

#### UNITED KINGDOM CONFORMITY ASSESSMENT

#### **UK TYPE EXAMINATION CERTIFICATE** 1

- 2 Equipment Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1
- 3 Certificate Number: CSAE 22UKEX1310X Issue: 0
- 8782 Slurry Transmitter and MS Slurry Sensor 4 Product:
- 5 Manufacturer: Emerson - Rosemount, Micro Motion, Inc.
- Address: 12001 Technology Dr. 6 Eden Prairie MN 55344 United States
- 7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 of the 8 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 reports listed in Section 14.2.
- 9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018	EN 60079-11:2012	EN 60079-26:2015
EN 60079-7:2015/A1:2018	EN 60079-15:2010	EN 60079-31:2014

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

- 10 If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use identified in the schedule to this certificate.
- This UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified 11 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 this product shall be in accordance with Regulation 41 and include the following: 12

**MS Slurry Sensor** 

II 1/2 G, II 2 G, II 2 D Ex eb ia IIC T6...T3 Ga/Gb Ex eb ib IIC T6...T3 Gb Ex tb IIIC T65°C ... T200°C D  $Ta = -50^{\circ}C to + 60^{\circ}C^{*}$  $Ta = -29^{\circ}C to + 60^{\circ}C^{**}$ \* Stainless Steel Enclosure

\*\* Carbon Steel Enclosure

## 8782 Slurry Transmitter

II 3(1) G, II 3(1) D Ex ec ic [ia Ga] IIC T4 Gc Ex ic nA [ia Ga] IIC T4 Gc Ex ic tc [ia Da] IIIC T80°C Dc  $Ta = -40^{\circ}C to +60^{\circ}C$ 



Certificate No. CSAE 22UKEX1310X CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK This certificate and its schedules may only be reproduced in its entirety and without change



QD-1599 Issue 4 (2022-08-22) Page 1 of 6



## UK TYPE EXAMINATION CERTIFICATE

CSAE 22UKEX1310X Issue 0

## 13 DESCRIPTION OF PRODUCT

The Model 8782 Slurry Transmitter is a magnetic flowmeter transmitter that, when combined with the MS Flow Tubes, measures the volumetric flow rate of a conductive fluid in a pipe. The enclosure is comprised of aluminum housing approximately 0.256 m Height x 0.208 m Width x 0.071 m Thickness. The enclosure is comprised of two compartments, a field wiring compartment and an electronics compartment. Each compartment is provided with its own hinged door. The enclosure also has an optional LOI display and keypad that is attached in the electronics compartment. The 8782 Slurry Transmitter is designed to only connect to the model MS flow tube.

The enclosure is provided with 4  $\frac{1}{2}$ " NPT conduit entries on the bottom of the enclosure for field wiring, and optional  $\frac{1}{2}$ " NPT to M20 thread adapters supplied with the equipment.

The 8782 Slurry Transmitter can be supplied to be powered from either a 90 to 250Vac 50/60Hz source, a 12-48 Vdc source, or 12-42 Vdc source. Each transmitter is programmed to have an IS output for the sensor electrode circuit, and a non-IS output for the Sensor Coil circuit. The transmitters are also equipped with two DIO circuits that are internally galvanically isolated. The transmitter communicates through a 4-20 mA/HART, a FIELDBUS/ PROFIBUS/FISCO, a MODBUS circuit and a pulse circuit, and they can be configured as intrinsically safe depending on the model option.

#### Entity Parameters for 8782 Slurry Transmitter

4-20 mA HART Circuit (Terminals 7 and 8):

Ui = 30 V; Ii = 300 mA; Pi = 1.0 W; Ci = 924 pF; Li = 0.0 mHFF/PA/FISCO field Device Circuit (Terminals 7 and 8):

Ui = 30 V ; Ii = 380 mA ; Ci = 924 pF ; Li = 0.0 mH (Non-FISCO)

Ui = 30 V ; Ii = 380 mA ; Pi = 5.32 W ; Ci = 924 pF ; Li = 0.0 mH(FISCO)

Pulse Circuit (Terminals 5 and 6):

Ui = 28 V ; Ii = 100 mA ; Pi = 1.0 W ; Ci = 4.5 pF ; Li = 0.0 mH Electrode Output Circuit (Terminals 17, 18, 19):

Um = 250 V; Uo = 28.56 V; Io = 5.77 mA; Po = 165 mW; Co = 61.7 nF; Lo = 1.0 H

The MS Slurry Sensor is installed in-line with process piping, either vertically or horizontally. Coils located on opposite sides of the flow tube create the necessary magnetic field. A conductive liquid moving through the magnetic field generates a voltage that is detected by two electrodes.

