IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx ULD 17.0019X

Issue No: 2

Certificate history:
Issue No. 2 (2019-09-05)
Issue No. 1 (2018-07-09)
Issue No. 0 (2017-11-09)

Status: **Current**

Date of Issue: **2019-09-05**

Applicant: **Exor International S.p.A.**
Via Monte Fiorino 9
San Giovanni Lupatoto
VR 37057
Italy

Equipment: **HMI touch panel and HMI/Gateway/PLC, eX700(G) series and eXware series**

Optional accessory: *PLCM01 communication module, PLCM05 bus extenders, PLCM09X wireless modem - UMTS/GSM and PLIO03 multifunction digital and analogue I/O module*

Type of Protection: **Non-Sparking "nA" and Dust Protection by Enclosure "tc"**

Marking:

For eX700(G) series:

Ex nA IIC T5…T4 Gc

Ex tc IIIC T95°C Dc

For eXWare series:

Ex nA IIC T5…T4 Gc

-20°C ≤ Tamb ≤ +60°C or 0°C ≤ Tamb ≤ +50°C

Limited to 0°C ≤ Tamb ≤ +50°C when installed with plug-in module, model PLIO03 with Part Number PLIO03xxxxY with Y ≤ 2.

Approved for issue on behalf of the IECEx Certification Body: Katy A. Holdredge

Position: Senior Staff Engineer

Signature: (for printed version)

Date: 2019-09-05

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2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

IECEx Certificate of Conformity

Certificate No: IECEx ULD 17.0019X Issue No: 2

Date of Issue: 2019-09-05

UL International DEMKO A/S
Borupvang 5A,
DK-2750 Ballerup
Denmark

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Manufacturer:	**Exor International S.p.A.** Via Monte Fiorino 9 San Giovanni Lupatoto VR 37057 **Italy**	

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

DK/ULD/ExTR17.0021/02

Quality Assessment Report:

DK/ULD/QAR16.0002/01

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

eX700(G) Series are Human Machine Interfaces (HMIs) with a touch screen display. They are intended to be panel-mounted and only the front face has been investigated as the enclosure and IP66 rating minimum. All models are to be powered by a Class 2 or limited power supply (LPS).

Only models eX707 and eX710 may be followed by G (ex707G and eX710G), that identifies a different display, with higher readability, and different Adaptor board, but less power consumption than already certified eX721.

eXware series are Human Machine Interfaces (HMIs), Gateway or PLC similar in construction to eX700(G) series, but instead of touch screen display is provided with a solid front cover and are intended to be mounted within a suitable Ex certified panel. All models are to be powered by a Class 2 or limited power supply (LPS).

eX700(G) series and eXware series may utilize the following Optional Accessories: Model PLCM01, PLCM05 and PLIO03, covered by IECEx ULD 16.0007X, and PLCM09X, covered under this report.

Accessory Modules are installed using an expansion ports at the rear cover of the HMIs. These Accessory Modules are communication, input and output modules for the HMIs models covered by this report. The modules are secured to the rear cover by two fasteners and one or two screws.

The PLCM01 module is a communication module designed to let the operator panel connect to the CAN network. The PLCM05 modules are bus extenders to mechanically adapt plug-in modules to the host HMI device.

The PLCM09X module is a Wireless Modem - UMTS/GSM.

The PLIO03 module is multifunction digital and analogue I/O module. Digital Inputs can be configured as encoder inputs, counter inputs and period/frequency measurement. Digital outputs are source type with feedback of output driver fault status. Analog Input programmable as voltage inputs, current inputs.

Additionally they can be configured to support industrial temperature sensors like thermocouple and PT100 (RTD). Analog Outputs programmable as voltage output s and current outputs. Additional PT 100 channel for cold junction compensation. To be used for thermocouples.

For Part Number with last digit “Y” ≤ 2, PLIO03 is for an ambient temperature range of 0 °C ≤ Tamb ≤ +50°C, fixing eX700(G) series and eXware series to Temperature Class T5. For Part Number with last digit “Y” > 2, PLIO03 is for ambient temperature range of -20°C ≤ Tamb ≤ +60°C, fixing eX700(G) series and eXware series to Temperature Class T4.

All accessory modules mentioned above are intended to be mounted only with the appropriate main unit covered by this certificate and are not to be used separately.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.
- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP54 in accordance with IEC 60079-15.
- 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.
- Only for eX700(G) series: Care shall be taken not to allow layers of dust to form on the graphic panel in a way that might cause the accumulation of static charges.
- Ambient temperature and Temperature Class – see instructions.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1: Addition of models eX707G and eX710G to eX700 series; new eXware series; accessory model PLCM09X and alternate Ethernet connectors for all models.

Issue 2: Addition of alternate accessory module PLIO03 with extended operating temperature range -20°C ≤ Tamb ≤ +60°C to be mounted on eX700(G) series and eXware series.

