

DI840

Compact Product Suite hardware selector



The DI840 is a 16 channel 24 V d.c. digital input module for single or redundant applications. The input voltage range is 18 to 30 V d.c. and the input current is 7 mA at 24 V d.c. Each input channel consists of current limiting components, EMC protection components, input state indication LED and optical isolation barrier. The transducer power is supervised and current limited; one output per two input channels. The Sequence of Event function (SOE) can collect events with a resolution of 1 ms. The event queue can contain up to 257 events. The function includes a Shutter filter for filtering out unwanted events.

Features and benefits

- 16 channels for 24 V d.c. inputs with current sinking
- 1 group of 16 isolated from ground
- Input status indicators
- Advanced on-board diagnostics
- Sequence of events
- Redundant or single applications
- Transducer power distribution

General info	
Type	Digital Input
Signal specification	24 V d.c.
Article number	3BSE020836R1
Number of channels	16
Signal type	Current sinking
HART	No
SOE	Yes
Redundancy	Yes
High integrity	No
Intrinsic safety	No
Mechanics	S800

Detailed data	
Input voltage range, "0"	-30..+5 V
Input voltage range, "1"	11..30 V
Input impedance	3.3 kΩ
Isolation	Groupwise isolated from ground
Filter times (digital, selectable)	0 to 127 ms
Current limiting	Built in current limited sensor power
Maximum field cable length	600 meters (656 yards)
Event recording accuracy	0 ms / +1.3 ms
Event recording resolution	1 ms
Rated insulation voltage	50 V
Dielectric test voltage	500 V a.c.
Power dissipation	Typ. 2.7 W
Current consumption +5 V Modulebus	100 mA
Current consumption +24V external	15 mA + transducer power, Max 335 mA

Diagnostics	
Front LED's	F(ault), R(un), W(arning), Channel 1-16 Status
Supervision	Process power, Internal circuitry
Status indication of supervision	Module Error, Module Warning, Channel error

Environment and certification	
CE mark	Yes
Electrical safety	IEC 61131-2, UL 508
Hazardous Location	C1 Div 2 cULus, C1 Zone 2 cULus, ATEX Zone 2
Marine certification	BV, DNV-GL, LR
Protection rating	IP20 according to IEC 60529
Corrosive atmosphere ISA-S71.04	G3
Climatic operating conditions	0 to +55 °C (Storage -40 to +70 °C), RH=5 to 95 % no condensation, IEC/EN 61131-2
Pollution degree	Degree 2, IEC 60664-1
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)
Max ambient temperature	55 °C (131 °F), for vertical mounting in compact MTU 40 °C (104 °F)
RoHS compliance	EN 50581:2012
WEEE compliance	DIRECTIVE/2012/19/EU

Compability	
Use with MTU	TU810, TU812, TU814, TU818, TU830, TU833, TU838, TU842, TU843, TU852
Keying code	CD

Intrinsic Safety parameters

Dimensions	
Width	45 mm (1.77")
Depth	102 mm (4.01"), 111 mm (4.37") including connector
Height	119 mm (4.7")
Weight	0.15 kg (0.33 lbs.)

Related products

 TU814V1	 TU810V1
 TU852	 TU833
 TU838	 TU812V1
 TU843	 TU830V1
 TU842	

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