                                       | 1.5  | 2   | 3    |     |
|                                                         | PDC1 A-A        | 125                                           | -                            |     | -    | -    | -    | -   | -                                       | -    | 2   | 3    |     |
|                                                         | PDC1 A-A        | 160                                           | -                            |     | -    | -    | -    | -   | -                                       | -    | 2   | 3    |     |

# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

| PDC2 PXR |     |      |      | PDC3 A-A TMTU<br>I <sub>cu</sub> = 70kA |     |     |     | PDC3 PXR<br>I <sub>cu</sub> = 70kA | PDC4 A-A TMTU<br>I <sub>cu</sub> = 70kA | PDC4 PXR<br>I <sub>cu</sub> = 70kA | PDC5 PXR<br>I <sub>cu</sub> = 100kA |     |      |      |      |   |
|----------|-----|------|------|-----------------------------------------|-----|-----|-----|------------------------------------|-----------------------------------------|------------------------------------|-------------------------------------|-----|------|------|------|---|
| 63       | 160 | 200  | 250  | 250                                     | 400 | 500 | 630 | 630                                | 800                                     | 800                                | 630                                 | 800 | 1000 | 1250 | 1600 |   |
| T        | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| T        | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 6        | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 2        | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.5      |     | 14.1 | 14.1 | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.4      |     | 7.4  | 7.4  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.4      |     | 5    | 5    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.3      |     | 4.8  | 4.8  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.3      |     | 4.6  | 4.6  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.3      |     | 4.4  | 4.4  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.3      |     | 4.2  | 4.2  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.2      |     | 3.9  | 3.9  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.2      |     | 3.8  | 3.8  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.1      |     | 3.5  | 3.5  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| -        | 3.1 | 3.1  | 3.1  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| T        | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| T        | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 3.2      | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 3        | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 2.9      | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 2.6      | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 2.4      | T   | T    | T    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 2.3      |     | 11.3 | 11.3 | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 2.3      |     | 10.4 | 10.4 | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 2.1      | 6   | 6    | 6    | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.4      |     | 5.4  | 5.4  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.3      |     | 5.1  | 5.1  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.2      |     | 4.5  | 4.5  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.2      |     | 4.1  | 4.1  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.2      |     | 3.9  | 3.9  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.2      |     | 3.8  | 3.8  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.2      |     | 3.6  | 3.6  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 1.1      |     | 3.4  | 3.4  | T                                       | T   | T   | T   | T                                  | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| 0.6      | 5   | 5    | 7.5  | 11                                      | 20  | 20  | 20  | 25                                 | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| -        | 5   | 5    | 7.5  | 11                                      | 20  | 20  | 20  | 25                                 | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| -        | 5   | 5    | 6.0  | 11                                      | 20  | 20  | 20  | 25                                 | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| -        | 5   | 5    | 6.0  | 11                                      | 20  | 20  | 20  | 25                                 | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| -        | 5   | 5    | 6.0  | 11                                      | 20  | 20  | 20  | 25                                 | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| -        | 5   | 5    | 6.0  | 11                                      | 20  | 20  | 20  | 25                                 | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |
| -        | 5   | 5    | 6.0  | 11                                      | 20  | 20  | 20  | 25                                 | T                                       | T                                  | T                                   | T   | T    | T    | T    | T |

# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

### Selective Protection between Incoming Circuit Breaker PDC...and Outgoing Circuit Breaker FAZ-B(C)... PKZ... PDC... NZM... (Continued)

Continued)

|               | Nr of entries | Upstream | PDC1 A-A TMTU<br>I <sub>cu</sub> = 25 (36) kA |       |    |     |     |     |     |     | PDC2 A-A TMTU<br>I <sub>cu</sub> = 70kA |     |     |     |                      |
|---------------|---------------|----------|-----------------------------------------------|-------|----|-----|-----|-----|-----|-----|-----------------------------------------|-----|-----|-----|----------------------|
|               |               |          | I <sub>n</sub> [A]                            | 16-40 | 50 | 63  | 80  | 100 | 125 | 160 | 125                                     | 160 | 200 | 250 |                      |
|               |               |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     | II(I <sub>cu</sub> ) |
| PDC2 A-A TMTU | PDC2 A-A      |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     |                      |
| PDC2 A-A      | PDC2 A-A      | 125      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | 2.2 | 2.6                  |
|               | PDC2 A-A      | 160      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | 2.5                  |
|               | PDC2 A-A      | 200      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
|               | PDC2 A-A      | 250      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
| PDC2 PXR      | PDC2 PXR      |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     |                      |
| PDC2 PXR      | PDC2 PXR      | 63       | 70                                            | -     | -  | -   | -   | -   | -   | -   | 1.7                                     | 2.1 | 2.4 | 2.6 |                      |
|               | PDC2 PXR      | 160      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | 2.5                  |
|               | PDC2 PXR      | 200      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
|               | PDC2 PXR      | 250      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
| PDC3 A-A TMTU | PDC3 A-A      |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     |                      |
| PDC3 A-A      | PDC3 A-A      | 250      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
|               | PDC3 A-A      | 400      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
|               | PDC3 A-A      | 500      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
|               | PDC3 A-A      | 630      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
| PDC3 PXR      | PDC3 PXR      |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     |                      |
| PDC3 PXR      | PDC3 PXR      | 630      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
| PDC4 A-A TMTU | PDC4 A-A      |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     |                      |
| PDC4 A-A      | PDC4 A-A      | 800      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
| PDC4 PXR      | PDC4 PXR      |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     |                      |
| PDC4 PXR      | PDC4 PXR      | 800      | 70                                            | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
| PDC5 PXR      | PDC5 PXR      |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     |                      |
| PDC5 PXR      | PDC5 PXR      | 630      | 100                                           | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
|               | PDC5 PXR      | 800      | 100                                           | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
|               | PDC5 PXR      | 1000     | 100                                           | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
|               | PDC5 PXR      | 1250     | 100                                           | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
|               | PDC5 PXR      | 1600     | 100                                           | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | -   | -                    |
| NZM breakers  | NZM...1-A     |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     |                      |
| NZM...1-A     | NZM...1-A     | 20-40    | 25 - 100                                      | -     | -  | 0.5 | 0.7 | 0.8 | 1.5 | 1.5 | 2                                       | 2.4 | 2.5 | 3.1 |                      |
|               | NZM...1-A     | 50       | 25 - 100                                      | -     | -  | -   | 0.6 | 0.8 | 1.5 | 1.5 | 2                                       | 2.4 | 2.5 | 3.1 |                      |
|               | NZM...1-A     | 63       | 25 - 100                                      | -     | -  | -   | -   | 0.8 | 1.5 | 1.5 | 1.9                                     | 2.3 | 2.6 | 3.1 |                      |
|               | NZM...1-A     | 80       | 25 - 100                                      | -     | -  | -   | -   | -   | 1.5 | 1.5 | 1.9                                     | 2.3 | 2.6 | 3   |                      |
|               | NZM...1-A     | 100      | 25 - 100                                      | -     | -  | -   | -   | -   | -   | 1.5 | -                                       | 2.2 | 2.6 | 3   |                      |
|               | NZM...1-A     | 125      | 25 - 100                                      | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | 2.6 | 3   |                      |
|               | NZM...1-A     | 160      | 25 - 100                                      | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | 2.6 | 3   |                      |
| NZM...1-M     | NZM...1-M     |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     |                      |
| NZM...1-M     | NZM...1-M     | 40       | 25 - 50                                       | -     | -  | -   | -   | 0.8 | 1   | 1   | 2                                       | 2.4 | 2.7 | 3.1 |                      |
|               | NZM...1-M     | 50       | 25 - 50                                       | -     | -  | -   | -   | -   | -   | 1   | 1.9                                     | 2.3 | 2.6 | 3   |                      |
|               | NZM...1-M     | 63       | 25 - 50                                       | -     | -  | -   | -   | -   | -   | 1   | 1.9                                     | 2.3 | 2.6 | 3   |                      |
|               | NZM...1-M     | 80       | 25 - 50                                       | -     | -  | -   | -   | -   | -   | -   | 1.8                                     | 2.2 | 2.6 | 3   |                      |
|               | NZM...1-M     | 100      | 25 - 50                                       | -     | -  | -   | -   | -   | -   | -   | -                                       | 2.2 | 2.6 | 3   |                      |
| NZM...2-A     | NZM...2-A     |          |                                               |       |    |     |     |     |     |     |                                         |     |     |     |                      |
| NZM...2-A     | NZM...2-A     | 20-40    | 25 - 150                                      | -     | -  | 0.5 | 0.6 | 0.8 | 1   | 1   | 1.9                                     | 2.3 | 2.5 | 3   |                      |
|               | NZM...2-A     | 50       | 25 - 150                                      | -     | -  | -   | 0.6 | 0.8 | 1   | 1   | 1.9                                     | 2.3 | 2.5 | 3   |                      |
|               | NZM...2-A     | 63       | 25 - 150                                      | -     | -  | -   | -   | 0.8 | 1   | 1   | 1.9                                     | 2.2 | 2.5 | 2.9 |                      |
|               | NZM...2-A     | 80       | 25 - 150                                      | -     | -  | -   | -   | -   | 1   | 1   | 1.9                                     | 2.2 | 2.5 | 2.9 |                      |
|               | NZM...2-A     | 100      | 25 - 150                                      | -     | -  | -   | -   | -   | -   | 1   | -                                       | 2.2 | 2.5 | 2.7 |                      |
|               | NZM...2-A     | 125      | 25 - 150                                      | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | 2.3 | 2.7 |                      |
|               | NZM...2-A     | 160      | 25 - 150                                      | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | 2.5 |                      |
|               | NZM...2-A     | 200      | 25 - 150                                      | -     | -  | -   | -   | -   | -   | -   | -                                       | -   | -   | 2.5 |                      |

# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

| PDC2 PXR |     |     |     | PDC3 A-A TMTU<br>I <sub>cu</sub> = 70kA |      |      |      | PDC3 PXR<br>I <sub>cu</sub> = 70kA | PDC4 A-A TMTU<br>I <sub>cu</sub> = 70kA | PDC4 PXR<br>I <sub>cu</sub> = 70kA | PDC5 PXR<br>I <sub>cu</sub> = 100kA |     |      |      |      |
|----------|-----|-----|-----|-----------------------------------------|------|------|------|------------------------------------|-----------------------------------------|------------------------------------|-------------------------------------|-----|------|------|------|
| 63       | 160 | 200 | 250 | 250                                     | 400  | 500  | 630  | 630                                | 800                                     | 800                                | 630                                 | 800 | 1000 | 1250 | 1600 |
| -        | -   | 2.7 | 2.7 | 3.2                                     | 5.4  | 9.8  | 16.6 | 16.6                               | 7.2                                     | 7.2                                | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | 2.4 | 3.2                                     | 5.4  | 9.8  | 16.6 | 16.6                               | 7.2                                     | 7.2                                | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -                                       | 5.4  | 9.8  | 15.5 | 15.5                               | 7.1                                     | 7.1                                | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -                                       | 5.4  | 9.8  | 13.3 | 13.3                               | 7.1                                     | 7.1                                | 20                                  | 20  | 50   | T    | T    |
| -        | 2.4 | 2.7 | 3   | 3.7                                     | 6    | 9.6  | 16.6 | 16.6                               | 7                                       | 7                                  | 20                                  | 20  | 50   | T    | T    |
| -        | -   | 2.7 | 3   | 3.4                                     | 5.6  | 9.3  | 13.8 | 13.8                               | 6.9                                     | 6.9                                | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -                                       | 5.5  | 9.2  | 13.6 | 13.6                               | 6.8                                     | 6.8                                | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -                                       | 5.5  | 9.2  | 13.5 | 13.5                               | 6.8                                     | 6.8                                | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -                                       | 4.3  | 5.7  | 6.7  | 6.7                                | 6                                       | 6                                  | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -5.6                                    | -    | -    | 6.6  | 6.6                                | 6                                       | 6                                  | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -    | 6.4  | 6.4                                | 6                                       | 6                                  | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -    | -    | -                                  | -                                       | -                                  | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -    | 20   | 20                                 | 50                                      | -                                  | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -    | -    | -                                  | -                                       | -                                  | -                                   | -   | -    | 20   | 20   |
| -        | -   | -   | -   | -                                       | -    | -    | -    | -                                  | -                                       | -                                  | -                                   | -   | -    | 20   | 20   |
| -        | -   | -   | -   | -                                       | -    | -    | -    | -                                  | -                                       | -                                  | -                                   | 10  | 15   | 20   | 20   |
| -        | -   | -   | -   | -                                       | -    | -    | -    | -                                  | -                                       | -                                  | -                                   | -   | -    | 20   | 20   |
| -        | -   | -   | -   | -                                       | -    | -    | -    | -                                  | -                                       | -                                  | -                                   | -   | -    | 20   | 20   |
| -        | -   | -   | -   | -                                       | -    | -    | -    | -                                  | -                                       | -                                  | -                                   | -   | -    | -    | 20   |
| -        | -   | -   | -   | -                                       | -    | -    | -    | -                                  | -                                       | -                                  | -                                   | -   | -    | -    | -    |
| 1.1      | 2.6 | 2.6 | 2.6 | 6                                       | 13.7 | 50   | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | 2.6 | 2.6 | 2.6 | 6                                       | 13.1 | 47.4 | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | 2.6 | 2.6 | 2.6 | 6                                       | 11.8 | 43.5 | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | 2.6 | 2.6 | 2.6 | 6                                       | 11.2 | 41.3 | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | 2.6 | 2.6 | 2.6 | 6                                       | 10.9 | 40.4 | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | 2.6 | 2.6 | 2.6 | 6                                       | 10.7 | 39.3 | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | -   | 2.6 | 2.6 | 6                                       | 10.5 | 38.5 | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| 1.1      | 2.7 | 2.7 | 2.7 | 6                                       | 13.9 | 50   | T    | T                                  | 10.4                                    | 10.4                               | T                                   | T   | T    | T    | T    |
| -        | 2.6 | 2.6 | 2.6 | 6                                       | 13.1 | 47.4 | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | 2.6 | 2.6 | 2.6 | 6                                       | 12.2 | 43.4 | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | 2.6 | 2.6 | 2.6 | 6                                       | 12.3 | 41.3 | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | 2.6 | 2.6 | 2.6 | 6                                       | 12.2 | 40.4 | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| 1        | 2.4 | 2.4 | 2.4 | 5.7                                     | T    | T    | T    | T                                  | 11.9                                    | 11.9                               | T                                   | T   | T    | T    | T    |
| -        | 2.4 | 2.4 | 2.4 | 5.8                                     | T    | T    | T    | T                                  | 10.4                                    | 10.4                               | T                                   | T   | T    | T    | T    |
| -        | 2.4 | 2.4 | 2.4 | 5.8                                     | 28.6 | T    | T    | T                                  | 10.4                                    | 10.4                               | T                                   | T   | T    | T    | T    |
| -        | 2.4 | 2.4 | 2.4 | 5.9                                     | 26.5 | T    | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | 2.4 | 2.4 | 2.4 | 5.7                                     | 24.5 | T    | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | -   | 2.4 | 2.4 | 4.5                                     | 14.1 | T    | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | -   | -   | 2.4 | 4.6                                     | 16.6 | T    | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | 4.4                                     | 10   | T    | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | 10   | T    | T    | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |

Power Defense Molded Case Circuit Breaker

Selective Protection (PDC, NZM, FAZ)

Selective Protection between Incoming Circuit Breaker PDC...and Outgoing Circuit Breaker FAZ-B(C)... PKZ... PDC... NZM... (Continued)

|                            | Nr of entries | Upstream | PDC1 A-A TMTU<br>I <sub>cu</sub> = 25 (36) kA |       |    |    |    |     |     | PDC2 A-A TMTU<br>I <sub>cu</sub> = 70kA |     |     |     |     |
|----------------------------|---------------|----------|-----------------------------------------------|-------|----|----|----|-----|-----|-----------------------------------------|-----|-----|-----|-----|
|                            |               |          | I <sub>n</sub> [A]                            | 16-40 | 50 | 63 | 80 | 100 | 125 | 160                                     | 125 | 160 | 200 | 250 |
|                            |               |          | II(I <sub>cu</sub> )                          |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...2-M                  | NZM...2-M     |          |                                               |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...2-M...               | NZM...2-M     | 20-120   | 25 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | 1.9 | 2.2 | 2.7 |
|                            | NZM...2-M     | 160      | 25 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | 2.5 |
|                            | NZM...2-M     | 200      | 25 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | 2.5 |
| NZM...2-VE                 | NZM...2-VE    |          |                                               |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...2-VE                 | NZM...2-VE    | 100      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | 2   | 2.2 | 2.7 |
|                            | NZM...2-VE    | 160      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | 2.7 |
|                            | NZM...2-VE    | 250      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
| NZM...2-ME                 | NZM...2-ME    |          |                                               |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...2-ME                 | NZM...2-ME    | 90       | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | 2.1 | 2.3 | 2.7 |
|                            | NZM...2-ME    | 140      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | 2.7 |
|                            | NZM...2-ME    | 220      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
| NZM...3-A                  | NZM...3-A     |          |                                               |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...3-A<br>(thermal-mag) | NZM...3-A     | 320      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...3-A     | 400      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...3-A     | 500      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
| NZM...3-AE                 | NZM...3-AE    |          |                                               |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...3-AE                 | NZM...3-AE    | 250      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...3-AE    | 400      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...3-AE    | 630      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
| NZM...3-VE                 | NZM...3-VE    |          |                                               |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...3-VE                 | NZM...3-VE    | 250      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...3-VE    | 400      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...3-VE    | 630      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
| NZM...3-ME                 | NZM...3-ME    |          |                                               |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...3-ME                 | NZM...3-ME    | 220      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...3-ME    | 350      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...3-ME    | 450      | 50 - 150                                      | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
| NZM...4-AE                 | NZM...4-AE    |          |                                               |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...4-AE                 | NZM...4-AE    | 630      | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...4-AE    | 800      | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...4-AE    | 1000     | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...4-AE    | 1250     | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...4-AE    | 1600     | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
| NZM...4-VE                 | NZM...4-VE    |          |                                               |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...4-VE                 | NZM...4-VE    | 630      | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...4-VE    | 800      | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...4-VE    | 1000     | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...4-VE    | 1250     | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...4-VE    | 1600     | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
| NZM...4-ME                 | NZM...4-ME    |          |                                               |       |    |    |    |     |     |                                         |     |     |     |     |
| NZM...4-ME                 | NZM...4-ME    | 550      | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...4-ME    | 875      | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |
|                            | NZM...4-ME    | 1400     | 50 - 85                                       | -     | -  | -  | -  | -   | -   | -                                       | -   | -   | -   | -   |

# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

| PDC2 PXR |     |     |     | PDC3 A-A TMTU<br>I <sub>cu</sub> = 70kA |      |     |     | PDC3 PXR<br>I <sub>cu</sub> = 70kA | PDC4 A-A TMTU<br>I <sub>cu</sub> = 70kA | PDC4 PXR<br>I <sub>cu</sub> = 70kA | PDC5 PXR<br>I <sub>cu</sub> = 100kA |     |      |      |      |
|----------|-----|-----|-----|-----------------------------------------|------|-----|-----|------------------------------------|-----------------------------------------|------------------------------------|-------------------------------------|-----|------|------|------|
| 63       | 160 | 200 | 250 | 250                                     | 400  | 500 | 630 | 630                                | 800                                     | 800                                | 630                                 | 800 | 1000 | 1250 | 1600 |
| -        | 2.4 | 2.4 | 2.4 | 5.9                                     | 35.9 | T   | T   | T                                  | 11.6                                    | 10                                 | 20                                  | 20  | 50   | T    | T    |
| -        | -   | 2.4 | 2.4 | 4.4                                     | 10   | T   | T   | T                                  | 10                                      | 10                                 | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | 2.8                                     | 10   | T   | T   | T                                  | 10                                      | 10                                 | 20                                  | 20  | 50   | T    | T    |
| -        | 2.4 | 2.7 | 3   | 4.3                                     | 10   | T   | T   | T                                  | 10                                      | 10                                 | 20                                  | 20  | 50   | T    | T    |
| -        | -   | 2.7 | 3   | 4.2                                     | 10   | T   | T   | T                                  | 10                                      | 10                                 | 20                                  | 20  | 50   | T    | T    |
| -        | -   | -   | -   | -                                       | 10   | T   | T   | T                                  | 10                                      | 10                                 | 20                                  | 20  | 50   | T    | T    |
| -        | 2.4 | 2.4 | 2.4 | 4.3                                     | 10   | T   | T   | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | -   | 2.4 | 2.4 | 4.2                                     | 10   | T   | T   | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | 2.8                                     | 10   | T   | T   | T                                  | 10                                      | 10                                 | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | 5.4  | 7.2 | 10  | 10                                 | 6.2                                     | 6.2                                | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | -    | 6.9 | 10  | 10                                 | 6.2                                     | 6.2                                | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | 6.2                                     | 6.2                                | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | 5.4  | 7   | 10  | 10                                 | 6                                       | 6.2                                | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -   | 10  | 10                                 | 6                                       | 6.2                                | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | -                                       | -                                  | -                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | 5.3  | 7.1 | 10  | 10                                 | 6                                       | 6.2                                | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -   | 10  | 10                                 | 6.1                                     | 6.2                                | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | 6                                       | 6.2                                | -                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | 2.8                                     | 4.5  | 6.5 | 10  | 10                                 | 6                                       | 6.2                                | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | 4.3  | 6.5 | 10  | 10                                 | 6                                       | 6.2                                | T                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -   | 10  | -                                  | 6                                       | 6.2                                | -                                   | T   | T    | T    | T    |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | 6.4                                     | 6.4                                | -                                   | 10  | 15   | 20   | 20   |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | -                                       | -                                  | -                                   | -   | -    | 20   | 20   |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | -                                       | -                                  | -                                   | -   | -    | 20   | 20   |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | -                                       | -                                  | -                                   | -   | -    | -    | 20   |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | -                                       | -                                  | -                                   | -   | -    | -    | -    |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | 6.4                                     | 6.4                                | -                                   | -   | -    | 20   | 20   |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | -                                       | -                                  | -                                   | -   | -    | -    | 20   |
| -        | -   | -   | -   | -                                       | -    | -   | -   | -                                  | -                                       | -                                  | -                                   | -   | -    | -    | -    |

# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

### Selective Protection

|            |                              | Upstream                | PDC1<br>I <sub>n</sub> = ...160 A |      |      |      | PDC2 A-A TMTU<br>I <sub>n</sub> = ...250 A |      |      |      | PDC2 PXR<br>I <sub>n</sub> = ...250 A |      |      |      |
|------------|------------------------------|-------------------------|-----------------------------------|------|------|------|--------------------------------------------|------|------|------|---------------------------------------|------|------|------|
|            |                              | I <sub>cu</sub> (415 V) | 25kA                              | 36kA | 50kA | 70kA | 25kA                                       | 36kA | 50kA | 70kA | 25kA                                  | 36kA | 50kA | 70kA |
| Downstream | I <sub>cu</sub> (415 V) [kA] | I <sub>n</sub> [A]      |                                   |      |      |      |                                            |      |      |      |                                       |      |      |      |
| PDC1       | 25                           | ...160                  | 25                                | 36   | 50   | 70   | 25                                         | 36   | 50   | 70   | 25                                    | 36   | 50   | 70   |
| PDC1       | 36                           | ...160                  | -                                 | 36   | 50   | 70   | -                                          | 36   | 50   | 70   | -                                     | 36   | 50   | 70   |
| PDC1       | 50                           | ...160                  | -                                 | -    | 50   | 70   | -                                          | -    | 50   | 70   | -                                     | -    | 50   | 70   |
| PDC1       | 70                           | ...160                  | -                                 | -    | -    | 70   | -                                          | -    | -    | 70   | -                                     | -    | -    | 70   |
| PDC2 A-A   | 25                           | ...250                  | -                                 | 36   | 50   | 70   | 25                                         | 36   | 50   | 70   | 25                                    | 36   | 50   | 70   |
| PDC2 A-A   | 36                           | ...250                  | -                                 | -    | 50   | 70   | -                                          | 36   | 50   | 70   | -                                     | 36   | 50   | 70   |
| PDC2 A-A   | 50                           | ...250                  | -                                 | -    | -    | 70   | -                                          | -    | 50   | 70   | -                                     | -    | 50   | 70   |
| PDC2 A-A   | 70                           | ...250                  | -                                 | -    | -    | -    | -                                          | -    | -    | 70   | -                                     | -    | -    | 70   |
| PDC2 PXR   | 25                           | ...250                  | -                                 | 36   | 50   | 70   | 25                                         | 36   | 50   | 70   | 25                                    | 36   | 50   | 70   |
| PDC2 PXR   | 36                           | ...250                  | -                                 | -    | 50   | 70   | -                                          | 36   | 50   | 70   | -                                     | 36   | 50   | 70   |
| PDC2 PXR   | 50                           | ...250                  | -                                 | -    | -    | 70   | -                                          | -    | 50   | 70   | -                                     | -    | 50   | 70   |
| PDC2 PXR   | 70                           | ...250                  | -                                 | -    | -    | -    | -                                          | -    | -    | 70   | -                                     | -    | -    | 70   |
| PDC3 A-A   | 25                           | ...630                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC3 A-A   | 36                           | ...630                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC3 A-A   | 50                           | ...630                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC3 A-A   | 70                           | ...630                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC3 PXR   | 25                           | ...630                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC3 PXR   | 36                           | ...630                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC3 PXR   | 50                           | ...630                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC3 PXR   | 70                           | ...630                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC4 A-A   | 36                           | ...800                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC4 A-A   | 50                           | ...800                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC4 A-A   | 70                           | ...800                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC4 PXR   | 36                           | ...800                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC4 PXR   | 50                           | ...800                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC4 PXR   | 70                           | ...800                  | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC5 PXR   | 50                           | ...1600                 | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC5 PXR   | 85                           | ...1600                 | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |
| PDC5 PXR   | 100                          | ...1600                 | -                                 | -    | -    | -    | -                                          | -    | -    | -    | -                                     | -    | -    | -    |

## Power Defense Molded Case Circuit Breaker

### Selective Protection (PDC, NZM, FAZ)

| PDC3 A-A TMTU<br>I <sub>n</sub> = ... 630 A |      |      |      | PDC3 PXR<br>I <sub>n</sub> = ... 630 A |      |      |      | PDC4 A-A TMTU<br>I <sub>n</sub> = ... 800 A |      |      | PDC4 PXR<br>I <sub>n</sub> = ... 800 A |      |      |
|---------------------------------------------|------|------|------|----------------------------------------|------|------|------|---------------------------------------------|------|------|----------------------------------------|------|------|
| 25kA                                        | 36kA | 50kA | 70kA | 25kA                                   | 36kA | 50kA | 70kA | 36kA                                        | 50kA | 70kA | 36kA                                   | 50kA | 70kA |
|                                             |      |      |      |                                        |      |      |      |                                             |      |      |                                        |      |      |
|                                             |      |      |      |                                        |      |      |      |                                             |      |      |                                        |      |      |
| 25                                          | 27   | 27   | 27   | 25                                     | 36   | 40   | 40   | 36                                          | 38   | 38   | 36                                     | 38   | 38   |
| -                                           | 36   | 39   | 39   | -                                      | 36   | 40   | 40   | 36                                          | 38   | 38   | 36                                     | 38   | 38   |
| -                                           | -    | 50   | 57   | -                                      | -    | 50   | 70   | -                                           | 50   | 70   | -                                      | 50   | 70   |
| -                                           | -    | -    | 70   | -                                      | -    | -    | 70   | -                                           | -    | 70   | -                                      | -    | 70   |
|                                             |      |      |      |                                        |      |      |      |                                             |      |      |                                        |      |      |
| 25                                          | 28   | 28   | 28   | 25                                     | 36   | 44   | 44   | 36                                          | 50   | 70   | 36                                     | 50   | 70   |
| -                                           | 36   | 44   | 44   | -                                      | 36   | 44   | 44   | 36                                          | 50   | 70   | 36                                     | 50   | 70   |
| -                                           | -    | 50   | 63   | -                                      | -    | 50   | 70   | -                                           | 50   | 70   | -                                      | 50   | 70   |
| -                                           | -    | -    | 70   | -                                      | -    | -    | 70   | -                                           | -    | 70   | -                                      | -    | 70   |
| 25                                          | 28   | 28   | 28   | 25                                     | 36   | 45   | 45   | 36                                          | 50   | 70   | 36                                     | 50   | 70   |
| -                                           | 36   | 44   | 44   | -                                      | 36   | 45   | 45   | 36                                          | 50   | 70   | 36                                     | 50   | 70   |
| -                                           | -    | 50   | 63   | -                                      | -    | 50   | 70   | -                                           | 50   | 70   | -                                      | 50   | 70   |
| -                                           | -    | -    | 70   | -                                      | -    | -    | 70   | -                                           | -    | 70   | -                                      | -    | 70   |
|                                             |      |      |      |                                        |      |      |      |                                             |      |      |                                        |      |      |
| 25                                          | 36   | 50   | 70   | 25                                     | 36   | 50   | 70   | 36                                          | 50   | 55   | 36                                     | 50   | 55   |
| -                                           | 36   | 50   | 70   | -                                      | 36   | 50   | 70   | 36                                          | 50   | 55   | 36                                     | 50   | 55   |
| -                                           | -    | 50   | 70   | -                                      | -    | 50   | 70   | -                                           | 50   | 70   | -                                      | 50   | 70   |
| -                                           | -    | -    | 70   | -                                      | -    | -    | 70   | -                                           | -    | 70   | -                                      | -    | 70   |
| 25                                          | 36   | 50   | 70   | 25                                     | 36   | 50   | 70   | 36                                          | 50   | 55   | 36                                     | 50   | 55   |
| -                                           | 36   | 50   | 70   | -                                      | 36   | 50   | 70   | 36                                          | 50   | 55   | 36                                     | 50   | 55   |
| -                                           | -    | 50   | 70   | -                                      | -    | 50   | 70   | -                                           | 50   | 70   | -                                      | 50   | 70   |
| -                                           | -    | -    | 70   | -                                      | -    | -    | 70   | -                                           | -    | 70   | -                                      | -    | 70   |
|                                             |      |      |      |                                        |      |      |      |                                             |      |      |                                        |      |      |
| -                                           | -    | -    | -    | -                                      | -    | -    | -    | 36                                          | 50   | 70   | 36                                     | 50   | 70   |
| -                                           | -    | -    | -    | -                                      | -    | -    | -    | -                                           | 50   | 70   | -                                      | 50   | 70   |
| -                                           | -    | -    | -    | -                                      | -    | -    | -    | -                                           | -    | 70   | -                                      | -    | 70   |
| -                                           | -    | -    | -    | -                                      | -    | -    | -    | 36                                          | 50   | 70   | 36                                     | 50   | 70   |
| -                                           | -    | -    | -    | -                                      | -    | -    | -    | -                                           | 50   | 70   | -                                      | 50   | 70   |
| -                                           | -    | -    | -    | -                                      | -    | -    | -    | -                                           | -    | 70   | -                                      | -    | 70   |
|                                             |      |      |      |                                        |      |      |      |                                             |      |      |                                        |      |      |
| -                                           | -    | -    | -    | -                                      | -    | -    | -    | -                                           | -    | -    | -                                      | -    | -    |
| -                                           | -    | -    | -    | -                                      | -    | -    | -    | -                                           | -    | -    | -                                      | -    | -    |
| -                                           | -    | -    | -    | -                                      | -    | -    | -    | -                                           | -    | -    | -                                      | -    | -    |

# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

### Selective Protection

|               | Nr of entries | Upstream | NZM1 A               |   |   |     |     |     |     |     |   |   |     | NZM2-A (25-150kA) |    |    |
|---------------|---------------|----------|----------------------|---|---|-----|-----|-----|-----|-----|---|---|-----|-------------------|----|----|
|               |               |          | I <sub>n</sub> [A]   |   |   |     |     |     |     |     |   |   |     | 20 - 40           | 50 | 63 |
|               |               |          |                      |   |   |     |     |     |     |     |   |   |     |                   |    |    |
|               |               |          | II(I <sub>cu</sub> ) |   |   |     |     |     |     |     |   |   |     |                   |    |    |
| PDC breakers  | PDC1 A-A      |          |                      |   |   |     |     |     |     |     |   |   |     |                   |    |    |
| PDC1 A-A      | PDC1 A-A      | 16-40    | 70                   | - | - | 0.5 | 0.7 | 0.8 | 1.5 | 1.5 | - | - | 0.6 |                   |    |    |
|               | PDC1 A-A      | 50       | 70                   | - | - | -   | 0.6 | 0.8 | 1.5 | 1.5 | - | - | -   |                   |    |    |
|               | PDC1 A-A      | 63       | 70                   | - | - | -   | -   | 0.8 | 1.5 | 1.5 | - | - | -   |                   |    |    |
|               | PDC1 A-A      | 80       | 70                   | - | - | -   | -   | -   | 1.5 | 1.5 | - | - | -   |                   |    |    |
|               | PDC1 A-A      | 100      | 70                   | - | - | -   | -   | -   | -   | 1.5 | - | - | -   |                   |    |    |
|               | PDC1 A-A      | 125      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC1 A-A      | 160      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
| PDC2 A-A TMTU | PDC2 A-A      |          |                      |   |   |     |     |     |     |     |   |   |     |                   |    |    |
| PDC2 A-A TMTU | PDC2 A-A      | 125      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC2 A-A      | 160      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC2 A-A      | 200      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC2 A-A      | 250      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
| PDC2 PXR      | PDC2 PXR      |          |                      |   |   |     |     |     |     |     |   |   |     |                   |    |    |
| PDC2 PXR      | PDC2 PXR      | 63       | 70                   | - | - | -   | -   |     |     |     |   | - | -   | -                 |    |    |
|               | PDC2 PXR      | 160      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC2 PXR      | 200      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC2 PXR      | 250      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
| PDC3 A-A TMTU | PDC3 A-A      |          |                      |   |   |     |     |     |     |     |   |   |     |                   |    |    |
| PDC3 A-A TMTU | PDC3 A-A      | 250      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC3 A-A      | 400      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC3 A-A      | 500      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC3 A-A      | 630      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
| PDC3 PXR      | PDC3 PXR      |          |                      |   |   |     |     |     |     |     |   |   |     |                   |    |    |
| PDC3 PXR      | PDC3 PXR      | 630      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
| PDC4 A-A TMTU | PDC4 A-A      |          |                      |   |   |     |     |     |     |     |   |   |     |                   |    |    |
| PDC4 A-A TMTU | PDC4 A-A      | 800      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
| PDC4 PXR      | PDC4 PXR      |          |                      |   |   |     |     |     |     |     |   |   |     |                   |    |    |
| PDC4 PXR      | PDC4 PXR      | 800      | 70                   | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
| PDC5 PXR      | PDC5 PXR      |          |                      |   |   |     |     |     |     |     |   |   |     |                   |    |    |
| PDC5 PXR      | PDC5 PXR      | 630      | 100                  | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC5 PXR      | 800      | 100                  | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC5 PXR      | 1000     | 100                  | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC5 PXR      | 1250     | 100                  | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |
|               | PDC5 PXR      | 1600     | 100                  | - | - | -   | -   | -   | -   | -   | - | - | -   |                   |    |    |

