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EXOR eXware707Q Industrial Gateway For Digitization IOT Installation Guide

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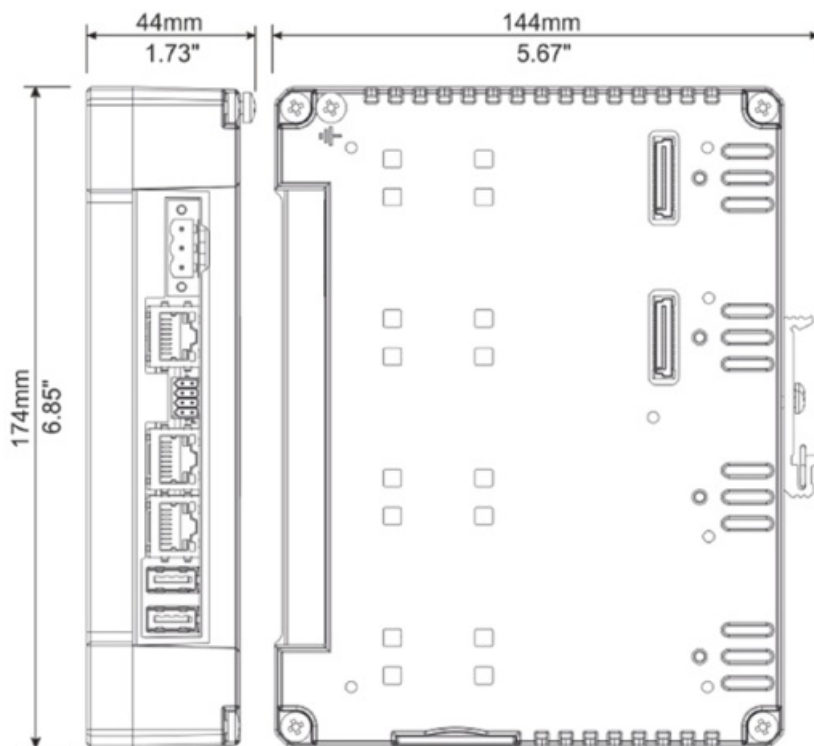
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eXware707
eXware707Q

Installation guide

1 DIMENSION



Model	CSD	CSD2
eXware707	400mm/15.74"	300mm/11.81"
eXware707Q	350mm/13.77"	250mm/9.84"

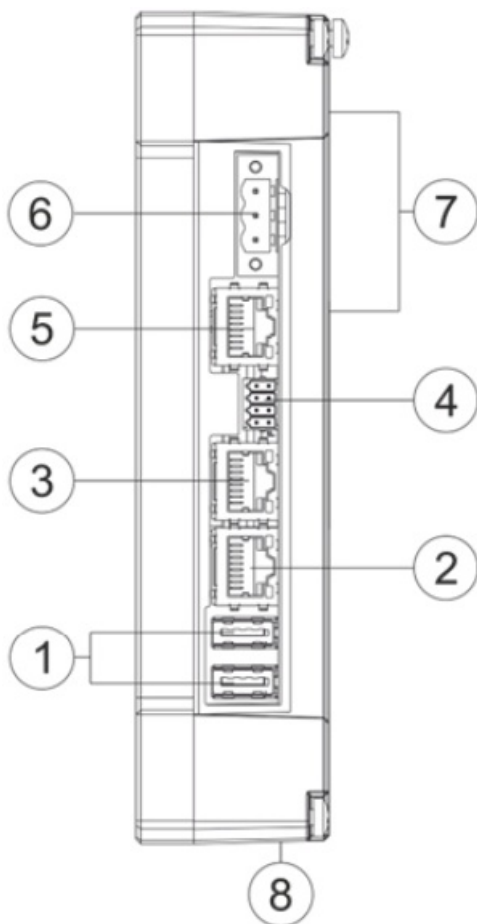
CSD = 350mm/13.77" = Minimum Compass Safe Distance of standard compass

CSD2 = 250mm/9.84" = Minimum Compass Safe Distance of steering compass, standby steering compass, emergency compass

2 INSTALLATION

The eXware is suitable for mounting on a DIN rail.

