

ABB XT1C 160

ABB TMAX XT1C 160 Circuit Breaker User Manual

Model: XT1C 160 | Brand: ABB

INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the ABB TMAX XT1C 160 Molded Case Circuit Breaker (MCCB). Please read this manual thoroughly before attempting any installation or operation.

SAFETY INFORMATION

WARNING: Electrical shock hazard. Only qualified personnel should install, operate, or maintain this device.

- Disconnect all power before working on the circuit breaker.
- Use appropriate personal protective equipment (PPE), including insulated gloves and eye protection.
- Follow all local and national electrical codes and regulations.
- Do not operate the circuit breaker if it is visibly damaged or if any components are missing.
- Ensure proper grounding where required.

PRODUCT OVERVIEW

The ABB TMAX XT1C 160 is a 3-pole fixed molded case circuit breaker with a thermomagnetic release, designed for protection against overloads and short circuits in electrical systems. It features front terminals for easy connection.



This image shows the ABB TMAX XT1C 160 circuit breaker. Key features visible include the ABB logo, the SACE Tmax branding, the 'off' position indicator, and the current rating adjustment dials (MED 106A, MAX 125A). The top section displays technical specifications such as rated operational voltage (Ue), rated ultimate short-circuit breaking capacity (Icu), and rated impulse withstand voltage (Uimp). The breaker is a 3-pole design with front terminals.

TECHNICAL SPECIFICATIONS

Parameter	Value
Model	XT1C 160
Current Rating	125 Amps
Number of Poles	3
Circuit Breaker Type	Standard, Thermal-Magnetic
Mounting Type	DIN Rail Mount

Parameter	Value
Rated Operational Voltage (Ue)	690V AC, 500V DC
Rated Ultimate Short-Circuit Breaking Capacity (Icu)	25kA @ 415VAC
Rated Impulse Withstand Voltage (Uimp)	8kV
Release Type	Thermomagnetic (TMD)
Terminals	Front
Standards	IEC60947-2, NEMA AB1
Manufacturer	ABB
ASIN	B07JL7XGD

INSTALLATION

Before Installation: Ensure the power supply is disconnected and locked out according to safety procedures. Verify the circuit breaker's ratings match the application requirements.

Mounting

The XT1C 160 is designed for DIN rail mounting.

- Securely attach the DIN rail to the mounting surface in the electrical enclosure.
- Align the circuit breaker's rear clips with the DIN rail.
- Press firmly until the breaker clicks into place, ensuring it is securely fastened.

Wiring

Connect the power supply and load cables to the designated front terminals.

- Connect incoming phase conductors to the top terminals (L1, L2, L3).
- Connect outgoing load conductors to the bottom terminals (T1, T2, T3).
- Ensure all connections are tight and secure to prevent overheating and arcing. Use a torque wrench to achieve specified torque values.
- Use appropriate wire gauges for the current rating to avoid overheating.

OPERATION

Switching On/Off

The circuit breaker has a toggle handle for manual operation.

- To switch ON: Push the handle upwards to the "ON" position.
- To switch OFF: Push the handle downwards to the "OFF" position.
- In case of a trip: The handle will move to an intermediate "TRIP" position. To reset, push the handle fully down to "OFF" first, then push it up to "ON".

Current Adjustment (TMD Release)

The thermomagnetic release allows for adjustment of the rated current (In) and instantaneous trip setting.

- The nominal current (In) can be set between 106A (MED) and 125A (MAX) using the adjustment dial on the front face of the breaker.
- The instantaneous trip setting (Ii) is typically fixed or adjustable within a specific range, as indicated on the device's label. Consult the product datasheet for precise values.

MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of the circuit breaker. Always disconnect power before performing any maintenance.

