

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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