

8-channel Analog Input

4–20 mA

8103-AI-TX

- 8 single-ended 4-20 mA input channels
- Non-incendive field circuits
- 4–20 mA
- 2- or 4-wire transmitters
- Open and short circuit detection
- 24 V dc bussed field power required

MODULE SPECIFICATION

See also System Specification

INPUTS

Number of channels

- 8, single-ended

Nominal signal range (span)

- to 20 mA

Full signal range

- 1 to 23 mA

Out of range alarm

- Lower threshold – > 23.5 mA
- Upper threshold – < 0.5 mA

Output voltage (@ 20 mA)

- 0.5 V (min.)

Output current

- 32 mA (max.)

Accuracy (over temp range)

- $\pm 0.1\%$ of span

Resolution

- 16 bits

Repeatability

- 0.05% of span

Isolation

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

CONFIGURABLE PARAMETERS

Alarms

- High, high-high, low and low-low

Alarm deadband (hysteresis)

- User defined value

Input filter time constant

- User defined value

Input dead zone

- User defined value

Drive on failsafe

- Disabled / upscale / downscale

Channel status

- Active / Inactive

RESPONSE TIME

Signal change to availability on Railbus

- 27 ms (max.)

SAFETY

FM non-incendive field wiring parameters (each channel)

- $V_{oc} = 28.7\text{ V}$; $I_{sc} = 33\text{ mA}$; $C_o = 0.17\text{ }\mu\text{F}$; $L_o = 11.0\text{ mH}$

POWER SUPPLIES

Railbus (12V) current

- 100 mA (typ.)
- 150 mA (max.)

Bussed Field Power

- 2-wire Tx 300 mA (max.) – (@ 24 Vdc $\pm 10\%$)
- 4-wire Tx – 60 mA (max.)

MECHANICAL

Module Key Code

- A1

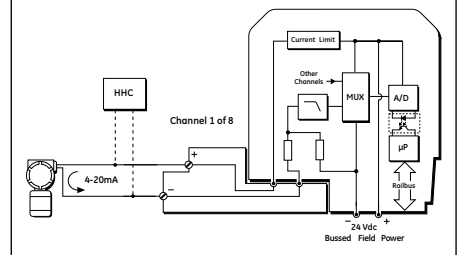
Module width

- 42 mm

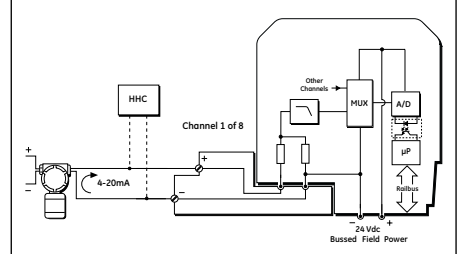
Weight

- 200 g

2-WIRE TRANSMITTER



4-WIRE TRANSMITTER



Field Terminals (2-Wire TX)

Field Wiring	Recommended Field Terminal	Compatible Field Terminal
General purpose	8602-FT-ST Standard	8604-FT-FU Fused
Class 1, Div 2 or Zone 2 hazardous area	8601-FT-NI Non-incendive	8603-FT-FU Non-incendive Fused