

8-channel Analog Input

0-10V/potentiometer input

8230-AI-IS

- 8 single-ended input channels
- Intrinsically safe field circuits
- Conventional 4–20 mA
- HART pass-through
- HART variable and status reporting
- For 2-wire transmitters
- In-built power supply

MODULE SPECIFICATION

See also *System Specification*

INPUTS

Number of channels

- 8, single-ended

0–10V input characteristics

- Nominal signal range (span) – 0 to 10 V
- Full signal range – 0 to +11 V
- Resolution – 16 bits
- Input impedance – >100 k Ω
- Under-range indication – -100 mV

Potentiometer input characteristics

- Nominal signal range (span) – 0 to 100% of travel
- Potentiometer resistance – 100 Ω to 10 k Ω
- Excitation voltage (nom.) – 10 V (from 2.2 k Ω source)
- Resolution (≥ 1 k Ω potentiometer) – 14 bits
- Resolution (100 Ω potentiometer) – 11 bits

Accuracy (at 25°C)

- $\pm 0.1\%$ of span

Isolation

- Any channel to Railbus – 100 V ac
- Between channels – None

CONFIGURABLE PARAMETERS

Input type (per channel)

- Voltage / Potentiometer

Alarms

- High and low

Alarm deadband (hysteresis)

- User defined value

Input filter time constant

- User defined value

Input dead zone

- User defined value

Drive on open circuit

- Disabled / upscale / downscale

Channel status

- Active / Inactive

Lead compensation

- User defined value

RESPONSE TIME

Signal change to availability on Railbus

- 33 ms (max.)

Open circuit line fault detection time

- ≤ 5 s

SAFETY

Field wiring protection

- [EExia] IIC

Safety description (each channel non linear output)

- $U_o \leq 15.75$ V, $I_o \leq 20$ mA, $P_o \leq 0.315$ W

FM entity parameters

- $V_{oc} = 15.75$ V, $I_{sc} = 20$ mA
- $C_o = 0.22$ μ F, $L_o = 5$ mH

POWER SUPPLIES

IS Railbus (12V) current

- Typical – 200 mA
- Max with voltage/current inputs – 250 mA
- Max. with 100 Ω potentiometer inputs – 350 mA

Power dissipation within module

- Max with voltage/current inputs – 3 W
- Max. with 100 Ω potentiometer inputs – 4.2 W

MECHANICAL

Module Key Code

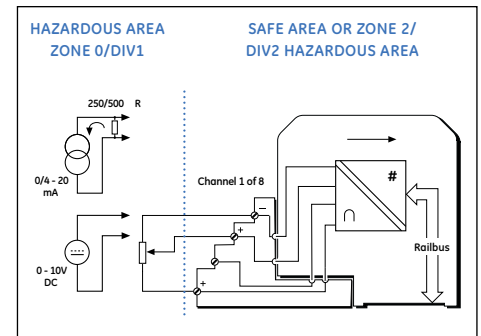
- C4

Module width

- 42 mm

Weight

- 200 g



FIELD TERMINALS

Field Wiring Type	Recommended Field Terminal
Intrinsically safe, standard	8623-FT-IS