

# DOS820

## 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 DOS820 is a Digital Output Relay NO Signal Conditioning Module supporting 2-wire devices.

### Features and benefits

- Digital output for 2-wire field devices
- 5-250 V AC, 5-125 V DC, up to 3 A
- Can be used in hazardous areas
- Field power sourced from the power injection
- Channel to channel galvanic isolation
- Diagnostics:
  - Fuse status supervision
  - Communication supervision
  - Internal power 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.
- 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

<b>General info</b>	
Article number	2PAA123606R1
Type	Digital Output Module
Number of channels	1
Signal specification	Up to 3 A 5-250 V AC 5-125V DC
HART	N/A
SOE	N/A
Redundancy	No
Hot swap	Yes
High integrity	No
Intrinsic safety	No
Mechanics	Select I/O

<b>Detailed data</b>	
Supported field devices	2-wire
Isolation	Galvanic isolation to system and between each channel. Routine tested at factory with 3060 VDC.
Field power	Current limited through fuse if power injection is used
Diagnostics	Fuse status supervision Communication supervision Internal power supervision
Calibration	Factory calibration
Power dissipation	0.5 W
Installation in Hazardous Area/Locations	Yes/Yes (applies up to 30 V)
IS barrier	No
Input voltage range	5-250 V AC, 5-125 V DC

**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 (max 3000 m above 150V, 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	N/A
Corrosive atmosphere	G3
RoHS compliance	EU RoHS, UAE RoHS, CN RoHS
WEEE compliance	EU
Hazardous Area ATEX	Up to 30V: II 3G Ex ec nC IIC T4 Gc
Hazardous Area IECEx	Up to 30V: II 3G Ex ec nC IIC T4 Gc
Hazardous Location US/CAN	Up to 30V: CL I, ZN 2 AEx ec nC IIC T4 Gc Ex ec nC IIC T4 Gc X CL I, DIV 2, Groups A-D T4
Hazardous Area CCC	No

**Dimensions**

Width	77.9 mm
Depth	105 mm
Height	9.8 mm
Weight (including base)	59 g

—  
[solutions.abb/800xA](https://solutions.abb/800xA)  
[solutions.abb/controlsystems](https://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