3 REAR VIEW



1. USB Port V2.0, max 500 mA *
2. Ethernet Port 2 (10/100 Mb)
3. Ethernet Port 1 (10/100 Mb)
4. Serial port
5. Ethernet Port 0 (10/100/1000 Mb)
6. Power supply
7. 2 Expansion slot for plug-in modules
8. SD card slot

* for maintenance only/

4 FACTORY SETTINGS

ETH0 / WAN: DHCP

ETH1 / LAN: IP Address 192.168.0.1 Subnet mask: 255.255.255.0

Settings: https://192.168.0.1/machine_config

Username: admin

Password: admin



All ports are SELV (Safety Extra – Low Voltage) according European Standards and Class 2 according UL Standards.

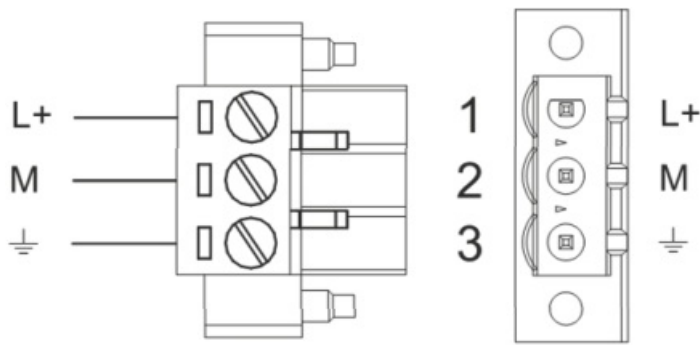


WARNING – EXPLOSION HAZARD – (Ethernet, USB connectors, memory card slot)
DO NOT CONNECT OR DISCONNECT UNLESS THE POWER HAS BEEN DISCONNECTED OR THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.



Don't open the panel rear cover when the power supply is applied.

5 POWER SUPPLY



+24V  Common

DC Power Connector, Female – R/C Terminal Blocks (XCFR2), manufactured by Weidmuller Inc., Cat. No. BLZ 5.08, torque 4.5 lb-in

3 conductor 1,5mm² wire size minimum, minimum temperature conductor rating 105°C.

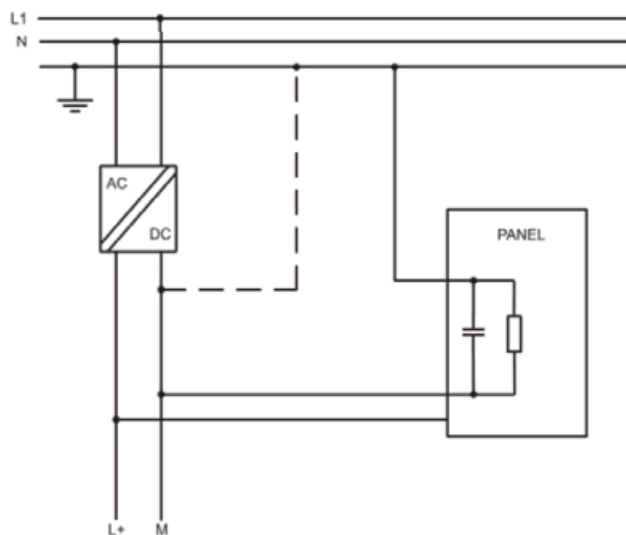


Do not open the cabinet while the system is powered up.



WARNING: Do not separate when energized.

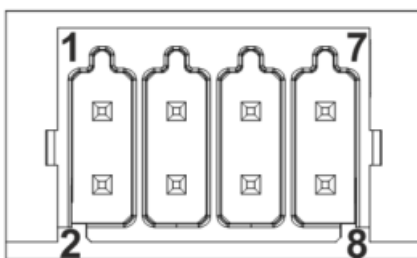
The unit must always be grounded to earth. Earth connection will have to be done using either the screw or the faston terminal located near the power supply terminal block. Also connect to ground the terminal 3 on the power supply terminal block.



Ensure that the power supply has enough power capacity for the operation of the equipment.

6 CONNECTIONS

SERIAL PORT



Pin	Description
1	RX/CHB-
2	TX/CHA-
3	CTS/CHB+
4	RTS/CHA+
5	+5V output
6	GND
7	
8	SHIELD

To operate in RS-485 pins 1-2 and 4-3 must be connected externally

7 EXPANSION SLOT FOR PLUG-IN MODULES

The validity of UL certification is ensured only by using accessories (PLxx) covered by the same certificate.



