

16-channel Discrete Input

Switch/proximity detector

8220-DI-IS

- 16 single-ended input channels
- Intrinsically safe field circuits
- Simple apparatus, dry contacts or IS proximity detectors
- Open and short-circuit field wiring detection

MODULE SPECIFICATION

See also System Specification

INPUTS

Number of channels

- 16

OFF current

- <1.2 mA

ON current

- >2.1 mA

Switching hysteresis

- 200 μ A (nom.)

Applicable specifications

- NAMUR, DIN19234

Voltage applied to sensor

- 7.0 to 9.0 V from 1 k Ω \pm 10%

Output (wetting) current

- @ 100 Ω line impedance
- >6 mA

Line fault detection

- Short circuit
- <100 Ω
- Open circuit
- >90 k Ω

Maximum input frequency in pulse counting mode

- 20 Hz

Minimum pulse width detected

- 45 ms

CONFIGURABLE PARAMETERS

Selectable input filter

- Fast, slow or user defined

(User defined permits 0 to 512 ms values in 3ms steps)

Latch inputs

- Enable / Disable

Latch polarity

- Latch on high / latch on low

Pulse counting

- Enable / Disable

Line fault detection

- Enable / Disable

RESPONSE TIME

Field event to availability on Railbus

- 6 ms (max.)

SAFETY

Field wiring protection

- [EEx ia] IIC

Safety Description (each channel)

- $U_o = 10.5$ V, $I_o = 14$ mA, $P_o = 0.04$ W

FM Entity parameters

- $V_{oc} \leq 10.5$ V dc, $I_{sc} \leq 14$ mA
- $C_o \leq 2.67$ μ F, $L_o \leq 176$ mH

Isolation

- Any channel to Railbus) – 60 V ac

(channels arranged in two groups of eight, with returns commoned within each group)

POWER SUPPLIES

IS Railbus (12V) current

- (16-channel mode) – 350 mA (max.)
- (8-channel mode) – 285 mA (max.)

MECHANICAL

Module Key Code

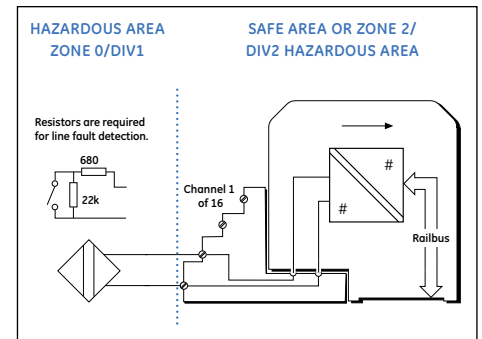
- B1

Module width

- 42 mm

Weight

- 170 g



FIELD TERMINALS

Field Wiring Type	Recommended Field Terminal
Intrinsically safe, 16-channel	8623-FT-IS
Intrinsically safe, 8-channel loop disconnect	8624-FT-IS