



Member of the FM Global Group

FM Approvals
1151 Boston Providence Turnpike
P.O. Box 9102 Norwood, MA 02062 USA
T: 781 762 4300 F: 781-762-9375 www.fmapprovals.com

CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

QNabcdef-g. Valve Position Monitor.

NI / I / 2 / ABCD / T5 Ta* = -40°C to +80°C; S / II / 2 / FG / T5 Ta* = -40°C to +80°C; Type 4, 4X, 6

*When a = 2E, 4E, 5E, 7E, BE, CE, 2F, 4F, 5F, 7F, BF or CF, Ta = -25°C to +70°C

a = Function 2P, 4P, 5P, 7P, BP, CP, 2L, 4L, 5L, 7L, BL, CL, 2H, 4H, 5H, 7H, 8H, BH, CH, 2S, 4S, 5S, 7S, BS, CS, 8Y, 2G, 4G, 5G, 7G, BG, CG, 2X, 4X, 5X, 6X, 7X, BX, CX, 2E, 4E, 5E, 7E, BE, CE, 2F, 4F, 5F, 7F, BF, CF, 33, 53, 73, B3, C3, 35, 5T, 7T, BT, CT, 92, 93, 96, 97, 82, 83, 86 or 87.

b = Enclosure C, E, P, B, Y, S, U or J

c = Junction 02 or 03

d = Output X, S, N, or H

e = Visual Indication X, G, R, C, 1, 2, 3, 4, 5, 0, N, D, A, S, T, U, V or W

f = Branding A, or M

g = Options 'Special Unit Digits'

Note: 'Special Unit Digits' do not affect the integrity of the housing, the electrical safety, or the title plate.

QNabcdef-g. Valve Position Monitor.

IS / I, II, III / 1 / ADBCEFG / T5 Ta* - 105196, 105197, 105199, 105201, 105202, 105203, 105208;
Entity*; Type 4, 4X, 6

NI / I / 2 / ABCD / T5* Ta = -40°C to +80°C; S / II / 2 / FG / T5* Ta = -40°C to +80°C; Type 4, 4X, 6

*When a = 2J, 4J, 5J, 7J, BJ, CJ, 2K, 4K, 5K, 7K, BK, CK, 2M, 4M, 5M, 7M, BM, CM, 5O, 7O

For T5 Ta* = -40°C to +80°C; For T6 Ta* = -40°C to +65°C

Entity Parameters: Ui = 30 Vdc, Ii = 100 mA, Ci = 66 nF, Li = 0.8 mH, Pi = 2.0 W

*When a = BO, CO

For T5 Ta* = -40°C to +80°C; For T6 Ta* = -40°C to +65°C

Energy Limitation Parameters: Ui = 26 V, Ii = 14 mA, Pi = 50mW, Ci = 0 nF, Li = 0 mH

*When a = 44, 54, 74, B4, C4

For T5 Ta* = -40°C to +80°C; For T6 Ta* = -40°C to +65°C

Energy Limitation Parameters:

Sensor Module: Ui = 22V, Ii = 120 mA, Pi = 2W, Ci = 98 nF, Li = 0.8 mH

Solenoid Connection Terminals: Ui = 30V, Ii = 120mA

*When a = 45, 5R, 7R, BR, CR

For T5 Ta* = -40°C to +80°C; For T6 Ta* = -40°C to +65°C

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

Energy Limitation Parameters:

Sensor Module: $U_i = 22V$, $I_i = 120\text{ mA}$, $P_i = 0.4\text{ W}$, $C_i = 3\text{ nF}$, $L_i = 0\text{ mH}$

Solenoid Connection Terminals: $U_i = 30V$, $I_i = 120\text{mA}$

* When a = 2N, 4N, 5N,6N, 7N, BN, CN

For T6, Ta*=	For T5, Ta*=	For T4...T1, Ta*=	U _i V	I _i mA	P _i mW	C _i nF	L _i mH
-25°C to +56°C	-25°C to +68°C	-25°C to +80°C	16	25	34	40	0.05
-25°C to +49°C	-25°C to +61°C	-25°C to +80°C	16	25	64	40	0.05
-25°C to +28°C	-25°C to +40°C	-25°C to +68°C	16	52	169	40	0.05
-25°C to +13°C	-25°C to +25°C	-25°C to +53°C	16	76	242	40	0.05

* When a = 2A, 4A, 5A, 7A, BA, CA

For T6, Ta*=	For T5, Ta*=	For T4...T1, Ta*=	U _i V	I _i mA	P _i mW	C _i nF	L _i mH
-40°C to +57°C	-40°C to +69°C	-40°C to +80°C	16	25	34	50	0.15
-40°C to +52°C	-40°C to +64°C	-40°C to +80°C	16	25	64	50	0.15
-40°C to +34°C	-40°C to +46°C	-40°C to +74°C	16	52	169	50	0.15
-40°C to +22°C	-40°C to +34°C	-40°C to +61°C	16	76	242	50	0.15

a = Function 2J, 4J, 5J, 7J, BJ, CJ, 2K, 4K, 5K, 7K, BK, CK, 2M, 4M, 5M, 7M, BM, CM, 5O, 7O, BO, CO, 2N, 4N, 5N, 6N, 7N, BN, CN, 2A, 4A, 5A, 7A, BA, CA, 44 54, 74 B4, C4, 45, 5R, 7R, BR or CR

b = Enclosure C, E, P, B, Y, S, U or J

c = Junction 02 or 03.

d = Output X, S, N, or H.

e = Visual Indication X, G, R, C, 1, 2, 3, 4, 5, 0, N, D, A, S, T, U, V or W.

f = Branding A, or M

g = Options 'Special Unit Digits'

Note: 'Special Unit Digits' do not affect the integrity of the housing, the electrical safety, or the title plate.

Special Conditions of Use:

1. Part of the enclosure is constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned only with a damp cloth.
2. The apparatus enclosure may contain aluminum which is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

Equipment Ratings:

Models QN: Nonincendive for Class I, Division 2, Groups A, B, C, & D, suitable for Class II, Division 2, Groups F & G, indoor and outdoor (NEMA Type 4, 4X, 6) hazardous (classified) locations.

Models QN: Intrinsically Safe with Entity Parameters for use in Class I, II, III, Division 1, Group A, B, C, D, E, F, and G, NEMA Type 4, 4X and 6 Hazardous (Classified) Indoor and Outdoor Locations.

FM Approved for:

StoneL

2671 US Hwy 59

Fergus Falls MN 56537



Member of the FM Global Group

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

Class «Primary Class of Work»

Class 3600	2011
Class 3610	2010
Class 3611	2004
Class 3615	2006
Class 3810	2005
ANSI/NEMA 250	1991

Original Project ID: 2Z6A0.AE

Approval Granted: March 21, 1996

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
1B1A7.AE	September 26, 1996	3D1A7.AE	January 27, 1998
3000081	March 24, 1998	3003073	March 12, 1999
3005301	September 2, 1999	3010777	June 6, 2001
3013354	March 13, 2002	3018704	November 24, 2003
3027732	September 25, 2006	3046824	November 11, 2013
RR201207	June 15, 2015	3055582	February 19, 2016

FM Approvals LLC

J.E. Marquedant
Manager, Electrical Systems

19 February 2016

Date