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 kΩ
- Under-range indication – -100 mV

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

Accuracy (at 25°C)
- ± 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
- $C_a = 0.22$ µF, $L_a = 5$ mH

POWER SUPPLIES

IS Railbus (12V) current
- Typical – 200 mA
- Max with voltage/current inputs – 250 mA
- Max. with 100Ω potentiometer inputs – 350 mA

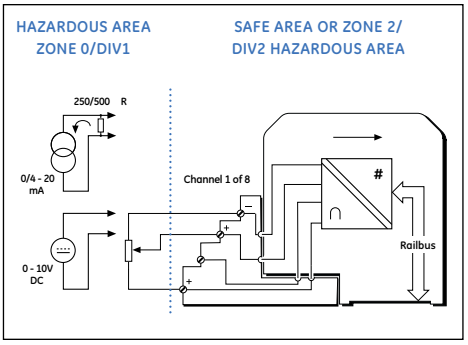
Power dissipation within module
- Max with voltage/current inputs – 3 W
- Max. with 100Ω potentiometer inputs – 4.2 W

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