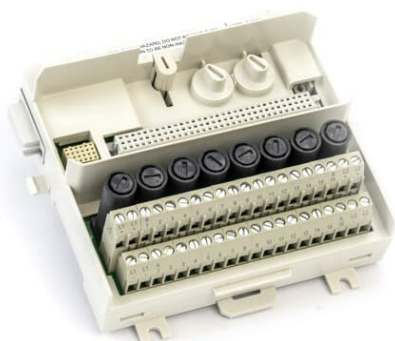


# TU838

## ABB Ability™ System 800xA® hardware selector



The TU838 MTU can have up to 16 I/O channels. The maximum rated voltage is 50 V and maximum rated current is 3 A per channel. The MTU distributes the ModuleBus to the I/O module and to the next MTU. It also generates the correct address to the I/O module by shifting the outgoing position signals to the next MTU.

The MTU can be mounted on a standard DIN rail. It has a mechanical latch that locks the MTU to the DIN rail.

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

- Complete installation of I/O modules using 3-wire connections, fuses and field power distribution.
- Up to 16 channels of field signals and 8 process power connections.
- Two channels share one fused transducer power terminal.
- Process voltage can be connected to 2 individually isolated groups, if the I/O module supports it.
- Connections to ModuleBus and I/O modules.
- Mechanical keying prevents insertion of the wrong I/O module.
- Latching device to DIN rail for grounding.
- DIN rail mounting.

| General info         |                                                                                                          |
|----------------------|----------------------------------------------------------------------------------------------------------|
| Article number       | 3BSE008572R1                                                                                             |
| Type                 | Extended                                                                                                 |
| Connection           | Terminal block                                                                                           |
| Channels             | 16                                                                                                       |
| Voltage              | 50 V                                                                                                     |
| Mounting             | Both directions                                                                                          |
| Mounting detail      | 55 °C (131 °F)                                                                                           |
| Use with I/O         | AI810, AI815, AI845, DI810, DI811, DI814, DI830, DI831, DI840 and DO814                                  |
| Process connections  | 40<br>up to 16 I/O channels<br>8 fused sensor power outlets<br>4 Process power<br>12 Process power (0 V) |
| Single/redundant I/O | Single                                                                                                   |

| Detailed data                      |                                                                                                                                                   |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum current per I/O channel    | 3 A                                                                                                                                               |
| Maximum current process connection | 10 A                                                                                                                                              |
| Acceptable wire sizes              | Solid: 0.2 - 4 mm <sup>2</sup><br>Stranded: 0.2 - 2.5 mm <sup>2</sup> , 24 - 12 AWG<br>Recommended torque: 0.5 - 0.6 Nm<br>Stripping length: 7 mm |
| 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 2                        |
| 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)                                                      |
| 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      | 126 mm (5 in.) including connector, 120.5 mm (4.74 in.) edge to edge installed |
| Depth      | 64 mm (2.52 in.) including terminals                                           |
| Height     | 110 mm (4.3 in.)                                                               |
| Weight     | 0.26 kg (0.57 lbs)                                                             |

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