

CERTIFICATE OF CONFORMITY



- HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
- Certificate No:** FM19US0170
- Equipment:** Echotel 910 Ultrasonic Level Switch
(Type Reference and Name)
- Name of Listing Company:** Magnetrol International Inc.
- Address of Listing Company:** 705 Enterprise Street
Aurora, IL 60504
United States of America
- The examination and test results are recorded in confidential report number:

1Q9A9.AE dated 1st November 1989
- FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3611:2004, FM Class 3615:2018,
FM Class 3810:2005, ANSI/NEMA 250:1991, ANSI/ISA/UL 60079-0:2019,
ANSI/ISA/UL 60079-1:2015, ANSI/IEC 60529:2004
- If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
- This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
- Equipment Ratings:

Explosionproof for Class I, Division 1, Groups B, C and D; Dust-Ignitionproof for Class II, III, Groups E, F and G; Nonincendive for Class I, Division 2, Groups A, B, C and D; Suitable for Class II, Division 2, Groups F and G, and Class III, Division 2 hazardous (classified) locations; indoor/outdoor (Type 4, 4X, IP66); Flameproof for Class I, Zone 1, AEx db IIC Gb. All ratings are FM Approved for a Temperature code of T6/T5 in a Maximum Ambient Temperature 70°C.

Certificate issued by:



J.E. Marquedant
VP, Manager - Electrical Systems

17 November 2020

Date

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

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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SCHEDULE



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11. The marking of the equipment shall include:

Class I Division 1, Groups B, C, D; T6 *Ta = $-40^{\circ}\text{C} \leq \text{Ta} \leq 70^{\circ}\text{C}$; Type 4, 4X, IP66

Class II, Division 1, Groups E, F, G, Class III, Division 1; T6 *Ta = $-40^{\circ}\text{C} \leq \text{Ta} \leq 70^{\circ}$; Type 4, 4X, IP66

Class I Division 2, Groups A, B, C, D; T5 *Ta = $-40^{\circ}\text{C} \leq \text{Ta} \leq 70^{\circ}$; Type 4, 4X, IP66

Class II Division 2, Groups F, G; T5 *Ta = $-40^{\circ}\text{C} \leq \text{Ta} \leq 70^{\circ}$; Type 4, 4X, IP66

Class III Division 2; T5 *Ta = $-40^{\circ}\text{C} \leq \text{Ta} \leq 70^{\circ}$; Type 4, 4X, IP66

Class I, Zone 1, AEx db IIC Gb; *Ta = $-40^{\circ}\text{C} \leq \text{Ta} \leq 70^{\circ}\text{C}$ or T6; Type 4X, IP66

*Probes > 60 inches Ta = $-20^{\circ}\text{C} \leq \text{Ta} \leq 70^{\circ}\text{C}$

12. **Description of Equipment:**

General – The 910 Series Level Control utilizes ultrasonic signals transmitted into a medium for level control or indicating applications. The 910 Series consists of a level control circuit assembly, an aluminium housing and a stainless steel transducer assembly. The level control circuit assemblies are available in 120 Vac 50/60 Hz, 240 Vac, 50/60 Hz or 24 Vdc versions. The 120 Vac and 240 Vac circuit boards have hermetically sealed relay contacts while the 24 Vdc board does not have a relay

Construction - The Level Control housing consists of a cover constructed of aluminium alloy 356-T6 and a base constructed of aluminium alloy 713 or stainless-steel. There are two 3/4 inch NPT or M20 openings in the base of the housing for conduit connections and one 3/4 inch NPT for connection of the transducer assembly. An o-ring is provided on the cover to prevent the ingress of dust or water. The housing containing the electrical and electronic devices complying with the kind of protection "db".

The probe/transducer assembly is constructed of 316 stainless steel tubing and is of a completely welded design. The ultrasonic sensor is contained within the transducer assembly and is epoxy potted. The sensor assembly is available in 1 to 100 inch lengths. The transducers are rated for up to 1500 psi maximum process pressure. The probe / transducer assembly complies with the kinds of protection "db".

Ratings – Input Power: 24 Vdc, 120 Vac, 240 Vac, 50/60 Hz

910-abcd-e. ECHOTEL Ultrasonic Level Control.

a = Housing A, V, Y, P or 5.

b = Type unit 1 or M.

c = Process connection material A, C, D, E, F, G, H, J, K, L, M, N, P, Q, R, S, T, U, V, W, X, Y, Z, 1, 2, 3, 4, 5, 6, 7, 8 or 9.

d = Input power H, J, K, 0, 1 or 2.

e = Actuation length 001 through 254.

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13. Specific Conditions of Use:

None

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
1 st November 1989	Original Issue.
18 th December 2019	<u>Supplement 17:</u> Report Reference: – PR452105 dated 18 th December 2019. Description of the Change: Addition of epoxy material options used in the construction for the feed-through assembly. Certificate issued under new format.
19 th February 2020	<u>Supplement 18:</u> Report Reference: – RR222446 dated 19 th February 2020. Description of the Change: Correction to a misspelling of the street name and city name on certificate.
17 th November 2020	<u>Supplement 19:</u> Report Reference: – PR454942 dated 17 th November 2020. Description of the Change: Add US zones, change from IP65 to IP66.

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