

# DI810

## Compact Product Suite hardware selector



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 divided into two individually isolated groups with eight channels and one voltage supervision input in each group. Every input channel consists of current limiting components, EMC protection components, input state indication LED and optical isolation barrier. The process voltage supervision input give channel error signals if the voltage disappears. The error signal can be read via the ModuleBus.

### Features and benefits

- 16 channels for 24 V d.c. inputs with current sinking
- Two isolated groups of 8 with voltage supervision
- Input status indicators

| General info         |                 |
|----------------------|-----------------|
| Article number       | 3BSE008508R1    |
| Type                 | Digital Input   |
| Signal specification | 24 V d.c.       |
| Number of channels   | 16              |
| Signal type          | Current sinking |
| HART                 | No              |
| SOE                  | No              |
| Redundancy           | No              |
| High integrity       | No              |
| Intrinsic safety     | No              |
| Mechanics            | S800            |

|                                     |  |
|-------------------------------------|--|
| <b>Detailed data</b>                |  |
| Input voltage range, "0"            | -30..+5 V  |
| Input voltage range, "1"            | 15..30 V   |
| Input impedance                     | 3.5 kΩ   |
| Isolation                           | Groupwise isolated from ground, 2 groups with 8 channels |
| Filter times (digital, selectable)  | 2, 4, 8, 16 ms   |
| Current limiting                    | Sensor power can be current limited by the MTU           |
| Maximum field cable length          | 600 meters (656 yards)                                   |
| Rated insulation voltage            | 50 V   |
| Dielectric test voltage             | 500 V a.c.   |
| Power dissipation                   | Typ. 1.8 W   |
| Current consumption +5 V Modulebus  | 50 mA  |
| Current consumption +24 V Modulebus | 0  |
| Current consumption +24 V external  | 0  |

|                                  |  |
|----------------------------------|--|
| <b>Diagnostics</b>               |  |
| Front LED's                      | F(ault), R(un), W(arning), Channel 1-16 ("0" or "1") |
| Supervision                      | Process voltage, 1 per group                         |
| Status indication of supervision | Module Error, Module Warning, Channel error          |









|                                      |   |
|--------------------------------------|---|
| <b>Environment and certification</b> |   |
| 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/65/EU (EN 50581:2012)                                     |
| WEEE compliance                      | DIRECTIVE/2012/19/EU  |

|                      |  |
|----------------------|--|
| <b>Compatibility</b> |  |
| Use with MTU         | TU810, TU812, TU814, TU818, TU830, TU833, TU838, TU850 |
| Keying code          | AA   |

|                   |  |
|-------------------|--|
| <b>Dimensions</b> |  |
| 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

|   |         |   |         |
|---|---------|---|---------|
|   | TU810V1 |  | TU812V1 |
|   | TU814V1 |  | TU818   |
|   | TU830V1 |  | TU833   |
|  | TU838   |  | TU850   |

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