## Power Defense Molded Case Circuit Breaker

### Selective Protection (PDC, NZM, FAZ)

| NZM2-A (25-150kA) |     |     |     |     |     | NZM2-VE (50-150) |     |     | NZM...3-A (36-150) |     |     |     | NZM...3-AE (250-630) |     |     | NZM...3-VE (50-150) |     |     |
|-------------------|-----|-----|-----|-----|-----|------------------|-----|-----|--------------------|-----|-----|-----|----------------------|-----|-----|---------------------|-----|-----|
| 80                | 100 | 125 | 160 | 200 | 250 | 100              | 160 | 250 | 250                | 320 | 400 | 500 | 250                  | 400 | 630 | 250                 | 400 | 630 |
|                   |     |     |     |     |     |                  |     |     |                    |     |     |     |                      |     |     |                     |     |     |
| 0.8               | 1.5 | 1.5 | 1.5 | 2   | 3   | 1.5              | 1.5 | 3   | 3                  | 4   | 6   | 7   | 7.5                  | 20  | 20  | 12.5                | 25  | 25  |
| 0.8               | 1.5 | 1.5 | 1.5 | 2   | 3   | 1.5              | 1.5 | 3   | 3                  | 4   | 6   | 7   | 7.5                  | 20  | 20  | 12.5                | 25  | 25  |
| -                 | 1.5 | 1.5 | 1.5 | 2   | 3   | 1.5              | 1.5 | 3   | 3                  | 4   | 6   | 7   | 6                    | 15  | 15  | 11                  | 20  | 20  |
| -                 | -   | 1.5 | 1.5 | 2   | 3   | -                | 1.5 | 3   | 3                  | 4   | 6   | 7   | 6                    | 15  | 15  | 11                  | 20  | 20  |
| -                 | -   | -   | 1.5 | 2   | 3   | -                | 1.5 | 3   | 3                  | 4   | 6   | 7   | 6                    | 15  | 15  | 11                  | 20  | 20  |
| -                 | -   | -   | -   | 2   | 3   | -                | -   | 3   | 3                  | 4   | 6   | 7   | 6                    | 15  | 15  | 11                  | 20  | 20  |
| -                 | -   | -   | -   | 2   | 3   | -                | -   | 3   | 3                  | 4   | 6   | 7   | 6                    | 15  | 15  | 11                  | 20  | 20  |
|                   |     |     |     |     |     |                  |     |     |                    |     |     |     |                      |     |     |                     |     |     |
| -                 | -   | -   | -   | 2.4 | 3   | -                | -   | 3   | 3.4                | 4   | 6   | 6.3 | 2.7                  | 4.4 | 5   | 3.6                 | 6.3 | 10  |
| -                 | -   | -   | -   | -   | 2.9 | -                | -   | 3   | 3.3                | 4   | 6   | 6.2 | 2.7                  | 4.4 | 5   | 3.5                 | 6.2 | 10  |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | 3.9 | 5.9 | 6   | -                    | 4.4 | 5   | -                   | 6   | 9.8 |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | 3.9 | 5.8 | 6   | -                    | 4.4 | 5   | -                   | 6   | 9.5 |
|                   |     |     |     |     |     |                  |     |     |                    |     |     |     |                      |     |     |                     |     |     |
| -                 | 1.2 | 1.7 | 2.1 | 2.6 | 3.1 | 1.2              | 1.9 | 3   | 3.6                | 4.2 | 6   | 6.6 | 2.7                  | 4.4 | 5   | 3.7                 | 6.6 | 10  |
| -                 | -   | -   | -   | 2.3 | 3   | -                | -   | 3   | 3.4                | 4   | 6   | 6.1 | 2.7                  | 4.4 | 5   | 3.5                 | 6.1 | 9.7 |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | 3.9 | 6   | 6   | 2.7                  | 4.4 | 5   | 3.5                 | 6   | 9.4 |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | 3.9 | 5.8 | 6   | -                    | 4.4 | 5   | -                   | 6   | 9.4 |
|                   |     |     |     |     |     |                  |     |     |                    |     |     |     |                      |     |     |                     |     |     |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | 3.6 | 4.7 | 5.4 | -                    | 4.3 | 4.7 | -                   | 5.4 | 5.4 |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | -   | -   | 5.1 | -                    | -   | 4.7 | -                   | -   | 5.3 |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | -   | -   | -   | -                    | -   | -   | -                   | -   | -   |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | -   | -   | -   | -                    | -   | -   | -                   | -   | -   |
|                   |     |     |     |     |     |                  |     |     |                    |     |     |     |                      |     |     |                     |     |     |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | -   | -   | -   | -                    | -   | -   | -                   | -   | -   |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | -   | -   | -   | -                    | -   | -   | -                   | -   | -   |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | -   | -   | -   | -                    | -   | -   | -                   | -   | -   |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | -   | -   | -   | -                    | -   | -   | -                   | -   | -   |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | -   | -   | -   | -                    | -   | -   | -                   | -   | -   |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | -   | -   | -   | -                    | -   | -   | -                   | -   | -   |
| -                 | -   | -   | -   | -   | -   | -                | -   | -   | -                  | -   | -   | -   | -                    | -   | -   | -                   | -   | -   |

# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

### Selective Protection

|                      | Nr of entries   | Upstream | NZM...4-AE (50-85)   |             |             |              |              |              |
|----------------------|-----------------|----------|----------------------|-------------|-------------|--------------|--------------|--------------|
|                      |                 |          | I <sub>n</sub> [A]   | 630         | 800         | 1000         | 1250         | 1600         |
|                      |                 |          | II(I <sub>cu</sub> ) | 7560 (85kA) | 9600 (85kA) | 12000 (85kA) | 15000 (85kA) | 19200 (85kA) |
| <b>PDC breakers</b>  | <b>PDC1 A-A</b> |          |                      |             |             |              |              |              |
| PDC1 A-A             | PDC1 A-A        | 16-40    | 70                   | T           | T           | T            | T            | T            |
|                      | PDC1 A-A        | 50       | 70                   | T           | T           | T            | T            | T            |
|                      | PDC1 A-A        | 63       | 70                   | T           | T           | T            | T            | T            |
|                      | PDC1 A-A        | 80       | 70                   | T           | T           | T            | T            | T            |
|                      | PDC1 A-A        | 100      | 70                   | T           | T           | T            | T            | T            |
|                      | PDC1 A-A        | 125      | 70                   | T           | T           | T            | T            | T            |
|                      | PDC1 A-A        | 160      | 70                   | T           | T           | T            | T            | T            |
| <b>PDC2 A-A TMTU</b> | <b>PDC2 A-A</b> |          |                      |             |             |              |              |              |
| PDC2 A-A TMTU        | PDC2 A-A        | 125      | 70                   | T           | T           | T            | T            | T            |
|                      | PDC2 A-A        | 160      | 70                   | T           | T           | T            | T            | T            |
|                      | PDC2 A-A        | 200      | 70                   | T           | T           | T            | T            | T            |
|                      | PDC2 A-A        | 250      | 70                   | T           | T           | T            | T            | T            |
| <b>PDC2 PXR</b>      | <b>PDC2 PXR</b> |          |                      |             |             |              |              |              |
| PDC2 PXR             | PDC2 PXR        | 63       | 70                   | T           | T           | T            | T            | T            |
|                      | PDC2 PXR        | 160      | 70                   | T           | T           | T            | T            | T            |
|                      | PDC2 PXR        | 200      | 70                   | T           | T           | T            | T            | T            |
|                      | PDC2 PXR        | 250      | 70                   | T           | T           | T            | T            | T            |
| <b>PDC3 A-A TMTU</b> | <b>PDC3 A-A</b> |          |                      |             |             |              |              |              |
| PDC3 A-A TMTU        | PDC3 A-A        | 250      | 70                   | 11.4        | 37.6        | 39.3         | 39.3         | 39.3         |
|                      | PDC3 A-A        | 400      | 70                   | 11.2        | 35.4        | 38           | 38           | 38           |
|                      | PDC3 A-A        | 500      | 70                   | 11.1        | 31.5        | 37.6         | 37.6         | 37.6         |
|                      | PDC3 A-A        | 630      | 70                   | -           | 30.7        | 37.3         | 37.3         | 37.3         |
| <b>PDC3 PXR</b>      | <b>PDC3 PXR</b> |          |                      |             |             |              |              |              |
| PDC3 PXR             | PDC3 PXR        | 630      | 70                   | -           | 30.6        | 37.3         | 37.3         | 37.3         |
| <b>PDC4 A-A TMTU</b> | <b>PDC4 A-A</b> |          |                      |             |             |              |              |              |
| PDC4 A-A TMTU        | PDC4 A-A        | 800      | 70                   | -           | -           | 18.7         | 25.3         | 25.5         |
| <b>PDC4 PXR</b>      | <b>PDC4 PXR</b> |          |                      |             |             |              |              |              |
| PDC4 PXR             | PDC4 PXR        | 800      | 70                   | -           | -           | 19.4         | 25.3         | 25.6         |
| <b>PDC5 PXR</b>      | <b>PDC5 PXR</b> |          |                      |             |             |              |              |              |
| PDC5 PXR             | PDC5 PXR        | 630      | 100                  | -           | T           | T            | T            | T            |
|                      | PDC5 PXR        | 800      | 100                  | -           | -           | T            | T            | T            |
|                      | PDC5 PXR        | 1000     | 100                  | -           | -           | -            | T            | T            |
|                      | PDC5 PXR        | 1250     | 100                  | -           | -           | -            | -            | T            |
|                      | PDC5 PXR        | 1600     | 100                  | -           | -           | -            | -            | -            |

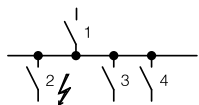
## Power Defense Molded Case Circuit Breaker

| NZM...4-VE (50-85) |             |              |              |              |
|--------------------|-------------|--------------|--------------|--------------|
| 630                | 800         | 1000         | 1250         | 1600         |
| 7560 (85kA)        | 9600 (85kA) | 12000 (85kA) | 15000 (85kA) | 19200 (85kA) |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
|                    |             |              |              |              |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
|                    |             |              |              |              |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
| T                  | T           | T            | T            | T            |
|                    |             |              |              |              |
| 11.4               | 37.6        | 39.3         | 39.3         | 39.3         |
| 11.2               | 35.4        | 38           | 38           | 38           |
| 11.1               | 31.5        | 37.6         | 37.6         | 37.6         |
| -                  | 30.7        | 37.3         | 37.3         | 37.3         |
|                    |             |              |              |              |
| -                  | 30.6        | 37.3         | 37.3         | 37.3         |
|                    |             |              |              |              |
| -                  | -           | 18.7         | 25.3         | 25.5         |
|                    |             |              |              |              |
| -                  | -           | 19.4         | 25.3         | 25.6         |
|                    |             |              |              |              |
| -                  | T           | T            | T            | T            |
| -                  | -           | T            | T            | T            |
| -                  | -           | -            | T            | T            |
| -                  | -           | -            | -            | T            |
| -                  | -           | -            | -            | -            |

# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

### Selective Protection



$I_n$  Rated operational current  
 $I_u$  Rated uninterrupted current  
 $I_{cu}$  Rated short-circuit breaking capacity  
 $I_i$  Set value non-delayed short-circuit releases

#### Selectivity 415 V AC

Between circuit-breakers it enables the separate disconnection of faulty system sections.

