DATA SHEET

AO815
Compact Product Suite hardware selector

The AO815 Analog Output Module has 8 unipolar analog output channels. The module performs self-diagnostic cyclically. Module diagnostics include:

- External Channel Error is reported (only reported on active channels) if the process power supply that supply voltage to output circuitry is too low, or the output current is less than the output set value and the output set value is greater than 1 mA (open circuit).
- Internal Channel Error is reported if the output circuit can not give the right current value.
- Module Error is reported in case of Output Transistor Error, Short Circuit, Checksum Error, Internal Power Supply Error or Watchdog error.

The module has HART pass-through functionality. Only point to point communication is supported. The output filter must be enabled on channels used for HART communication.

Features and benefits

- 8 channels of 4...20 mA
- 1 group of 8 channels isolated from ground
- Analog inputs are short circuit secured to ZP or +24 V
- HART pass-through communication

General info	
Article number	3BSE052605R1
Type	Analog Output
Signal specification	4..20 mA
Number of channels	8
HART	Yes
SOE	No
Redundancy	No
High integrity	No
Intrinsic safety	No
Mechanics	S800

Detailed data

Resolution	12 bit
Isolation	Groupwise isolated from ground
Under/over range	-12.5% / +15%
Output load	Max 750 Ω
Error	Max. 0.1%
Temperature drift	Max. 50 ppm/°C
Input filter (rise time 0-90%)	23 ms (0-90%), max 4 mA / 12.5 ms
Update cycle time	10 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	3.5 W (typ.)
Current consumption +5 V Modulebus	Max. 125 mA
Current consumption +24 V Modulebus	0
Current consumption +24 V external	Max. 165 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	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, TU830, TU833
Keying code	DB

Dimensions

Width	45 mm (1.77")
Depth	102 mm (4.01"), 111 mm (4.37") including connector
Height	119 mm (4.7")
Weight	0.21 kg (0.46 lbs.)

Related products

	TU810V1		TU812V1
	TU814V1		TU830V1
	TU833		

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