

FM Hazardous Area Approvals Fisher™ 4200 Electronic Position Transmitters

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 4200 Instruction Manual ([D200354X012](#)), 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.

⚠ 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, Dust Ignition-proof, Non-Incendive

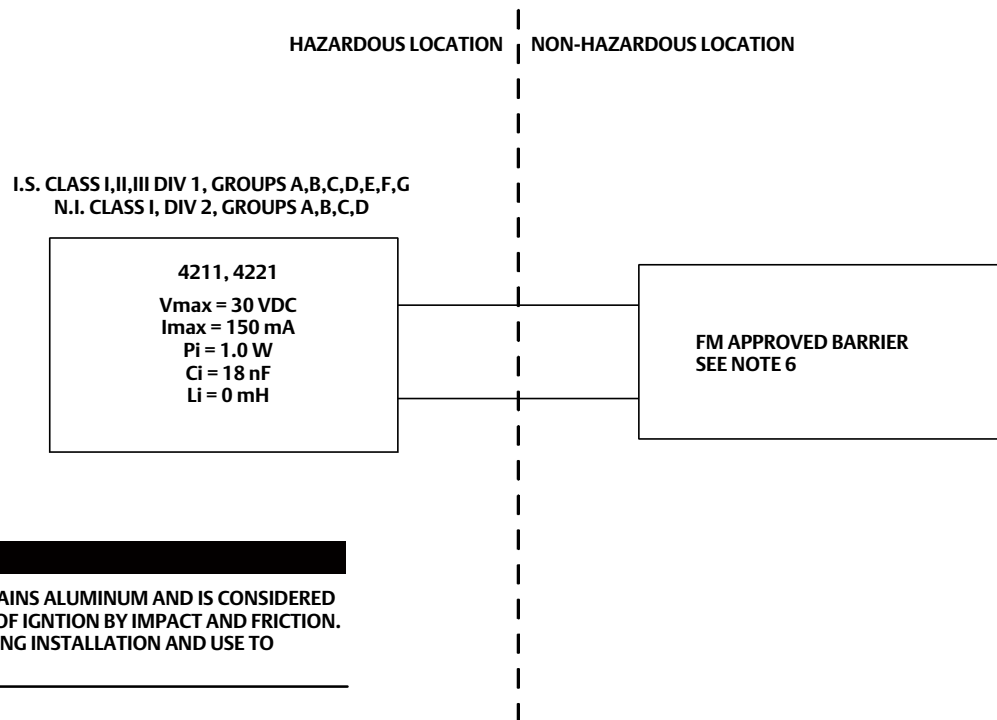
No special conditions for safe use.

Refer to table 1 for approval information.

Table 1. Hazardous Area Classifications—FM (United States)

Certification Body	Type	Certification Obtained	Entity Rating	Temperature Code
FM	4211, 4221	Intrinsically Safe Class I,II,III Division 1 GP A,B,C,D,E,F,G per drawing GE16019 (see figure 1)	V _{max} = 30 VDC I _{max} = 150 mA P _i = 1.0 W C _i = 18 nF L _i = 0 mH	T4 (T _{amb} ≤ 71°C)
	4210, 4211, 4212, 4215, 4220, 4221, 4222	Explosion-proof Class I Zone 1 AEx d IIC T5 Class I, Division 1 GP A,B,C,D T5	---	T5 (T _{amb} ≤ 71°C)
	4211, 4221	Class I Division 2 GP A,B,C,D T4 Class II Division 2 GP F,G T4	---	T4 (T _{amb} ≤ 71°C)
	4210, 4211, 4212, 4215, 4220, 4221, 4222	Class II Division 1 GP E,F,G T5	---	T5 (T _{amb} ≤ 71°C)

Figure 1. Fisher 4211 and 4221 FM Schematic (Drawing GE16019)

**⚠ WARNING**

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.
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 V_{rms}.
5. RESISTANCE BETWEEN BARRIER GROUND AND EARTH GROUND MUST BE LESS THAN ONE OHM.
6. 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	

GE16019-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

