MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Amikon cover with selected official ABB reference pages

S800 I/O / 3BSE008510R1

DO810

S800 DIGITAL OUTPUT MODULE

OFFICIAL SOURCES

ABB DO810 official data sheet, exported 2026-11-06. Original pages and copyright notice retained.

DATA SHEET

DO810
Compact Product Suite hardware selector



This module has 16 digital outputs. The output voltage range is 10 to 30 volt and the maximum continuous output current is 0.5 A. The outputs are protected against short circuits, over voltage and over temperature. The outputs are divided into two individually isolated groups with eight output channels and one voltage supervision input in each group. Each output channel consists of a short circuit and over temperature protected high side driver, EMC protection components, inductive load suppression, output state indication LED and optical isolation barrier.

The process voltage supervision input give channel error signals if the voltage disappears. The error signal can be read through the ModuleBus. The outputs are current limited and protected against over temperature. If the outputs are overloaded the output current will be limited.

Features and benefits

- 16 channels for 24 V d.c. current sourcing outputs
- 2 isolated groups of 8 channels with process voltage supervision
- Output status indicators
- OSP sets outputs to predetermined state upon error detection
- Short-circuit protection to ground and 30 V
- Over-voltage and over-temperature protection

General info	
Article number	3BSE008510R1
Type	Digital Output
Signal specification	24V d.c. (12 - 32 V d.c.), 0.5 A
Number of channels	16
Signal type	Current sourcing, current limiting
HART	No
SOE	No
Redundancy	No
High integrity	No
Intrinsic safety	No
Mechanics	S800

Detailed data	
Isolation	Groupwise isolated from ground
Output load	< 0.4 Ω
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. 2.1 W
Current consumption +5 V Modulebus	80 mA

Diagnostics	
Front LED's	F(ault), R(un), W(arning), O(SP), Channel 1-16 Status
Supervision	Process voltage, 1 per group
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	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, 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
Keying code	AA

Dimensions	
Width	45 mm
Depth	102 mm, 111 mm including connector
Height	119 mm
Weight	0.18 kg

Related products

	TU810V1		TU812V1
	TU814V1		TU830V1
	TU833		

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