



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:

FSV430abcdefgh – Vortex Flow Transmitter – Integral Sensor – Dual Seal

IS / I, II, III / 1 / ABCDEFG / T6...T4, Entity 3KXF065215U0109, IP66, IP67 Type 4X

I / 0 / AEx ia IIC / T6...T4 Entity 3KXF065215U0109, IP66, IP67 Type 4X

NI / I / 2 / ABCD / T6...T4 IP66, IP67 Type 4X

DIP / II / 2 / EFG / T6 Ta = -40°C to *; IP66, IP67 Type 4X

DIP / III / T6 Ta = -40°C to *; IP66, IP67 Type 4X

I / 2 / AEx nA IIC / T6...T4 IP66, IP67 Type 4X

*See Control drawing

a = Explosion Protection Certification; F3, F4, F8 or F9

b = System Design; C1, or C2.

c = Process Connection Type / Meter Size / Connection Size: W025R0, W040R0, W050R0, W080R0, W100R0, W150R0, F015R0, F015R2, F015R4, F025R0, F025R2, F025R3, F040R0, F040R1, F040R3, F050R0, F050R2, F050R3, F080R0, F080R1, F080R3, F100R0, F100R2, F100R4, F150R0, F150R2, F150R3, F200R0, F200R1, F200R2, F250R0, F250R1, or F300R0.

d = Pressure Rating; D1, D2, D3, D4, D5, D6, D7, E1, E2, E3, A1, A3, A6, A7, A8, A9, J0, J1, J2, J3, or J4.

e = Temperature Range of Measuring Medium; A1, B1, or C1.

f = Housing Material / Cable Glands; A1, B1, S1, or T1.

g = Output Signal; H1, H5 or M4**.

h = Additional Options; (Any of the following) C*, CG*, EG*, G1, G2, G4, L1, L2, M*, N*, P*, R5, S1, SM1, SM2, SM3, SM4, SM5, SM6, SM7, SP0, SP1, SP2, SP3, TC1, TCC, TCS, TCZ, TA4, TA5, U1, U2, NG*, NS*, and/or NL*.

* = Any single character – Not relevant to safety.

** = For NI, DIP, and AEx nA versions only

FSV430abcdefgh – Vortex Flow Transmitter – Remote Sensor – Dual Seal

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DIP / II / 2 / EFG / T6 Ta = -40°C to *; IP66, IP67 Type 4X

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I / 2 / AEx nA IIC / T6...T4 IP66, IP67 Type 4X

*See Control drawing

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

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 c = Process Connection Type / Meter Size / Connection Size; W025R0, W040R0, W050R0, W080R0, W100R0, W150R0, F015R0, F015R2, F015R4, F025R0, F025R2, F025R3, F040R0, F040R1, F040R3, F050R0, F050R2, F050R3, F080R0, F080R1, F080R3, F100R0, F100R2, F100R4, F150R0, F150R2, F150R3, F200R0, F200R1, F200R2, F250R0, F250R1, or F300R0.
 d = Pressure Rating; D1, D2, D3, D4, D5, D6, D7, E1, E2, E3, A1, A3, A6, A7, A8, A9, J0, J1, J2, J3, or J4.
 e = Temperature Range of Measuring Medium; A1, B1, or C1.
 f = Housing Material / Cable Glands; A1, B1, S1, or T1.
 g = Output Signal; H1, H5 or M4**
 h = Additional Options; (Any of the following) C*, CG*, EG*, G1, G2, G4, L1, L2, M*, N*, P*, R5, S1, SC2, SC4, SC6, SM1, SM2, SM3, SP0, SP1, SP2, SP3, TC1, TCC, TCS, TCZ, TA4, TA5, U1, U2, NG*, NS* and/or NL*.
 * = Any single character – Not relevant to safety.
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FSS430abcdefgh – Swirl Flow Transmitter – Integral Sensor – Dual Seal

