

DATA SHEET

DI880 Compact Product Suite hardware selector



The DI880 is a 16 channel 24 V d.c. digital input module for single or redundant configuration. 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. There is one current limited transducer power output per input. The Sequence of Event function (SOE) can collect events with a resolution of 1 ms. The event queue can contain up to 512 x 16 events. The function include a Shutter filter for suppression of unwanted events. The SOE function can report the following status in the event message – Channel value, Queue full, Synchronization jitter, Uncertain time, Shutter filter active and Channel error.

Features and benefits

- 16 channels for 24 V d.c. inputs with current sinking
- Redundant or single configuration
- 1 group of 16 isolated from ground
- Input status indicators
- Advanced on-board diagnostics
- Sequence of events (SOE)
- Current limited sensor supply per channel
- Certified for SIL3 according to IEC 61508
- Certified for Category 4 according to EN 954-1

General info		
Article number	3BSE028586R1	
Туре	Digital Input	
Signal specification	24 V d.c.	
Number of channels	16	
Signal type	Current sinking	
HART	No	
SOE	Yes	
Redundancy	Yes	
High integrity	Yes	
Intrinsic safety	No	
Mechanics	\$800	

Detailed data		
Input voltage range, "0"	-30+5 V	
Input voltage range, "1"	1130 V	
Input impedance	3.1 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	2.4 W	
Current consumption +5 V Modulebus	Typ. 125 mA, Max. 150 mA	
Current consumption +24 V external	15 mA + sensor power, Max. 527 mA	

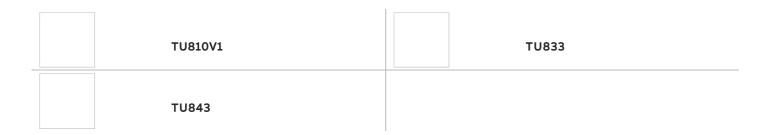
Diagnostics		
Front LED's	F(ault), R(un), W(arning), P(rimary), Channel 1-16 Status	
Supervision	Process power, Internal circuitry	
Status indication of supervision	Module Error, Module Warning, Internal channel error	

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 in compact MTU 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/EU (EN 50581:2012)	
WEEE compliance	DIRECTIVE/2012/19/EU	

Compatibility	
Use with MTU	TU810, TU812, TU814, TU818, TU830, TU833, TU842, TU843, TU852
Keying code	FF

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.)

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