



1 **TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 16ATEX4341X** Issue: **2**

4 Equipment: **M400 Type * Multi-Parameter Transmitter**
(* for Type refer to Description of Equipment)

5 Applicant: **Mettler-Toledo GmbH**

6 Address: Im Hackacker 15
Urdorf, 8902
Switzerland

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V. certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design of Category 3 equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012/A11:2013

EN 60079-15:2010

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This Type Examination Certificate relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 3G

Ex nA nC IIC T4 Gc

Tamb = -20°C to +50°C

Project Number 1048

Signed: 

Title: Director of Operations

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CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem,
Netherlands



SCHEDULE

TYPE EXAMINATION CERTIFICATE

Sira 16ATEX4341X
Issue 2

13 DESCRIPTION OF EQUIPMENT

The M400 G2 Series Multi-parameter Transmitter is designed for use in hazardous (classified) locations.

The transmitter can be connected to an analog sensor or a digital sensor representing electrical conductivity (resistivity), pH, dissolved oxygen, process temperature, etc. delivering 4-20 mA (HART) electrical signals. There are optional 0/4-20 mA input signals, digital input signals, digital output signals and relay output signals for alarm and control.

The transmitter consists of an aluminum alloy housing (back cover and front cover), with three printed circuit boards installed inside. All boards are protected by an additional middle cover. On the front cover, there is a one-touch panel, an LCD display and a four-key tactile keypad. On the back cover, there are five cable entries, one of which is M25*1.5 and the others are M20*1.5. Snap-in terminals are designed for external connection, on both the power board and the sensor board.

Depending on the model, the transmitter can be configured with the software or touch panel or tactile keypads, for different parameter measurement or several separate measurements combined together.

The M400 is available in different versions. Model designations of the M400 Type * are as follows:

- * = 1: measures pH and conductivity
- * = 2: measures pH, conductivity, dissolved oxygen, dissolved carbon dioxide, ozone
- * = 3: measures pH, conductivity, dissolved oxygen, gas-phase oxygen, dissolved carbon dioxide, ozone

* = any alphanumeric code and strings that is only with adjustment on firmware compared with the above models: measures pH, conductivity, dissolved oxygen, gas-phase oxygen, dissolved carbon dioxide, ozone.

All the models have identical hardware. They are all rated 20-30VDC, 100-240VAC, 50/60Hz, maximum power is 10W.

Variation 1 - This variation introduced the following changes:

- i. Recognition of additional models which only have different software comparing with existing models. Product description was amended accordingly.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	26 th January 2017	R70100660A	The release of the prime certificate.
1	17 31st October 2019	R70216812A	The introduction of Variation 1.

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2	31st October 2019	1048	<ul style="list-style-type: none">Transfer of certificate Sira 16ATEX4341X from Sira Certification Service to CSA Group Netherlands B.V.
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15 SPECIFIC CONDITIONS OF USE

- 15.1 This equipment has external non-metallic parts, therefore may generate an ignition-capable level of electrostatic charge under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high pressure steam) that might cause a build-up of electrostatic charge on non-conducting surfaces.
- 15.2 The display has not been tested for resistance to ultraviolet light. The display shall be protected from direct light (e.g. from sunlight or luminaires).

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed reports listed in Section 14.2.

Certificate Annexe



Certificate Number: Sira 16ATEX4341X

Equipment: M400 Type * Multi-Parameter Transmitter

Applicant: Mettler-Toledo GmbH

Issue 0

Drawing no.	Sheets	Rev.	Date (Sira Stamp)	Description
30346799	1 to 2	C	20 Dec 16	PCBA Mainboard
30346900	1 to 5	C	20 Dec 16	PCB Mainboard
SCH-30346799	1 to 5	C	20 Dec 16	Schematic of Mainboard
30346902	1 to 5	C	20 Dec 16	PCB Power Board
30346904	1 to 2	C	20 Dec 16	PCBA Power Board
SCH-30346904	1 of 1	C	20 Dec 16	Schematic of Power Board
30350383	1 to 5	D	20 Dec 16	PCB Sensor Board
30350384	1 to 2	E	20 Dec 16	PCBA Sensor Board
SCH-30350384	1 to 2	E	20 Dec 16	Schematic of Sensor Board
ME-12112249	1 of 1	A	20 Dec 16	Grounding wire
ME-30280746	1 of 1	A	20 Dec 16	Gasket rubber inner sealing phoenix
ME-30280761	1 of 1	A	20 Dec 16	Gasket panel sealing phoenix
ME-30350919	1 of 1	A	20 Dec 16	General assembly
ME-30350940	1 of 1	A	20 Dec 16	Touch panel with overlay
ME-30350941	1 of 1	A	20 Dec 16	Top housing
ME-30350943	1 of 1	A	20 Dec 16	Bottom housing
ME-30350948	1 of 1	A	20 Dec 16	Keyboard film
ME-30378591	1 of 1	A	20 Dec 16	Marking

Issue 1 - No new drawings were introduced.

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