

UL Type Examination Certificate

ATEX Directive 2014/34/EU



Certificate

UL 23 ATEX 2985X
Rev. 1

Issue date
2023-08-23

Re-issued
2026-08-28

This is to acknowledge that

MX On Corporation

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Gyeonggi-do, 14055, Republic of Korea

has had

Industrial HMI Touch Panel

evaluated and meets the requirements of the standards

EN IEC 60079-0:2018

EN 60079-7:2015

EN IEC 60079-7:2015/A1:2018

EN 60079-11:2012

Test Report No. **US/UL/ExTR23.0025/01**

Certification Manager
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This is to certify that the sample(s) of the product described herein ("Certified Product") has been investigated and found in compliance with the above mentioned harmonized Standard(s) per Article 12 of Directive 2014/34/EU of the European Parliament and of the Council relating to equipment and protective systems for use in potentially explosive atmospheres indicated on this Certificate, in accordance with the UL Type Examination Certificate Scheme Requirements.

The responsibilities of manufacturers, their authorized representatives are provided in Articles 6 and 7 of the Directive 2014/34/EU. This remains the responsibility of the manufacturer and authorized representative and is not covered as part of this certificate.

This certificate and test results obtained apply only to the product sample(s) submitted by the Applicant. UL International Demko A/S (UL) did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established follow-up service for inspection or other surveillance of the product. The Certificate Holder is solely and fully responsible for conformity of all products to all applicable Standards, specifications, requirements or Directives/Regulations. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

UL TYPE EXAMINATION CERTIFICATE No. UL 23 ATEX 2985X Rev. 1
Technical Details / Schedule

Description of product

This industrial HMI touch panel is an industrial control device required in industrial field. It is a device based on RS 232C and RS 422/485, Ethernet which is used for the basic purpose of communication with another device (like a PLC, other industrial control device) incorporating Resistive-touch screen and rechargeable battery.

The TOPRT series consists of two modules together, a process module and a display module. In the process module, the model is determined by the combination of CPU assemblies (CPU, location of rechargeable battery and connector). There are three types for Process modules (TOPRP10D (CPU type 1), TOPRP10D (CPU type 2) and TOPRP50D (CPU type 3)) and four types of Display module (TOPRD1220X, TOPRD1230X, TOPRD1040X and TOPRD1540X) for model TOPRT1210SD-Ex and for models TOPRT1230XD-Ex, TOPRT1240XD-Ex, TOPRT1040SD-Ex and TOPRT1540XD-Ex.

The process modules TOPRP10D (CPU type 1) or TOPRP10D (CPU type 2) are combined with display modules TOPRD1220X or TOPRD1230X and TOPRP50D (CPU type 3) are combined with display modules TOPRD1040S or TOPRD1230X or TOPRD1540X.

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 1) to the scope of EN 60079-28:2015.

Nomenclature

Model	TOPRT	12	10	S	D	-	Ex	**
	I	II	III	IV	V		VI	VII

I. TOPRT Series

II. Screen Size

12 – 12.1 inch

III. Combined model:

10 – TOPRP10D (process module,) or TOPRP50D (process module) + TOPRD1220X (display module)

IV. Resolution:

S – XGA (1024*768)

V. Power:

D - DC

VI. Explosion proof

Ex – Explosion proof or special model

VII. Customer Option (for the Sensor/ Camera/ CPU type)

Blank – Front sensor, Front camera, CPU type 1

01 – Front sensor, CPU type 1

02 – Front sensor, Front camera, CPU type 2

03 – Front sensor, Front camera, CPU type 3

04 – Front sensor, CPU type 2

05 – Front sensor, CPU type 3

06 – Front camera, CPU type 1

07 – CPU type 1

08 – Front camera, CPU type 2

09 – Front camera, CPU type 3

10 – CPU type 2

11 – CPU type 3

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Model	TOPRT	12	30	X	D	-	Ex	**
	I	II	III	IV	V		VI	VII

