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DATA SHEET

DIS820
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 DIS820 is a Digital Input 120 V 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
- Channel to channel galvanic isolation
- Field power sourced from the power injection
- Configurable software signal filter 0...100 ms
- Diagnostics:
  - Fuse status supervision
  - Communication supervision
  - Internal power supervision
- Sequence of Events (SoE)
- DIS820 supports both Normally Open (NO) and Normally Closed (NC)
- 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

General info	
Article number	2PAA123607R1
Type	Digital Input Module
Number of channels	1
Signal specification	120 V AC/DC
HART	N/A
SOE	Yes
Redundancy	No
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. 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	No/No
IS barrier	No
Input voltage range	77...130 V AC / 75...145 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-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	N/A
Corrosive atmosphere	G3
RoHS compliance	EU RoHS, UAE RoHS, CN RoHS
WEEE compliance	EU
Hazardous Area ATEX	No
Hazardous Area IECEx	No
Hazardous Location US/CAN	No
Hazardous Area CCC	No

Dimensions

Width	77.9 mm
Depth	105 mm
Height	9.8 mm
Weight (including base)	57 g

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