DATA SHEET

AO890

ABB Ability™ System 800xA® hardware selector

The AO890 Analog Output Module has 8 channels. The module includes Intrinsic Safety protection components on each channel for connection to process equipment in hazardous areas without the need for additional external devices.

Each channel can drive up to 20 mA loop current into a field load such as an Ex certified current-to-pressure converter and is limited to 22 mA in overload conditions.

TU890 and TU891 Compact MTU can be used with this module and it enables two wire connections to the process devices without additional terminals. TU890 for Ex applications and TU891 for non Ex applications.

Features and benefits

•8 channels of 0...20 mA, 4...20 mA outputs.

•1 group of 8 channels isolated from ground.

•Power to drive Ex certified I/P actuators.

General info	
Article number	3BSC690072R1
Type	Analog Output
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	Yes
Mechanics	S800

Detailed data	
Resolution	12 bit
Isolation	Groupwise isolated from ground
Under/over range	0 / 22 mA
Output load	<725 ohms at 20 mA, no over-range <625 ohms at up to 22 mA
Error	Typ. 0.05%, Max. 0.1% at 650 ohms
Temperature drift	Typ. 50 ppm/°C, Max. 100 ppm/°C
Rise Time	1 ms (10% to 90%)
Current limiting	Short circuit proof current limited output
Rated insulation voltage	50 V
Dielectric test voltage	500 V a.c.
Power dissipation	3.1 W
Current consumption +5 V Modulebus	80 mA
Current consumption +24 V Modulebus	Typ. 110 mA , Max. <150 mA
Current consumption +24 V external	Typ. 220 mA, Max. <300 mA

Diagnostics	
Front LED's	F(ault), R(un), W(arning), O(SP)
Supervision	Internal process supply, Open wire if > 1 mA is set

Environment and certification	
CE mark	Yes
Electrical safety	EN 61010-1, EN 61010-2-201
Hazardous Location	ATEX/IECEx Zone 2 with interface to Zone 0, cFMus C1, Div 2/Zone 2 with interface to C1, C2, C3 Div 1/Zone 0
Marine certification	ABS, BV, DNV, LR
Temperature, Operating	0 to +55 °C (+32 to +131 °F)
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	TU890 and TU891
Keying code	AD

Dimensions	
Width	45 mm (1.77")
Depth	102 mm (4.01"), 111 mm (4.37") including connector
Height	119 mm (4.7")
Weight	0.2 kg (0.44 lbs.)

Related products

TU890

TU891

solutions.abb/800xA
solutions.abb/controlsystems