ABB ABB Series Service Manual

TU810V1

1. Description

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.

3. Product Information

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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 ºC (131 °F)

Vertical 40 ºC (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 mm² Stranded: 0.2 - 2.5 mm², 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)