

# DO840

## Compact Product Suite hardware selector



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

### Features and benefits

- 16 channels for 24 V d.c. current sourcing outputs
- 2 isolated groups of 8 channels with process voltage supervision
- Advanced on-board diagnostics
- Output status indicators
- OSP sets outputs to predetermined state upon error detection
- Redundant or single applications
- Current limited and over-temperature protection

General info	
Article number	3BSE020838R1
Type	Digital Output
Signal specification	24 V d.c. (19.2 - 32 V d.c.), 0.5 A
Number of channels	16
Signal type	Current sourcing, current limiting
HART	No
SOE	No
Redundancy	Yes
High integrity	No
Intrinsic safety	No
Mechanics	S800

Detailed data	
Isolation	Groupwise isolated from ground
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. 4.3 W
Current consumption +5 V Modulebus	130 mA
Current consumption +24 V Modulebus	0
Current consumption +24 V external	200 mA

Diagnostics	
Front LED's	F(ault), R(un), W(arning), O(SP), Channel 1-16 Status
Supervision	Process power 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	DNV
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	DIRECTIVE/2011/65/EN (EN 50581:2012)
WEEE compliance	DIRECTIVE/2012/19/EU

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

Dimensions	
Width	45 mm (1.77")
Depth	102 mm (4.01"), 111 mm (4.37") including connector
Height	119 mm (4.7")
Weight	0.15 kg (0.33 lbs.)

# Related products

	TU810V1		TU812V1
	TU814V1		TU830V1
	TU833		TU842
	TU843		TU852

---

**[solutions.abb/compactproductsuite](https://solutions.abb/compactproductsuite)  
[solutions.abb/controlsystems](https://solutions.abb/controlsystems)**

---

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© 2025 ABB All rights reserved