Selectivity exists between incoming circuit breaker 1 and outgoing circuit-breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit. System sections 3 and 4 remain operational.

Provided that the short-circuit current does not exceed those values specified ( $I_{cc\ rms}$ ).

These details represent the limits of selectivity. Both circuit breakers will switch off with higher short-circuit currents. On IZM circuit-breakers with trip units, the delay time  $t_{sd}$  must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4).

| Incoming circuit breaker (1)                             |               | Incoming circuit breaker |                       |      |      |      |      |       |       |       |       |       |       |
|----------------------------------------------------------|---------------|--------------------------|-----------------------|------|------|------|------|-------|-------|-------|-------|-------|-------|
|                                                          | $I_n$ [A]     | 630                      | 630                   | 630  | 800  | 800  | 800  | 1000  | 1000  | 1000  | 1250  | 1250  | 1250  |
|                                                          | $I_{cu}$ [kA] | 42                       | 50                    | 65   | 42   | 50   | 65   | 42    | 50    | 65    | 42    | 50    | 65    |
|                                                          | $I_i$ [A]     | 7560                     | 7560                  | 7560 | 9600 | 9600 | 9600 | 12000 | 12000 | 12000 | 15000 | 15000 | 15000 |
| Outgoing circuit breaker (2)                             |               | $I_u$ [A]                | $I_{cu2}$ (415V) [kA] | B    | N    | H    | B    | N     | H     | B     | N     | H     |       |
| Prospective short circuit current ( $I_{cc\ rms}$ in kA) |               |                          |                       |      |      |      |      |       |       |       |       |       |       |
| PDC1F(G)(K)(M)-TAA...                                    | 16            | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 20            | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 25            | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 32            | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 40            | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 50            | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 63            | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 80            | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 100           | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 125           | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
| PDC9G(K)(M)-B(D)(E)(P)...                                | 160           | 25-50                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 63            | 36-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 100           | 36-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
| PDC2F(G)(K)(N)-TAA...                                    | 160           | 36-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 90            | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 125           | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 160           | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 200           | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 220           | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
| PDC2G(N)(K)-B(D)(E)(P)...                                | 250           | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 160           | 36-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 200           | 36-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 250           | 36-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
| PDC3F(G)(K)(N)-TAA...                                    | 250           | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 320           | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 400           | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 500           | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 630           | 25-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
| PDC3G(N)(K)-B(D)(E)(P)...                                | 250           | 36-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 400           | 36-70                    | T                     | T    | T    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 630           | 36-70                    | -                     | -    | -    | T    | T    | T     | T     | T     | T     | T     | T     |
| PDC4F(G)(K)(N)-TAA...                                    | 800           | 36-70                    | -                     | -    | -    | -    | -    | -     | T     | T     | T     | T     | T     |
| PDC4G(N)(K)                                              | 800           | 36-70                    | -                     | -    | -    | -    | -    | -     | T     | T     | T     | T     | T     |
| PDC5(K)(P)(H)                                            | 630           | 50-100                   | -                     | -    | -    | T    | T    | T     | T     | T     | T     | T     | T     |
|                                                          | 800           | 50-100                   | -                     | -    | -    | -    | -    | -     | T     | T     | T     | T     | T     |
|                                                          | 1000          | 50-100                   | -                     | -    | -    | -    | -    | -     | -     | -     | T     | T     | T     |
|                                                          | 1250          | 50-100                   | -                     | -    | -    | -    | -    | -     | -     | -     | -     | -     | -     |
|                                                          | 1600          | 50-100                   | -                     | -    | -    | -    | -    | -     | -     | -     | -     | -     | -     |

Notes B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity

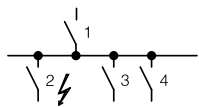
## Power Defense Molded Case Circuit Breaker

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# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

### Selective Protection



$I_n$  Rated operational current  
 $I_u$  Rated uninterrupted current  
 $I_{cu}$  Rated short-circuit breaking capacity  
 $I_i$  Set value non-delayed short-circuit releases

#### Selectivity 415 V AC

Between circuit-breakers it enables the separate disconnection of faulty system sections.

Selectivity exists between incoming circuit breaker 1 and outgoing circuit-breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit. System sections 3 and 4 remain operational.

Provided that the short-circuit current does not exceed those values specified ( $I_{cc\ rms}$ ).

These details represent the limits of selectivity. Both circuit breakers will switch off with higher short-circuit currents.

On IZM circuit-breakers with trip units, the delay time  $t_{sd}$  must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4).

| Incoming circuit breaker (1)                             |      |               | Incoming circuit breaker |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------------------------------------|------|---------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                                          |      | $I_n$ [A]     | 800                      | 800   | 800   | 1000  | 1000  | 1000  | 1250  | 1250  | 1250  | 1600  | 1600  | 1600  |
|                                                          |      | $I_{cu}$ [KA] | 66                       | 85    | 100   | 66    | 85    | 100   | 66    | 85    | 100   | 66    | 85    | 100   |
|                                                          |      | $I_i$ [A]     | 11200                    | 11200 | 11200 | 14000 | 14000 | 14000 | 17500 | 17500 | 17500 | 19200 | 19200 | 19200 |
| Outgoing circuit breaker (2)                             |      | $I_u$ [A]     | $I_{cu2}$ (415V) [KA]    | B     | N     | H     | B     | N     | H     | B     | N     | H     | B     | N     |
| Prospective short circuit current ( $I_{cc\ rms}$ in kA) |      |               |                          |       |       |       |       |       |       |       |       |       |       |       |
| PDC1F(G)(K)(M)<br>-TAA...                                | 16   | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 20   | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 25   | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 32   | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 40   | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 50   | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 63   | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 80   | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 100  | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 125  | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC9G(K)(M)<br>-B(D)(E)(P))...                           | 160  | 25-50         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 63   | 36-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 100  | 36-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC2F(G)(K)(N)<br>-TAA...                                | 160  | 36-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 90   | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 125  | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC2G(N)(K)<br>-B(D)(E)(P))...                           | 160  | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 200  | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 220  | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 250  | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 250  | 36-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC3F(G)(K)(N)<br>-TAA...                                | 200  | 36-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 250  | 36-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 250  | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 320  | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 400  | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC3G(N)(K)<br>-B(D)(E)(P))...                           | 500  | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 630  | 25-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 250  | 36-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 400  | 36-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 630  | 36-70         | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC4F(G)(K)(N)<br>-TAA...                                | 800  | 36-70         | -                        | -     | -     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC3G(N)(K)                                              | 800  | 36-70         | -                        | -     | -     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC5(K)(P)(H)                                            | 630  | 50-100        | T                        | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 800  | 50-100        | -                        | -     | -     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 1000 | 50-100        | -                        | -     | -     | -     | -     | -     | T     | T     | T     | T     | T     | T     |
|                                                          | 1250 | 50-100        | -                        | -     | -     | -     | -     | -     | -     | -     | -     | T     | T     | T     |
|                                                          | 1600 | 50-100        | -                        | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |

Notes B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity

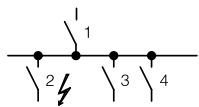
## Power Defense Molded Case Circuit Breaker

[illegible]

# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

### Selective Protection



$I_n$  Rated operational current  
 $I_u$  Rated uninterrupted current  
 $I_{cu}$  Rated short-circuit breaking capacity  
 $I_i$  Set value non-delayed short-circuit releases

#### Selectivity 415 V AC

Between circuit-breakers it enables the separate disconnection of faulty system sections.

Selectivity exists between incoming circuit breaker 1 and outgoing circuit-breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit. System sections 3 and 4 remain operational.

Provided that the short-circuit current does not exceed those values specified ( $I_{cc\ rms}$ ).

These details represent the limits of selectivity. Both circuit breakers will switch off with higher short-circuit currents.

On IZM circuit-breakers with trip units, the delay time  $t_{sd}$  must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4).

| Incoming circuit breaker (1)                             |      |               | Incoming circuit breaker |                       |       |       |       |       |       |       |       |       |       |       |
|----------------------------------------------------------|------|---------------|--------------------------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                                          |      | $I_n$ [A]     | 800                      | 800                   | 800   | 1000  | 1000  | 1000  | 1250  | 1250  | 1250  | 1600  | 1600  | 1600  |
|                                                          |      | $I_{cu}$ [kA] | 66                       | 85                    | 100   | 66    | 85    | 100   | 66    | 85    | 100   | 66    | 85    | 100   |
|                                                          |      | $I_i$ [A]     | 11200                    | 11200                 | 11200 | 14000 | 14000 | 14000 | 17500 | 17500 | 17500 | 19200 | 19200 | 19200 |
| Outgoing circuit breaker (2)                             |      |               | $I_u$ [A]                | $I_{cu2}$ (415V) [kA] | B     | N     | H     | B     | N     | H     | B     | N     | H     |       |
| Prospective short circuit current ( $I_{cc\ rms}$ in kA) |      |               |                          |                       |       |       |       |       |       |       |       |       |       |       |
| PDC1F(G)(K)(M)<br>-TAA...                                | 16   | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 20   | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 25   | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 32   | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 40   | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 50   | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 63   | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 80   | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 100  | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 125  | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC9G(K)(M)<br>-B(D)(E)(P))...                           | 160  | 25-50         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 63   | 36-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 100  | 36-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC2F(G)(K)(N)<br>-TAA...                                | 160  | 36-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 90   | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 125  | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC2G(N)(K)<br>-B(D)(E)(P))...                           | 160  | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 200  | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 220  | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 250  | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 160  | 36-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC3F(G)(K)(N)<br>-TAA...                                | 200  | 36-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 250  | 36-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 250  | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 320  | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 400  | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC3G(N)(K)<br>-B(D)(E)(P))...                           | 500  | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 630  | 25-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 250  | 36-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 400  | 36-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 630  | 36-70         | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC4F(G)(K)(N)<br>-TAA...                                | 800  | 36-70         | -                        | -                     | -     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC3G(N)(K)                                              | 800  | 36-70         | -                        | -                     | -     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
| PDC5(K)(P)(H)                                            | 630  | 50-100        | T                        | T                     | T     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 800  | 50-100        | -                        | -                     | -     | T     | T     | T     | T     | T     | T     | T     | T     | T     |
|                                                          | 1000 | 50-100        | -                        | -                     | -     | -     | -     | -     | T     | T     | T     | T     | T     | T     |
|                                                          | 1250 | 50-100        | -                        | -                     | -     | -     | -     | -     | -     | -     | -     | T     | T     | T     |
|                                                          | 1600 | 50-100        | -                        | -                     | -     | -     | -     | -     | -     | -     | -     | -     | -     | -     |

Notes B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity

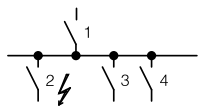
## Power Defense Molded Case Circuit Breaker

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# Power Defense Molded Case Circuit Breaker

## Selective Protection (PDC, NZM, FAZ)

### Selective Protection



$I_n$  Rated operational current  
 $I_u$  Rated uninterrupted current  
 $I_{cu}$  Rated short-circuit breaking capacity  
 $I_i$  Set value non-delayed short-circuit releases

#### Selectivity 415 V AC

Between circuit-breakers it enables the separate disconnection of faulty system sections.

