

UK-TYPE EXAMINATION CERTIFICATE

Product or Protective Systems Intended for Use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

- UK-Type Examination Certificate Number:** ITS22UKEX0528X **Issue 00**
- Product:** MX2033 & MX2034 Digital Proximity Systems
- Manufacturer:** Metrix Instrument Co.
- Address:** 8824 Fallbrook, Houston, Texas, 77064. USA
- This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- Intertek Testing and Certification Limited, Approved Body number 0359, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), 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 Schedule 1 of the Regulations.
The examination and test results are recorded in the confidential report 104968532DAL-002
Dated: 23-Aug-2022.
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018 and EN 60079-11:2012 except in respect of those requirements referred to within item 14 of the Schedule.
- If the sign "X" is placed after the certificate number, it indicates that the product is subject to the special conditions of use specified in the Schedule to this certificate.
- This UK-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- The marking of the product shall include the following:



II 1G Ex ia IIC T4 Ga
-40°C ≤ Ta ≤ 85°C

Certification Officer: _____


Kevin Wolf

Date: _____

9 September 2022

METRIX DOC NO: 1934496
REV: A

SCHEDULE:

UK-Type Examination Certificate Number: ITS22UKEX0528X Issue 00

11. Description of Product or Protective System

The MX2033-AA-BB-CC-DD and MX2034-AA-BB-CC-DD-EE-FFF-GG are normally supplied as part of the Digital Proximity System (DPS).

For MX2034-AA-BB-CC-DD-EE-FFF-GG where DD = X4, X5, X6, X7, or X8, these models are suitable for either Zone 0 (Ex ia) or for Zone 2 (Ex ec) use, the protection concept used must be irrevocably marked on the label at the time of installation.

For MX2034-AA-BB-CC-DD-EE-FFF-GG where DD = X0, these models are non-hazardous area certified, the letters after the main model number denote configuration options not affecting certification.

The MX2034 also includes a BNC connector that can be used in hazardous locations.

- Where DD = 04, S4, 05, S5, 06, S6, the BNC connector can only be used in Zone 2 (Ex ec) installations.
- Where DD = 07, S7, 08, S8, the BNC connector can be used in Zone 0 (Ex ia) installations.

The units comprise three potted printed circuit boards housed inside a DIN rail mountable enclosure. A coaxial RF connector is present to enable a proximity probe to be connected using an extension cable, and screw terminal plug and socket assembly accepts the user connections.

The input terminals of MX2033 and MX2034 is to be powered only from resistively limited sources.

TERMINAL PARAMETERS

MX2034 DD=04/S4, 05/S5, or 06/S6:

Input Terminals Pin 1(Loop-) & Pin 2(Loop+)

$U_i = 28V$
 $I_i = 93mA$
 $P_i = 0.66W$
 $C = 18nF$
 $L_i = 2\mu H$

Output BNC Dynamic Connector

$U_m = 0V$

MX2034 DD = 07/S7, 08/S8:

Input Terminals Pin 1(Loop-) & Pin 2(Loop+)

$U_i = 25.4V$
 $I_i = 86.8mA$
 $P_i = 0.551W$
 $C = 0\mu F$
 $L_i = 39.6\mu H$

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Input Terminals Pin 3(Sig) & Pin 4(COM) - BNC Dynamic Connector

$U_i = 15.5V$
 $I_i = 7.2mA$
 $P_i = 0.028W$
 $C_i = 7.48nF$
 $L_i = 192.28\mu H$

MX2033 Input Terminals Pin 1(-VT), Pin 2(COM) & Pin 3(Sig)

$U_i = 28V$
 $I_i = 138mA$
 $P_i = 0.81W$
 $C = 18nF$
 $L_i = 2\mu H$

This equipment is certified to type Ex 'ec' by Type certificate ITS22UKEX0533X.

12. Report Number

Intertek Report: 104968532DAL-002 Issue: 00 Dated: August 23rd, 2022.

13. Special Conditions of Certification

(a). Special Conditions of Use

- The protection concept used must be irrevocably marked on the label during installation
- To reduce the risk of electrostatic ignition the equipment must be cleaned only with a damp cloth.

(b). Conditions of Manufacture - Routine Tests

- N/A

14. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report: 104968532DAL-002 Issue: 00 Dated: August 23rd, 2022.

15. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Schematic, DPS, Analag/Digital Board	100495- AGENCY-DWG	J	8/13/2018
BOM, MX2032/MX2034 Controller Board (Agency)	100497- AGENCY	L	8/30/2021
BOM, MX2033 Controller Board (AGENCY)	100500- AGENCY	L	10/28/2021
Assembly, DPS, Analog/Digital Board	100497- AGENCY-DWG	E	8/13/2018
Fabrication Dwg, Analog PCB, MX2032, MX2033 & MX2034 (Agency)	100496- AGENCY-DWG	J	8/13/2018
Parts List for Assy, Adapter Board	9639-AGENCY	B	8/13/2018

