Certificate of Compliance

Certificate: 80176833 **Master Contract:** 605593

Project: 80176833 **Date Issued:** August 23, 2023

Issued to: **Anton Paar GmbH**
Anton Paar Straße 20
Graz
Styria
8054
Austria

Attention: Stefan Doppelhofer

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: *H. Gambell*
H. Gambell

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 US Standards

Ex db ib IIC T4 Gb (Integral model PA0K with AU, Series sensors)
Class I, Zone 1, AEx db ib IIC T4 Gb

Ex db ib IIB T4 Gb (Integral model PA0K with, AB, or AS Series sensors)
Class I, Zone 1, AEx db ib IIB T4 Gb

Ex db [ib] IIC T6 Gb (Remotely mounted transmitter)
Class I, Zone 1, AEx db [ib] IIC T6 Gb

L-Cor Mass Flowmeter Transmitter, Model PA0K-C-*bcde* for use with AU, AB and AS intrinsically safe coil sensors certified under **CSA Certificate** 80176831 for the same manufacturer. PA0K transmitter electrical ratings: AC ratings: 85-250 V, 50/60 Hz, 29VA max; Um = 250V; DC ratings: 20-30V, 6.9W max, Um = 250V Where:

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L-Cor Mass Flowmeter Transmitter Model PA0K-C-bcde			
Code	Explanation	Value	Explanation
b	Transmitter specification	1	Integral transmitter with integral sensor
		2	Remote transmitter with separate sensor
c	Power Source specification	1	DC power supply
		2	AC power supply
d	Communication	1	4 to 20 mAdc, and HART communication
		2	Foundation Fieldbus
		3	Profibus Communication
		4	Digital communication (MODBUS)
e	Approval	4	CSA Certified C/US

Ambient Temperature Range:
-40°C to +55°C (except AS080) or
-20°C to +55°C (for AS080)

Process Temperature Range:
-40°C to +80°C (only Integral except AB015 and AS080) or
-40°C to +70°C (for AB 015 Integral)
-20°C to +80°C (for AS 080 Integral)

Analogue output: 4-20 mA DC; Um=250 V (provided with HART communication)
Communication MODBUS: Pulse/Status Output: 10-30 Vdc, 50mA; Um=250 V
Communication FOUNDATION FIELDBUS/PROFIBUS: in type of protection intrinsic safety Ex ib IIC, only for connection as field device in accordance with FISCO.

The following entity parameters are less than AU, AB and AS Sensors parameters (CSA Certificate 80176831)
Drive circuit output: **Uo=12.3V, Io=0.864mA, Po=2.66W**
Pick-up circuit output: **Uo=7.2V, Io=9.4mA, Po=16.9mW**

Conditions of Acceptability

1. The above model is permanently connected equipment, Pollution Degree 2.
2. Line and Neutral pole connections supplying power at the installation site must be protected by certified or listed fuses for Canada and US rated 2A max, installed outside the equipment and acceptable to the authorities where equipment is installed.
3. Wiring providing power to the unit must be certified or listed for Canada and US –type Field Wiring suitable for temperatures above 75°C and size AWG 14-18
4. The user replaceable mains fuse found within the equipment must be certified or listed for Canada and US acceptable to the authorities where the equipment is installed.
5. Units installed with conduit runs must have conduit seals instaled at the enclosure
6. Units installed with other than conduit runs and conduit seals, must be fitted with certified or listed cable glands for use in Class I, Zone 1, with method of protection “Ex d IIB” or ”Ex db IIC”, and suitable for the ambient temperature range and the cable being applied.
7. Remove adapter before installing stopping plug in the conduit entry.
8. Terminal Cover B fasteners (M6 x 1 - 6g) are class A-50 or better.
9. There are no other replaceable parts other than the mains fuse identified above.
10. If at any time there is a conflict between the system safety provisions and any relevant local (national or regional) requirements, the local requirements always take precedence.

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APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 61010-1-12 (3rd Edition)	Safety Requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General Requirements
ANSI/UL 61010-1 (3rd Edition)	Safety Requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General Requirements
CAN/CSA C22.2 No. 60079-0:19 *February 2019*	Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA C22.2 No. 60079-1:16 *May 2016*	Explosive atmospheres — Part 1: Equipment protection by flameproof enclosures “d”
CAN/CSA-C22.2 No. 60079-11:14 *February 2014*	Explosive atmospheres — Part 11: Equipment protection by intrinsic safety “i”
ANSI/UL 60079-0 (2019) Seventh Edition	Explosive atmospheres – Part 0: Equipment – General Requirements
ANSI/UL 60079-1 (2015) Seventh Edition	Explosive atmospheres — Part 1: Equipment protection by flameproof enclosures “d”
ANSI/UL 60079-11 Sixth Edition	Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety ’i’

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Nameplate adhesive label material approval information:

The following markings appear on adhesive aluminum nameplate manufactured by Nitto Dennko Co. Type No. 5915, which is suitable for use on metal at the maximum ambient temperature of the unit. These markings may also be rigid, mechanically secured, provided by laser etching on permanently marked metal nameplate using stainless steel wire to the outside of the device, or on CSA certified or UL recognized adhesive nameplate material compatible with the surface used.

- Manufacturer’s name: “Anton Paar GmbH”, or CSA Master Contract Number “605593”, adjacent to the CSA Mark in lieu of manufacturer’s name
- Marking on the unit that indicates the manufacturing location if the equipment is manufactured at more than one factory location
- Model number: As specified in the PRODUCT nomenclature section, above.

- Electrical rating specification, as specified in the PRODUCT nomenclature section, above.
- Safety related symbol: ISO 3864 No. B.3.1 Special Conditions of Use, consult accompanying literature
- Replacement fuse markings; Fuse type(s) and rating(s) (in volts and amperes), adjacent to the fuseholder(s).
- Protective earthing (internal) TERMINAL is identified by the IEC 60417 No 5019 symbol , adjacent to the TERMINAL or letter “G” or “GND”; external grounding is identified by the IEC 60417-5017 symbol adjacent to the external ground screw located between conduit entries.
- Neutral is identified by the letter "N"; Line is identified by the letter “L”
- Manufacturer date in MMYY format, or serial number, traceable to month of manufacture.
- The products listed 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: , or , or .
- Certificate Number Reference: CSA23.80176833X, on the same label with the CSA logo
- Hazardous Locations designations: As specified in the PRODUCTS section, above.
- Temperature Code: As specified in the PRODUCTS section, above.
- Ambient temperature range: As specified in the PRODUCTS section, above.
- Entity parameters: As specified in the PRODUCTS section, above.
- Each G ¾ or M25 Metric Adapter must be marked with the correct conduit entry size it provides (ex. ½ NPT, M20x1-6H).
- The following words:
  - “INTRINSICALLY SAFE" and “SÉCURITÉ INTRINSÈQUE" or equivalent wording.
  - “WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY” and “AVERTISSMENT: SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SECURITE INTRINSEQUE” or equivalent wording.
  - “DO NOT REMOVE COVER WHILE CIRCUITS ARE ALIVE” and “NE PAS OUVRIR LE TOUT EN CIRCUITS SONT SOUS TENSION” or equivalent wording
  - “A SEAL SHALL BE INSTALLED AT THE ENCLOSURE” and “UN SCELLEMENT DOIT ÊTRE INSTALLÉ À L’BOÎTIER”, or equivalent wording.
- FISCO Field device

Notes:

Products certified under Class C225804, C225884 have been certified under CSA’s ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca