ABB ABB Series Service Manual

TU891

1. Description

The TU891 MTU has gray terminals for field signals and process voltage connections. The maximum rated voltage is 50 V and maximum rated current is 2 A per channel, but these are primarily constrained to specific values by the design of the I/O modules for their certified application. 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.

3. Product Information

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Two mechanical keys are used to configure the MTU for different types of I.S. I/O modules. This is only a mechanical configuration and it does not affect the functionality of the MTU or the I/O module. The keys used on the TU891 are of the opposite gender to those on any other type of MTU and will mate only with IS I/O modules.

Features and benefits

Intrinsic safety applications - use with AI890, AI893, AI895, AO890, AO895, DI890 and DO890

Compact installations of I/O modules

Field signals and process power connections

Connections to ModuleBus and I/O modules

Mechanical keying prevents insertion of the wrong module

Latching device to DIN rail

DIN rail mounting

General info

Article number 3BSC840157R1

Type Compact

Connection Terminal block

Channels 8

Voltage 24 V

Mounting Horizontal

Mounting detail 55 ºC (131 °F)

Use with I/O AI890, AI893, AI895, AO890, AO895, DI890, DO890

Process connections 27 gray terminals

Single/redundant I/O Single

Detailed data

Maximum current per I/O channel 2 A

Acceptable wire sizes Process Connector:

Solid 0.2 - 4 mm²

Stranded 0.2 - 2.5 mm², 24 - 12 AWG

Recommended torque 0.5 - 0.6 Nm

Power supply connector:

0.25 - 2.5 mm², 24 - 14 AWG

Recommended torque 0.5 - 0.6 Nm

Dielectric test voltage 500 V a.c.

Environment and certification

CE mark Yes

Electrical safety IEC 61131-EN 61010-1, EN 61010-2-201

Hazardous Location -

Marine certification ABS, BV, DNV-GL, LR

Temperature, Operating 0 to +55 °C (+32 to +131 °F) (Storage -40 to +70 °C) (-40 to +158 °F), RH=5 to 95 % non-condensing

Pollution degree Degree 2, IEC 60664-1

Corrosion protection ISA-S71.04: G3

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 (1.77 in.) including connector, 58.5 mm (2.3 in.) edge to edge installed

Depth 58 mm (2.28 in.), 106 mm (4.2 in.) including terminals

Height 194 mm (7.6 in.) including latch