



Confirmation of Product Type Approval

Company Name: F-R TECNOLOGIAS DE FLUJO, S.A. DE C.V.

Address: AV. MIGUEL DE CERVANTES NO. 111 COMPLEJO INDUSTRIAL CHIHUAHUA 31136 Mexico

Product: Meter, Flowmeter

Model(s): 8732EM, 8712EM, 8705M, 8711M/L

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	15-HS1351310-4-PDA-DUP	27-AUG-2019	27-APR-2020
Manufacturing Assessment (MA)	19-MZ3685272	26-JUN-2019	24-JUL-2024
Product Quality Assurance (PQA)	NA	NA	NA

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3

Intended Service
Marine and Offshore Applications.

Description
Magnetic Process Flow Metering System.

Ratings
Ordinary and Hazardous (Classified) Location Installations.

Type of Protection: Ex d, Ex eb, Ex ia, Ex ib, Ex ic, Ex nA, Ex ec and Ex tb;

Ex db eb [ia Ga] IIC T6...T3 Gb

Ex db [ia Ga] IIC T6...T3 Gb

Ex nA [ia Ga] IIC T4...T3 Gc

Ex ec [ia Ga] IIC T4...T3 Gc

[Ex ia Ga] IIC

Ex eb ia IIC T5...T3 Ga/Gb

Ex eb ib IIC T5...T3 Gb

Ex nA ia IIC T5...T3 Ga/Gc

Ex ec ia IIC T5...T3 Ga/Gc

Ex nA ic IIC T5...T3 Gc

Ex ec ic IIC T5...T3 Gc

Ex tb III C T80 deg C...T200 deg C Db

Ex nA ic [ia Ga] IIC T4 Gc

Ex ec ic [ia Ga] IIC T4 Gc

Ex tb IIIC T80 deg C Db

Also see the attached CSA certificate of compliance 70081467X covering the hazardous area classification.

8705M Pressure Range: 0 to 6, 170 psig;

8711M/L Pressure Range: 0 to 740 psig;

See Manufacturer's Documents noted below for additional ratings and certification details.

Service Restrictions

- Unit Certification is not required for this product.

- Not to be used where an intrinsically safe type only device is required (i.e. pump room on tanker, etc.) unless Vessel, Mobile Offshore Drilling Unit or Facility complies fully with IEC 60092-502 (1999). If ATEX Certification Scheme only is followed, not to be installed on US Flagged Vessel, Mobile Offshore Drilling Unit or Facility.

Comments

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes, Drawings and Documentation

08705-0014, 8705/8707/MS Pipe Pressure Calculations, Revision: AN: -

08711-1014, 8711 Pipe Pressure Calculations, Revision: AC: -

08711-1015, 8711 Casting Pressure Calculations, Revision: AD: -

IECEX Certificate No. IECEX DEK 14.0031X Certificate of Conformity dated 22 Mar 2019, Revision: -

CSA certificate No. 70081467X Certificate of Compliance dated 28 November 2018, Revision: -

CSA Descriptive Report and Test Results, date issued 28 November 2018, Revision: -

381942200_Annex to IECEX DEK 14.0031X , issue no.6, Revision: -

00825-0100-4444 - 8732EM Transmitter with hart protocol, Rev - AI, March 2019: -

00825-0100-4445 - 8712EM Transmitter with hart protocol, Rev - AB, November 2017: -

00825-0100-4727 - 8700 Magnetic flow meter sensor, Rev - DD, May 2019: -

00825-0400-4444 – 8732EM Transmitter with Modbus Protocol, Rev - AC, November 2017: -

00825-0400-4445 – 8712EM Transmitter with Modbus Protocol, Rev - AB, Nov 2017: -

00825-0500-4444 – 8732EM Transmitter with foundation fieldbus, Rev - AA, May 2019: -

00825-0500-4445 – 8712EM Transmitter with foundation fieldbus, Rev - AA, May 2019: -
00825-MA00-0001 - 8700M Approval Document IECEx and ATEX, Rev - AC, May 2019: -
00825-MA00-0002 - 8700M Approval Document - Class Division Rev - AB, May 2019: -
00825-MA00-0003 - 8700M Approval Document - North American Zone Rev - AB, May 2019: -
Drawing No. 08712-2023 Approvals drawings 8712EM ATEX/IECEx Type Ex e, Ex nA,, Ex i, Rev - AC: -
Drawing No. 08732-2020 8732EM ATEX/IECEx Flameproof, Rev AF: -
08732-2061 – Installation Drawing CSA Canadian and USA Class Division, Rev AG: -
08732-2066 – Installation Drawing CSA Canadian and USA Zone, Rev AC: -
Dwg. No. 08705-2020, Rev. AA – 8705-M, 8711-M/L ATEX, IECEx, Increased Safety with Intrinsically Safe Electrode (Ex e ia OR Ex e ib): -

Term of Validity

This Product Design Assessment (PDA) Certificate 15-HS1351310-4-PDA-DUP, dated 26/Aug/2019 remains valid until 27/Apr/2020 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

ABS Rules

Rules for Conditions of Classification, Part 1 2016, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2016 Steel Vessels: 4-8-3/13

2016 Rules for Vessels Under 90 Meters 4-6-3/11

2016 ABS Rules for Offshore Support Vessels 4-8-3/13

Rules for Conditions of Classification, Part 1 - 2016 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2016 Rules for Mobile Offshore Drilling Units 4-3-3/9

International Standards

IEC 60079-0 : 2011 Edition 6.0 - Explosives atmospheres - Part 0: General requirements;

IEC 60079-1: 2014 Edition: 7.0 - Explosive atmospheres - Part 1: Equipment Protection by flameproof enclosures "d";

IEC 60079-11 : 2011 Edition:6.0 - Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "I";

IEC 60079-15 : 2010 Edition:4 - Explosives atmospheres - Part 15: Equipment protection by type of protection "n";

IEC 60079-26 : 2014-10 Edition:3 - Explosives atmospheres - Part 26: Equipment with Equipment Protection Level (EPL) Ga;

IEC 60079-31 : 2013 Edition:2 - Explosives atmospheres - Part 31: Equipment dust ignition protection by enclosure "I";

IEC 60079-7 : 2015 Edition:5.0 - Explosives atmospheres - Part 7: Equipment Protection by increased safety "e";

EU-MED Standards

NA

National Standards

FM Class 3600: 2011, FM Class 3610: 2010, FM Class 3611: 2004, FM Class 3615: 2006, FM 3616: 2011, FM 3810: 2005;

ANSI/NEMA 250: 2003, ANSI/IEC 60529: 2004, ANSI/ISA 60079-0: 2013, ANSI/ISA 60079-11: 2013, ANSI/ISA-60079-1: 2009, ANSI/ISA-60079-7: 2008, ANSI/ISA 60079-15: 2012; ANSI/ISA-60079-31: 2013, ANSI/ISA-6010-1: 2015;

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read 'James J. White', is positioned above the corporate information.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 23-Oct-2019 8:13

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.