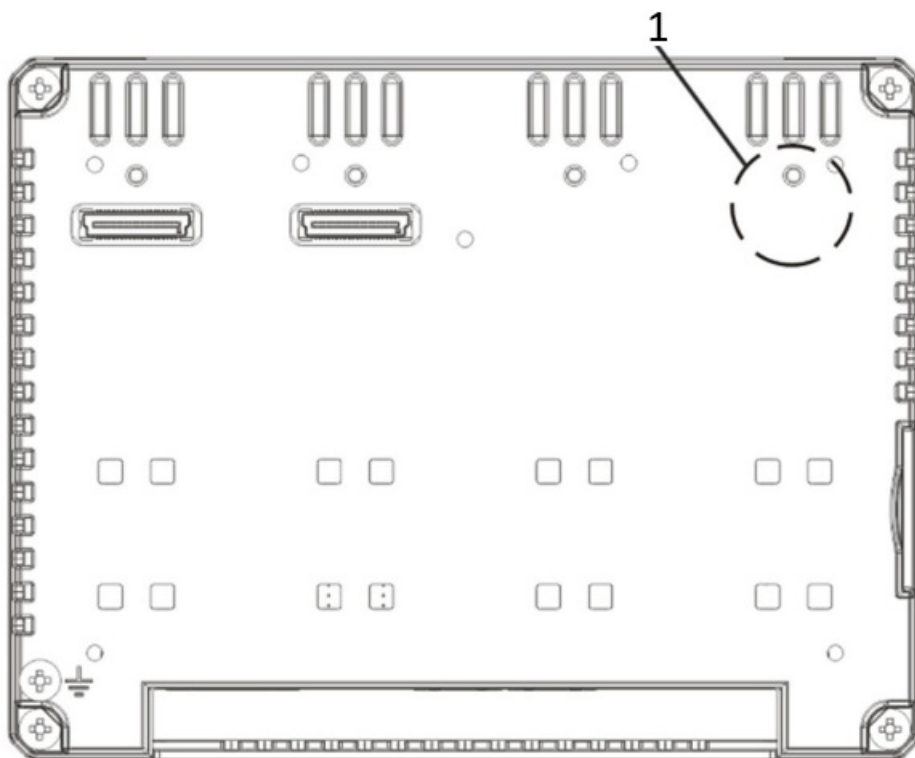
The vents in the panel casing must not be obstructed.

Check that panels are mounted in enclosures satisfying minimum IP54 degree of protection for category 3G and the requirements relating to the 3G categories in Zones 2 (Category 3: normal level of protection – G: Gas).



Ensure that the labelling specifications are compatible with the conditions permitted for the hazardous area at the site where it is being used (Zones 2 Group II: Surface industries – Category 3: Normal level of protection – G: Gas – IP: degree of protection (protection against solids and liquids) – T: maximum surface temperature).

8 DISPOSE OF BATTERIES



1. Battery

These devices are equipped with rechargeable Lithium battery, not user-replaceable.

MARKINGS

ATEX markings, applied to the Models eXware707:

AUFSCHRIFTEN

DEMKO 17 ATEX 1871X / UL22UKEX2726X

II 3G Ex ec IIC T5...T4 Gc $0 \leq T_{amb} \leq +50^{\circ}\text{C}$ or $-20 \leq T_{amb} \leq +60^{\circ}\text{C}$

T Amb: $0^{\circ}\text{C} - +50^{\circ}\text{C}$ or $-20^{\circ}\text{C} - +60^{\circ}\text{C}$

Type examination certificate number: DEMKO 17 ATEX 1871X / UL22UKEX2726X

DO NOT DISCONNECT WHILE CIRCUIT IS LIVE

IECEX markings, applied to the Models eXware707:

AUFSCHRIFTEN

IECEX: IECEX ULD 17.0019X

Ex ec IIC T5...T4 Gc $0^{\circ}\text{C} \leq T_{amb} \leq +50^{\circ}\text{C}$ or $-20^{\circ}\text{C} \leq T_{amb} \leq +60^{\circ}\text{C}$

Type examination certificate number: IECEX ULD 17.0019X



Dispose of batteries according to local regulations.



This device cannot be disposed of as a domestic waste but according to WEEE European Directive 2012/19/EU



The product has been designed for use in industrial, residential, commercial, light industrial and marine environment

in compliance with the 2014/30/EU directives.

