ABB ABB Series Service Manual

DO801

1. Description

The DO801 is a 16 channel 24 V digital output module for the S800 I/O. 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 in one isolated 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.

3. Product Information

The DO801 is a 16 channel 24 V digital output module for the S800 I/O. 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 in one isolated 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.

Features and benefits

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

1 isolated groups of 16 channels

Output status indicators

OSP sets outputs to predetermined state upon communication error

Short-circuit protection to ground and 30 V

Over-voltage and overtemperature protection

Process and power connection via detachable connectors

General info

Article number 3BSE020510R1

Type Digital Output

Signal specification 24 V 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 S800L

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

Current consumption +24 V Modulebus 0

Current consumption +24 V external 0

Supported wire size Solid: 0.05-2.5 mm², 30-12 AWG

Stranded: 0.05-1.5 mm², 30-12 AWG

Recommended torque: 0.5-0.6 Nm

Stripping length 6-7.5mm, 0.24-0.30 inch

Diagnostics

Front LED's S(tatus), Channel 1-16 Status

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 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/EU (EN 50581:2012)

WEEE compliance DIRECTIVE/2012/19/EU

Dimensions

Width 86.1 mm (3.4”)

Depth 58.5 mm (2.3”)

Height 110 mm (4.33”)

Weight 0.24 kg (0.53 lbs.)