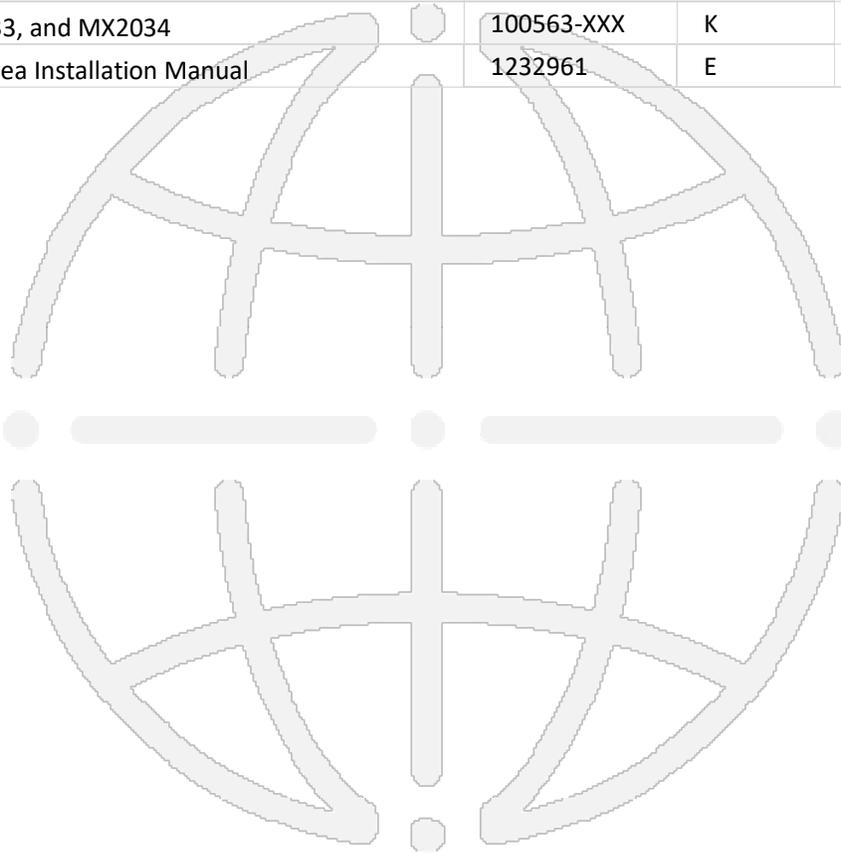
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Registered No 3272281 Registered Office: Academy Place, 1-9 Brook Street, Brentwood, Essex, CM14 5NQ.

Assy, Adapter Board (Agency)	9639-AGENCY-DWG	B	8/13/2018
Schematic, DPS, Power Supply Bd.	100492-AGENCY-DWG	H	8/13/2018
BOM, "MX2034 POWER SUPPLY BOARD"	100494-AGENCY	V	7/16/2022
Assy, DPS, Power Supply Bd.	100494-AGENCY-DWG	C	8/13/2018
Drill Dwg, Power Supply, MX2032 & MX2034 (Agency)	100493-AGENCY-DWG	E	8/13/2018
Schematic, DPS, Power Supply Bd.	100486-AGENCY-DWG	J	8/13/2018
BOM, "MX2033 POWER SUPPLY BOARD"	100491-AGENCY	N	8/20/2021
Assy, DPS, Power Supply Bd. (Agency)	100491-AGENCY-DWG	B	8/13/2018
Drill Dwg, Power Supply, MX2033 (Agency)	100487-AGENCY-DWG	G	8/13/2018
Schematic, DPS, Interconnect Bd.	100501-AGENCY-DWG	D	7/29/2021
BOM, DPS Interconnect Board (Agency)	100503-AGENCY	G	8/3/2021
Assy, DPS, Interconnect Bd. (Agency)	100503-AGENCY-DWG	C	7/29/2021
Drill Dwg, Interconnect PCB, MX2032, MX2033 & MX2034 (Agency)	100502-AGENCY-DWG	D	9/28/2021
Schem Dwg, MX2033/MX2034 interconnect board, RoHS, Agency	100972-AGENCY-DWG	B	5/7/2020
Drill Dwg, MX2033/MX2034 interconnect board, RoHS, Agency	100973-AGENCY-DWG	C	4/29/2021
Parts List, MX2033/MX2034 interconnect board, RoHS, Agency	100974-AGENCY	B	5/7/2020
Assy Dwg, MX2033/MX2034 interconnect board, RoHS, Agency	100974-AGENCY-DWG	B	5/7/2020
100974 Interconnect Board MX2034, 3 Pin Connector (94019-107) or 4 Pin Connector (94019-108) Modification Procedure	1862198-AGENCY	A	6/1/2019
100974 Interconnect Board for MX2033, 3 Pin Connector (94019-107) Modification Procedure	1881628-AGENCY	A	6/1/2019
Label, MX2032, MX2033 & MX2034	100563-XXX-AGENCY	C	5/5/2021
Label, Top, MX2032, MX2033 & MX2034	100511-XXX-AGENCY-DWG	C	4/12/2022
General Arrangement Drawing	1082695-AGENCY	E	8/13/2018

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Intrinsically Safe Installation (Intertek) MX2033 & MX2034	100506-DWG	C	4/29/2022
Installation, (ATEX IECEx), MX2032, MX2033, & MX2034	100508-DWG	C	4/29/2022
Zone 2 Installation (ATEX IECEx), MX2032, MX2033, & MX2034	100515-DWG	C	4/29/2022
SCD, connector, screwless term block, 3 pos, 3.5mm, RoHS	94019-107-SCD	E	9/11/2020
SCD, connector, screwless term block, 4 pos, 3.5mm, RoHS	94019-108-SCD	E	9/11/2020
Div. 2 Installation (Intertek) MX2033/MX2034	100512-DWG	D	4/25/2022
Label, MX2033, and MX2034	100563-XXX	K	4/29/2022
Hazardous Area Installation Manual	1232961	E	April 2022



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