MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

MTL

8103-AI-TX

EIGHT-CHANNEL ANALOG INPUT MODULE

Used with the applicable MTL8000 2/2 I/O configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: MTL 8103-AI-TX, PAC8000 Modular I/O module specification, page 21.

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)
- ± 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 V; I_{sc} = 33 mA; C_a = 0.17 µF; L_a = 11.0 mH

POWER SUPPLIES

Railbus (12V) current
- 100 mA (typ.)
- 150 mA (max.)

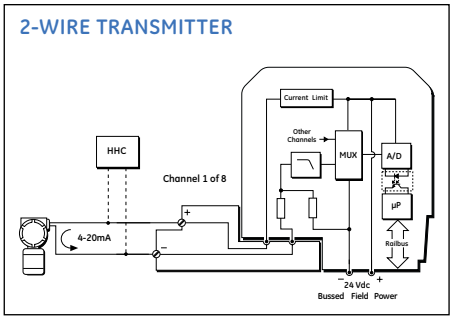
Bussed Field Power
- 2-wire Tx 300 mA (max.) – (@ 24 Vdc ± 10%)
- 4-wire Tx – 60 mA (max.)

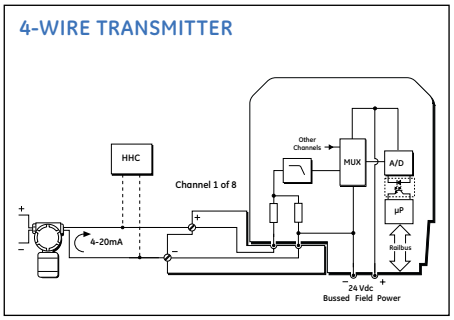
MECHANICAL

Module Key Code
- A1

Module width
- 42 mm

Weight
- 200 g





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