

DO880

Compact Product Suite hardware selector



The DO880 is a 16 channel 24 V digital output module for single or redundant application. The maximum continuous output current per channel is 0.5 A. The outputs are current limited and protected against over temperature. Each output channel consists of a current limited and over temperature protected high side driver, EMC protection components, inductive load suppression, output state indication LED and an isolation barrier to the Modulebus.

Features and benefits

- 16 channels for 24 V d.c. current sourcing outputs in one isolated group
- Redundant or single configuration
- Loop monitoring, supervision of short and open load with configurable limits (see table Table 97).
- Diagnostic of output switches without pulsing on outputs
- Advanced on-board diagnostics
- Output status indicators (activated/error)
- Degraded mode for normally energized channels (supported from DO880 PR:G)
- Current limitation at short circuit and over-temperature protection of switches
- Fault tolerance of 1 (as defined in IEC 61508) for output drivers. For ND (Normally De-energized) systems, outputs can still be controlled with error on output drivers
- Certified for SIL3 according to IEC 61508
- Certified for Category 4 according to EN 954-1.

| General info | |
|----------------------|-------------------------------------|
| Article number | 3BSE028602R1 |
| Type | Digital Output |
| Signal specification | 24 V d.c. (19.2 - 32 V d.c.), 0.5 A |
| Number of channels | 16 |
| Signal type | Current sourcing, current limiting |
| HART | No |
| SOE | No |
| Redundancy | Yes |
| High integrity | Yes |
| Intrinsic safety | No |
| Mechanics | S800 |

| Detailed data | |
|-------------------------------------|--|
| Isolation | Groupwise isolated from ground |
| 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 | 5.6 W (0,5 A x 16 channels) |
| Current consumption +5 V Modulebus | 45 mA |
| Current consumption +24 V Modulebus | Max. 50 mA |
| Current consumption +24 V external | 10 mA |

| Diagnostics | |
|----------------------------------|--|
| Front LED's | F(ault), R(un), W(arning), Channel 1-16 Status/Error |
| Supervision | Process power per channel Loop supervision configurable for loop resistance from 50 Ω to 2 kΩ dependent of configuration and mode of operation Internal circuitry |
| Status indication of supervision | Module Error, Module Warning, Internal 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 and 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, TU833, TU842, TU843, TU852 |
| Keying code | FE |

| Dimensions | |
|------------|--|
| Width | 45 mm (1.77") |
| Depth | 102 mm (4.01"), 111 mm (4.37") including connector |
| Height | 119 mm (4.7") |
| Weight | 0.20 kg (0.44 lbs.) |

Related products



TU810V1



TU812V1



TU814V1



TU830V1



TU833



TU842



TU843



TU852

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