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 I / 2 / AEx nA IIC / T6...T4 IP66, IP67 Type 4X
 *See Control drawing

a = Explosion Protection Certification; F3, F4, F8 or F9
 b = System Design; C1, or C2.
 c = Process Connection Type / Meter Size / Connection Size; F015R0, F020R0, F025R0, F032R0, F040R0, F050R0, F080R0, F100R0, F150R0, F200R0, F300R0, or F400R0.
 d = Pressure Rating; D1, D2, D3, D4, D5, D6, D7, E1, E2, E3, A1, A3, A6, A7, A8, A9, J0, J1, J2, J3, or J4.
 e = Temperature Range of Measuring Medium; A1, B1, or C1.
 f = Housing Material / Cable Glands; A1, B1, S1, or T1.
 g = Output Signal; H1, H5 or M4*
 h = Additional Options; (Any of the following) C*, CG*, EG*, G1, G2, G4, L1, L2, M*, N*, P*, R5, S1, SM1, SM2, SM3, SM4, SM5, SM6, SM7, SP0, SP1, SP2, SP3, TC1, TCC, TCS, TCZ, TA4, TA5, U1, U2, NG*, NS*, and/or NL*.
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 NI / I / 2 / ABCD / T6...T4 IP66, IP67 Type 4X
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 d = Pressure Rating; D1, D2, D3, D4, D5, D6, D7, E1, E2, E3, A1, A3, A6, A7, A8, A9, J0, J1, J2, J3, or J4
 e = Temperature Range of Measuring Medium; A1, B1, or C1

f = Housing Material / Cable Glands; A1, B1, S1, or T1
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h = Additional Options; (Any of the following) C*, CG*, EG*, G1, G2, G4, L1, L2, M*, N*, P*, R5, RR S1, SC*, SM1, SM2, SM3, SM4, SM5, SM6, SM7, SP0, SP1, SP2, SP3, TC1, TCC, TCS, TCZ, TA4, TA5, U1, U2 NG*, NS*, and/or NL*
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c = Process Connection Type / Meter Size / Connection Size; W025R0, W040R0, W050R0, W080R0, W100R0, W150R0, F015R0, F015R2, F015R4, F025R0, F025R2, F025R3, F040R0, F040R1, F040R3, F050R0, F050R2, F050R3, F080R0, F080R1, F080R3, F100R0, F100R2, F100R4, F150R0, F150R2, F150R3, F200R0, F200R1, F200R2, F250R0, F250R1, or F300R0.
d = Pressure Rating; D1, D2, D3, D4, D5, D6, D7, E1, E2, E3, A1, A3, A6, A7, A8, A9, J0, J1, J2, J3, or J4.
e = Temperature Range of Measuring Medium; A1, B1, or C1.
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d = Pressure Rating; D1, D2, D3, D4, D5, D6, D7, E1, E2, E3, A1, A3, A6, A7, A8, A9, J0, J1, J2, J3, or J4.
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d = Pressure Rating; D1, D2, D3, D4, D5, D6, D7, E1, E2, E3, A1, A3, A6, A7, A8, A9, J0, J1, J2, J3, or J4

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c = Process Connection Type / Meter Size / Connection Size; F015R0, F020R0, F025R0, F032R0, F040R0, F050R0, F080R0, F100R0, F150R0, F200R0, F300R0, or F400R0

d = Pressure Rating; D1, D2, D3, D4, D5, D6, D7, E1, E2, E3, A1, A3, A6, A7, A8, A9, J0, J1, J2, J3, or J4

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Equipment Ratings:

Intrinsically safe for Class I, II and III, Division 1 Groups A, B, C, D, E, F and G and Class I, Zone 0, Group IIC Hazardous (Classified) Locations per the Entity Concept when installed in accordance with Control Drawing 3KXF065215U0109. Temperature Class T6...T4 depending on input parameters and process temperature.



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Nonincendive for Class I, Division 2 Groups A, B, C and D; Suitable for Class II, III Division 1 and 2 Groups E, F and G; Suitable for Class I, Zone 2 Group IIC Hazardous (Classified) Locations. Temperature Class T6...T4.

Suitable for indoor and outdoor locations IP66/67 and Type 4X.

Dual Seal in accordance with ANSI/ISA 12.27.01

FM Approved for:

ABB Engineering (Shanghai) Ltd
Shanghai, China



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

FM Class 3600	2011
FM Class 3610	2010
FM Class 3810	2005
ANSI/ISA 61010-1	2004
ANSI/NEMA 250	2003
ANSI/IEC 60529	2004
ANSI/ISA 12.27.01	2003
ISA 60079-0	2013
ISA 60079-11	2014
ISA 60079-15	2013

Original Project ID: 0003048130

Approval Granted: February 27, 2014

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
3055129	October 6, 2015		
3054654	April 5, 2016		

FM Approvals LLC

J.E. Marquedant
Group Manager, Electrical

5 April 2016

Date