Selectivity exists between incoming circuit breaker 1 and outgoing circuit-breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit. System sections 3 and 4 remain operational.

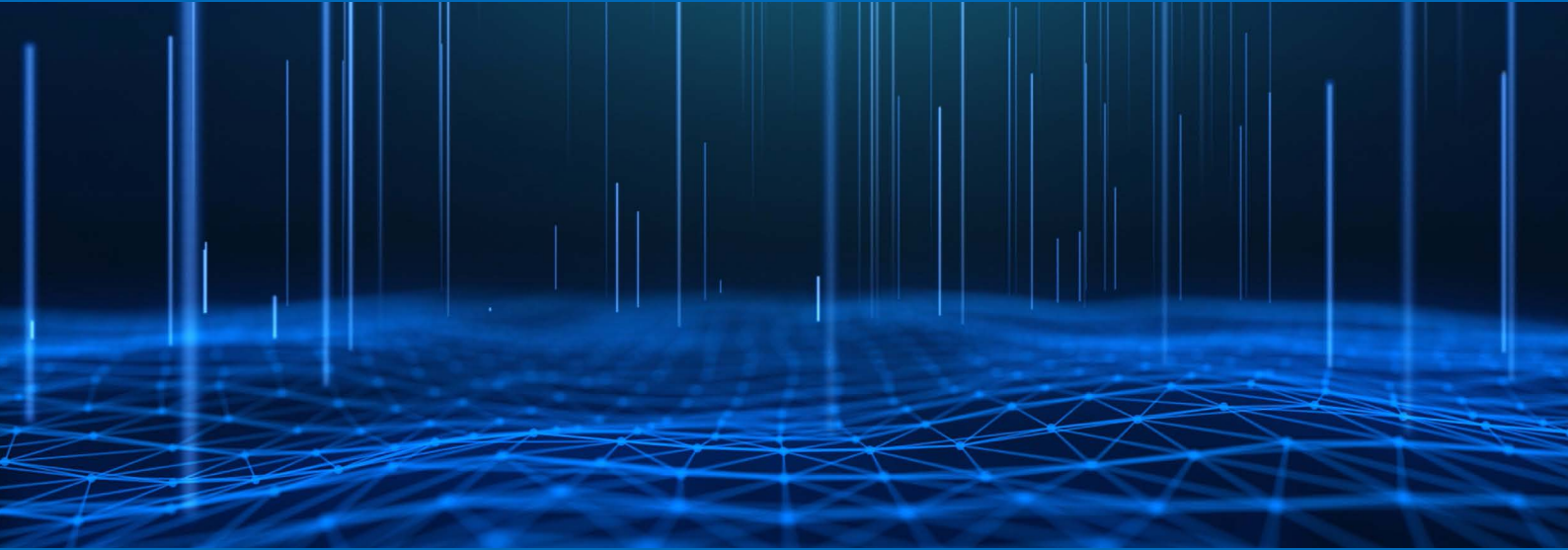
Provided that the short-circuit current does not exceed those values specified ( $I_{cc\ rms}$ ).

These details represent the limits of selectivity. Both circuit breakers will switch off with higher short-circuit currents.

On IZM circuit-breakers with trip units, the delay time  $t_{sd}$  must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4).

| Incoming circuit breaker (1)                             |               |           | IZM99...-V            |       |       |       |       |       | IZM99...-U |       |       |       |       |       |
|----------------------------------------------------------|---------------|-----------|-----------------------|-------|-------|-------|-------|-------|------------|-------|-------|-------|-------|-------|
|                                                          | $I_n$ [A]     |           | 4000                  | 4000  | 5000  | 5000  | 6300  | 6300  | 4000       | 4000  | 5000  | 5000  | 6300  | 6300  |
|                                                          | $I_{cu}$ [KA] |           | 85                    | 100   | 85    | 100   | 85    | 100   | 85         | 100   | 85    | 100   | 85    | 100   |
|                                                          | $I_i$ [A]     |           | 48000                 | 48000 | 60000 | 60000 | 63000 | 63000 | 48000      | 48000 | 60000 | 60000 | 63000 | 63000 |
| Outgoing circuit breaker (2)                             |               | $I_u$ [A] | $I_{cu2}$ (415V) [KA] | N     | H     | N     | H     | N     | H          | N     | H     | N     | H     | N     |
| Prospective short circuit current ( $I_{cc\ rms}$ in kA) |               |           |                       |       |       |       |       |       |            |       |       |       |       |       |
| PDC1F(G)(K)(M)<br>-TAA...                                | 16            | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 20            | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 25            | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 32            | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 40            | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 50            | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 63            | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 80            | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 100           | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 125           | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
| PDC9G(K)(M)<br>-B(D)(E)(P))...                           | 160           | 25-50     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 63            | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 100           | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
| PDC2F(G)(K)(N)<br>-TAA...                                | 160           | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 90            | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 125           | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
| PDC2G(N)(K)<br>-B(D)(E)(P))...                           | 160           | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 200           | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 220           | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 250           | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 160           | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
| PDC3F(G)(K)(N)<br>-TAA...                                | 200           | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 250           | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 250           | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 320           | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 400           | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
| PDC3G(N)(K)<br>-B(D)(E)(P))...                           | 500           | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 630           | 25-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 250           | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 400           | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 630           | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
| PDC4F(G)(K)(N)<br>-TAA...                                | 800           | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
| PDC3G(N)(K)                                              | 800           | 36-70     | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
| PDC5(K)(P)(H)                                            | 630           | 50-100    | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 800           | 50-100    | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 1000          | 50-100    | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 1250          | 50-100    | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |
|                                                          | 1600          | 50-100    | T                     | T     | T     | T     | T     | T     | T          | T     | T     | T     | T     | T     |

Notes B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity



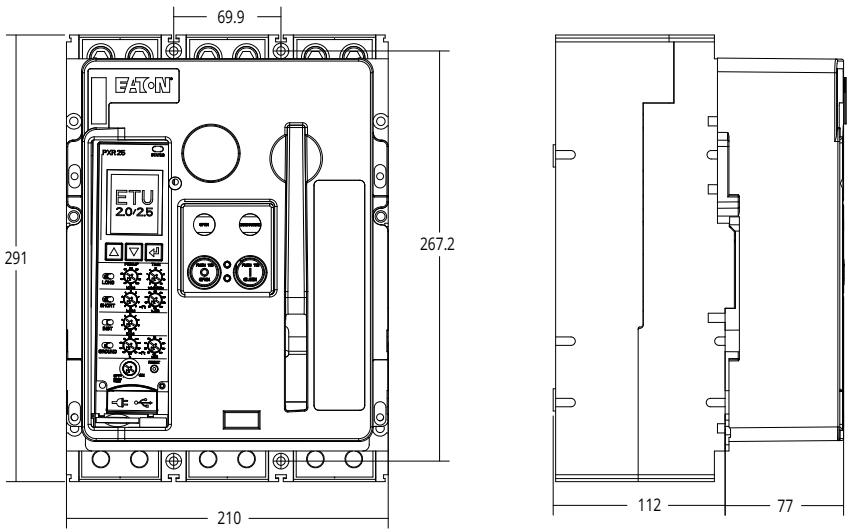
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# Power Defense Molded Case Circuit Breaker