These devices have been designed for use in potentially explosive atmospheres in accordance with 2014/34/EU Directive

The products have been designed in compliance with:

EN 61000-6-4
EN 61000-6-3

CISPR 32

Class B

EN 61000-6-2
EN 61000-6-1

EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN 61000-4-29
EN 60945

EN 60079-0
EN 60079-7

Equipment group II, category 3 intended for use in potentially explosive atmospheres zones 2, G:gas.

Type examination certificate number: DEMKO 17 ATEX 1871X / UL22UKEX2726X

9 USAGE IN EXPLOSION-HAZARDOUS AREAS ZONE 2



The connection and installation have to be done in conformity with ATEX Directive, IEC EN 60079-14, and have to be performed by authorized, qualified personnel and in possession of necessary skills.



Confirm that the location is free from explosively hazardous gases or dust before connecting or disconnecting equipment, replacing or wiring modules. Confirm that the power supply has been turned OFF before disconnecting, replacing or wiring modules.

WARNING – Power, input and output (I/O) wiring must be in accordance with Class I, Division 2 wiring methods, Article 501.10 (B) of the National Electrical Code, NFPA 70 for installation in the U.S., or as specified in Section 18-1J2 of Canadian Electrical Code for installations within Canada and in accordance with the authority having

jurisdictions.

WARNING – EXPLOSION HAZARD – SUBSTITUTION OF ANY COMPONENT MAY IMPAIR SUIT- ABILITY FOR CLASS I, DIVISION 2

WARNING – EXPLOSION HAZARD – WHEN IN HAZARDOUS LOCATIONS, TURN OFF POWER BEFORE REPLACING OR WIRING MODULES, and

WARNING – EXPLOSION HAZARD – DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOW TO BE FREE OF IGNITABLE CONCENTRATIONS.

SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D HAZARDOUS LOCATIONS, OR NONHAZARDOUS LOCATIONS ONLY.

WARNING – EXPLOSION HAZARD – DO NOT CHANGE BATTERY UNLESS THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS

eXware, is an open-type device and is required to be installed on a DIN-rail in an enclosure suitable for the environment such that the internal part of the equipment is only accessible with the use of a tool.


10 STANDARDS AND APPROVALS

Standards and Approvals

IECEX
IEC 60079-0, Ed.7
IEC 60079-7, Ed.5.1

IECEX: IECEX ULD 17.0019X
Ex ec IIC T5...T4 Gc 0°C≤Tamb≤+50°C or -20°C≤Tamb≤+60°C

ATEX
EN IEC 60079-0: 2018
EN IEC 60079-7: 2015
+A11:2013

 DEMKO 17 ATEX 1871X / UL22UKEX2726X
II 3G Ex ec IIC T5...T4 Gc 0°C≤Tamb≤+50°C or -20°C≤Tamb≤+60°C

11 SPECIAL INSTRUCTION FOR USE

- The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC/EN 60664-1.
- The equipment shall be installed in an enclosure that provides a minimum ingress ptotection of IP54 in accordance with IEC/EN 60079-0.
- Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.

The relation between maximum ambient temperature and the assigned temperature class is as follow:

Maximum ambient temperature range	Temperature Class
-20°C up to 60°C	T4
0°C up to 50°C	T5

Ambient temperature range: the ambient temperature range is –20°C≤Tamb≤+60°C. The ambient temperature range is limited to 0°C≤Tamb≤+50°C when installed with plug-in module, model PLIO03 with Part Number PLIO03xxxxY with Y≤2.

12 TECHNICAL DATA

Model	eXware707	eXware707Q
User memory flash	4GB	4GB
SD card slot	yes	yes
Recipe memory	1GB	1GB
Serial Port	RS-232,RS-485, RS-422 software configurable	RS-232,RS-485, RS-422 software configurable
Ethernet port	2 10/100Mb 1 10/100/1000Mb	2 10/100Mb 1 10/100/1000Mb
USB port	2 Host interface version 2.0 max. 500mA	2 Host interface version 2.0 max. 500mA
Expansion slot	2 Optional Plugin	2 Optional Plugin
Battery	rechargeable	rechargeable
Real Time Clock	yes	yes
Voltage	24Vdc	24Vdc
Current rating (at 24VDC)	0.50A	0.55A
Weight	0.7 Kg	0.7 Kg

13 PRODUCT IDENTIFICATION

The product may be identified through a plate attached to the rear cover. You will have to know the type of unit you are using for correct usage of the information contained in the guide.