The enclosure of the flow tube consists of two parts the junction box, and the tube. The junction box has two 1/2" NPT entries or M20 entries and contains a field wiring terminal.

There are two input circuits included in the MS flow tube. The circuits can be supplied by the Emerson remote mount transmitter models, 8712EM, 8732EM, or 8782. The MS flow tube has a connection for the coil circuit which is used to generate the magnetic field, and a connection for the electrode circuit which is used to read a voltage created by the flowing process in the magnetic field. The electrode circuit is an intrinsically safe circuit in all explosive gas installations.

Entity Parameters for MS Slurry Sensor Electrode Circuit (Terminals 17, 18, 19): Ui = 30 V ; Ii = 50 mA ; Pi = 1.0 W ; Ci = 1.9 nF ; Li = 630  $\mu$ H





## UK TYPE EXAMINATION CERTIFICATE

CSAE 22UKEX1310X Issue 0

## 8782 Slurry Transmitter

- Model :8782abcdeffgg
- a = Revisions Level: A
- b = Transmitter Mounting Options: W
- c = Power Supply: 1 or 2
- d = Transmitter Outputs: A, B, F, P, D or M
- e = Conduit Entry: 1 or 2
- ff = Safety Approvals Code Options: N1, N7, N9, ND, NF
- gg = Any Alpha-Numeric characters representing product options up to fifty digits.

## MS Slurry Sensor:

- Model: MSaaabcdefghijkklim
- aaa = Line size: 030 360(3-36 inch)
- b = Rev level: A
- c= Mounting option: R = Remote
- d = Conduit Entry: 1=1/2" NPT, 2= M20
- e = Lining Material: Any one digit alpha or numeric character
- f = Electrode Material: Any one digit alpha or numeric character
- g = Electrode Type: Any one digit alpha or numeric character
- h = Flange Material: Any one digit alpha or numeric character
- i = Flange Type: Any one digit alpha or numeric character
- j = Flange Rating: Any one digit alpha or numeric character
- kk = Coil Housing Configuration: M0, M1, M2, or M4.
- II = Safety Approval Options: K1, K7, K9, N1, N7, N9, ND, NF

m = Options: Any Alpha-Numeric characters representing non-safety product options up to fifty-two digits in length.

## Incorporated amendments

The product description includes the following applicable amendments. Only amendments directly applicable to UKCA certification have been included in this list. The amendments are numbered to include a reference to the previous ATEX variation at which these were introduced.

## Variation 1

- i. Update drawings to incorporate editorial changes and minor design changes made to 8782 Slurry Transmitter and MS Slurry Sensor.
- ii. Update standard from EN 60079-7:2015 to EN 60079-7:2015/A1:2018.

## 14 DESCRIPTIVE DOCUMENTS

## 14.1 Drawings

Refer to Certificate Annexe.

## 14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	23 November 2022	R80140198A	The release of the prime certificate.





