



Member of the FM Global Group

FM Approvals
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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

R96-5abc-def-RAg-hij-k00. Pulsar R96 Radar Level Transmitter / Pulsar Radar level Probe.

IS/I,II,III/1/ABCDEFG/T4 Ta = -40°C to +70°C – 099-5061; Entity; FISCO; Type 4X, IP67;

XP-IS/I/1/BCD/T4 Ta = -40°C to +70°C; Type 4X, IP67;

DIP-IS/II,III/1/EFG/T5 Ta = -15°C to 70°C; Type 4X, IP67;

NI/I,II,III/2/ABCDEFG/T4 Ta = -40°C to 70°C; Type 4X, IP67;

I/0/Ex ia/IIC/T4...T1 Ga Ta = -40°C to +70°C – 099-5061; Entity; Type 4X, IP67;

I/0/1/AEx db ia/IIB+H₂/T4...T1 Ga/Gb Ta = -40°C to +70°C – 099-0561; Entity; FISCO; Type 4X, IP67;

I/2/AEx ic/IIC/T4...T1 Gc Ta = -15°C to +70°C – 099-0561; Entity; FNICO; Type 4X, IP67;

I/2/AEx nA/IIC T4...T1 Gc Ta = -15°C to +70°C; Type 4X, IP67;

Entity Parameters:

Ui = 28.6V, Ii = 140mA, Pi = 1W, Ci = 4.4nF, Li = 2.7µH

a = Signal Out: 1 or 2.

b = Options: 0 or 1.

c = Accessories: 0 or A.

d = Classification: 1, 3 (when a = 1 or 2), 0, A, B or C.

e = Housing/Conduit Connection: 1 or 2.

f = Options: 0, 2 or 3.

g = Configuration Style: A, B, C, 3, 4, or 6.

h = Material of Construction. Antenna/ Mounting Nut: A, B, C, G, L or K.

i = Process Connection Size Type: 31, 32, 43, 44, 45, 53, 54, 55, 63, 64, 65, 73, 74, 75, 83, 84, 85, DA, DB, DD, EA, EB, ED, FA, FB, FD, GA, GB, GD, HA, HB, HD, 3P, 4P, 5P, 6P or 7P.

j = O rings: 0, 1, 2 or 8.

k = Maximum Nozzle Length: 0, 1, 2 or 3.

Special Conditions of Use:

1. The enclosure contains aluminum and is considered to present a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact or friction.
2. To maintain the T4 to T1 temperature code care shall be taken to ensure the enclosure temperature does not exceed 70°C.
3. The risk of electrostatic discharge shall be minimized at installation, following the direction given in the instruction.
4. Contact the original manufacturer for information in the dimensions of flameproof joints.
5. For Installation with ambient temperature of 70°C, refer to the manufacturer's instructions for guidance on proper selection of conductors.
6. Provisions shall be made to provide transient overvoltage protection to a level not to exceed 119Vdc.
7. The sensor probes are suitable for connections to Class I, II, III, Division 1 Groups A, B, C, D, E, F and G and Class I, Zone 0, Group IIC Hazardous (Classified) Locations.
8. Temperature codes for the ratings AEx db ia IIB+H₂, AEx ia IIC, AEx nA IIC and AEx ic IIC are defined by the following table:

Process temperature(PT)	Temperature Code-TCG (GAS)
From 0°C to 110°C	T4
From 110°C to 175°C	T3
From 175°C to 275°C	T2
From 275°C to 425°C	T1

Equipment Ratings:

Intrinsically Safe (Entity) (FISCO) for Class I, II and III Division 1, Groups A, B, C, D, E, F and G, Temperature Class T4 Ta = -40°C to +70°C in accordance with drawing 099-5061; Intrinsically Safe (Entity) (FISCO) for Class I, Zone 0, AEx ia IIC T4...T1 Ga Ta = -40°C to +70°C in accordance with control drawing 099-5061; Explosionproof with Intrinsic Safety for Class I, Division 1, Groups B, C and D; Temperature Class T4 Ta = -40°C to +70°C; Flameproof with Intrinsic Safety for Class I, Zone 0/1, AEx db ia IIB+H₂ T4...T1 Ga/Gb Ta = -40°C to +70°C; Dust-ignitionproof with Intrinsic Safety for Class II and III, Division 1, Groups E, F and G; Temperature Class T5, Ta = -15°C to +70°C; Nonincendive for Class I, II and III, Division 2, Groups A, B, C, D, E, F and G Temperature Class T4, Ta = -40°C to +70°C; Non-Sparking for Class I, Zone 2 AEx nA IIC T4...T1 Ta = -15°C to + 70°C hazardous (classified) locations; Intrinsically Safe (Entity) (FNICO) for Class I, Zone 2, AEx ic IIC T4...T1 Gc Ta = -15°C to +70°C in accordance with control drawing 099-5061 hazardous (classified) locations, indoors and outdoors (Type 4X and IP67).

FM Approved for:

Magnetrol International Inc
Aurora, IL 60504 United States



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

Class 3600	2011
Class 3610	2010
Class 3611	2004
Class 3615	2006
Class 3616	2011
Class 3810	2005
ANSI/ISA 60079-0	2013
ANSI/ISA 60079-1	2013
ANSI/ISA 60079-11	2014
ANSI/ISA 60079-15	2013
ANSI/ISA 60079-26	2011
ANSI/NEMA 250	2003
ANSI/IEC 60529	2004

Original Project ID: 3054552

Approval Granted: January 22, 2016

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
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FM Approvals LLC

J.E. Marquedant
Manager of Electrical Systems

22 January 2016

Date