DATA SHEET

AO845A

ABB Ability™ System 800xA® hardware selector



The AO845/AO845A Analog Output Module for single or redundant applications 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 > 1 mA (open circuit).
- Internal Channel Error is reported if the output circuit can not give the right current value. In a redundant pair the module will be commanded to error state by the ModuleBus master.
- Module Error is reported in case of Output Transistor Error, Short Circuit, Checksum Error, Internal Power Supply Error, Status Link Error, Watchdog or Wrong OSP behavior.

Features and benefits

- 8 channels of 4...20 mA
- For single or redundant applications
- 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	3BSE045584R1
Type	Analog Output
Signal specification	4..20 mA
Number of channels	8
HART	Yes
SOE	No
Redundancy	Yes
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
Rise Time	Output filter: Disable 23 ms, Enable max 4 mA / 12.5 ms
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	Typ. 3.5 W
Current consumption +5 V Modulebus	Max. 125 mA
Current consumption +24 V external	218 mA

Diagnostics	
Front LED’s	F(ault), R(un), W(arning), O(SP)
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 Div2 cULus, C1 Zone2 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 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	EU RoHS, UAE RoHS, CN RoHS
WEEE compliance	DIRECTIVE/2012/19/EU

Compatibility	
Use with MTU	TU810, TU812, TU814, TU830, TU833, TU842, TU843 or TU852
Keying code	DB

Dimensions	
Width	45 mm
Depth	102 mm, 111 mm including connector
Height	119 mm
Weight	0.21 kg

Related products

	TU810V1		TU812V1
	TU814V1		TU830V1
	TU833		TU842
	TU843		TU852

solutions.abb/800xA
solutions.abb/controlsystems

800xA and Symphony® Plus is a registered trademark of ABB. All rights to other trademarks reside with their respective owners.

We reserve the right to make technical changes to the products or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not assume any responsibility for any errors or incomplete information in this document.

We reserve all rights to this document and the items and images it contains. The reproduction, disclosure to third parties or the use of the content of this document – including parts thereof – are prohibited without ABB's prior written permission.

Copyright© 2026 ABB All rights reserved