

FM Hazardous Area Approvals Fisher™ 3722 Electro-Pneumatic Converter

Hazardous Area Classifications and Special Instructions for “Safe Use” and Installations in Hazardous Locations

Certain nameplates may carry more than one approval, and each approval may have unique installation/wiring requirements and/or conditions of “safe use”. These special instructions for “safe use” are in addition to, and may override, the standard installation procedures. Special instructions are listed by approval.

Note

This information supplements the nameplate markings affixed to the product and the 3710 and 3720 Valve Positioners and 3722 Electro-Pneumatic Converter instruction manual ([D101728X012](#)), available from your [Emerson sales office](#) or Local Business Partner, or at [www.Fisher.com](#).

Always refer to the nameplate itself to identify the appropriate certification.

These Special Instruction for “Safe Use” and Installation in Hazardous Location also apply to 3720 positioners.

⚠ WARNING

Failure to follow these conditions of “safe use” could result in personal injury or property damage from fire or explosion, or area re-classification.

Intrinsically Safe, Explosion-proof, Type n, Dust Ignition-proof, Non-incendive

No special conditions for safe use.

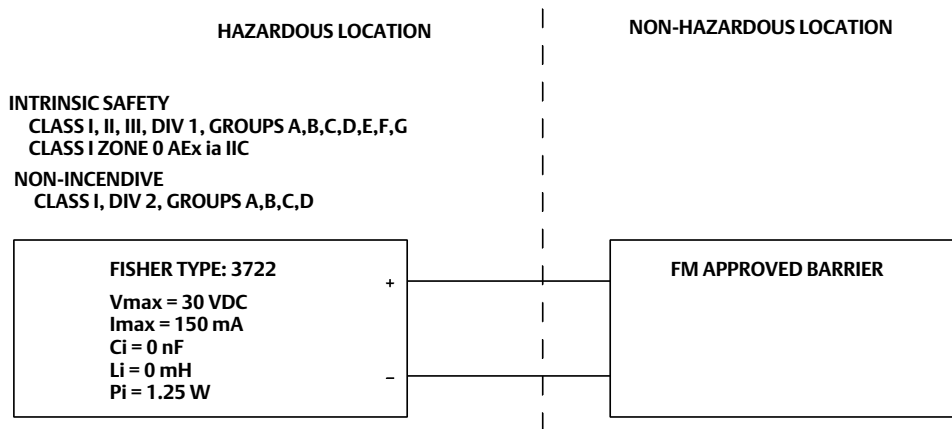
Refer to table 1 for approval information.

Table 1. Hazardous Area Classifications⁽¹⁾

Certification Body	Certification Obtained	Entity Rating	Temperature Code
FM	Intrinsically Safe Class I Zone 0 AEx ia IIC T4/T5/T6 per drawing GE28590 (figure 1) Class I, II, III Division 1 GP A,B,C,D,E,F,G T4/T5/T6 per drawing GE28590 (figure 1)	V _{max} = 30 VDC I _{max} = 150 mA P _i = 1.25 W C _i = 0 nF L _i = 0 mH	T4 (T _{amb} ≤ 82°C) T5 (T _{amb} ≤ 62°C) T6 (T _{amb} ≤ 47°C)
	Explosion-proof Class I Zone 1 AEx d IIC T5 Class I, Division I, GP A,B,C,D T5	---	T5 (T _{amb} ≤ 82°C)
	Type n Class I Zone 2 AEx nA IIC T5	---	T5 (T _{amb} ≤ 82°C)
	Class I, Division 2, GP A,B,C,D T5 Class II, Division 1, GP E,F,G T5 Class II, Division 2, GP F,G T5	---	T5 (T _{amb} ≤ 82°C)

1. These hazardous area classification also apply to 3720 positioners.

Figure 1. Loop Schematic (Installation Drawing GE28590)



WARNING

FOR INTRINSICALLY SAFE APPLICATIONS: THE APPARATUS ENCLOSURE CONTAINS ALUMINUM AND IS CONSIDERED TO CONSTITUTE A POTENTIAL RISK OF IGNITION BY IMPACT AND FRICTION. AVOID IMPACT AND FRICTION DURING INSTALLATION AND USE TO PREVENT RISK OF IGNITION.

NOTES:

1. THE INSTALLATION MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC), NFPA 70, ARTICLE 504 AND ANSI/ISA RP12.6 OR ARTICLE 505.
2. THE CLASS 1, DIV 2 APPLICATIONS MUST BE INSTALLED AS SPECIFIED IN NEC ARTICLE 501-4(B). EQUIPMENT AND FIELD WIRING IS NON-INCENDIVE WHEN CONNECTED TO APPROVED BARRIERS WITH ENTITY PARAMETERS.
3. LOOPS MUST BE CONNECTED ACCORDING TO THE BARRIER MANUFACTURER'S INSTRUCTIONS.
4. MAXIMUM SAFE AREA VOLTAGE SHOULD NOT EXCEED 250 Vrms.
5. RESISTANCE BETWEEN BARRIER GROUND AND EARTH GROUND MUST BE LESS THAN ONE OHM.
6. NORMAL OPERATING CONDITIONS 30 VDC 20 mADC.
7. FOR ENTITY INSTALLATION (I.S. AND N.I.):

$$\begin{array}{ll} V_{max} > V_{oc}, \text{ or } V_t & C_i + C_{cable} < C_a \\ I_{max} > I_{sc}, \text{ or } I_t & L_i + L_{cable} < L_a \\ P_i > P_o, \text{ or } P_t & \end{array}$$

GE28590-B

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