Certificate of Compliance

Certificate:	80180490	**Master Contract:**	273000
Project:	80180490	**Date Issued:**	August 31, 2023

Issued To: **Knick Elektronische Messgeräte GmbH & Co. KG**
22, Beuckestraße
Berlin, 14163
Germany

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: *Maria Gomes*
Maria Gomes

PRODUCTS

CLASS 2258 04	-	PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations
CLASS 2258 84	-	PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations– Certified to U.S. Standards

Ex ia IIC T6…T4 Ga
Class I, Zone 0 AEx ia IIC T6…T4 Ga
IS Class I, Division 1, Groups A, B, C and D T6…T4

Inductive sensor-cable connection system MEMOSENS, consisting of a sensor and the measuring cable is used to measure different parameters of fluid media.

The sensors in conjunction with the measuring cable (max. length 100m) may be connected to an intrinsic safe digital sensor interface providing the following maximum values as described below. In particular the effective inner inductivity and capacity of the approved, intrinsic safe sensor output may not exceed the values given below.

1. Entity Parameter Set	2. Entity Parameter Set
Uo = 5.1 V	Uo = 5.04 V
Io = 130 mA	Io = 80 mA
Po = 166 mW (linear output characteristic)	Po = 112 mW (trapezoid output characteristic)
Ci = 15 µF	Ci = 14.1 µF
Li = 95 µH	Li = 237.2 µH

Furthermore, the connection of power limited Memosens sensors (Pi is defined) to the power limited inductive coupling of measuring cables is possible considering of the following value:
Maximum output power P_o = 178 mW (except for sensor type SE655X-GEFTT0AM and SE656X-GEFTW0KM).

Digital sensor types are:

- Conductivity measuring inductive sensor type SE655X-GEFTT0AM
- Conductivity measuring inductive sensor type SE656X-GEFTW0KM

The cable types are:

- Measuring cable type CA/MS-***X**
- Measuring cable type CA/MS-***X**-L

Name	Type	Ambient Temperature	Process Temp. Range
Conductivity measuring inductive	SE655X-GEFTT0AM	0 °C ≤ T_a ≤ +55 °C (T4) 0 °C ≤ T_a ≤ +50 °C (T6)	−20 °C ≤ T_p ≤ +110 °C (T4) −20 °C ≤ T_p ≤ +70 °C (T6)
Conductivity measuring inductive	SE656X-GEFTW0KM		
Measuring Cable	CA/MS-***X**	−15 °C ≤ T_a ≤ +120 °C (T4) −15 °C ≤ T_a ≤ +70 °C (T6)	
Measuring Cable	CA/MS-***X**-L	−10 °C ≤ T_a ≤ +50 °C (T6)	

Conditions of Acceptability:

1. The measuring cable type CA/MS-***X** and CA/MS-***X**-L and its connecting head must be protected from electrostatic charging, if installed through areas of EPL Ga (Zone 0).
2. The sensors type SE655X-GEFTT0AM and SE656X-GEFTW0KM may only be used in liquid media with a conductivity of at least 10 nS/cm. Metallic process connection parts should be grounded at a mounting location with an impedance of <1 MΩ. Non-metallic process connection parts have to be protected from electrostatic charging. The connection cable shall be protected from electrostatic charging where necessary.
3. Only sensors, intended to be used according to the user instructions, must be connected. The rated values of input and output circuits must be followed.
4. To be supplied by a Class 2 or Limited Energy Source in accordance with CSA 61010-1-12.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 61010-1-12 (r2017)	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements
CAN/CSA-C22.2 No. 60079-0:15	Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA-C22.2 No. 60079-11:14	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”
UL 61010-1-Third Edition (2016)	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements
UL 60079-0, Sixth Edition	Explosive atmospheres – Part 0: Equipment – General requirements
UL 60079-11, Sixth Edition	Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety “i”

MARKINGS

Each unit shall bear all the required markings identified in the applicable certification report(s).
Note: The Listee’s name and/or CSA file number shall replace the submittor’s equivalent information (where applicable).