## UK TYPE EXAMINATION CERTIFICATE

CSAE 22UKEX1310X Issue 0

#### 15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

- 15.1 Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
- 15.2 The 8782 Slurry Transmitter enclosure is manufactured from Aluminum Alloy. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation.
- 15.3 The MS Slurry Sensor is intended for use only in combination with the 8782, 8732EM, 8712EM Transmitters or a Transmitter with equivalent or less output ratings.
- 15.4 The 8782 Slurry Transmitter is not capable of passing the 500 V isolation test on terminals to chassis due to integral transient protection. This must be considered upon installation.
- 15.5 Appropriately rated conduit entries must be installed to maintain the enclosure ingress ratings of IP66, IP68 or IP69.
- 15.6 The MS Slurry Sensor contains nonconductive liners over the grounded tube. For process requiring EPL Ga, precautions shall be taken to avoid the liner being charged by the flow of nonconductive media.
- 15.7 In order to maintain the ingress protection level on the M4 electrode housing for the MS Flow Tube, the copper crush washer that seals the electrode access plug shall be replaced when the plug is reinstalled. The copper crush washer is one time use only.
- 15.8 When "Special Paint Systems" are applied, instructions for safe use regarding potential electrostatic charging hazard have to be followed
- 15.9 Warning Ignition hazard, wetted parts may contain Titanium and Zirconium. For processes requiring EPL Ga and Gb rated equipment, suitability for use must be determined by the end user to eliminate ignition hazard due to impact or friction.
- 15.10 The MS Slurry Sensor is not allowed to be thermally insulated.
- 15.11 The 8782 Slurry Transmitter and the MS Slurry Sensor are permanently (conduit) connected, intended for continuous operation in extended environmental conditions as specified. Overvoltage Category II, Pollution Degree 2.
- 15.12 The 8782 Slurry Transmitter electrode and coil circuits can be remotely connected to the 8707 Sensor or MS Slurry Sensor.
- 15.13 The 8782 Slurry Transmitter is suitable for field wiring wire gauges of 22 AWG to 10 AWG that are to be tightened down with a torque of 1.2 Nm.
- 15.14 The MS Slurry Sensor is suitable for field wiring wire gauges of 14 AWG to 16 AWG that are to be tightened down with a torque of 1.2 Nm.
- 15.15 The temperature code, ambient temperature range, and maximum process temperature for the MS Slurry Sensor are as follows:





## UK TYPE EXAMINATION CERTIFICATE

## CSAE 22UKEX1310X Issue 0

#### Hazardous Gas Locations (Group IIC)

T-Code	Coil Housing	Line Size	Ambient Temperature	Maximum Process
	Material		Range	Temperature
Т6	Carbon Steel	All	-29°C to 35°C	45°C
T5	Carbon Steel	3″	-29°C to 60°C	60°C
Τ4	Carbon Steel	3″	-29°C to 60°C	105°C
Т3	Carbon Steel	3″	-29°C to 60°C	177°C
T5	Carbon Steel	4″-36″	-29°C to 60°C	65°C
T4	Carbon Steel	4″-36″	-29°C to 60°C	110°C
Т3	Carbon Steel	4″-36″	-29°C to 60°C	177°C
Т6	Stainless Steel All		-50°C to 35°C	45°C
T5	Stainless Steel	3″	-50°C to 60°C	60°C
T4	Stainless Steel	3″	-50°C to 60°C	105°C
Т3	Stainless Steel	4″-36″	-50°C to 60°C	177°C
T5	Stainless Steel	4″-36″	-50°C to 60°C	65°C
T4	Stainless Steel	4"-36"	-50°C to 60°C	110°C
Т3	Stainless Steel	4"-36"	-50°C to 60°C	177°C

## Hazardous Dust Locations (Group IIIC)

T-Code	Coil Housing Material	Line Size	Ambient Temperature Range	Maximum Process Temperature
T65	Carbon Steel	All	-29°C to 35°C	45°C
T80	Carbon Steel	All	-29°C to 60°C	60°C
T135	Carbon Steel	All	-29°C to 60°C	105°C
T200	Carbon Steel	All	-29°C to 60°C	177°C
T65	Stainless Steel	All	-50°C to 35°C	45°C
T80	Stainless Steel	All	-50°C to 60°C	60°C
T135	Stainless Steel	All	-50°C to 60°C	105°C
T200	Stainless Steel	All	-50°C to 60°C	177°C

## 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

## 17 PRODUCTION CONTROL

- 17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders.
- 17.2 8782 Transmitter Models (DC Models):

## Mains Circuit Test:

At the conclusion of manufacture, and before shipping, each unit shall be subjected to a dielectric strength test, using a potential of 55.08V dc rms minimum, for a period of 2 seconds, without breakdown, between the following points: (voltage level is 90% of rated tolerance of the MOVs on the DC power module)

• Between Positive and Negative Power Terminal and the ground terminal with the metal enclosure.