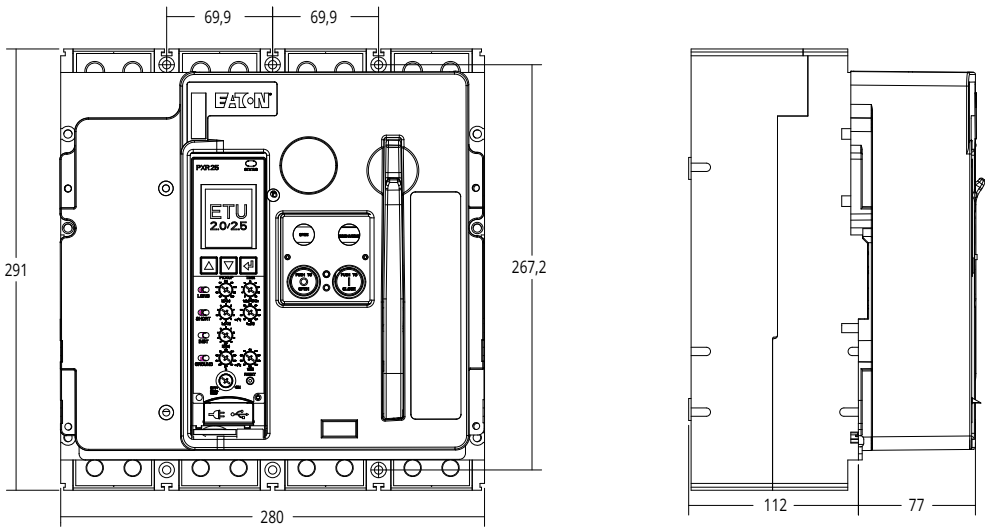
## Dimensions

### Circuit Breaker's Basic Device

3P

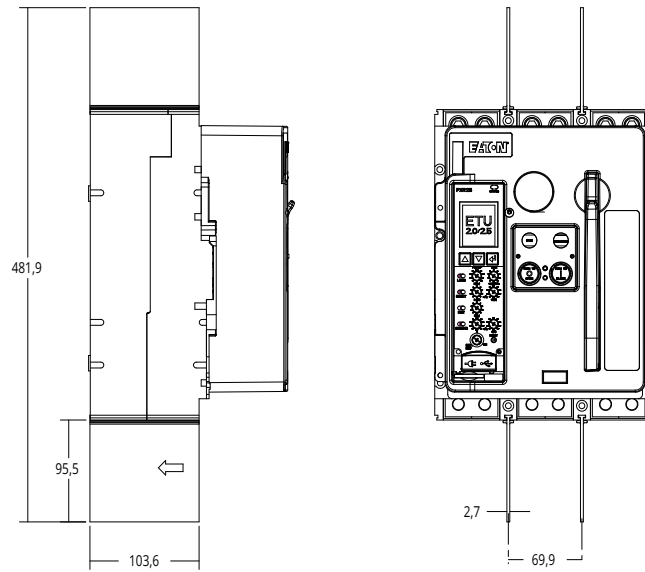


4P

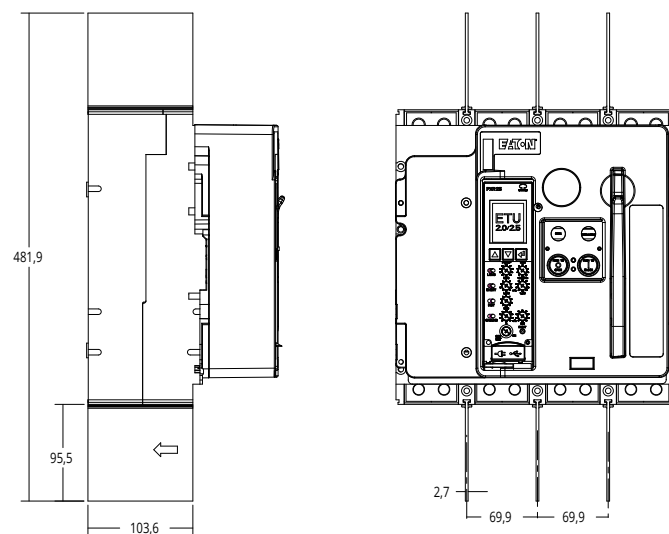


### Circuit Breaker's Accessories

#### Phase barrier 100 3P



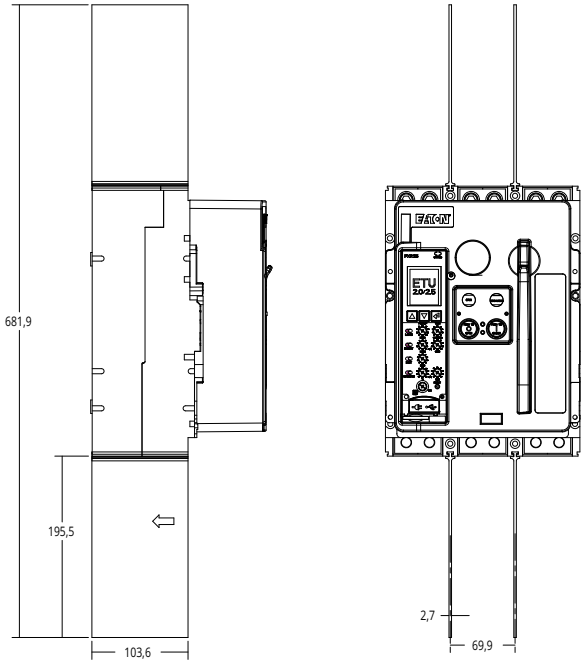
#### Phase barrier 100 4P



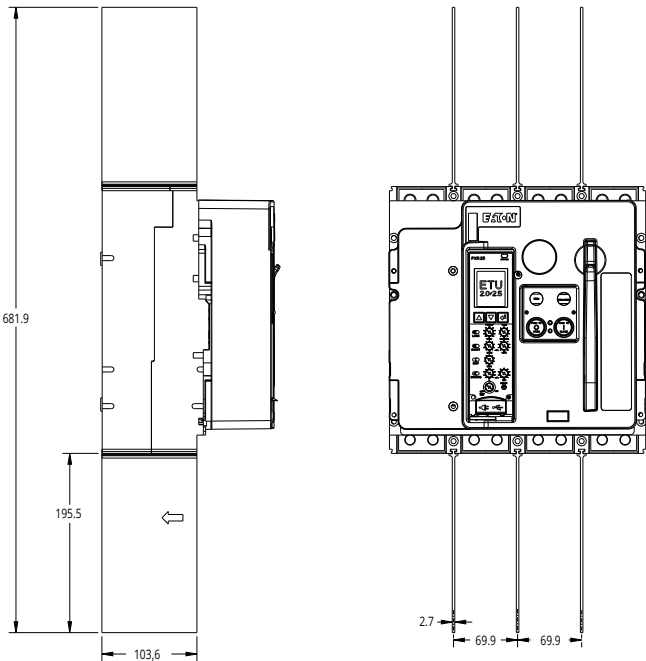
Power Defense Molded Case Circuit Breaker  
Dimensions