- **Periodic Inspection:** Visually inspect the circuit breaker for any signs of physical damage, discoloration, or loose connections. Check for dust accumulation, especially in ventilation openings.
- **Cleaning:** Disconnect power before cleaning. Use a dry, clean, lint-free cloth to wipe the exterior. Do not use solvents, abrasive cleaners, or liquids that could enter the breaker.
- **Terminal Tightness:** Periodically check the tightness of all terminal connections. Loose connections can lead to increased resistance, overheating, and potential failure.
- **Functional Test:** If possible and safe, perform periodic functional tests according to ABB guidelines or relevant industry standards to verify proper tripping characteristics.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Breaker trips frequently	Overload or short circuit in the protected circuit.	Identify and remove the overload. Check for short circuits in the connected circuit using appropriate testing equipment.
Breaker does not reset after tripping	Persistent fault in the circuit or internal damage to the breaker.	Ensure the fault is completely cleared. If it still doesn't reset, the breaker may be damaged internally and require replacement by a qualified technician.
Overheating at terminals	Loose connections or undersized wiring for the load.	Disconnect power and tighten terminal screws to the specified torque. Verify wire gauge is appropriate for the maximum current.
Breaker does not trip on fault	Breaker malfunction or incorrect rating for the application.	Immediately disconnect power. Do not use the breaker. It must be inspected and potentially replaced by a qualified professional. Verify the breaker's ratings match the system requirements.

WARRANTY AND SUPPORT

For detailed warranty information and technical support, please refer to the official ABB website or contact your authorized ABB distributor. Keep your purchase receipt for warranty claims.

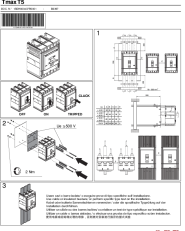

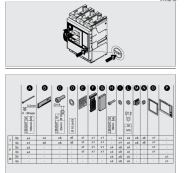


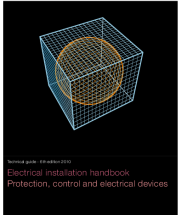
Manufacturer: ABB

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For further assistance, visit the [ABB Store on Amazon](#).

Related Documents - XT1C 160

 <p>ABB</p>	<p>ABB Tmax T5 Circuit Breaker Installation and Technical Data</p> <p>Comprehensive technical specifications, dimensional drawings, and installation guidelines for ABB Tmax T5 circuit breakers, including various series like PR221DS.</p>
 <p>ABB</p>	<p>ABB SACE Tmax XT Catalog: Low Voltage Molded Case Circuit-Breakers</p> <p>Explore the ABB SACE Tmax XT series, a cutting-edge range of low voltage molded case circuit-breakers offering advanced performance, connectivity, ease of use, and robust protection for diverse industrial and commercial applications.</p>
 <p>ABB</p>	<p>SACE Tmax XT Circuit Breaker Installation Guide</p> <p>Comprehensive installation instructions and recommended conditions for ABB SACE Tmax XT circuit breakers, covering AC and DC applications, wiring diagrams, dimensional data, and trip test procedures.</p>
 <p>ABB</p>	<p>ABB SACE® Tmax® XT Molded Case Circuit Breakers: Distributor Migration Guide from Spectra™</p> <p>This Distributor Migration Guide from ABB provides a comprehensive overview of the SACE® Tmax® XT molded case circuit breakers, detailing their features, applications, and benefits. It guides users on migrating from the retiring Spectra™ series, offers stocking strategies, lists accessories, and explains product ordering structures. Essential for electrical distributors and specifiers.</p>
 <p>ABB</p>	<p>ABB VD4 Vacuum Circuit Breaker: Technical Catalog and Specifications</p> <p>Explore the ABB VD4 Vacuum Circuit Breaker, a high-performance solution for electrical distribution systems. This catalog details technical specifications, operating conditions, installation, and maintenance for models ranging from 12-24kV.</p>
 <p>ABB</p>	<p>ABB Electrical Installation Handbook: Protection, Control, and Electrical Devices</p> <p>Comprehensive technical guide from ABB covering electrical installation, protection, control devices, circuit breakers, switch disconnectors, and relevant standards. Features detailed specifications and coordination tables.</p>