

8-channel Analog Input



4-20 mA with HART®

8101-HI-TX

- ◆ 8 single-ended 4-20 mA input channels
- ◆ non-incendive field circuits
- ◆ HART pass-through
- ◆ HART variable and status reporting
- ◆ 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 |
| Line fault detection | |
| Short circuit current | > 23.5 mA |
| Open circuit current | < 0.5 mA |
| Output voltage (@ 20mA) | 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 |
| HART variable and status reporting | enable /disable |

RESPONSE TIME

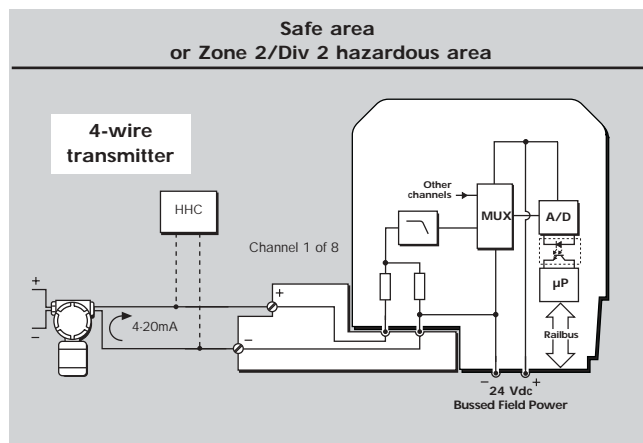
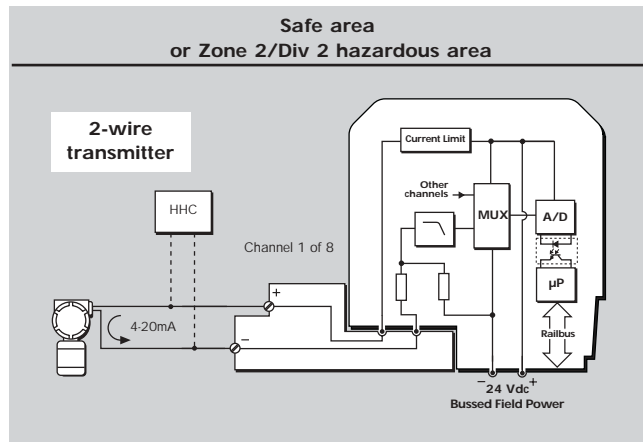
| | |
|---|--------------------|
| Signal change to availability on Railbus | |
| 4-20 mA mode | 27 ms (max.) |
| HART mode | 0.75 s per channel |

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 | |
| (@ 24 V dc ±10%) | 2-wire Tx.....300 mA (max.) |
| | 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 |

FIELD TERMINALS (4-WIRE TX)

| Field wiring | Recommended Field Terminal | Compatible Field Terminal |
|---|----------------------------|---------------------------|
| General Purpose | 8615-FT-4W | - |
| Class 1, Div 2 or Zone 2 hazardous area | 8615-FT-4W | - |

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