

# TU814V1

## ABB Ability™ System 800xA® hardware selector



The TU814V1 MTU can have up to 16 I/O channels and two process voltage connections. The maximum rated voltage is 50 V and maximum rated current is 2 A per channel.

The TU814V1 has three rows of crimp snap-in connectors for field signals and process power connections. The MTU is a passive unit used for connection of the field wiring to the I/O modules. It also contains a part of the ModuleBus.

Two mechanical keys are used to configure the MTU for different types of I/O modules. This is only a mechanical configuration and it does not affect the functionality of the MTU or the I/O module. Each key has six positions, which gives a total number of 36 different configurations.

### Features and benefits

- 16 channels for 24 V d.c. inputs with current sourcing
- 2 Isolated groups of 8 with voltage supervision
- Input status indicators

| General info        |   |
|---------------------|---|
| Article number      | 3BSE013233R1  |
| Type                | Compact   |
| Connection          | Crimp Snap-in connector   |
| Channels            | 16  |
| Voltage             | 50 V  |
| Mounting            | Both directions   |
| Mounting detail     | Horizontal 55 °C (131 °F)<br>Vertical 40 °C (104 °F)  |
| Use with I/O        | AI810, AI815, AI820, AI830, AI835A, AI835, AI845, AO810, AO810V2, AO815, AO820, AO845, AO845A, DI810, DI811, DI814, DI830, DI831, DI840, DI880, DI885, DO810, DO814, DO815, DO840, DO880, DP820 and DP840 |
| Process connections | 30<br>up to 16 I/O channels<br>2 x 2 Process power<br>2 x 5 Process power (0 V)   |

| Detailed data                      |  |
|------------------------------------|--|
| Maximum current per I/O channel    | 2 A  |
| Maximum current process connection | 5 A  |
| Acceptable wire sizes              | Stranded: 0.2 - 0.5 mm², 24 - 20 AWG<br>0.5 - 1.0 mm², 20 - 18 AWG<br>1.5 - 2.5 mm², 16 - 14 AWG |
| Dielectric test voltage            | 500 V a.c.   |

| 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                          |
| Marine certification            | ABS, BV, DNV-GL, 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, EN 61000-6-2  |
| Overvoltage categories          | IEC/EN 60664-1, EN 50178  |
| Equipment class                 | Class I according to IEC 61140; (earth protected)                   |
| RoHS compliance                 | EN 50581:2012   |
| WEEE compliance                 | DIRECTIVE/2012/19/EU  |

| Dimensions |  |
|------------|--|
| Width      | 64 mm (2.52 in.) including connector, 58.5 mm (2.3 in.) edge to edge installed |
| Depth      | 64 mm (2.52 in.), including terminals  |
| Height     | 170 mm (6.7 in.) including latch   |
| Weight     | 0.17 kg (0.37 lbs)   |

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