



Certificate of Compliance

Certificate: 1812440

Master Contract: 220043

Project: 70010048

Date Issued: September 25, 2014

Issued to: AW-Lake Company
8809 Industrial Dr
Franksville, WI 53126
USA
Attention: Michael Pikula

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.



Dorel Stefan

Issued by: Dorel Stefan

PRODUCTS

CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations -
Certified to US Standards

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

Class I, Division 1, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class III; T6; Type 4X*:

RT-Ex15-Ex Digital Flow Monitor, Input Rating 200 mA @ 5-24 Vdc Class 2, Analog Loop Outputs 4-20 mA @ 12-24 Vdc Class 2, Limit Outputs 50 mA @ 5-24 Vdc Class 2, and Reset Input 5-24 Vdc Class 2.

Temperature Range: -40°C to +60°C

Maximum Working Pressure (MWP) per drawing RT30990F. Sensor Hole Style 1 MWP is 34.4MPa (5kpsi) and Sensor Hole Style 2 MWP is 62.1MPa (9kpsi) or 103.4MPa (15kpsi) depending on sensor hole membrane thickness.

Conditions of Certification:

1. The RT-Ex15-Ex Digital Flow Monitors must be used with a meter body whose sensor hole is manufactured according to control drawing RT30990F including meter material of construction as noted on



Certificate: 1812440

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drawing. If the flow monitor is not supplied with a meter body, the customer must be supplied with control drawing RT30990F for proper installation of meter body.

2. The RT-Ex15-Ex Flow Monitor must be installed in accordance to the RT-Ex15-Ex Flow Monitor Installation Manual.

3. * The RT-Ex15 Digital Flow Monitor certification does NOT include Type 4 or Type 4X when the optional "Swivel Union" is used. The Swivel Union is installed between the enclosure and adapter hub to allow the product to be positioned properly for installation.

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations – to U.S. Requirements

Class I, Division 1, Groups C and D; Class II, Division 1, Groups E, F and G; Class III; T6; Type 4X:

RT-30Ex Gear and TM-30Ex Turbine(with or without HART communication) Digital Flow Monitor

Input Rating 200 mA @ 9-24 Vdc Class 2, Analog Loop Output 4-20 mA @ 9-24 Vdc Class 2,

Limit Outputs 40 mA @ 5-30 Vdc Class 2, and Reset Input 12-24 Vdc Class 2.

Ambient Temperature Range: -20°C to +60°C

Maximum Working Pressure (MWP) per drawing RT30990F. Sensor Hole Style 1 MWP is 34.4MPa (5kpsi) and Sensor Hole Style 2 MWP is 62.1MPa (9kpsi) or 103.4MPa (15kpsi) depending on sensor hole membrane thickness.

Part Number: aa-30Ex-bccd

aa = Meter type (RT or TM)

b = Enclosure access (S or D)

cc = Sensor version (00, 01 or 32)

d = Communication protocol (Blank or H)



Certificate: 1812440

Master Contract: 220043

Project: 70010048

Date Issued: September 25, 2014

Conditions of Certification:

1. The RT/TM-30Ex Digital Flow Monitor remote version shall be used only with the remote sensor pickup model number HUB-40EX.
2. The RT/TM-30Ex Digital Flow Monitor and HUB-40EX shall be used with a meter body whose sensor hole is manufactured according to control drawing RT30990F including meter material of construction as noted. If the flow monitor or remote sensor is not supplied with a meter body, the customer must be supplied with control drawing RT30990F for proper installation of meter body.
3. The RT/TM-30Ex Flow Monitor shall be installed in accordance to the RT/TM-30Ex Flow Monitor Installation Manual.
4. The HUB-40EX remote sensor pickup shall be installed in accordance to the HUB-40EX Installation Manual.

APPLICABLE REQUIREMENTS

CAN/CSA Std C22.2 No. 0-M91 (R2006)	General Requirements - Canadian Electrical Code, Part II
CSA Std C22.2 No. 142-M1987 (R2009)	Process Control Equipment
CSA Std C22.2 No. 94.1-07 – 1st Ed.	Safety Enclosures for Electrical Equipment, Non-Environmental Considerations
CSA Std C22.2 No. 94.2-07 – 1st Ed.	Safety Enclosures for Electrical Equipment, Environmental Considerations
CSA Std C22.2 No. 25-1966 (R2009)	Enclosures for Use in Class II, Groups E, F and G Hazardous Locations
CSA Std C22.2 No. 30-M1986 (R2007)	Explosion-Proof Enclosures for Use in Class I Hazardous Locations
UL 508 – 17th Ed. (Jan 28, 1999 including revisions thru April 15, 2010)	Industrial Control Equipment
UL 1203 – 4th Ed. (Sept 15, 2006 including revisions thru Oct 28, 2009)	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous Locations
UL 50 – 12th Ed. (Sept 4, 2007)	Safety Enclosures for Electrical Equipment, Non-Environmental Considerations
UL 50E – 1st Ed. (Sept 4, 2007)	Safety Enclosures for Electrical Equipment, Environmental Considerations



Certificate: 1812440

Master Contract: 220043

Project: 70010048

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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.

