ABB ABB Series Service Manual

DO815

1. Description

The DO815 is a 8 channel 24 V digital output module for the S800 I/O. The output voltage range is 10 to 30 V and the maximum continuous output current is 2 A @ 24 V. The outputs are protected against short circuits, and over load. The outputs are divided into two individually isolated groups with four output channels in each group. Each output channel consists of a short circuit and over load protected high side driver with open load detection (on active signal), EMC protection components, induc

3. Product Information

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Features and benefits

8 channels for 24 V d.c. current sourcing outputs

2 isolated groups of 4 channels with under voltage detection

OSP sets outputs to predetermined state upon communication error

Output status indicators and a channel wise error flag

Short-circuit protection to ground and positive supply

Over load protection

Open load and short-circuit detection

Two output fault operation modes: Automatic reset mode and Fault latching mode

Inductive load driving capability

Filament lamp load up to 10W

MTUs that match this product

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TU814V1

General info

Article number 3BSE013258R1

Type Digital Output

Signal specification 24 V d.c. (10 - 32 V d.c.), 2A

Number of channels 8

Signal type High side driver, 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 < 0.25 Ω

Current limiting Short circuit proof current limited output

Maximum field cable length 600 meters (656 yards)

Event recording accuracy -0 ms / +1.3 ms

Rated insulation voltage 50 V

Dielectric test voltage 500 V a.c.

Power dissipation Typ. 4 W

Current consumption +5 V Modulebus Typ. 120 mA, Max. 150 mA

Current consumption +24 V Modulebus 0

Current consumption +24 V external 0

Diagnostics

Front LED’s F(ault), R(un), W(arning), O(SP), Channel 1-8 Status, Channel 1-8 Fault

Supervision Short circuit, over load, under voltage and open load

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

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

Keying code AA

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.)