

AI801

ABB Ability™ System 800xA® hardware selector



The AI801 Analog Input Module has 8 channels for 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.

Features and benefits

- 8 channels for 0...20 mA, 4...20 mA 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
- Process and power connections via detachable connectors

General info	
Article number	3BSE020512R1
Type	Analog Input
Signal specification	0...20 mA, 4...20 mA
Number of channels	8
Signal type	Unipolar single ended
HART	No
SOE	No
Redundancy	No
High integrity	No
Intrinsic safety	No
Mechanics	S800L

Detailed data	
Resolution	12 bit
Input impedance	230 - 275 kΩ (current input incl PTC)
Isolation	Groupwise isolated from ground
Under/over range	0% / +15%
Error	Max 0,1%
Temperature drift	Typ. 50 ppm/°C, Max. 80 ppm/°C
Input filter (rise time 0-90%)	180 ms
Update cycle time	1 ms
Maximum field cable length	600 meters (656 yards)
Max input voltage (non destructive)	30 V d.c.
NMRR, 50Hz, 60Hz	> 40dB
Rated insulation voltage	50 V
Dielectric test voltage	500 V a.c.
Power dissipation	1.1 W
Current consumption +5 V Modulebus	70 mA
Current consumption +24 V Modulebus	0
Current consumption +24 V external	30 mA
Supported wire size	Solid: 0.05-2.5 mm², 30-12 AWG
	Stranded: 0.05-1.5 mm², 30-12 AWG
	Recommended torque: 0.5-0.6 Nm
	Stripping length 6-7.5mm, 0.24-0.30 inch

Diagnostics	
Front LED's	S(tatus) (run or fault)
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, CCS
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 40 °C (104 °F)
Protection class	IP20 according to IEC 60529
Mechanical operating conditions	IEC 61131-2
EMC	EN 61000-6-4 and EN 61000-6-2
Overvoltage categories	IEC/EN 60664-1
Equipment class	Class I according to IEC 61140; (earth protected)
RoHS compliance	EU RoHS, UAE RoHS, CN RoHS
WEEE compliance	DIRECTIVE/2012/19/EU

Dimensions	
Width	86.1 mm (3.4")
Depth	58.5 mm (2.3")
Height	110 mm (4.33")
Weight	0.24 kg (0.53 lbs.)

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