Markings for RT-Ex15-Ex are on a 0.5 mm (0.02 inch) thick aluminum or stainless steel label which is fixed to the enclosure by stainless steel screws or drive pins.

- CSA Monogram
- Company Name and/or File Number #220043
- Model number
- Serial Number
- Supply Electrical Rating: 24 VDC, 200 mA Max. Class 2
- Hazardous Location Designation
- Ambient Temperature Range: -40°C to +60°C
- Temperature Code: T6 (Optional)
- Maximum Working Pressure or MWP: 103.4 MPa (15kpsi), 62.1MPa (9kpsi) or 34.4MPa (5kpsi)
- Warning or Caution; "SEE INSTRUCTIONS & INSTALLATION MANUAL FOR ADDITIONAL ELECTRICAL RATINGS AND WARNINGS"
- Warning or Caution; "KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE" and "GARDER LE COUVERCLE BIEN FERME TANT QUE LES CIRCUITS SONT SOUS TENSION" or equivalent.
- Warning or Caution; "For Class I, Group A, A EXPLOSIONPROOF SEAL SHALL BE INSTALLED WITHIN 450 mm (18 inches) OF THE ENCLOSURE" or equivalent.
- "The RT-Ex15-Ex Flow Monitor must be installed in accordance to the RT-Ex15-Ex Flow Monitor Installation Manual"



Certificate: 1812440

Master Contract: 220043

Project: 70010048

Date Issued: September 25, 2014

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- Meter Bodies to be marked with associated model codes and/or additional coding indicating meter is machined according to control drawing RT30990F.
 - Meter Bodies to have MWP: 103.4 MPa (15kpsi), 62.1MPa (9kpsi) or 34.4MPa (5kpsi)

Common markings for RT-30Ex, TM-30Ex are on a 0.5 mm (0.02 inch) thick aluminum or stainless steel label which is fixed to the enclosure by stainless steel screws or drive pins.

- Manufacturer's name: "AW Co", or CSA Master Contract Number "220043", adjacent to the CSA Mark in lieu of manufacturer's name.
- Model number: As specified in the PRODUCTS section, above.
- Electrical ratings: As specified in the PRODUCTS section, above.
- Ambient temperature rating: As specified in the PRODUCTS section, above.
- Manufacturing date in MMY format, or serial number, traceable to month of manufacture.
- Enclosure ratings: As specified in the PRODUCTS section above.
- The CSA Mark w/wo the "C" and/or "US" indicators, as explained on the Certificate of Conformity.
- Hazardous Location designation: As specified in the PRODUCTS section, above (may be abbreviated).
- Temperature code: As specified in the PRODUCTS section, above. (Optional if T6 or T5)
- Rated maximum working pressure (MWP) as specified in the PRODUCTS section, above. Optional marking if MWP is already provided on the meter body.
- The following words or equivalent:
 - "Remove Power Before Servicing Unit" and "Coupez l'alimentation avant entretien de l'unité" or "KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE" and "GARDER LE COUVERCLE BIEN FERME TANT QUE LES CIRCUITS SONT SOUS TENSION".
 - "SEAL REQUIRED WITHIN 18 INCHES"
 - "The RT-30Ex Flow Monitor must be installed in accordance to Installation Manual" or "The TM-30Ex Flow Monitor must be installed in accordance to Installation Manual"
 - Warning or Caution; "SEE INSTRUCTIONS & INSTALLATION MANUAL FOR ADDITIONAL ELECTRICAL RATINGS AND WARNINGS"
 - "WARNING: DISCONNECT POWER TO THE HUB ADAPTER BEFORE LOOSENING OR ADJUSTING THE SWIVEL COLLAR"
- Optional marking: "XP rated"

Markings for remote HUB-40EX are on a 0.5 mm (0.02 inch) thick aluminum or stainless steel label which is fixed to the enclosure by stainless steel screws or drive pin.

- Manufacturer's name: "AW Co", or CSA Master Contract Number "220043", adjacent to the CSA Mark in lieu of manufacturer's name.
- Model number
- Ambient temperature rating: -20°C to +60°C
- Manufacturing date in MMY format, or serial number, traceable to month of manufacture.
- Enclosure rating: Type 4X
- The CSA Mark w/wo the "C" and/or "US" indicators, as explained on the Certificate of Conformity.



