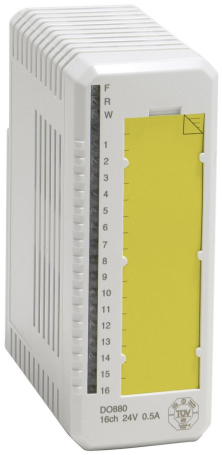
DATA SHEET

# DO880
## System 800xA 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 | |
|---|---|
| Type | Digital Output |
| Signal specification | 24 V d.c. (19.2 - 32 V d.c.), 0.5 A |
| Article number | 3BSE028602R1 |
| 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<br>Loop supervision configurable for loop resistance from 50 Ω to 2 kΩ dependent of configuration and mode of operation<br>Internal circuitry |
| Status indication of supervision | Module Error, Module Warning, Internal channel error |

| Environment and certification | |
|---|---|
| CE mark | Yes |
| Electrical safety | IEC 61131-2, UL 508 |
| Hazardous Location | C1 Div 2 cULus, C1 Zone 2 cULus, ATEX Zone 2 |
| Marine certification | ABS, BV, DNV-GL, LR, RS, CCS |
| Protection rating | IP20 according to IEC 60529 |
| Corrosive atmosphere ISA-S71.04 | G3 |
| Climatic operating conditions | 0 to +55 °C (Storage -40 to +70 °C), RH=5 to 95 % no condensation, IEC/EN 61131-2 |
| Pollution degree | Degree 2, IEC 60664-1 |
| 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) |
| Max ambient temperature | 55 °C (131 °F), for vertical mounting in compact MTU 40 °C (104 °F) |
| RoHS compliance | EN 50581:2012 |
| WEEE compliance | DIRECTIVE/2012/19/EU |

| Compability | |
|---|---|
| Use with MTU | TU810, TU812, TU814, TU830, TU833, TU842, TU843, TU852 |
| Keying code | FE |

| Intrinsic Safety parameters | |
|---|---|

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

# Related products

**TU814V1**

**TU810V1**

**TU852**

**TU833**

**TU812V1**

**TU843**

**TU830V1**

**TU842**

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**www.abb.com/800xA**
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