

FM Hazardous Area Approvals Fisher™ 582i 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 3582 and 3582i Positioners, 582i Electro-Pneumatic Converter, and 3583 Valve Stem Position Transmitter instruction manual ([D200138X012](#)), 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 Instructions for “Safe Use” and Installation in Hazardous Locations also apply to 3582i 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, Non-incendive, Dust-Ignition proof

No special conditions for safe use.

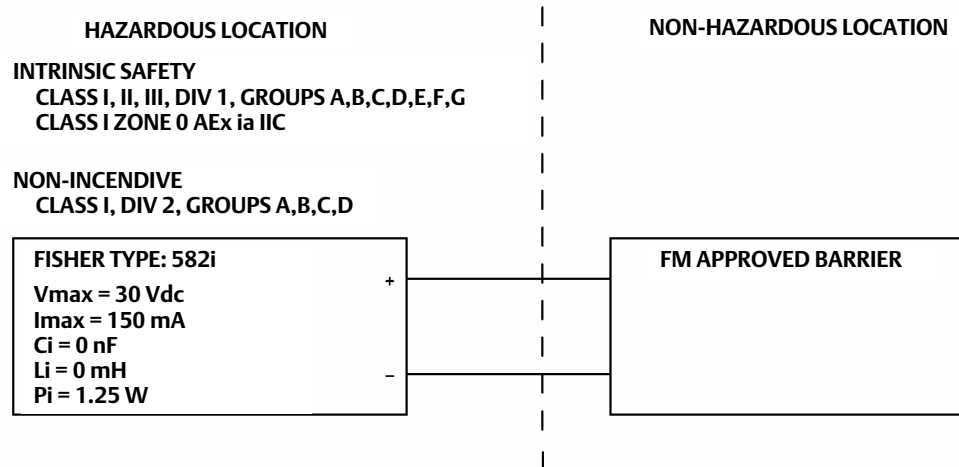
Refer to table 1 for additional information.

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} ≤ 71°C) T5 (T _{amb} ≤ 62°C) T6 (T _{amb} ≤ 47°C) |
| | Explosion Proof Class I Zone 1 AEx d IIC T6 Class I, Division I, GP A,B,C,D T6 | --- | T6 (T _{amb} ≤ 71°C) |
| | Type n Class I Zone 2 AEx nA IIC T6 | --- | T6 (T _{amb} ≤ 71°C) |
| | Class I Division 2, GP A,B,C,D T6 Class II Division 1, GP E,F,G T6 Class II Division 2, GP F,G T6 | --- | T6 (T _{amb} ≤ 71°C) |

1. These hazardous area classification also apply to 3582i 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.):

| | |
|-------------------------------|-------------------------|
| $V_{max} > V_{oc}$, or V_t | $C_i + C_{cable} < C_a$ |
| $I_{max} > I_{sc}$, or I_t | $L_i + L_{cable} < L_a$ |
| $P_i > P_o$, or P_t | |

GE28590 Rev B

Neither Emerson, Emerson Automation Solutions, nor any of their affiliated entities assumes responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use, and maintenance of any product remains solely with the purchaser and end user.

Fisher is a mark owned by one of the companies in the Emerson Automation Solutions business unit of Emerson Electric Co. Emerson Automation Solutions, Emerson, and the Emerson logo are trademarks and service marks of Emerson Electric Co. All other marks are the property of their respective owners.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available upon request. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.

Emerson Automation Solutions
 Marshalltown, Iowa 50158 USA
 Sorocaba, 18087 Brazil
 Cernay, 68700 France
 Dubai, United Arab Emirates
 Singapore 128461 Singapore

www.Fisher.com

