ABB ABB Series Service Manual

DO821

1. Description

The DO821 is an 8 channel 230 V a.c./d.c. relay (NC) output module for the S800 I/O. The maximum output voltage is 250 V a.c. and the maximum continuous output current is 3 A. All outputs are individually isolated. 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 24 V distributed on the ModuleBus, gives an error signal if the voltage disappears, and the

3. Product Information

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Features and benefits

8 channels for 230 V a.c./d.c. relay Normal Closed (NC) outputs

8 isolated channels

Output status indicators

OSP sets outputs to predetermined state upon error detection

MTUs that match this product

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TU811V1

General info

Article number 3BSE013250R1

Type Digital Output

Signal specification 230 V a.c./d.c. (5-250 V a.c./d.c.), 3 A

Number of channels 8

Signal type Relay (NC)

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

Current limiting Can be current limited by the MTU

Maximum field cable length 600 meters (656 yards)

Rated insulation voltage 250 V

Dielectric test voltage 2000 V a.c.

Power dissipation Typ. 2.9 W

Current consumption +5 V Modulebus 60 mA

Current consumption +24 V Modulebus 140 mA

Current consumption +24 V external 0

Diagnostics

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

Supervision 24 / 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 -

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 TU811, TU813, TU831, TU836, TU837, TU851

Keying code CA

Dimensions

Width 45 mm (1.77”)

Depth 102 mm (4.01”), 111 mm (4.37”) including connector

Height 119 mm (4.7”)

Weight 0.23 kg (0.5 lbs.)