AO820
ABB Ability™ System 800xA® hardware selector

The AO820 Analog Output Module has 4 bipolar analog output channels. The choice of current or voltage output is configurable for each channel. There are separate sets of terminals for voltage and current outputs, and it is up to the user to wire outputs properly. The only differences between current or voltage channel configuration is in software settings.

To supervise the communication to the A/D-converters the output data is read back and verified. The opencircuit diagnostics are read continuously as well. The process voltage supervision input give channel error signals if the voltage disappears. The error signal can be read via the ModuleBus.

Features and benefits

- 4 channels of -20 mA...+20 mA, 0...20 mA, 4...20 mA or -10 V...+10 V, 0...10 V, 2...10 V outputs
- Individually galvanically isolated channels
- OSP sets outputs to predetermined state upon error detection."

General info	
Article number	3BSE008546R1
Type	Analog Output
Signal specification	-20 mA...+20 mA, 0...20 mA, 4...20 mA, -10 V...+10 V, 0...10 V, 2...10 V
Number of channels	4
HART	No
SOE	No
Redundancy	No
High integrity	No
Intrinsic safety	No
Mechanics	S800

Detailed data

Resolution	12 bits including sign
Isolation	Individually isolated - channel-to-channel and channel to circuit common
Under/over range	±15%
Output load	≤ 550 Ω ≥ 5 kΩ (voltage output)
Error	Max. 0.1% (voltage); Typ. 0.1% at 250 ohms, Max 0,15% (current)
Temperature drift	Max 90 ppm/°C
Rise Time	< 0.7 ms
Update cycle time	≤ 1.5 ms
Current limiting	Short circuit proof current limited output
Maximum field cable length	600 meters (656 yards)
Rated insulation voltage	50 V
Dielectric test voltage	500 V a.c.
Power dissipation	Typ. 6 W
Current consumption +5 V Modulebus	Max 100 mA
Current consumption +24 V Modulebus	Max 260 mA

Diagnostics

Front LED's	F(ault), R(un), W(arning), O(SP)
Supervision	Module Error: Output power low. Channel Error: Open circuit (for current >1 mA)
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 and 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, TU830, TU833
Keying code	BC

Dimensions

Width	45 mm (1.77")
Depth	102 mm (4.01"), 111 mm (4.37") including connector
Height	119 mm (4.7")
Weight	0.18 kg (0.4 lbs.)

Related products

	TU810V1		TU812V1
	TU814V1		TU830V1
	TU833		

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