An example of this plate is shown in the figure below:



product model name eXware707

product part number EXW707U0P1

year/week of production 1816


serial number AA00012L1000000561AA

version id of the product 121005B02201000

manufacturer address and Exor International S.p.A.

read instruction warning Via Monte Fiorino 9-13, IT-37057 San Giovanni Lupatoto (VR)

ATEX Marking

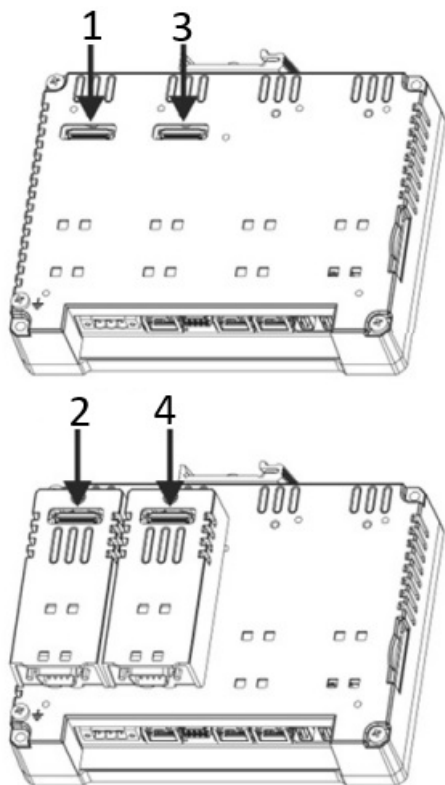

 DEMKO 17 ATEX 1871X / UL22UKEX2726X
 II 3G Ex ec IIC T5...T4 Gc $0^{\circ}\text{C} \leq \text{Tamb} \leq +50^{\circ}\text{C}$ or $-20^{\circ}\text{C} \leq \text{Tamb} \leq +60^{\circ}\text{C}$

IECEx Marking

IECEx: IECEx ULD 17.0019X
 Ex ec IIC T5...T4 Gc $0^{\circ}\text{C} \leq \text{Tamb} \leq +50^{\circ}\text{C}$ or $-20^{\circ}\text{C} \leq \text{Tamb} \leq +60^{\circ}\text{C}$

14 OPTIONAL PLUGIN MODULE

The panels have several optional plugin module, multiple modules configurations are possible.



1. Slot #1
2. Slot #2
3. Slot #3
4. Slot #4

Slot#2 and Slot#4 are available only if plugin module has the “bus extension connector”.

Each slot carries two communication channels:

- 1 serial interface
- 1 CAN interface
- 1 SPI interface
- 1 2G/3G interface

Note: It is not possible to stack two modules that are using the same type of interface

