



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:

TEC 2000, ECP 2000 and EHO Series Electric Valve Actuators. Model abcd-ef.

XP/II/1/BCD/T* Ta = 60°C; DIP/II,III/1/EFG/T* Ta = 60°C, Type 4X; Type 6P**

a = Model Type:

- (1, 2, 3, 4, 5, 6, 7, 8 and 9) Multi-Turn with torque and thrust.
- (E or H) Multi-Turn side mount on bevel gear.
- (F or G) Multi-turn torque only.
- (P, Q and R) Quarter turn-top mount.
- (D, S, U or A) Multi-turn (no thrust).
- (J, K, L or V) 4 Turn top mount.
- (M or W) Quarter turn-side mount on 1/4T gear box.
- (B) Multi-turn with ball screw output.
- (C) Multi-turn with ball screw temperature compensated.
- (T) Multi-turn with temperature compensation.

b = Motor horsepower: A,B,C,D,E,F,G,H,J,K,L,M,N,P,Q,R,S,T,U,V,W,1-9.

c = Motor gear ratio: A,B,C,D,E,F,G,H,J,K,L,M,N,P,Q,R,S,T,U,V,W,X,Y and Z.

d = Valve adaption code to describe max Acme and Stem Size, max Shaft Size, Bolt Circle, Screw Size, Qty Screw, Worm Ratio and Hand of Gearing.

e = Motor voltage: 1,2,3,4,5,6,7,8,9,B,C,D,E,F,G,H,J,K,L,M,N,P,Q,R or T.

f = Additional features: F, T, B, C, H, M, E, D, CBM (CBM rated for Groups C,D,E,F,G), RDM or none.

Special Condition of Use:

**T4 temperature code rating when valve actuator motors are protected with 130°C rated thermal cutouts, and T4A temperature code rating when valve actuator motors are protected with 115°C rated thermal cutouts.*

*** Type 6P rating was tested at 50 ft for 7 days.*

CBM Circuit Breaker Module.

XP/II/1/CD/T6 Ta = 60°C; DIP/II,III/1/EFG/T6 Ta = 60°C, Type 4X; Type 6P*

* *Special Condition of Use: Type 6P rating was tested at 50 ft for 7 days.*

RDM Remote Display Module.

XP/II/1/BCD/T6 Ta = 60°C; DIP/II,III/1/EFG/T6 Ta = 60°C, Type 4X; Type 6P*

* *Special Condition of Use: Type 6P rating was tested at 50 ft for 7 days.*

TEC 2000, ECP 2000 and EHO Series Electric Valve Actuators. Model abcd-efgh.

XP/II/1/BCD/T* Ta = 60°C; DIP/II,III/1/EFG/T* Ta = 60°C, Type 4X; Type 6P**

a = Model Type

(D, U, S, X, Y, Z) Multi-Turn

b = Motor Horsepower

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

- (A, B, C, D, E, F, G, H, J, K, L, M, N, P, Q, R, S, T, U, V, W, 1-9)
- c = Motor Gear Ratio
(A, B, C, D, E, F, G, H, J, K, L, M, N, P, Q, R, S, T, U, V, W, X, Y & Z)
- d = Worm Gear Ratio
(A, B, C, K, L, M, R, S)
- e = Motor Voltage
[1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, J, K, L, M, N, P, Q, R OR T]
- f = Additional Mechanical Features
(0) None
(C) Ceramic (Surface Coating)
(F) Fire Enhanced Model K-Mass (Surface Coating)
CBM Circuit Breaker Module (CBM does not include Group B)
RDM Remote Display Module
- g = Gearbox type Mechanical Features
(0) KWG – Special
(1) KBG – Special
(2) KWG – Bronze Worm Gear
(3) KWG - Ductile Iron Worm Gear
(4) KBG – Bronze Gear
(5) KWG – Bronze Gear 360 degree
(8) MWG
(A) KWG – Traveling Nut – Bronze Worm Gear
(B) KWG – Traveling Nut – Ductile Iron Worm Gear
- h = Valve Adaption Code to describe Worm Ratio, and Worm Gear Size

Special Condition of Use:

**T4 temperature code rating when valve actuator motors are protected with 130°C rated thermal cutouts, and T4A temperature code rating when valve actuator motors are protected with 115°C rated thermal cutouts.*

*** Type 6P rating was tested at 50 ft for 7 days.*

Equipment Ratings:

TEC 2000 and ECP 2000 Series Electric Valve Actuators

Explosionproof for Class I, Division 1, Groups B, C and D; and dust-ignitionproof for Class II, III, Division 1, Groups E, F, and G hazardous (classified) locations, indoors and outdoors (Type 4X and Type 6P). Type 6P rating was tested at 50 ft for 7 days.

CBM Module

Explosionproof for Class I, Division 1, Groups C and D; and dust-ignitionproof for Class II, III, Division 1, Groups E, F, and G hazardous (classified) locations, indoors and outdoors (Type 4X and Type 6P). Type 6P rating was tested at 50 ft for 7 days.

RDM Module

Explosionproof for Class I, Division 1, Groups B, C and D; and dust-ignitionproof for Class II, III, Division 1, Groups E, F, and G hazardous (classified) locations, indoors and outdoors (Type 4X and Type 6P). Type 6P rating was tested at 50 ft for 7 days.

FM Approved for:

Emerson Process Management Valve Actuation, LLC
13840 Pike Road
Missouri City, TX 77489

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



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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 3615	2006
FM Class 3810	2005
ANSI/NEMA 250	1991

Original Project ID: 3004998

Approval Granted: June 9, 2003

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
100107	February 17, 2010		
100309	March 18, 2010		
RR202634	October 16, 2015		

FM Approvals LLC

J.E. Marquedant
Manager, Electrical Systems

16 October 2015

Date

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