

DOS810

ABB Ability™ 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 Module |
| Number of channels | 1 |
| Signal specification | 24 V DC / 0.6 A |
| HART | N/A |
| SOE | N/A |
| Redundancy | Yes |
| Hot swap | Yes |
| High integrity | No |
| Intrinsic safety | No |
| Mechanics | Select I/O |

| Detailed data | |
|---|--|
| Supported field devices | 2-wire |
| 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 | 0.36 W |
| Installation in Hazardous Area/Locations | Yes/Yes |
| IS barrier | No |
| Output load. Max inductor time constant (L/R) | 40 - 5000 Ω , 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 %, non-condensing |
| 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 |

Dimensions

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

solutions.abb/800xA
solutions.abb/controlsystems

800xA and Symphony Plus is a registered trademark of ABB. All rights to other trademarks reside with their respective owners.

We reserve the right to make technical changes to the products or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not assume any responsibility for any errors or incomplete information in this document.

We reserve all rights to this document and the items and images it contains. The reproduction, disclosure to third parties or the use of the content of this document – including parts thereof – are prohibited without ABB's prior written permission.

Copyright© 2024 ABB All rights reserved