

# AO810V2

## ABB Ability™ System 800xA® hardware selector



The AO810/AO810V2 Analog Output Module has 8 unipolar analog output channels. To supervise the communication to the D/A-converters the serial data is read back and verified. The opencircuit diagnostic is received during the readback. The module performs self-diagnostic cyclically. The module diagnostics includes process power supply supervision, which is reported when supply voltage to output circuitry is too low. The error is reported as a channel error. The channel diagnostic includes fault detection of the channel (only reported on active channels). The error is reported if the output current is less than the output set value and the output set value is greater than 1 mA.

### Features and benefits

- 8 channels of 0...20 mA, 4...20 mA outputs
- OSP sets outputs to predetermined state upon error detection
- Analog Output is to be short circuit secured to ZP or +24 V

General info	
Article number	3BSE038415R1
Type	Analog Output
Signal specification	0..20 mA, 4..20 mA
Number of channels	8
HART	No
SOE	No
Redundancy	No
High integrity	No
Intrinsic safety	No
Mechanics	S800

Detailed data	
Resolution	14 bit
Isolation	Groupwise isolated from ground
Under/over range	- / +15%
Output load	≤ 500 Ω (supply connected to L1+ only) 250 - 850 Ω (with supply connected L2+ only)
Error	Max. 0.1% at 0 - 500 ohms (current)
Temperature drift	Typ. 30 ppm/°C, Max 60 ppm/°C
Rise Time	0.35 ms (PL = 500 Ω)
Update cycle time	≤ 2ms
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	2.3 W
Current consumption +5 V Modulebus	Max 70 mA
Current consumption +24 V Modulebus	0
Current consumption +24 V external	245 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	IEC 61131-2, UL 61010-1, UL 61010-2-201
Hazardous Location	C1 Div 2 cULus, C1 Zone 2 cULus, ATEX Zone 2
Marine certification	ABS, BV, DNV-GL, LR
Protection rating	IP20 according to IEC 60529
Corrosive atmosphere ISA-S71.04	G3
Climatic operating conditions	0 to +55 °C (Storage -25 to +70 °C), RH=5 to 95 % no condensation, IEC/EN 61131-2
Pollution degree	Degree 2, IEC 60664-1
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)
Max ambient temperature	55 °C (131 °F), for vertical mounting in compact MTU 40 °C (104 °F)
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	AE

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



# Related products

	<b>TU810V1</b>		<b>TU812V1</b>
	<b>TU814V1</b>		<b>TU830V1</b>
	<b>TU833</b>		

---

**[solutions.abb/800xA](https://solutions.abb/800xA)**  
**[solutions.abb/controlsystems](https://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© 2023 ABB All rights reserved