I.TOPRT Series

II.Screen Size
12 – 12.1 inch

III.Combined model:
30 – TOPRP10D (process module) + TOPRD1230X (display module)

IV.Resolution:
X – XGA (1024*768)

V.Power:
D - DC

VI.Explosion proof
Ex – Explosion proof or special model

VII.Customer Option (for the camera/ touch sensor type)
Blank – Front camera, Resistive touch
01 – Resistive touch
02 – Front camera, Capacitive touch
03 – Capacitive touch

Model	TOPRT	12	40	X	D	-	Ex	**
	I	II	III	IV	V		VI	VII

I.TOPRT Series

II.Screen Size
10 – 10.4 inch
12 – 12.1 inch
15 – 15.1 inch

III.Combined model:
40 – TOPRP50D (process module) + + TOPRD1040S/TOPRD1230X/TOPRD1540X (display module)

IV.Resolution:
S - SVGA (800*600)
X – XGA (1024*768)

V.Power:
D - DC

VI.Explosion proof
Ex – Explosion proof or special model

VII.Customer Option (for the camera/Rear SD card/IrDA Sensor)

For model TOPRT1040SD-Ex and TOPRT1540SD-Ex

Blank – Front camera, Rear SD card Closed, IrDA Sensor
01 – No Front camera, Rear SD card Closed, IrDA Sensor
02 – Front camera, Rear SD card Opened, IrDA Sensor
03 – No Front camera, Rear SD card Opened, No IrDA Sensor
04 – Front camera, Rear SD card Closed, No IrDA Sensor
05 – No Front camera, Rear SD card Closed, No IrDA Sensor
06 – Front camera, Rear SD card Opened, No IrDA Sensor
07 – No Front camera, Rear SD card Opened, No IrDA Sensor

For model TOPRT1240XD-Ex

Blank - Front camera, Rear SD card Closed, IrDA Sensor
01 – No Front camera, Rear SD card Closed, IrDA Sensor
02 – Front camera, Rear SD card Opened, IrDA Sensor
04 – Front camera, Rear SD card Closed, No IrDA Sensor
05 – No Front camera, Rear SD card Closed, No IrDA Sensor
07 – No Front camera, Rear SD card Opened, No IrDA Sensor

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Ex marking
 II 3 G Ex ic ec IIC T6 Gc
Temperature range
The ambient temperature range is -10°C to +50°C.
Trademark
The trademark  will be used as the company identifier on the marking label.
Ratings
<u>Electrical data</u> TOPRT1040SD-Ex: 20-28Vdc, 20W (Class 2); TOPRT1210SD-Ex: 20-28Vdc, 15W (Class 2); TOPRT1230XD-Ex: 20-28Vdc, 18W (Class 2); TOPRT1240XD-Ex, TOPRT1540XD-Ex, 20-28Vdc, 25W (Class 2)
Routine tests
N/A
Descriptive documents
The scheduled drawings are listed in the report no. provided under item "Test Report No." on page 1 of this UL Type Examination Certificate.
Specific Conditions of Use
- The equipment shall only be used in an area of at least pollution degree 2, as defined in EN 60664-1. - Equipment shall be installed in a back enclosure with tool removable door or cover that provides a degree of protection not less than IP54 in accordance with EN IEC 60079-0. - Provisions shall be made to prevent the rated voltage from being exceeded by transient disturbances of more than 140%. - The equipment shall only be installed in locations where there is a low risk of mechanical damage. - Touch the device after wiping the front panel with a damp cloth or wearing anti-static gloves, to avoid the electrostatic charges - The equipment shall not be exposed from UV light when installed.
Essential Health and Safety Requirements
The Essential Health and Safety Requirements (EHSRs) covered by the standards listed on page 1.
Additional Information
The Display of the TOPRT series has in addition passed the tests for Ingress Protection to IP 54 in accordance with EN60529:1991+A1:2000+A2:2013.