

DI801

ABB Ability™ System 800xA® hardware selector



The DI801 is a 16 channel 24 V digital input module for the S800 I/O. This module has 16 digital inputs. The input voltage range is 18 to 30 volt d.c. and the input current is 6 mA at 24 V. The inputs are in one isolated group with sixteen channels and channel number sixteen can be used for voltage supervision input in the group. Every input channel consists of current limiting components, EMC protection components, input state indication LED and optical isolation barrier.

Features and benefits

- 16 channels for 24 V d.c. inputs with current sinking
- 1 isolated groups of 16 with voltage supervision
- Input status indicators
- Process and power connection via detachable connectors

| General info | |
|----------------------|-----------------|
| Article number | 3BSE020508R1 |
| Type | Digital Input |
| Signal specification | 24V d.c. |
| Number of channels | 16 |
| Signal type | Current sinking |
| HART | No |
| SOE | No |
| Redundancy | No |
| High integrity | No |
| Intrinsic safety | No |
| Mechanics | S800L |

| Detailed data | |
|-------------------------------------|---|
| Input voltage range, "0" | -30 .. +5 V |
| Input voltage range, "1" | 15 .. 30 V |
| Input impedance | 3.5 kΩ |
| Isolation | Groupwise isolated from ground |
| Filter times (digital, selectable) | 2, 4, 8, 16 ms |
| Maximum field cable length | 600 meters (656 yards) |
| Rated insulation voltage | 50 V |
| Dielectric test voltage | 500 V |
| Power dissipation | Typ 2.2 W |
| Current consumption +5 V Modulebus | 70 mA |
| Current consumption +24 V Modulebus | 0 |
| Supported wire size | Solid: 0.05-2.5 mm², 30-12 AWG Stranded: 0.05-1.5 mm², 30-12 AWG Recommended torque: 0.5-0.6 Nm Stripping length 6-7.5mm, 0.24-0.30 inch |

| Diagnostics | |
|----------------------------------|--|
| Front LED's | S(tatus) (run or fault), Channel 1-16 ("0" or "1") |
| Supervision | Process voltage supervision on channel 16 |
| Status indication of supervision | Module Error, Module Warning, Channel Error |

| Environment and certification | |
|---------------------------------|---|
| CE mark | Yes |
| Electrical safety | EN 61010-1, UL 61010-1, EN 61010-2-201, UL 61010-2-201 |
| Hazardous Location | C1 Div 2 cULus, C1 Zone 2 cULus, ATEX Zone 2 |
| Marine certification | ABS, BV, DNV, LR |
| Temperature, Operating | 0 to +55 °C (+32 to +131 °F), approvals are issued for +5 to +55 °C |
| Temperature, Storage | -40 to +70 °C (-40 to +158 °F) |
| Pollution degree | Degree 2, IEC 60664-1 |
| Corrosion protection | ISA-S71.04: G3 |
| Relative humidity | 5 to 95 %, non-condensing |
| Max ambient temperature | 55 °C (131 °F), for vertical mounting 40 °C (104 °F) |
| Protection class | IP20 according to IEC 60529 |
| Mechanical operating conditions | IEC/EN 61131-2 |
| EMC | EN 61000-6-4 and EN 61000-6-2 |
| Overvoltage categories | IEC/EN 60664-1, EN 50178 |
| Equipment class | Class I according to IEC 61140; (earth protected) |
| RoHS compliance | DIRECTIVE/2011/65/EN (EN 50581:2012) |
| WEEE compliance | DIRECTIVE/2012/19/EU |

| Dimensions | |
|------------|---------------------|
| Width | 86.1 mm (3.4") |
| Depth | 58.5 mm (2.3") |
| Height | 110 mm (4.33") |
| Weight | 0.24 kg (0.53 lbs.) |

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