15 PRODUCT IDENTIFICATION

Note: the PLCM01 label is used as an example for PLCM01, PLCM05, PLCM09X, PLIO03



product model name PLCM01

product part number PLCM01U0P1

year/week of production 1816

serial number AA0000225000000561AA

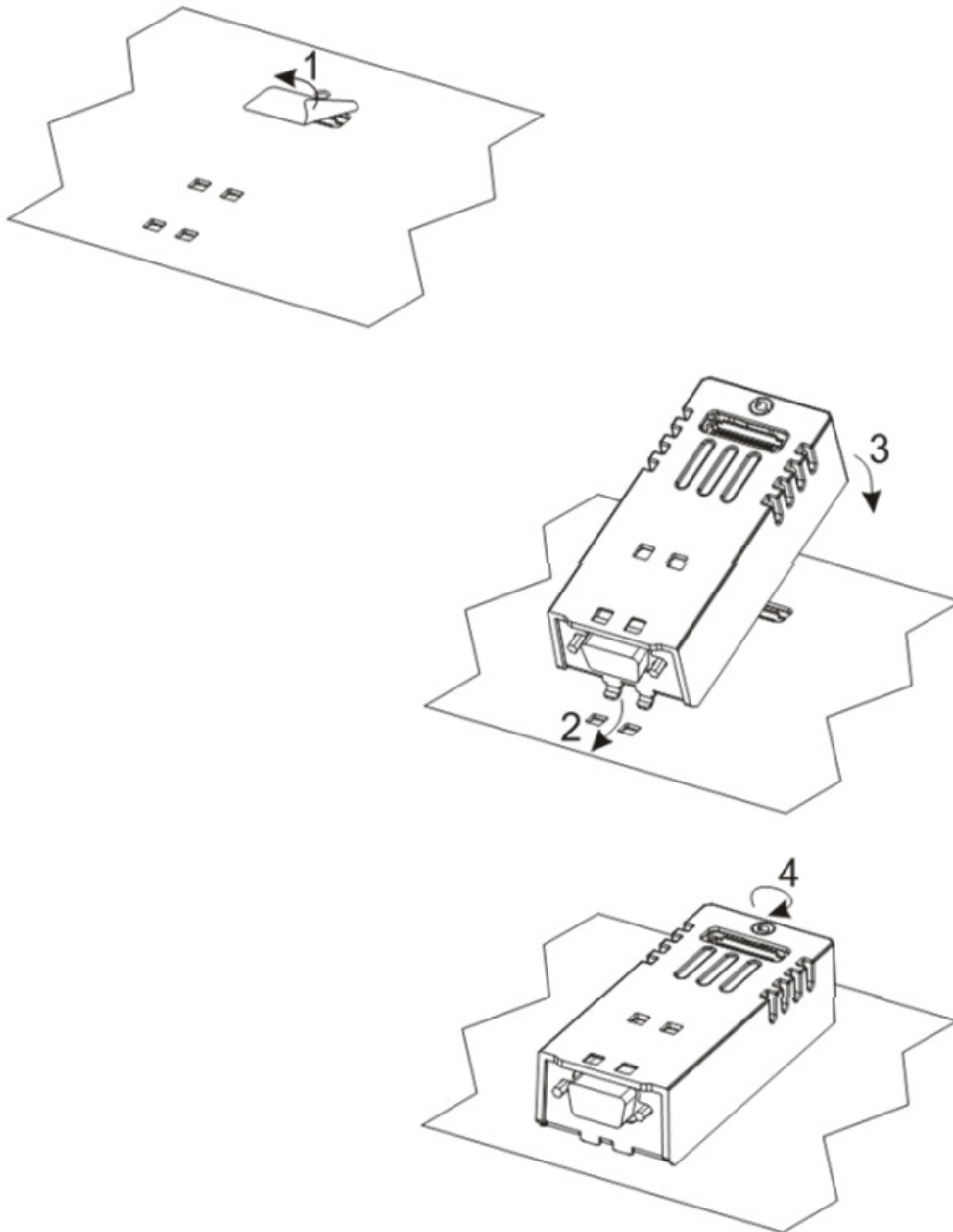
version id of the product 050100A00000000

manufacturer address and Exor International S.p.A.

read instruction warning Via Monte Fiorino 9-13, IT-37057 San Giovanni Lupatoto (VR)

