DATA SHEET

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	EU RoHS, UAE RoHS, CN RoHS
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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