



Certificate of Compliance

Certificate: 70174889

Master Contract: 252450

Project: 80034276

Date Issued: 2020-02-28

Issued To: Syscor Controls & Automation Inc.
Suite 201 - 60 Bastion Square
Victoria, British Columbia, V8W 1J2
Canada

Attention: Nick Tzonev

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: Madhumathi Kulothungan
Madhumathi Kulothungan

PRODUCTS

CLASS - C225804 - PROCESS CONTROL EQUIPMENT Intrinsically Safe, Entity - For Hazardous Locations

**Class I, Division 1, Groups C and D, T4
Ex ia IIB T4 Ga**

Wireless HC Tracker, Power and Control Unit,
Models: PCU-X¹-X²-X³-X⁴-X⁵ where,

- 1 – Battery pack
- 2 – Inclinometer
- 3 – Accelerometer
- 4 – Antenna
- 5 – Mounting brackets

Battery powered using Syscor battery pack, part number 000841, or 000902.
Ambient Temperature Range: -40°C to +60°C; Temperature Code T4; Type 4X and IP67.
Intrinsically Safe when wired per drawing 000985



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PCU output entites
U _o = 6.51V
I _o = 4.34A
P _o = 0.95W
C _o = 222.53μF
L _o = 7.55μH

Wireless HC Tracker, Hydrocarbon liquid and vapour detector with water level sensor probes,
Models: HCD-XX¹-XX²-XXXX³-A⁴-XX⁵ and HCDW-XX¹-XX²-XXXX³-A⁴-XX⁵

- 1 – Interface (software protocol)
- 2 – Hydrocarbon detector chemistry selection
- 3 – Cable length
- 4 – Units (of cable length)
- 5 – Certification

Powered by model PCU,

Ambient Temperature Range: -40°C to +60°C; Temperature Code T4; Type 4X and IP67.

Intrinsically Safe when wired per drawing 000985

HCD input entities	HCDW Input entities
U _i = 6.51V	U _i = 6.51V
I _i = 4.34A	I _i = 4.34A
P _i = 0.95W	P _i = 0.95W
C _i = 52.25μF	C _i = 66μF
L _i = 0μH	L _i = 0μH

Conditions of Acceptability:

- i. 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.
- ii. The Hart maintenance port in the PCU shall not be used in the hazardous area. When used in the non-hazardous area, a HART Field Communicator, manufactured by Emerson/Rosemount, model 375, or model 475 may be used.
- iii. A passive antenna may be supplied by the manufacturer or provided by the customer. Permitted antennas must have <10000mm² plastic surface when screwed in directly to the enclosure. Antennas mounted via cable are not subject to the plastic surface area restriction.
- iv. The above model is a battery powered 7.2Vdc, Equipment Class III, Pollution Degree 2, Overvoltage Category I. Mode of Operation: Continuous
- v. Environmental Conditions: Extended: -40⁰C to +60⁰C, 5000 m max, Extended Relative Humidity of 0-99%.

CLASS - C225884 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations - Certified to US Standards



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Class I, Division 1, Groups C and D, T4
Class I, Zone 0 AEx ia IIB T4 Ga

Wireless HC Tracker, Power and Control Unit.

Models: PCU-X¹-X²-X³-X⁴-X⁵

- 1 – Battery pack
- 2 – Inclinator
- 3 – Accelerometer
- 4 – Antenna
- 5 – Mounting brackets

Battery powered using Syscor battery pack, part number 000841, or 000902.

Ambient Temperature Range: -40°C to +60°C; Temperature Code T4; Type 4X and IP67.

Intrinsically Safe when wired per drawing 000985

PCU output entites
U _o = 6.51V
I _o = 4.34A
P _o = 0.95W
C _o = 222.53µF
L _o = 7.55µH

Wireless HC Tracker, Hydrocarbon liquid and vapour detector with water level sensor probes,

Models: HCD-XX¹-XX²-XXXX³-A⁴-XX⁵ and HCDW-XX¹-XX²-XXXX³-A⁴-XX⁵

- 1 – Interface (software protocol)
- 2 – Hydrocarbon detector chemistry selection
- 3 – Cable length
- 4 – Units (of cable length)
- 5 – Certification

Powered by model PCU,

Ambient Temperature Range: -40°C to +60°C; Temperature Code T4; Type 4X and IP67.

Intrinsically Safe when wired per drawing 000985

HCD input entites	HCDW Input entites
U _i = 6.51V	U _i = 6.51V
I _i = 4.34A	I _i = 4.34A
P _i = 0.95W	P _i = 0.95W
C _i = 52.25µF	C _i = 66µF
L _i = 0µH	L _i = 0µH

Conditions of Acceptability:

- i. 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



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- 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.
- ii. The Hart maintenance port in the PCU shall not be used in the hazardous area. When used in the non-hazardous area, a HART Field Communicator, manufactured by Emerson/Rosemount, model 375, or model 475 may be used.
 - iii. A passive antenna may be supplied by the manufacturer or provided by the customer. Permitted antennas must have 10000mm^2 plastic surface when screwed in directly to the enclosure. Antennas mounted via cable are not subject to the plastic surface area restriction.
 - iv. The above model is a battery powered 7.2Vdc, Equipment Class III, Pollution Degree 2, Overvoltage Category I. Mode of Operation: Continuous
 - v. Environmental Conditions: Extended: -40°C to $+60^{\circ}\text{C}$, 5000 m max, Extended Relative Humidity of 0-99%.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 94.2-15	Enclosures for electrical equipment, environmental considerations
CAN/CSA-C22.2 No. 60529:16	Degrees of protection provided by enclosures (IP Code)
CAN/CSA-60079-0-15	Electrical apparatus for explosive gas atmospheres; Part 0: General requirements
CAN/CSA-60079-11-14	Electrical apparatus for explosive gas atmospheres; Part 11: Intrinsic safety "i"
CAN/CSA-C22.2 No. 61010-1-12	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
ANSI/UL 50E, Ed.2	Enclosure for Electrical Equipment, Environmental Considerations
IEC 60529, Ed.2	Degrees of protection provided by enclosures (IP Code)
ANSI/UL 61010-1, Ed.3	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements
ANSI/UL 913-2018, Ed.8	Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, III, Division 1, Hazardous (Classified) Locations
ANSI/UL 60079-0, Ed.6	Electrical apparatus for explosive gas atmospheres; Part 0: General requirements
ANSI/UL 60079-11, Ed.6	Electrical apparatus for explosive gas atmospheres; Part 11; Intrinsic safety "i"



Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80034276	2020-02-28	Update to CSA report 70174889 to include the following modifications, 1. Removal of the I.S. zone from the HCD and HCDW sensor probes 2. Minor changes to the PCB shape and enclosure to improve the probe's potting. 3. Request an immediate permissive change to enable manufacture the existing product with zero 0 ohm resistors in place of the fuses. 4. Descriptive document update based on above modifications
80026006	2019-11-27	Update to report 70174889 to include the following modifications, 1) Add new class no 2258 04 and 2258 84 which is associated to the product certified under project 70174889. 2) Correct the typo "2258 03" to "2258 04" in the CofC
70174889	2019-03-21	New Certification for Model PCU and HCD/HCDW Wireless Hydrocarbon detector, as Intrinsic Safety (IS) for Class I Division 1 Groups CD in Canada and US.