DATA SHEET

AI810

ABB Ability™ System 800xA® 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**		

—

solutions.abb/800xA
solutions.abb/controlsystems

—