

## TU831/TU831V1 Extended MTU

### Features

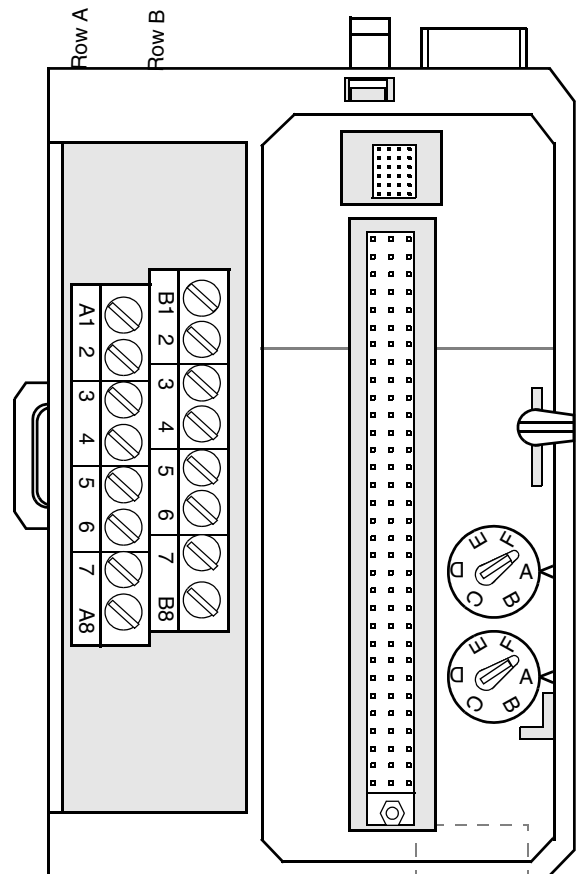
- 250 Volt applications - use with DI820, DI821, DO820, and DO821 I/O modules.
- Greater connection area for larger wires.
- Up to 8 isolated channels of field signals.
- Connections to ModuleBus and I/O modules.
- Mechanical keying prevents insertion of the wrong I/O module.
- Latching device to DIN rail for grounding.
- DIN rail mounting.

### Description

The TU831/TU831V1 is a 8 channel 250 V extended 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 TU831/TU831V1 MTU can have up to 8 I/O channels. The maximum rated voltage is 250 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. The latch can be released with a screwdriver.

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. The configuration can be changed with a screwdriver.

The MTU has a mechanical locking mechanism that locks the module in its position. This mechanism also gives the signal BLOCK to the I/O module that keeps the module in its init state until it is locked in its position.

The process signal terminals has 8 individually isolated I/O channels. Each channel has two connections.

### Technical Data

*Table 121. TU831/TU831V1 Compact MTU Specifications*

Item	Value
Process connections	16 up to 8 I/O channels (2 terminals per channel)
Rated maximum continuous current per I/O channel	3 A
ModuleBus: Maximum 5 V current distribution Maximum 24 V current distribution	1.5 A 1.5 A
Acceptable wire sizes	Solid: 0.2 - 6mm <sup>2</sup> Stranded: 0.2 - 4 mm <sup>2</sup> , 24 - 10 AWG Recommended torque: 0.5 - 0.6 Nm Stripping length: 7 mm
Mechanical keys (2)	36 different combinations

Table 121. TU831/TU831V1 Compact MTU Specifications (Continued)

Item	Value
I/O Module lock	Locks module and enables operation
Equipment class	Class I according to IEC 61140; (earth protected)
Protection rating	IP20 according to IEC 60529
Rated insulation voltage	250 V
Dielectric test voltage	2000 V a.c.
Width	126 mm (5") including connector, 120.5 mm (4.74") edge to edge installed
Depth	64 mm (2.52") including terminals
Height	110 mm (4.3")
Weight	0.22 kg (0.48 lbs.)

### Connections

Table 122. TU831/TU831V1 Process Connection Screw Terminals (X1)

Position	Row A	Row B
1	A1	B1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6

*Table 122. TU831/TU831V1 Process Connection Screw Terminals (X1)*

<b>Position</b>	<b>Row A</b>	<b>Row B</b>
7	7	7
8	A8	B8

**Block Diagram TU831/TU831V1**

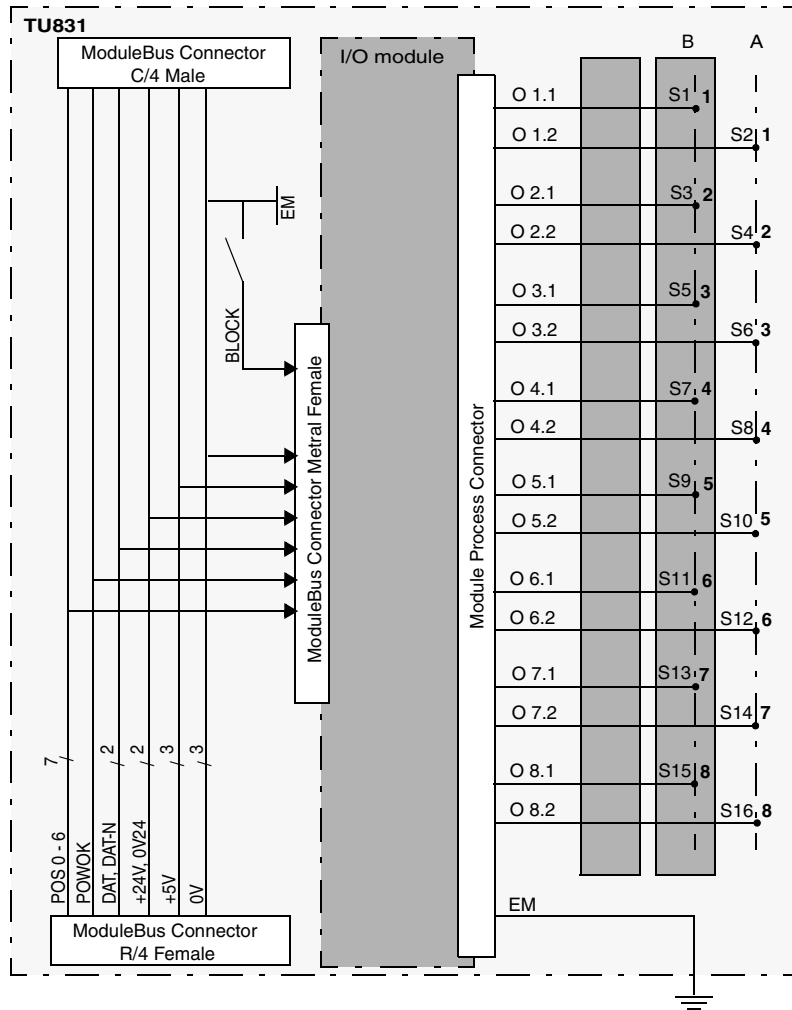


Figure 221. TU831/TU831V1 Block Diagram