

DATA SHEET

DO890

ABB Ability™ System 800xA® hardware selector



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 a nominal current of 40 mA into a 300-ohm field load such as an Ex-certified solenoid valve, alarm sounder unit, or indicator lamp. Open and short circuit detection can be configured for each channel. All four channels are galvanic isolated between channels and from the ModuleBus and power supply. Power to the output stages is converted from the 24 V on the power supply connections.

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

- 4 channels for 11 V, 40 mA digital outputs.
- All channels fully isolated.
- Power to drive Ex certified solenoid valves and alarm sounders.
- Output and fault status indicators for each channel.

General info		
Article number	3BSC690074R1	
Туре	Digital Output	
Signal specification	11 V, 40 mA	
Number of channels	4	
Signal type	Solenoid driver	
HART	No	
SOE	No	
Redundancy	No	
High integrity	No	
Intrinsic safety	Yes	
Mechanics	\$800	

Detailed data		
Isolation	Individually isolated, channel-to-channel and to circuit common ground	
Output load	100 - 5000 Ω	
Current limiting	Short circuit proof current limited output	
Rated insulation voltage	50 V	
Dielectric test voltage	500 V a.c.	
Power dissipation	4.4 W	
Current consumption +5 V Modulebus	Typ. 80 mA, Max. <150 mA	
Current consumption +24 V external	Typ. 250 mA, Max. <360 mA	

Diagnostics		
Front LED's	F(ault), R(un), W(arning), O(SP), Channel 1-4 status	
Supervision	Internal process supply Short circuit fault detection limit < 20 Ω Open circuit fault detection limit > 100 k Ω Fault sense current < 4 mA	
Status indication of supervision	256, 512, 1024 ms	

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/EN (EN 50581:2012)	
WEEE compliance	DIRECTIVE/2012/19/EU	

Compatibility	
Use with MTU	TU890, TU891
Keying code	AB

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



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