Certificate: 1812440

Master Contract: 220043

Project: 70010048

Date Issued: September 25, 2014

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- Hazardous Location designation (may be abbreviated): CL I Div1 GR C,D; CL II GR E,F,G; CL III;
 - Temperature code: T6 (Optional)
 - Rated maximum working pressure (MWP) per drawing RT30990F. Sensor hole style 1 MWP is 34.4MPa (5kpsi) and Sensor hole style 2 MWP is 62.1MPa (9kpsi) or 103.4MPa (15kpsi). Optional marking if MWP is already provided on the meter body.
 - The following words or equivalent:
 - “Remove Power Before Servicing Unit” and “Coupez l'alimentation avant entretien de l'unité” or "KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE” and “GARDER LE COUVERCLE BIEN FERME TANT QUE LES CIRCUITS SONT SOUS TENSION”.
 - “SEAL REQUIRED WITHIN 18 INCHES”
 - "The HUB-40EX shall be used with the RT-30Ex or TM-30Ex Flow Monitor and must be installed in accordance to Installation Manual"
 - Warning or Caution; “SEE INSTRUCTIONS & INSTALLATION MANUAL FOR ADDITIONAL ELECTRICAL RATINGS AND WARNINGS”
 - “WARNING: DISCONNECT POWER TO THE HUB ADAPTER BEFORE LOOSENING OR ADJUSTING THE SWIVEL COLLAR”
 - Optional marking: “XP rated”

The following markings shall be on the meter bodies:

- Model number and/or additional coding indicating meter is machined according to control drawing RT30990F.
- Material of construction
- Rated maximum working pressure (MWP) per drawing RT30990F. Sensor hole style 1 MWP is 34.4MPa (5kpsi) and Sensor hole style 2 MWP is 62.1MPa (9kpsi) or 103.4MPa (15kpsi).

An installation manual or data sheet(s) shall be supplied with each RT/TM-30Ex unit, containing the following minimum marking information:

- Manufacturers name and address
- Hazardous Area Installation Instructions
- Electrical ratings: "9-24 VDC, 200 mA Class 2".
- Specification for ambient temperature rating: "-20°C to 60°C".
- Inputs:
 - Reset Input: 12-24 VDC Class 2 (3.3Kohm impedance)
 - Sensor Ratings: Freq Input Range from 0.3 – 4500 Hz; Sensor Supply Voltage 12 VDC @ 50mA max; Magnetic Sensor Input is 15mVp-p min and 24Vpeak max; High Level Pulse Input is 2Vpeak min and 24Vpeak max.
- Outputs:
 - Three (3) Opto-Isolated Limit Outputs: 5-30 VDC, 40mA Class 2 (minimum load impedance required = 600 Ohm @ 24VDC)



Certificate: 1812440

Master Contract: 220043

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- Analog Output 4-20mA: 9-24 VDC Class 2 loop supply (maximum load impedance = 500 Ohm @ 24 VDC and 250 Ohm @ 12 VDC)
 - Enclosure Certification: Type 4X
 - Connections: Spring Terminal Strips; 3/4" NPT conduit entrance
 - The following words, or suitable equivalent:
 - “WARNING - Explosion Hazard. Do not connect or disconnect this equipment unless power has been removed or the area is known to be nonhazardous.” and “AVERTISSEMENT - RISQUE D'EXPLOSION. NE PAS DEBRANCHER TANT QUE LE CIRCUIT EST SOUS TENSION, A MOINS QU'IL NE S'AGISSE D'UN EMPLACEMENT NON DANGEREUX.”
 - SEAL REQUIRED WITHIN 18 INCHES
 - Warning: Power must be removed from the unit before the Swivel Collar can be loosened or adjusted.

An installation manual or data sheet shall be supplied with each HUB-40EX unit, containing the following minimum marking information:

- Manufacturers name and address
- Hazardous Area Installation Instructions
- Specification for ambient temperature rating: "-20°C to 60°C".
- Sensor Ratings: Supply Voltage 10-28 VDC; Supply Current of 8mA @ 12 VDC & 12mA @ 24 VDC; Freq Output of 0.5Hz min; Output Amplitude of $V_{low} = 0\text{ V}$ & $V_{high} = V_{supply} - 0.7\text{V}$; Duty Signal is 50% \pm 15%
- Enclosure Certification: Type 4X
- Connections: Terminal Block; 1/2" NPT (Female) conduit entrance
- The following words, or suitable equivalent:
 - “WARNING - Explosion Hazard. Do not connect or disconnect this equipment unless power has been removed or the area is known to be nonhazardous.” and “AVERTISSEMENT - RISQUE D'EXPLOSION. NE PAS DEBRANCHER TANT QUE LE CIRCUIT EST SOUS TENSION, A MOINS QU'IL NE S'AGISSE D'UN EMPLACEMENT NON DANGEREUX.”
 - SEAL REQUIRED WITHIN 18 INCHES
 - Warning: Power must be removed from the unit before the Swivel Collar can be loosened or adjusted.



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
70010048	Sep 25, 2014	Evaluation for update of report 1812440 to add Carrier Option board. No change to Product Listing / Cert Record. Assumes no effect to method of protection.
70006982	Aug 22, 2014	Update to report 1812440 to allow for a 1mm membrane thickness below the sensor hole in the meter body and an optional welded on 3/8" NPT adapter for shallow meter sensor holes.
2471428	Feb 29, 2012	Update report 1812440 to include models RT-30Ex and HUB-40EX.
1812440	Feb 9, 2007	RT-Ex15-Ex for Class I, Division 1, Groups ABCD, Class II Groups EFG Class III, Hazardous Locations