ABB ABB Series Service Manual

TU814V1

1. Description

TU814V1 Compact Module Termination Unit - ABB

3. Product Information

TU814V1 Compact Module Termination Unit - ABB

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 ºC (131 °F)

Vertical 40 ºC (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

up to 16 I/O channels

2 x 2 Process power

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

0.5 - 1.0 mm², 20 - 18 AWG

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)