



Member of the FM Global Group

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CERTIFICATE OF COMPLIANCE

HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

This certificate is issued for the following equipment:

Pulsar dl-aa-bbb-c-ddd-e-0-H-N-f Series of Protected by Encapsulation Ultrasonic Transducers
IPA / I,II,III / 1 / ABCDEFG / T4 Tamb = -40°C to +64°C; Drawing # D-804-1035-A, Type 4X

dl = dBi series HART transducers

aa = Measurement range in meters: 03, 06, 10 or 15;

bbb = cable length in meters: 005, 010, 020, 030, 040, 050, 060, 070, 080, 090 or 100;

c = Configuration options:

0 = standard

1 = submersible shield

2 = flange standard

3 = flange sanitary

4 = mach3 horn and shield

5 = front nose thread (options indicated by ddd)

6 = drip shield

ddd = Flange or nose thread:

000 = no flange or front thread

002 = 2" ANSI

003 = 3" ANSI

004 = 4" ANSI

006 = 6" ANSI

008 = 8" ANSI

100 = 100 DIN

150 = 150 DIN

200 = 200 DIN

015 = 1.5" front nose thread (dbi3 or dBi6 only)

020 = 2" front nose thread (dBi10 only)

e = Option for material fitted to the face of the transducer:

0 = standard

1 = foam

2 = PTFE (0.25 mm thick)

4 = PVDF

5 = Thick PTFE (0.5 mm thick)

To verify the availability of the Approved product, please refer to www.approvalguide.com

f = Name of seller on the label
P = Pulsar

Special Conditions of Use:

- 1 *The enclosure of the transducer is considered to constitute an electrostatic discharge hazard. Clean only with a damp cloth.*
- 2 *The transducer shall be connected to a source incorporating a 100 mA fuse which provides a minimum interrupt capacity of at least 1500A.*
- 3 *The transducer is not suitable for use in the presence of Ketones, Aliphatic Hydrocarbons, Alcohols, Esters, and Acids.*

Pulsar dl-aa-bbb-c-ddd-e-1-H-N-f Series of Intrinsically Safe Ultrasonic Transducers

IS / I,II,III / 1 / ABCDEFG / T4 Tamb = -40°C to +80°C; Drawing #D-804-1035-A, Type 4X
Ui = 28V, li = 162 mA, Pi = 1.03W, Ci = 0, Li = 0

dl = dBi series HART transducers

aa = Measurement range in meters: 03, 06, 10 or 15;

bbb = cable length in meters: 005, 010, 020, 030, 040, 050, 060, 070, 080, 090 or 100;

c = Configuration options:

- 0 = standard
- 1 = submersible shield
- 2 = flange standard
- 3 = flange sanitary
- 4 = mach3 horn and shield
- 5 = front nose thread (options indicated by ddd)
- 6 = drip shield

ddd = Flange or nose thread:

- 000 = no flange or front thread
- 002 = 2" ANSI
- 003 = 3" ANSI
- 004 = 4" ANSI
- 006 = 6" ANSI
- 008 = 8" ANSI
- 100 = 100 DIN
- 150 = 150 DIN
- 200 = 200 DIN
- 015 = 1.5" front nose thread (dbi3 or dBi6 only)
- 020 = 2" front nose thread (dBi10 only)

e = Option for material fitted to the face of the transducer:

- 0 = standard
- 1 = foam
- 2 = PTFE (0.25 mm thick)
- 4 = PVDF
- 5 = Thick PTFE (0.5 mm thick)

f = Name of seller on the label
P = Pulsar

Special Conditions of Use:

1. *The enclosure of the transducer is considered to constitute an electrostatic discharge hazard. Clean only with a damp cloth.*
2. *The transducer is not suitable for use in the presence of Aliphatic Hydrocarbons and Alcohols.*

Equipment Ratings:

Intrinsically Safe (Entity) for use in Class I, II, and III, Division 1, Groups A, B, C, D, E, F, and G indoor and outdoor Hazardous Locations in accordance with Control Drawing # D-804-1035-A, Temperature Class T4 for an ambient temperature range of -40°C to +80°C;
FM Approved for use in Class I, II, and III, Division 1, Groups A, B, C, D, E, F, and G indoor and outdoor Hazardous Locations in accordance with Control Drawing #D-804-1035-A, Temperature Class T4 for an ambient temperature range of -40°C to +64°C;
Type 4X.

FM Approved for:

Pulsar Process Management Ltd
Malvern, Worcestershire, UK

This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

CSA C22.2 No. 1010.1	2004
CSA C22.2 No. 157	1992 (R 2012)
CSA C22.2 No. 25	1966 (R 2000)
CSA C22.2 No. 94	1994 (R 2011)
CSA C22.2 60079-0	2011
CSA C22.2 60079-11	2011

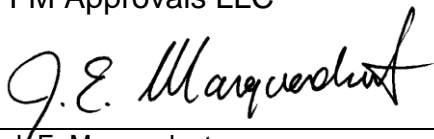
Original Project ID: 3047911

Approval Granted: April 7, 2014

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
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FM Approvals LLC



J.E. Marquedant
Group Manager, Electrical

7 April 2014
Date