

# DOS810

## System 800xA 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 DOS810 is a Digital Output (24V / 0.6A) Signal Conditioning Module supporting 2-wire devices.

### Features and benefits

- Digital output for 2-wire field devices
- 24 V / 0.6 A current sourcing
- Can be used in hazardous areas
- Field power sourced from the power injection
- Short circuit proof, electronically current limited to 0.6 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
- OSP (Output Set to Predetermined value)
- 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

| General info         |                |
|----------------------|----------------|
| Article number       | 3BSE078768R1   |
| Type                 | Digital Output |
| Signal specification | 24V DC / 0.6 A |
| HART                 | N/A            |
| SOE                  | N/A            |
| Redundancy           | Yes            |
| Hot swap             | Yes            |
| Intrinsic safety     | No             |
| Mechanics            | Select I/O     |

| Detailed data                                 |   |
|---|---|
| Supported field devices                       | 2-wire  |
| Isolation                                     | Galvanic isolation to system.<br>Routine tested at factory with 3060 VDC.   |
| Field power                                   | Current limited   |
| Diagnostics                                   | - Loop supervision (short circuit and open circuit)<br>- Internal hardware supervision<br>- Communication supervision<br>- Internal power supervision |
| Calibration                                   | Factory calibration   |
| Power dissipation                             | 0.36 W  |
| Installation in Hazardous Locations           | ATEX – II 3G Ex nA/eC IIC T4 Gc<br>Class I, Zone 2, IIC T4<br>Class I, Div 2, Groups A, B, C, D T4<br>Non-arcing Field wiring acc. to Division model  |
| IS barrier                                    | No  |
| Output load. Max inductor time constant (L/R) | 40 - 5000 $\Omega$ , 50 ms  |
| Field Input Robustness                        | $\pm 35$ 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 % no condensation  |
| Altitude                        | -1000 to 3000 m, (-100 ... 2000 m for Zone 2/Class I Div 2)                |
| Mechanical operating conditions | IEC 61131-2  |
| EMC                             | IEC/EN 61000-6-4, IEC/EN 61000-6-2   |
| Overvoltage categories          | Category II, IEC 60664-1   |
| Protection class                | IP20 according to IEC 60529  |
| CE-marking                      | Yes  |
| Electrical Safety               | IEC/EN 61010-1, IEC 61010-2-201, UL 61010-2-201, CSA C22.2 No. 61010-2-201 |
| Hazardous Area                  | EN 60079-0, EN60079-7, EN60079-15, UL 12.12.01 / CSA C22.2 No. 213-17      |
| Marine certification            | DNV-GL, ABS  |
| Corrosive atmosphere            | G3 (ISA-S71.04)  |
| RoHS compliance                 | DIRECTIVE/2011/65/EU (EN 50581:2012)                                       |
| WEEE compliance                 | DIRECTIVE/2012/19/EU   |

| Dimensions              |                    |
|-------------------------|--------------------|
| Width                   | 77.9 mm (3.06 in.) |
| Depth                   | 105 mm (4.13 in.)  |
| Height                  | 9.8 mm (0.39 in.)  |
| Weight (including base) | 73 g (0.16 lbs)    |

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