

DATA SHEET

## **DIS810**

## ABB Ability™ System 800xA® hardware selector



Select I/O is an Ethernet networked, single channel granular I/O system for the ABB Ability<sup>TM</sup> 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 DIS810 is a Digital Input 24V Signal Conditioning Module supporting 2/3/4-wire devices with Sequence of Events (SOE).

## Features and benefits

- Digital input for 2-wire, 3-wire and externally powered 4-wire field devices
- Can be used in hazardous areas
- Field device power output current limited to 30 mA
- Channel to channel galvanic isolation
- Configurable software signal filter 0...100 ms
- Protected against wrong wiring
- Diagnostics:
  - Loop supervision (open circuit and short circuit)
  - Hardware error supervision
  - Communication supervision
  - Internal power supervision
- Sequence of Events (SoE)
- DIS810 supports both Normally Open (NO) and Normally Closed (NC) 24 V loops
- 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	3BSE078766R1	
Туре	Digital Input Module	
Number of channels	1	
Signal specification	24V DC	
HART	N/A	
SOE	Yes	
Redundancy	Yes	
Hot swap	Yes	
High integrity	No	
Intrinsic safety	No	
Mechanics	Select I/O	

Detailed data		
Supported field devices	2-wire, 3-wire and 4-wire sensors (dry contacts and proximity switches, external power required for 4-wire devices)	
Isolation	Galvanic isolation to system and between each channel (including field power).  Routine tested at factory with 3060 VDC.	
Field power	Current limited to 30 mA	
Diagnostics	Loop supervision (short circuit and open circuit) Internal hardware supervision Communication supervision Internal power supervision	
Calibration	Factory calibration	
Power dissipation	0.55 W	
Installation in Hazardous Area/Locations	Yes/Yes	
IS barrier	No	
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 nA 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 Non-incendive use for 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© 2025 ABB All rights reserved