Circuit Breaker's Accessories

Phase barrier 200 3P

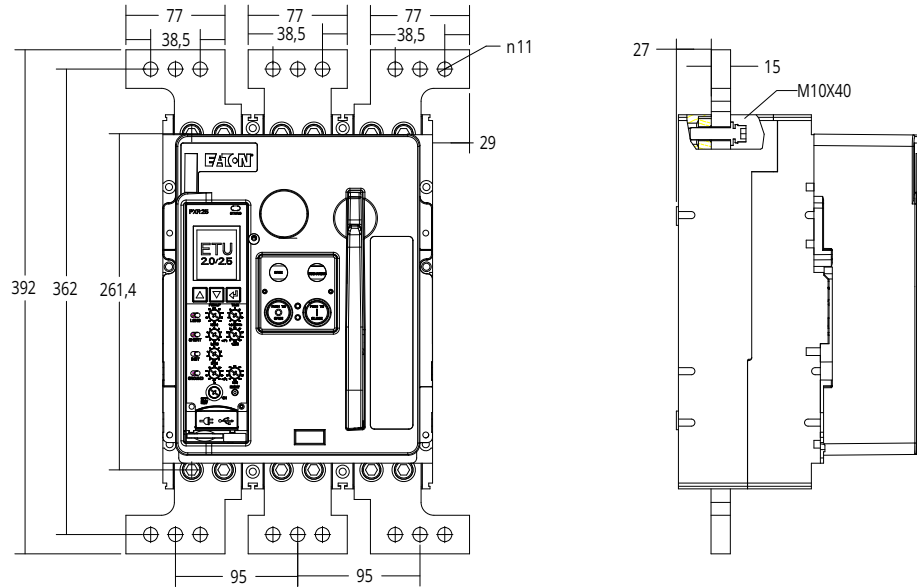


Phase barrier 200 4P

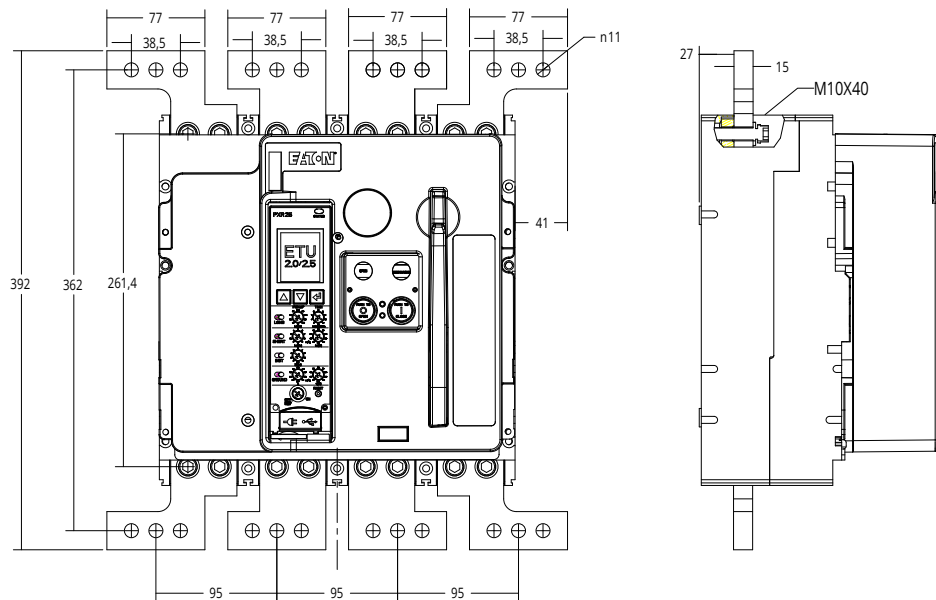


### Circuit Breaker's Accessories

#### 95MM phase spacing extended board 3P



#### 95MM spacing extended board 4P

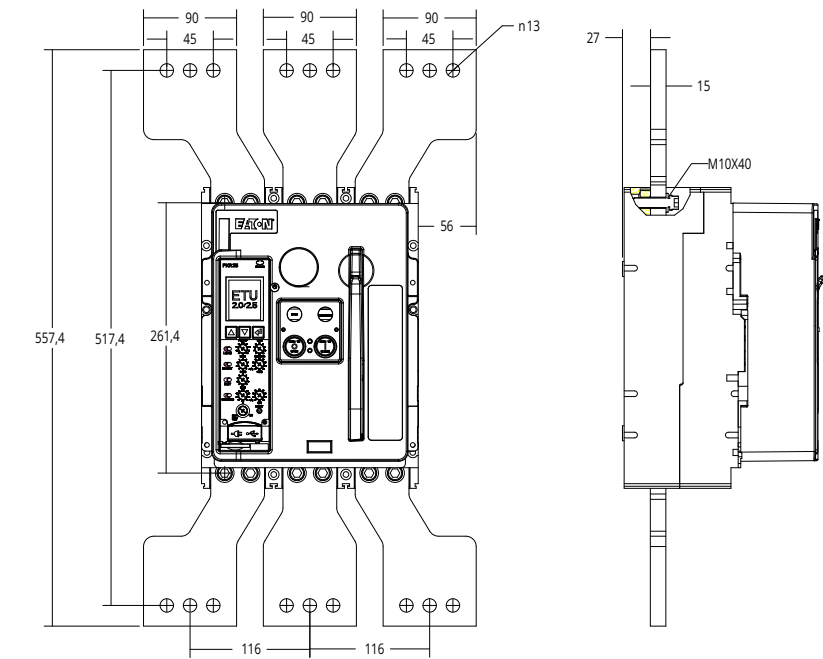


# Power Defense Molded Case Circuit Breaker

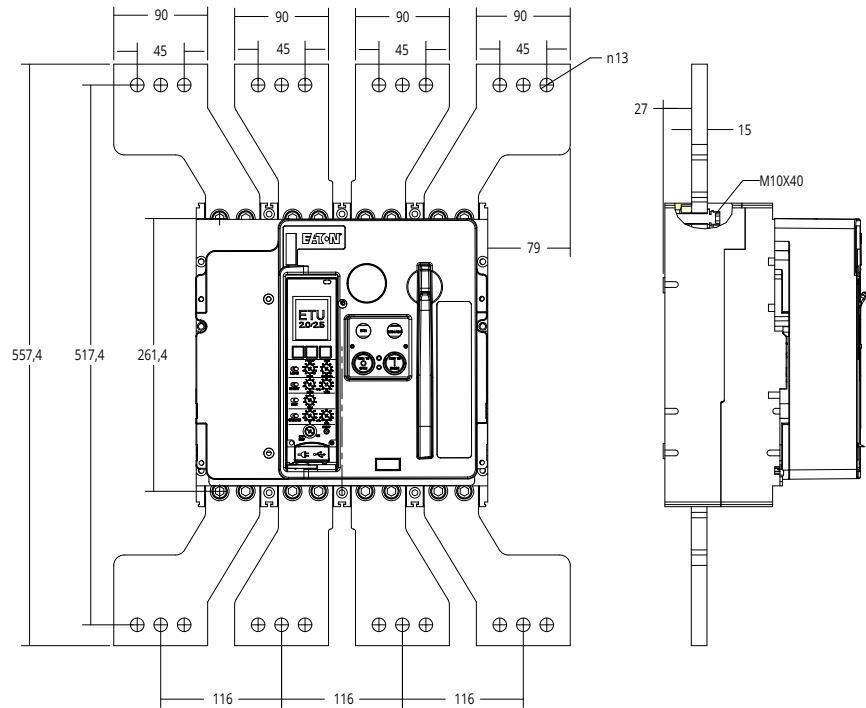
## Dimensions

### Circuit Breaker's Accessories

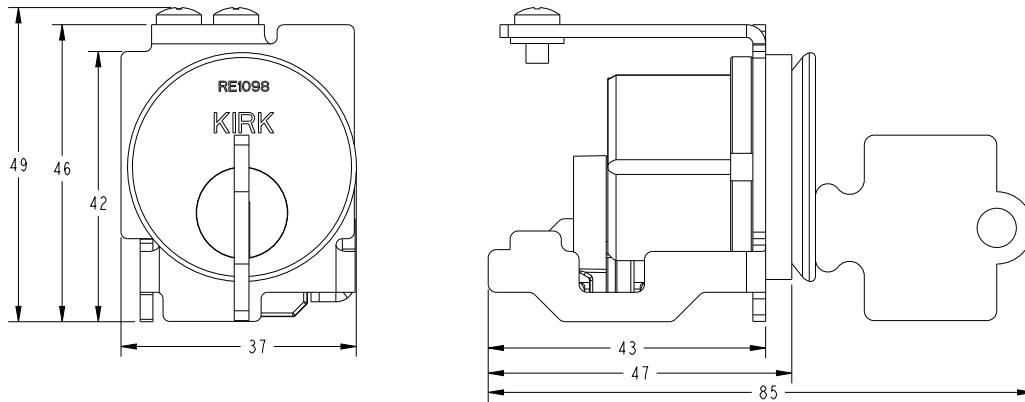
#### 116MM spacing extended board 3P



#### 116MM spacing extended board 4P

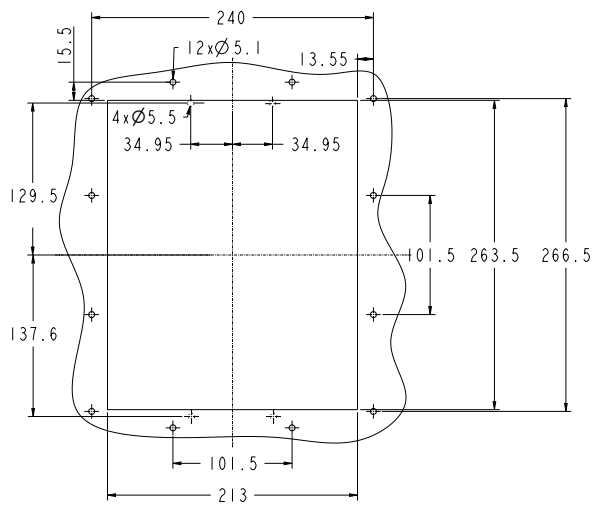


**OFF Position Safety Lock**



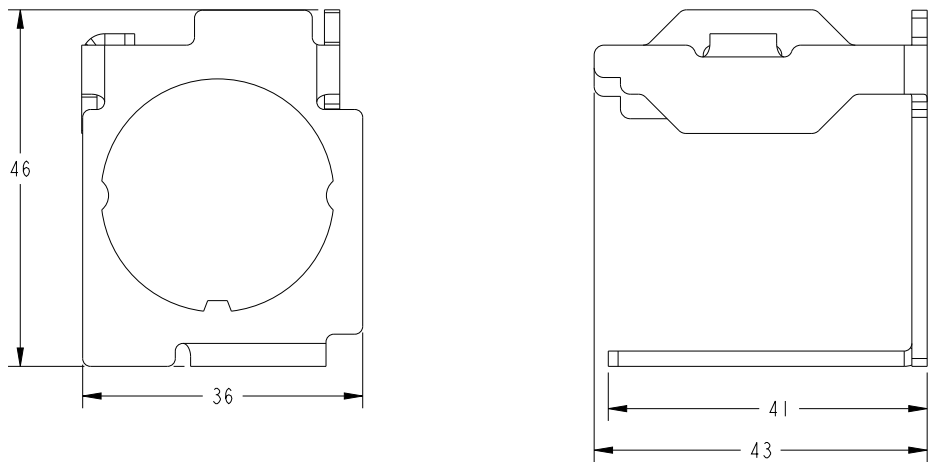
**Fixed Type Door Escutcheon**

**Cabinet door cutout dimensions**



**Power Defense Molded Case Circuit Breaker**  
Dimensions

**Lock Bracket**

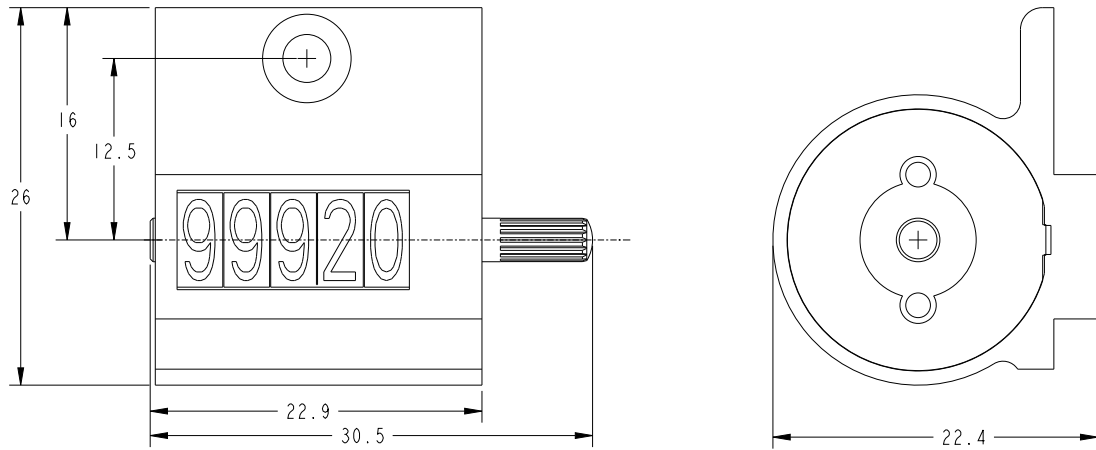


**Communication Module**

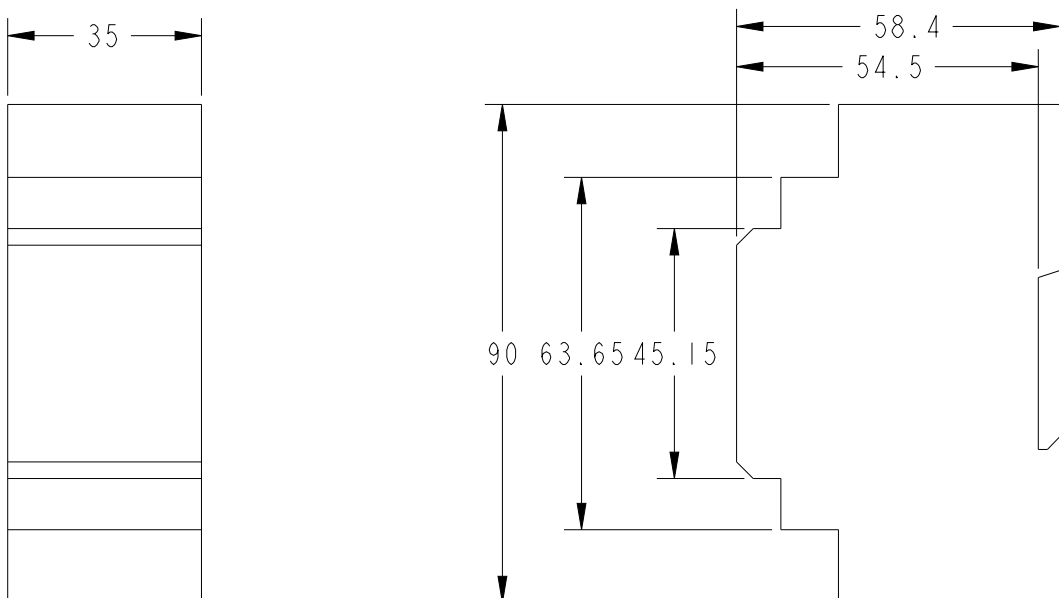
# Power Defense Molded Case Circuit Breaker

## Dimensions

### Operations Counter

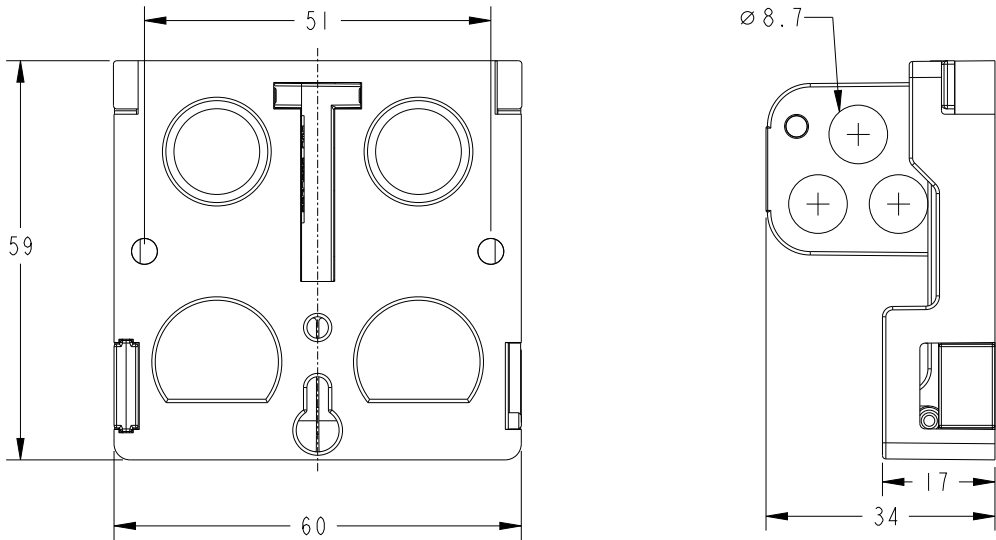


### Power Module

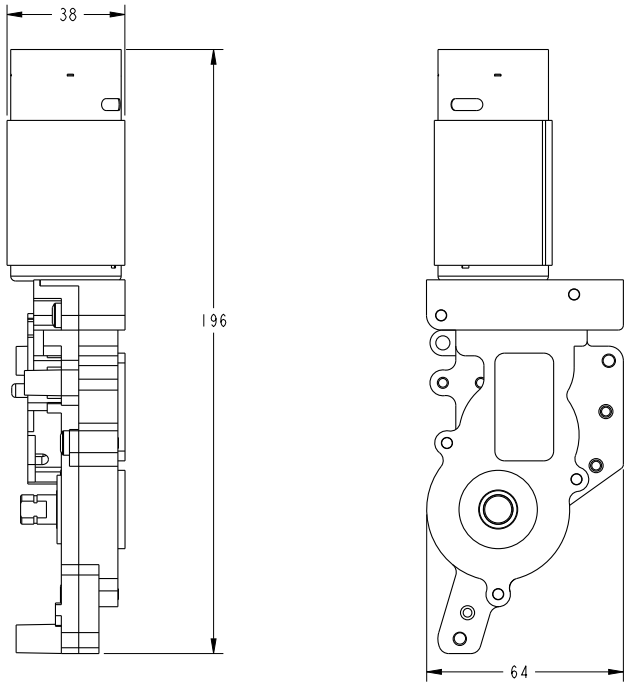


**Power Defense Molded Case Circuit Breaker**  
Dimensions

**Button Cover**



**Motor Operator**



## Power Defense Molded Case Circuit Breaker

### Dimensions

Eaton is an intelligent power management company dedicated to improving the quality of life and protecting the environment for people everywhere. We are guided by our commitment to do business right, to operate sustainably and to help our customers manage power - today and well into the future. By capitalizing on the global growth trends of electrification and digitalization, we're accelerating the planet's transition to renewable energy, helping to solve the world's most urgent power management challenges, and doing what's best for our stakeholders and all of society.

Eaton was founded in 1911 and has been listed on the New York Stock Exchange for over a century. We reported revenues of \$23.2 billion in 2023 and serve customers in more than 160 countries. Eaton entered the Chinese market in 1993 and has grown significantly since then. In 2004, Eaton moved its Asia-Pacific headquarters from Hong Kong to Shanghai. Today, Eaton has nearly 8,000 employees and 19 manufacturing facilities in China.

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