Annex:

Annex to IECEx ULD 17.0019X Issue 2.pdf

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TYPE DESIGNATION

Nomenclature:

eX700 series

eX7	**	G
I	II	III

Where:

I - Product model name:
eX7 – eX700(G) series

II - Display touchscreen model:
05 - TFT color 5” widescreen display touchscreen
07 - TFT color 7” widescreen display touchscreen
10 - TFT color 10.1” widescreen display touchscreen
15 - TFT color 15.6” widescreen display touchscreen
21 - TFT color 21.5” widescreen display touchscreen

III - Null - No special features.
G - Different Adaptor Board and Display (Only for models eX707g and eX710G)

eXware7	**	Q
I	II	III

I- Product model name:
eXware7 - eXware series

II- Cover Dimension:
03 - 5” solid front cover
07 - 7” solid front cover

III- Product configuration
Null - No special features
Q – Quad Core CPU and Increased RAM and Flash (only for eXware707)

PLCM	09	X
I	II	III

I- Product model name:
PLCM – Plug-in module

II- Module Function:
09 – Wireless modem – UMTS/GSM

III- Product configuration
X – Radiofrequency power up to 2 W

PARAMETERS RELATING TO THE SAFETY

Electrical ratings:

Model Type	Power supply voltage	Current consumption
eX705	24 Vdc, Class 2	0.6 A at 24Vdc (max)
eX707(G)	24 Vdc, Class 2	0.7 A at 24Vdc (max)
eX710(G)	24 Vdc, Class 2	1.0 A at 24Vdc (max)
eX715	24 Vdc, Class 2	1.2 A at 24Vdc (max)
eX721	24 Vdc, Class 2	1.7 A at 24Vdc (max)
eXware703	24 Vdc, Class 2	0.35 A at 24Vdc (max)
eXware707	24 Vdc, Class 2	0.50 A at 24Vdc (max)
eXware707Q	24 Vdc, Class 2	0.55 A at 24Vdc (max)

Accessory modules type (24Vdc powered from Operator Interface Terminal):

- PLCM01: one D-Sub for CAN network interface. Communication protocol CAN 2.0, max speed 1 Mbit. For electrical rating refers to the host HMI models covered by this report.
- PLCM05: bus extender to mechanically adapt PLIO03 to the host HMI device covered by this report. For electrical rating refers to the host HMI models covered by this report and PLIO03 ratings.
- PLCM09X: 2 x Digital Inputs (12÷30 Vdc, 3mA); 2 x Digital Outputs (12 - 30 Vdc, 0.5A).
- PLIO03: 20xDigital Inputs voltage 12÷30 Vdc, 9mA; 12xDigital Outputs voltage 12÷30 Vdc, 0.5A; 4xAnalog inputs 0÷10 Vdc, 4-20mA; 4xAnalog outputs: 0÷10 Vdc, 4-20mA.

  PLIO03: with Part Number PLIO03xxxxY where:
  - Y ≤ 2 is operating temperature range 0°C ≤ Tamb ≤ +50°C (vertical installation), 12-30Vdc
  - Y > 2 is operating temperature range -20°C ≤ Tamb ≤ +60°C (vertical installation), 12-30Vdc

Ingress protection: IP66 (face of HMI eX700(G) series to mounting panel only)

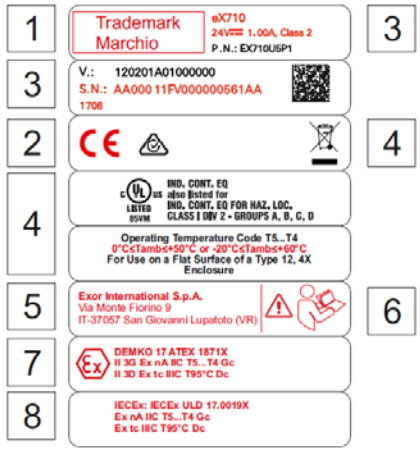
Rated ambient temperature range: -20°C ≤ Tamb ≤ +60°C.
Limited to 0°C ≤ Tamb ≤ +50°C when installed with plug-in module, model PLIO03 with Part Number PLIO03xxxxY with Y ≤ 2.

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

MARKING

Label for Model eX710 used as an example for all eX700 series.



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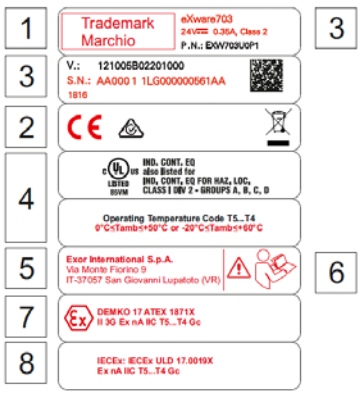
2	CE Marking / Marcatura CE
3	Model, ratings, serial number, production date Modello, consumo, serial number, data produzione
4	cULus Marking / Marchiatura cULus
5	Address / Indirizzo
6	Warning read installation guide / Avvertenza lettura guida installazione
7	ATEX Marking / Marcatura ATEX
8	IECEx Marking / Marcatura IECEx

Label for Model eXware703 used as an example for all eXware series.



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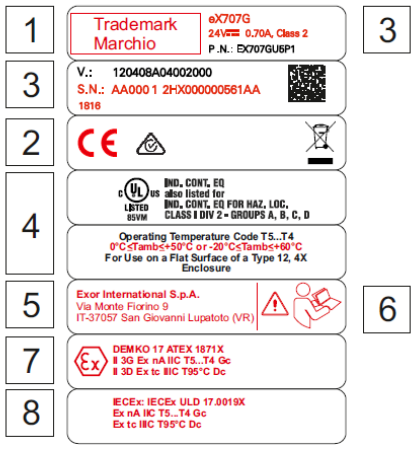
Label for Model eX707G used as an example for eX710G series.



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Label for Model PLCM09X accessory used as an example for accessory series.

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4	Address / Indirizzo
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