

DI803

ABB Ability™ System 800xA® hardware selector



The DI803 is an 8 channel 230 V a.c./d.c. digital input module for the S800 I/O. This module has 8 digital inputs. The a.c. input voltage range is 164 - 264 volt and the input current is 7.6 mA at 230 V a.c. The d.c. input range is 175 - 275 V and the input current is 1.6 mA at 220 V. The inputs are individually isolated. Every input channel consists of current limiting components, EMC protection components, input state indication LED and optical isolation barrier.

Features and benefits

- 8 channels for 230 V a.c./d.c. inputs with current sinking
- Individually isolated channels
- Voltage supervision of field input power
- Input status indicators
- Signal filtering
- Process connection via detachable connectors

| General info | |
|----------------------|------------------------|
| Article number | 3BSE022362R1 |
| Type | Digital Input |
| Signal specification | 230 V a.c., 220 V d.c. |
| Number of channels | 8 |
| Signal type | Current sinking |
| HART | No |
| SOE | No |
| Redundancy | No |
| High integrity | No |
| Intrinsic safety | No |
| Mechanics | S800L |

| Detailed data | |
|-------------------------------------|---|
| Input voltage range, "0" | 0..50 V a.c., 0..40 V d.c. |
| Input voltage range, "1" | 164..264 V a.c., 175..275 V d.c. |
| Input impedance | 30 kΩ (a.c.) 134 kΩ (d.c.) |
| Isolation | Individually isolated channels |
| Filter times (digital, selectable) | 2, 4, 8, 16 ms |
| Input frequency range | 47..63 Hz |
| Analog filter On/Off delay | 5 / 28 ms |
| Maximum field cable length | 200 meters (219 yards) 100 pF/m for a.c., 600 meters for d.c. |
| Rated insulation voltage | 250 V |
| Dielectric test voltage | 2000 V a.c. |
| Power dissipation | Typ. 2.8 W |
| Current consumption +5 V Modulebus | 50 mA |
| Current consumption +24 V Modulebus | 0 |
| Current consumption +24 V external | 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(status) (run or fault), Channel 1-16 ("0" or "1") |
| Supervision | Process voltage supervision on channel 8 |
| 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 | - |
| 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 | Class I according to IEC 61140; (earth protected) |
| Equipment class | Class I according to IEC 61140; (earth protected) |
| RoHS compliance | DIRECTIVE/2011/65/EU (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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