

DOS885

Compact Product Suite hardware selector



Select I/O is an Ethernet networked, single-channel granular I/O system for the ABB Ability™ System 800xA automation platform. Select I/O helps decouple project tasks, minimizes the impact of late changes, and supports standardization of I/O cabinetry ensuring automation projects are delivered on time and under budget. A Signal Conditioning Module (SCM) performs the necessary signal conditioning and powering of the connected field device for one I/O channel.

The DOS885 is a Digital Output (24V / 3A) Signal Conditioning Module for use in High Integrity applications (certified for SIL3) supporting 2-wire devices such as solenoids, horns, and beacons.

Features and benefits

- Digital output for 2-wire field devices
- 24 V/3 A current sourcing
- Can be used in hazardous areas
- Certified for Functional safety
- Field power sourced from the power injection
- Short circuit proof, electronically current limited to 3 A
- Built-in inductive load suppression, free-wheeling diode
- Galvanic isolation
- Protected against wrong wiring
- Diagnostics:
 - Loop supervision (open circuit and short circuit)
 - Hardware error supervision
 - Communication supervision
 - Internal power supervision
 - Power injection supervision
- Single loop granularity - each SCM handles a single channel
- Supports hot swap
- Mechanical locking slider which turns off field device power and/or output before removal.
- Field disconnect function which can galvanically separate the field loop wiring from the SCM during commissioning and maintenance.
- All SCMs have electronic current limitation
- Mechanical keying to prevent insertion of wrong module type after commissioning.
- 24V DC powered through Modulebus
- Configurable through parameters
- LED indicators on the SCM indicate the operational state of the module
- Certified for SIL3

| General info | |
|----------------------|-------------------------------|
| Article number | 3BSE074061R1 |
| Type | Digital Output Module - SIL 3 |
| Number of channels | 1 |
| Signal specification | 24 V DC / 3 A |
| HART | N/A |
| SOE | N/A |
| Redundancy | Yes |
| Hot swap | Yes |
| High integrity | Yes |
| Intrinsic safety | No |
| Mechanics | Select I/O |

| Detailed data | |
|---|--|
| Supported field devices | 2-wire Solenoids, Horns and Beacons |
| Isolation | Galvanic isolation to system. Routine tested at factory with 3060 VDC. |
| Field power | Current limited |
| Diagnostics | Loop supervision (short circuit and open circuit) Internal hardware supervision Communication supervision Internal power supervision Power injection supervision |
| Calibration | Factory calibration |
| Power dissipation | 0.61 W |
| Installation in Hazardous Area/Locations | Yes/Yes |
| IS barrier | No |
| Output load. Max inductor time constant (L/R) | 8 - 5000 Ω , 10 ms |
| Field Input Robustness | ± 35 V between all terminals |
| Input voltage range | 19.2 ... 30 V |

| Environment and certification | |
|--------------------------------------|--|
| Temperature, Operating | -40 °C (-40 °F) to +70 °C (158 °F) |
| Temperature, Storage | -40 °C (-40 °F) to +85 °C (185 °F) |
| Pollution degree | Pollution Degree 2 acc. to IEC 60664-1 |
| Relative humidity | 5 to 95 %, non-condensation |
| Altitude | -1000 to 5000 m (restrictions apply) |
| Mechanical operating conditions | IEC 61131-2 |
| EMC | IEC/EN 61000-6-4, IEC/EN 61000-6-2 |
| Overvoltage categories | Category II acc. to IEC 60664-1 |
| Protection class | IP20 acc. to IEC 60529 |
| CE-marking | Yes |
| UKCA | Yes |
| Electrical Safety | IEC/EN 61010-1 UL 61010-1 CSA-C22.2 No. 61010-1-12 IEC/EN 61010-2-201 UL 61010-2-201 CSA C22.2 No. 61010-2-201 |
| Marine certification | DNV, ABS |
| Corrosive atmosphere | G3 |
| RoHS compliance | EU RoHS, UAE RoHS, CN RoHS |
| WEEE compliance | EU |
| Hazardous Area ATEX | II 3G Ex nA IIC T4 Gc II 3G Ex ec IIC T4 Gc II 3G Ex ic nA IIC T4 Gc II 3G Ex ic ec IIC T4 Gc |
| Hazardous Area IECEx | Available on IPA: II 3G Ex nA IIC T4 Gc II 3G Ex ec IIC T4 Gc II 3G Ex ic nA IIC T4 Gc II 3G Ex ic ec IIC T4 Gc |
| Hazardous Location US/CAN | cULus CL I, ZN 2, AEx ec IIC T4 Gc, Ex ec IIC T4 Gc X CL I, ZN 2, AEx nA IIC T4 Gc, Ex nA IIC T4 Gc X CL I, DIV 2, Groups A-D T4 |
| Hazardous Area CCC | Ex ec IIC T4 Gc Ex ec ic IIC T4 Gc |
| Functional Safety | IEC 61508 Ed. 2, SIL 1-3 IEC 61511-1 IEC 62061 IEC 61131-2, IEC 61131-6 IEC 60204-1 NFPA 72, NFPA 79, NFPA 85, NFPA 86 EN ISO 14118 EN 50156-1 EN 298 EN 54-2, EN 54-2 A1 EN ISO 13850 |

| Dimensions | |
|-------------------------|---------|
| Width | 77.9 mm |
| Depth | 105 mm |
| Height | 9.8 mm |
| Weight (including base) | 73 g |

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