## UK TYPE EXAMINATION CERTIFICATE

CSAE 22UKEX1310X Issue 0

Notes:

1) A potential of 55.08V dc minimum may alternatively be applied for a period of 2 seconds.

## Secondary Floating Circuit Test:

At the conclusion of manufacture, and before shipping, each unit shall be subjected to a dielectric strength test, using a potential of 350V ac rms, for a period of 2 seconds, without breakdown, between the following points:

• Between output Terminals and the ground terminal with the metal enclosure.

Notes:

- 1) A potential of 354V Minimum dc may alternatively be applied for a period of 2 seconds. Voltage level is 90% MOV's Rating. On pins 5, 6, 7, 8,9, 10, 11, 12, 18 and 19 to the ground terminal with the metal enclosure
- 2) A potential of 500V Minimum dc may alternatively be applied for a period of 2 seconds. Voltage level is 90% MOV's Rating. On pins 1, 2 to the ground terminal with the metal enclosure

## IS Transformer Test:

At the conclusion of manufacture, and before shipping, each transformer (reference drawing 08732-0817) shall be subjected to a dielectric strength test, using a potential of 1500V, for a period of 60 seconds, without breakdown, between the following points:

• Between Primary and secondary windings of the transformer.

Notes:

- 1) A potential of 1800 V may alternatively be applied for a period of 1 seconds.
- 17.3 MS Slurry Sensor Models:

At the conclusion of manufacture, and before shipping, each unit shall be subjected to a dielectric strength test, using a potential of 500V ac rms, for a period of 60 seconds, without breakdown, between the following points:

• Between terminals 1, and 2 and the ground terminal with the metal enclosure. Notes:

- 1) A potential of 707 V dc may alternatively be applied for a period of 60 seconds.
- 2) A potential of 600 Vac may alternatively be applied for a period of 0.1 seconds.
- 3) A potential of 850V dc may alternatively be applied for a period of 0.1 seconds.





Certificate Number:	CSAE 22UKEX1310X
Product:	8782 Slurry Transmitter and MS Slurry Sensor
Manufacturer:	Emerson – Rosemount, Micro Motion, Inc.

## Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
000MS-0020	1 to 9	AB	08 Jul 2021	MS Control Drawing. Increased Safety with
				Intrinsically Safe Electrode
000MS-0023	1 to 9	AB	08 Jul 2021	MS Control Drawing. Type 'n' and Type 'e' with
				intrinsically safe electrode.
000MS-0024	1 to 8	AB	08 Jul 2021	MS Control Drawing. MS. ATEX IECEx Dust Ex tx
08782-0023	1 to 8	AA	24 Sep 2019	8782 Transmitter Control Drawing – IECEx/ATEX 'e'
				and 'i'
08782-0024	1 to 8	AA	24 Sep 2019	8782 Transmitter Control Drawing – IECEx/ATEX 't'
08782-0060	1 to 12	AA	24 Sep 2019	INSTALLATION DRAWING ATEX/IECEX HAZARDOUS
				(Ex) LOCATIONS
MS Slurry Se	ensor draw	/ings	1	
03031-0383	1 to 2	AG	08 Jul 2021	Ground Terminal Assembly
03144-1010	1 to 2	AW	08 Jul 2021	Cover, Aluminum
03144-1074	1 of 1	AH	02 Oct 2019	Cover, Stainless Steel
08701-0065	1 of 1	AD	08 July 2021	Coil Shield – 12"
08701-0077	1 of 1	AK	02 Oct 2019	Coil Stud
08701-0187	1 to 2	AG	02 Oct 2019	Coil Shield – 14" to 36"
08701-0304	1 of 1	Α	02 Oct 2019	Coil Support 30" and 36"
08705-0201	1 to 4	AM	02 Oct 2019	Tube Adapter
08705-0202	1 of 1	AD	02 Oct 2019	Glass Header (Hermetically Sealed)
08705-0209	1 to 4	AJ	02 Oct 2019	Side Wrapper, Carbon Steel
08705-0212	1 to 2	AL	08 Jul 2021	Glass Header Assembly
08705-0213	1 to 3	AH	02 Oct 2019	Flow Tube Center Wrapper
08705-0221	1 of 1	AA	02 Oct 2019	Tube Adapter Schematic
08705-0222	1 to 3	AE	02 Oct 2019	Tube Adapter PCB
08705-0223	1 to 4	AJ	08 Jul 2021	Tube Adapter Assembly
08705-0224	1 to 2	AE	02 Oct 2019	Tube Adapter Cap
08705-0226	1 to 4	AB	08 Jul 2021	Encapsulant – Sylgard 170
08705-0228	1 to 3	AC	02 Oct 2019	Tube Adapter
08705-1004	1 of 1	BD	02 Oct 2019	Wrapper Ring
08705-1006	1 to 2	AI	02 Oct 2019	Glass Header Feedthrough
08705-1016	1 to 4	AC	02 Oct 2019	Electrode Assembly
08705-1038	1 to 2	AE	02 Oct 2019	Electrode Compartment Cap
08705-1050	1 to 7	AJ	02 Oct 2019	Electrode Compartment
08707-0161	1 to 5	AN	08 Jul 2021	Coil Shield – 1.5" to 5"
08707-0162	1 of 1	AH	08 Jul 2021	Coil Shield – 6" to 10"
08707-3001	1 to 2	AF	08 Jul 2021	Coil
08707-3034	1 of 1	AH	02 Oct 2019	Coil Assembly
08732-0140	1 to 2	AT	02 Oct 2019	Tube Adapter



CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK This certificate and its schedules may only be reproduced in its entirety and without change QD-1599 Issue 4 (2022-08-22) Page 1 of 4



Certificate Number:	CSAE 22UKEX1310X
Product:	8782 Slurry Transmitter and MS Slurry Sensor
Manufacturer:	Emerson – Rosemount, Micro Motion, Inc.

Drawing	Sheets	Rev.	Date (Stamp)	Title
08732-0222	1 of 1	AN	02 Oct 2019	Nulling Printed Circuit Assembly
08732-0300	1 to 3	AG	02 Oct 2019	Junction Box, Aluminum
08732-0302	1 to 2	AB	02 Oct 2019	Remote Mount Terminal Block Schematic
08732-0303	1 to 2	AE	02 Oct 2019	Remote Mount Terminal Block PWB
08732-0304	1 to 1	AA	02 Oct 2019	Remote Mount Terminal Block W/ Connectors
				Schematic
08732-0305	1 to 2	AD	08 Jul 2021	Remote Mount Terminal Block W/ Connectors PWB
08732-0306	1 of 1	AD	02 Oct 2019	Socket Module Retaining Cup for Encapsulant
08732-0307	1 of 1	AE	02 Oct 2019	Remote Mount Terminal Block Shroud with Integral
				Terminal Block
08732-0308	1 to 2	AE	02 Oct 2019	Terminal Block Divider
08732-0310	1 to 3	AD	02 Oct 2019	Junction Box, Stainless Steel
08732-0313	1 to 4	AJ	08 Jul 2021	Remote Mount Terminal Block Assembly
08732-0314	1 of 1	AA	02 Oct 2019	Socket Module Schematic
08732-0315	1 to 2	AD	02 Oct 2019	Socket Module PWB
08732-0316	1 to 3	AG	02 Oct 2019	Socket Module CCA
08732-0317	1 to 2	AE	02 Oct 2019	Socket Module Assembly
08732-0318	1 to 2	AC	08 Jul 2021	Oxy-cast Epoxy, 2-Part
08732-0329	1 of 1	AA	02 Oct 2019	O-Ring (Buna-N)
C10213	1 to 5	AP	02 Oct 2019	Flat Washer
C10984	1 to 2	AM	08 Jul 2021	O-Ring (Ethylene –Propylene)
C11035	1 to 5	AG	02 Oct 2019	Hex Nut
C11397	1 to 5	AE	02 Oct 2019	Ground Screw
C12214	1 to 4	AF	02 Oct 2019	Mounting Bolt
C50096	1 to 3	AE	02 Oct 2019	Lock Washer
C50243	1 to 3	AK	02 Oct 2019	O-Ring – Silicone Rubber
C50276	1 to 3	E	02 Oct 2019	Ground Electrode Wire
C53583	1 to 3	AE	08 Jul 2021	Remote Mount Terminal Block Potting Material
C53633	1 to 3	В	02 Oct 2019	Tyco Amp Connector
C53980	1 to 4	AC	02 Oct 2019	M6 Plug
C54049	1 to 6	AG	02 Oct 2019	Cushioned Clamp
C54052	1 to 3	AA	02 Oct 2019	Ring- Tongue Terminal
C54095	1 to 3	AD	02 Oct 2019	Epoxy, 2-part
C55113	1 to 3	AB	02 Oct 2019	Wire Crimp Splice
C55194	1 to 4	AD	02 Oct 2019	Electrode and Coil Lead Cable (Shielded)
C55240	1 to 3	AD	02 Oct 2019	Silicone Wire Insulating Sleeve
C55459	1 of 1	AA	02 Oct 2019	M6 Crush Washer
C55463	1 to 3	AC	02 Oct 2019	Flange Hex Nut
FC0045	1 to 2	AA	02 Oct 2019	Electrode and Coil Hookup Wire (Non-Shielded)
FC0058	1 to 2	AA	02 Oct 2019	Electrode and Coil Cable (Foil Shield)



CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK This certificate and its schedules may only be reproduced in its entirety and without change QD-1599 Issue 4 (2022-08-22)



Certificate Number:	CSAE 22UKEX1310X
Product:	8782 Slurry Transmitter and MS Slurry Sensor
Manufacturer:	Emerson – Rosemount, Micro Motion, Inc.

Drawing	Sheets	Rev.	Date (Stamp)	Title
8782 Slurry Transmitter Drawings				
00444-0282	1 to 3	BG	08 Jul 2021	Thread Adapters
08712-0010	1 of 1	AC	02 Oct 2019	Glass for LOI/Display
08712-0054	1 to 16	AR	02 Oct 2019	Housing Base
08712-0091	1 of 1	AA	02 Oct 2019	Gasket for LOI/Display
08712-0301	1 of 1	AA	02 Oct 2019	Cover Screw
08712-0534	1 of 1	AD	02 Oct 2019	Teflon Insulated Wire
08712-0580	1 to 4	AG	02 Oct 2019	Housing Upper Cover with LOI
08712-0581	1 to 3	AG	02 Oct 2019	Housing Upper Cover without LOI
08712-0582	1 to 2	AD	02 Oct 2019	Housing – LOI Keypad Cover
08712-0583	1 to 3	AK	02 Oct 2019	Housing Lower Cover
08712-0604	1 to 2	AH	02 Oct 2019	Terminal Block
08712-0607	1 to 2	AF	02 Oct 2019	Terminal Block - Safety Cover
08712-0608	1 to 2	AC	02 Oct 2019	Upper and Lower Cover Gasket Seal
08712-0612	1 of 1	AA	02 Oct 2019	Terminal Block Divider Assembly
08712-0870	1 of 1	AB	02 Oct 2019	LOI Schematic
08712-0871	1 to 4	AE	08 Jul 2021	LOI PCB Fab
08712-0872	1 of 1	AF	02 Oct 2019	LOI PCB Assembly
08732-0161	1 to 4	AZ	08 Jul 2021	Electrode and Power Cable Assembly
08732-0312	1 to 2	AF	02 Oct 2019	08732 LOI Cable
08732-0866	1 to 10	AP	08 Jul 2021	8732 EM SIRF (HART) Board Schematic
08732-0867	1 to 15	AH	02 Oct 2019	8732 EM SIRF (HART) Board PCB Fab
08732-0868	1 to 2	AL	08 Jul 2021	8732 EM SIRF (HART) Board Assembly
08732-0869	1 to 10	AE	08 Jul 2021	8732 EM SIRF (FF/Fieldbus/Profibus) Board Schematic
08732-0870	1 to 8	AB	02 Oct 2019	8732 EM SIRF (FF/Fieldbus/Profibus) Board PCB Fab
08732-0871	1 to 2	AE	08 Jul 2021	8732 EM SIRF (FF/Fieldbus/Profibus) Board Assembly
08782-0320	1 to 10	AD	08 Jul 2021	Global Slurry Mag Board Schematic
08782-0321	1 to 3	AB	02 Oct 2019	Global Slurry Mag Board Fab Drawing
08782-0322	1 to 6	AC	02 Oct 2019	Global Slurry Mag Board Assembly Drawing
08782-0323	1 of 1	AC	02 Oct 2019	Transition Board Schematic
08782-0324	1 to 3	AC	02 Oct 2019	Transition Board PCB Fab
08782-0325	1 of 1	AC	02 Oct 2019	Transition Board Assembly
08782-0326	1 of 1	AC	02 Oct 2019	DC Power Board Schematic
08782-0327	1 to 3	AC	02 Oct 2019	DC Power Board Fab Drawing
08782-0328	1 of 1	AC	02 Oct 2019	DC Power Board Assembly Drawing
08782-0329	1 of 1	AB	02 Oct 2019	AC Power Board Schematic
08782-0330	1 to 4	AB	02 Oct 2019	AC Power Board Fab Drawing
08782-0331	1 of 1	AB	02 Oct 2019	AC Power Board Assembly Drawing
08782-0349	1 to 1	AB	02 Oct 2019	Thermal Pad
08782-0350	1 to 4	AA	02 Oct 2019	DC-DC Power Module



CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK This certificate and its schedules may only be reproduced in its entirety and without change QD-1599 Issue 4 (2022-08-22)



Certificate Number:	CSAE 22UKEX1310X
Product:	8782 Slurry Transmitter and MS Slurry Sensor
Manufacturer:	Emerson – Rosemount, Micro Motion, Inc.

Drawing	Sheets	Rev.	Date (Stamp)	Title
08782-0352	1 to 4	AA	02 Oct 2019	AC Input Module
08782-0353	1 to 4	AA	02 Oct 2019	AC/DC Converter Module
08782-0501	1 to 2	AD	02 Oct 2019	Heat Sink Bracket
08782-0503	1 to 2	AA	02 Oct 2019	LOI – Keyboard Membrane
C09866	1 to 5	AK	08 Jul 2021	Ground Screw
C10375	1 to 4	AP	08 Jul 2021	O-Ring Buna N
C11998	1 to 5	F	02 Oct 2019	Screw
C12304	1 to 2	AA	02 Oct 2019	Washer Ground Terminal
C12728	1 to 3	AE	02 Oct 2019	Thread Sealant
C50283	1 to 6	AB	02 Oct 2019	Pan Head Screw
C50352	1 to 2	AB	02 Oct 2019	3145RTV Sealant for LOI Cable and Glass
C51571	1 to 4	AV	08 Jul 2021	NPT Stopping Plug
C51715	1 to 5	AE	02 Oct 2019	Screw
C52990	1 to 2	В	02 Oct 2019	Hinge Lubricant
C53209	1 to 4	AE	02 Oct 2019	Drive Screw for Nameplates
C53496	1 to 3	AD	02 Oct 2019	Terminal Block - Safety Cover Screw
C54374	1 to 4	AA	02 Oct 2019	Button Head Screw Cap
C54902	1 to 3	AC	02 Oct 2019	Electrical Contact Lubricant
C55532	1 to 3	AA	02 Oct 2019	Strain Relief Bushing
C55730	1 to 3	AB	02 Oct 2019	Screw – Button Head Socket Cap
C55830	1 to 2	AD	08 Jul 2021	Solder Wire
FC0061	1 to 3	AA	02 Oct 2019	Fuses 250V AC
000MS-00AT	1 to 2	AB	25 Oct 2022	DRAWING, APPROVAL LABEL, ATEX / UKEX , MS
08782-00AT	1 to 3	AB	25 Oct 2022	8782 Transmitter Label Drawing
00825-	1 to 32	AD	25 Oct 2022	Rosemount <sup>™</sup> 8782 and MS IECEx, ATEX, and UKEX
MA00-0010				Approvals Document



CSA Group Testing UK Ltd., Unit 6 Hawarden Industrial Park, Hawarden, CH5 3US, UK This certificate and its schedules may only be reproduced in its entirety and without change QD-1599 Issue 4 (2022-08-22)