16 INSTALLATION PROCEDURE

PLCM

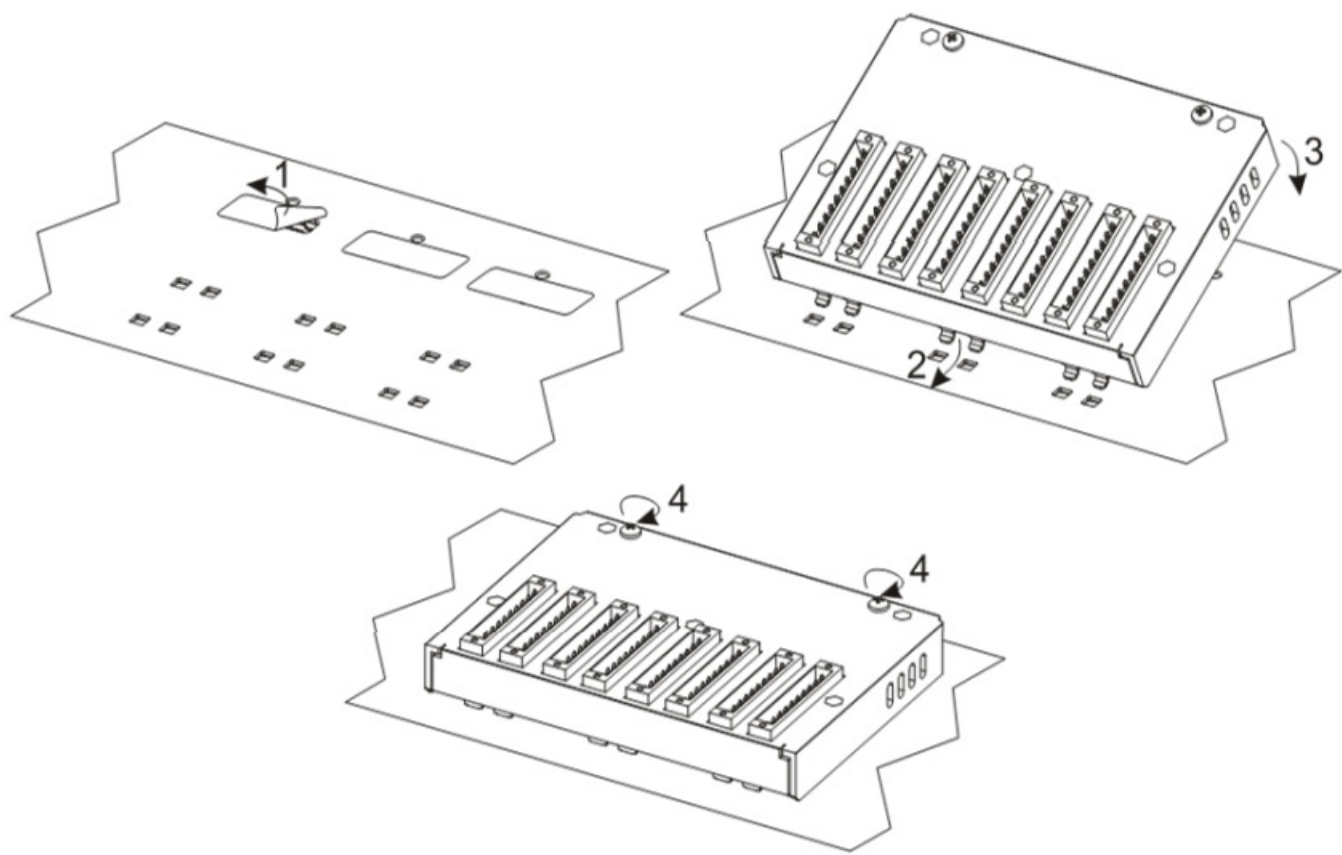


Note the above different “Operating Temperature Code” for different part number of PLIO03 module.

PLCM and PLIO03 electrical ratings:

- PLCM01: For electrical rating refers to the host eXware models.
- PLCM05: For electrical rating refers to the host eXware models and PLIO03 ratings
- PLCM09X: 2xDigital Inputs voltage 12÷30 Vdc, 3mA; 2xDigital Outputs voltage 12÷30 Vdc, 0.5A
- PLIO03: 20xDigital Inputs voltage 12÷30 Vdc; 12xDigital Outputs voltage 12÷30 Vdc, 0.5A; 4xAnalog inputs 0÷10 Vdc, 4-20mA; 4xAnalog outputs: 0÷10 Vdc, 4-20mA

17 INSTALLATION PROCEDURE



Below you can find relation between modules and max number of modules that can be used into eXware serie panels, based on their Interface Type:

Module	Application	Max Modules	Bus Extension connector
PLCM01	CAN	2	Y
PLCM01-NE	CAN	2	N
PLCM05	CODESYS License	1	Y
PLCM09X	3G modem	1	Y
PLIO03	Multifunction I/O	1	N
PLCM01 PLCM01-NE PLCM05 PLCM09X	Operating temperature -20°C to 60°C		
PLIO03	with part number PLIO03xxxxY where: – Y≤2 is operating temperature range 0°C≤Tamb≤+50°C with Operating Temperature Code T5 (vertical installation), 12-30VDC – Y>2 is operating temperature range –20°C≤Tamb≤+60°C with Operating Temperature Code T4 (vertical installation), 12-30VDC		

Software available in this product is based on OpenSource. Visit oss.exorint.net for more details.

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eXware707Q Industrial Gateway For Digitization IOT, eXware707Q, Industrial Gateway For Digitization IOT, Gateway For Digitization IOT, Digitization IOT

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