

AI810

Compact Product Suite hardware selector



The AI810 Analog Input Module has 8 channels. Each channel can be either a voltage or current input. The current input is able to handle a short circuit to the transmitter supply at least 30 V d.c without damage. Current limiting is performed with a PTC resistor. The input resistance of the current input is 250 ohm, PTC included.

The voltage input is able to withstand an over or undervoltage of at least 30 V d.c. Input resistance is 290k ohm. Transmitter supply can be connected to L1+, L1- and/or L2+, L2-.

Features and benefits

- 8 channels for 0...20 mA, 4...20 mA, 0...10 V or 2...10 V d.c., single ended unipolar inputs
- 1 group of 8 channels isolated from ground
- 12 Bit resolution
- Input shunt resistors protected to 30 V by PTC resistor
- Analog inputs are short circuit secured to ZP or +24 V
- The input withstand HART communication.

| General info | |
|----------------------|----------------------------------|
| Article number | 3BSE008516R1 |
| Type | Analog Input |
| Signal specification | 0..20mA, 4..20mA, 0..10V, 2..10V |
| Number of channels | 8 |
| Signal type | Unipolar single ended |
| HART | No |
| SOE | No |
| Redundancy | No |
| High integrity | No |
| Intrinsic safety | No |
| Mechanics | S800 |

| Detailed data | |
|-------------------------------------|---|
| Resolution | 12 bit |
| Input impedance | 290 kΩ (voltage input) 230 - 275 kΩ (current input) |
| Isolation | Groupwise isolated from ground |
| Under/over range | -5% / +15% |
| Error | Max. 0.1% |
| Temperature drift | Voltage: Typ. 70 ppm/°C Max. 100 ppm/°C; Current: Typ. 50 ppm/°C Max. 80 ppm/°C |
| Input filter (rise time 0-90%) | 140 ms |
| Update cycle time | 8 ms |
| Current limiting | Transmitter power can be current limited by the MTU |
| Maximum field cable length | 600 meters (656 yards) |
| Max input voltage (non destructive) | 30 V d.c. |
| NMRR, 50Hz, 60Hz | > 40 dB |
| Rated insulation voltage | 50 V |
| Dielectric test voltage | 500 V a.c. |
| Power dissipation | 1.5 W |
| Current consumption +5 V Modulebus | 70 mA |
| Current consumption +24 V Modulebus | 40 mA |
| Current consumption +24 V external | 0 |

| Diagnostics | |
|----------------------------------|---|
| Front LED's | F(ault), R(un), W(arning) |
| Supervision | Internal power supply |
| Status indication of supervision | Module Error, Module Warning, Channel error |

| Environment and certification | |
|---------------------------------|---|
| CE mark | Yes |
| Electrical safety | EN 61010-1, UL 61010-1, EN 61010-2-201, UL 61010-2-201 |
| Hazardous Location | C1 Div 2 cULus, C1 Zone 2 cULus, ATEX Zone 2 |
| Marine certification | ABS, BV, DNV, LR |
| Temperature, Operating | 0 to +55 °C (+32 to +131 °F), approvals are issued for +5 to +55 °C |
| Temperature, Storage | -40 to +70 °C (-40 to +158 °F) |
| Pollution degree | Degree 2, IEC 60664-1 |
| Corrosion protection | ISA-S71.04: G3 |
| Relative humidity | 5 to 95 %, non-condensing |
| Max ambient temperature | 55 °C (131 °F), for vertical mounting in compact MTU 40 °C (104 °F) |
| Protection class | IP20 according to IEC 60529 |
| Mechanical operating conditions | IEC/EN 61131-2 |
| EMC | EN 61000-6-4, EN 61000-6-2 |
| Overvoltage categories | IEC/EN 60664-1, EN 50178 |
| Equipment class | Class I according to IEC 61140; (earth protected) |
| RoHS compliance | DIRECTIVE/2011/65/EU (EN 50581:2012) |
| WEEE compliance | DIRECTIVE/2012/19/EU |

| Compatibility | |
|---------------|---|
| Use with MTU | TU810, TU812, TU814, TU818, TU830, TU833, TU835, TU838, TU850 |
| Keying code | AE |

| Dimensions | |
|------------|--|
| Width | 45 mm (1.77") |
| Depth | 102 mm (4.01"), 111 mm (4.37") including connector |
| Height | 119 mm (4.7") |
| Weight | 0.2 kg (0.44 lbs.) |



Related products

| | | | |
|---|----------------|---|----------------|
|  | TU810V1 |  | TU812V1 |
|  | TU814V1 |  | TU818 |
|  | TU830V1 |  | TU833 |
|  | TU835V1 |  | TU838 |
|  | TU850 | | |

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