FM Approvals
Member of the FM Global Group

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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

I. Special Protection

FDU 91-QNcde. PROSONIC S Ultrasonic Level Sensor.
S/I/1/ABCD/T6 -40 °C ≤ Ta ≤ +60 °C; T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/I/2/ABCD/T6 -40 °C ≤ Ta ≤ +60 °C; T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/II,III/1/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/II,III/2/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68

c = Cable length: any single letter or number representing the cable length.
d = Heater option: A (without heating)
e = Additional options: A (without option), Y (special cleaning and supplemental documents).

Special Conditions of Use:
1. Excluded from use in Ketone chemical family atmospheres.

FDU 91F-Qbcd. PROSONIC S Ultrasonic Level Sensor.
S/I/1/ABCD/T6 -40 °C ≤ Ta ≤ +60 °C; T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/I/2/ABCD/T6 -40 °C ≤ Ta ≤ +60 °C; T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/II,III/1/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/II,III/2/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68

b = Process connection: H (prepared for flush mounting (FAU 80), stainless steel, cable entry ANSI 1/2" NPT), N (ANSI 1" NPT thread, stainless steel, cable entry ANSI 1/2" NPT), U (clamp ISO 2852 DN80 (3-1/2"), stainless steel, cable entry ANSI 1/2" NPT).
c = Cable length: any single letter or number representing the cable length.
d = Additional options: A (without option), Y (special cleaning and supplemental documents).

FDU 92-QNcd. PROSONIC S Ultrasonic Level Sensor.
S/I/1/ABCD/T6 -40 °C ≤ Ta ≤ +60 °C; T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/I/2/ABCD/T6 -40 °C ≤ Ta ≤ +60 °C; T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68

S/II,III/1/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/II,III/2/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68

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S/II,III/2/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68

c = Cable length: any single letter or number representing the cable length.
d = Additional options: A (without option), Y (special cleaning and supplemental documents).

FDU 95-Q1de. PROSONIC S Ultrasonic Level Sensor.
S/I/1/ABCD/T6 -40 °C ≤ Ta ≤ +60 °C; T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/I/2/ABCD/T6 -40 °C ≤ Ta ≤ +60 °C; T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/II,III/1/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/II,III/2/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68

d = Cable length: any single letter or number representing the cable length.
e = Additional options: A (without option), Y (special cleaning and supplemental documents).

II. Dust-Ignitionproof

FDU 93-PNcd. PROSONIC S Ultrasonic Level Sensor.
DIP/II,III/1/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
NI/I/2/ABCD/T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/II,III/2/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68

c = Cable length: any single letter or number representing the cable length.
d = Additional options: A (without option), Y (special cleaning and supplemental documents).

FDU 95-P1Nde. PROSONIC S Ultrasonic Level Sensor.
DIP/II,III/1/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
NI/I/2/ABCD/T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/II,III/2/EFG/T4A -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68

d = Cable length: any single letter or number representing the cable length.
e = Additional options: A (without option), Y (special cleaning and supplemental documents).

FDU 95-P2Nde. PROSONIC S Ultrasonic Level Sensor.
DIP/II,III/1/EFG/T3A -40 °C ≤ Ta ≤ +130 °C; Type 6P, IP68

NI/I/2/ABCD/T5 -40 °C ≤ Ta ≤ +80 °C; Type 6P, IP68
S/II,III/2/EFG/T3A -40 °C ≤ Ta ≤ +130 °C; Type 6P, IP68

d = Cable length: any single letter or number representing the cable length.
e = Additional options: A (without option), Y (special cleaning and supplemental documents).

FDU 96-KNcd. PROSONIC S Ultrasonic Level Sensor.
DIP/II,III/1/EFG/T5 -40 °C ≤ Ta ≤ +85 °C; Type 6P, IP68
NI/I/2/ABCD/T5 -40 °C ≤ Ta ≤ +85 °C; Type 6P, IP68
S/II,III/2/EFG/T5 -40 °C ≤ Ta ≤ +85 °C; Type 6P, IP68

c = Cable length: any single letter or number representing the cable length (max. length of 300 m).
d = Additional options: A (without option), Y (special cleaning and supplemental documents).

FDU 96-PNcd. PROSONIC S Ultrasonic Level Sensor.
DIP/II,III/1/EFG/T3C -40 °C ≤ Ta ≤ +140 °C; Type 6P, IP68
NI/I/2/ABCD/T5 -40 °C ≤ Ta ≤ +85 °C; Type 6P, IP68
S/II,III/2/EFG/T3C -40 °C ≤ Ta ≤ +140 °C; Type 6P, IP68

c = Cable length: any single letter or number representing the cable length (max. length of 300 m).
d = Additional options: A (without option), Y (special cleaning and supplemental documents).

Equipment Ratings:

I. Special Protection for use in Class I, II & III, Division 1, Groups A, B, C, D, E, F & G; Special Protection for use in Class I, II & III, Division 2, Groups E, F & G Hazardous (Classified) indoor/outdoor (Type 6P & IP68) Locations

II. Dust-Ignitionproof for use in Class II & III, Division 1, Groups E, F & G; Nonincendive for use in Class I, Division 2, Groups A, B, C & D; and Special Protection for use in Class II & III, Division 2, Groups E, F & G Hazardous (Classified) indoor/outdoor (Type 6P & IP68) Locations

FM Approved for:

Endress+Hauser GmbH+Co. KG
Hauptstraße 1
79689 Maulburg
Germany

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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	1998
Class 3611	2004
Class 3616	Draft
Class 3810	2005
ANSI/IEC 60529	2004
ANSI/ISA-12.23.01	2002
ANSI NEMA 250	1991

Original Project ID: 3023671 Approval Granted: January 24, 2006

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
3028368	26 JUNE 2007		

FM Approvals LLC

Roger L. Allard
Assistant Vice President

26 JUNE 2007
Date