

TU810V1

ABB Ability™ System 800xA® hardware selector



The TU810/TU810V1 is a 16 channel 50 V compact module termination unit (MTU) for the S800 I/O. 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.

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.

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

- Compact installation of I/O modules using one-wire connections.
- Up to 16 channels of field signals and process power connections.
- 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 | 3BSE013230R1 |
| Type | Compact |
| Connection | Terminal block |
| Channels | 16 |
| Voltage | 50 V |
| Mounting | Both directions |
| Mounting detail | Horizontal 55 °C (131 °F) Vertical 40 °C (104 °F) |
| Use with I/O | AI810, AI815, AI820, AI830, AI830A, AI835, AI835A, AI845, AO810, AO810V2, AO815, AO820, AO845, AO845A, DI810, DI811, DI814, DI830, DI831, DI840, DI880, DI885, DO810, DO814, DO815, DO840, DO880, DP820, DP840 |
| Process connections | 2 x 2 Process power, 5 x 2 Process power (0 V) |
| Single/redundant I/O | Single |

| Detailed data | |
|------------------------------------|----------------------------------------------------------------------------------|
| Maximum current per I/O channel | 2A |
| Maximum current process connection | 5A |
| Acceptable wire sizes | Solid: 0.2 - 4 mm ² Stranded: 0.2 - 2.5 mm ² , 24 - 12 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 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), 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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