

# DO821

## ABB Ability™ System 800xA® hardware selector



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 Warning LED turns on. The error signal can be read via the ModuleBus. This supervision can be enabled/disabled with a parameter.

### 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

| 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.)                                 |

## Related products



**TU811V1**



**TU813**



**TU831V1**



**TU836V1**



**TU837V1**

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