

TYPE EXAMINATION CERTIFICATE



Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

- [3] Type Examination Certificate Number: **UL 23 ATEX 2985X Rev. 0**
- [4] Product: **Industrial HMI Touch Panel**
- [5] Manufacturer: **M2I Corporation**
- [6] Address: **11-35 Simin-daero, 327beon-gil Dongan-gu Anyang-si, Gyeonggi-do, 14055, Republic of Korea**
- [7] This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] UL International Demko A/S certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.
- The examination and test results are recorded in confidential report no. **US/UL/ExTR23.0025/00.**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN IEC 60079-0:2018 EN IEC 60079-7:2015/A1:2018 EN 60079-11:2012**
- Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.
- [10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.
- [11] This Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.
- [12] The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):

 **II 3 G Ex ic ec IIC T6 Gc**

Certification Manager
Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. 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 or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2023-08-23

Certification Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

[13]

[14]

Schedule TYPE EXAMINATION CERTIFICATE No. UL 23 ATEX 2985X Rev. 0

[15]

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 two types of the display module for model TOPRT1210SD-Ex and for models TOPRT1230XD-Ex and TOPRT1240XD-Ex.

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) + TOPRD1220S (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

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



[13]

[14]

Schedule
TYPE EXAMINATION CERTIFICATE No.
UL 23 ATEX 2985X Rev. 0

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

- I. TOPRT Series
- II. Screen Size
12 – 12.1 inch
- III. Combined model:
40 – TOPRP50D (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

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.

Temperature range:

The ambient temperature range is -10°C to +50°C.

Electrical data

TOPRT1210SD-Ex, 20-28Vdc, 15W (Class 2)
TOPRT1230XD-Ex and TOPRT1240XD-Ex, 20-28Vdc, 18W (Class 2)

Routine tests:

N/A

[16] Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this Type Examination Certificate.

[17] Special 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

[18] Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

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.

The trademark  will be used as the company identifier on the marking label.