# ABB ABB Series Service Manual

DO828

## 1. Description

The DO828 is an 16 channel 125V d.c. / 250V a.c. relay output module for the S800 I/O. The maximum output voltage is 125V d.c. / 250V a.c. and the maximum continuous output current is 2A. All outputs are individually isolated.

## 3. Product Information

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Each output channel consists of optical isolation barrier, output state indication LED, relay driver, relay and EMC protection components.

The relay supply voltage supervision, derived from the 12 V distributed on the ModuleBus, gives an error signal if the voltage disappears, and the Warning LED turns on. The error signal can be read through the ModuleBus. This supervision can be enabled/disabled with a parameter.

Features and benefits

16 channels for 125V d.c. / 250V a.c. relay outputs

16 isolated channels

Output status indicators

OSP sets outputs to predetermined state uponerror detection

MTUs that match this product

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TU851

General info

Article number 3BSE069055R1

Type Digital Output

Signal specification 125 V d.c. / 250 V a.c., (5 - 125 V d.c. / 5 - 250 V a.c.), 2 A

Number of channels 16

Signal type Relay (NO)

HART No

SOE No

Redundancy No

High integrity No

Intrinsic safety No

Mechanics S800

Detailed data

Isolation Individually isolated, channel-to-channel and to circuit common

Maximum field cable length 600 meters (656 yards)

Rated insulation voltage 250 V

Dielectric test voltage 2000 V a.c.

Power dissipation Typ. 3.5 W

Current consumption +5 V Modulebus 45 mA

Current consumption +24 V Modulebus 80 mA

Current consumption +24 V external 0

Diagnostics

Front LED’s F(ault), R(un), O(SP) Channel 1-16 Status

Supervision 12 V Relay power converter monitor

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 TU851

Keying code ED

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.)