

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)	4 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)	13.5 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

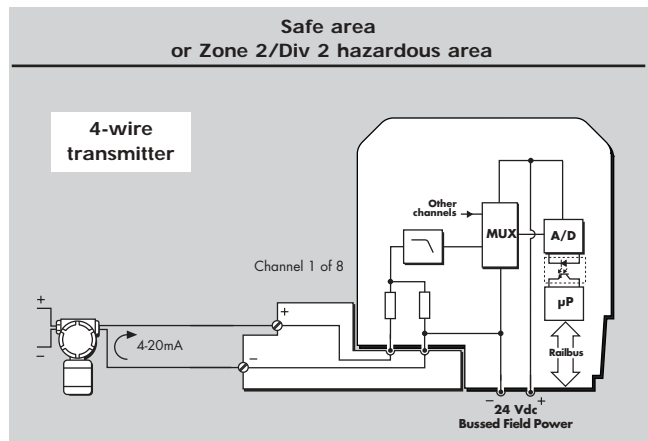
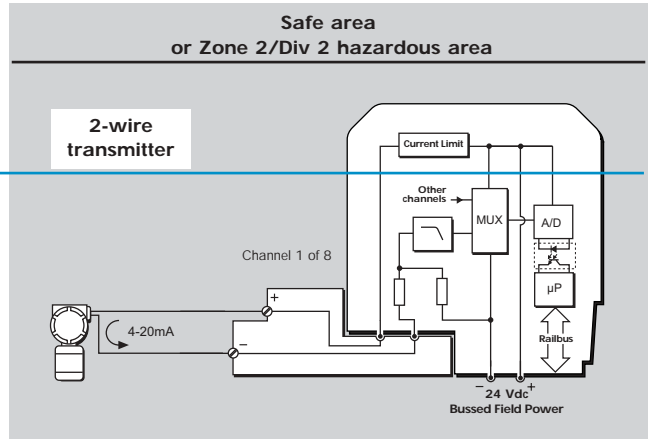
Signal change to availability on Railbus27 ms (max.)

SAFETY

FM non-incendive field wiring parameters (each channel)
 $V_{OC} = 28.7\text{ V}$; $I_{SC} = 33\text{ mA}$; $C_a = 0.17\text{ }\mu\text{F}$; $L_a = 11.0\text{ mH}$

POWER SUPPLIES

Railbus (12V) current	100 mA (typ.)
	150 mA (max.)
Bussed Field Power	2-wire Tx 300 mA (max.)
(@ 24 Vdc ± 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

