

Overview



With the TM31 Terminal Module, the number of available digital inputs and outputs and the number of analog inputs and outputs within a drive can be expanded.

Design

The following interfaces are located on the TM31 Terminal Module:

- 8 x digital inputs
- 4 x bidirectional digital inputs/digital outputs
- 2 x relay outputs with changeover contact
- 2 x analog inputs
- 2 x analog outputs
- 1 x temperature sensor input (KTY84-130 or PTC)
- 2 x DRIVE-CLiQ sockets
- 1 x connection for the electronics power supply via the 24 V DC power supply connector
- 1 x PE (protective ground) connection.

The TM31 Terminal Module can be snapped onto a 35 x 15/7.5 DIN rail in accordance with EN 50022.

The signal cable shield can be connected to the TM31 Terminal Module via a shield connection terminal, e.g. Phoenix Contact type SK8 or Weidmüller type KLBÜ CO 1. The shield connection terminal must not be used for strain relief.

The status of the TM31 Terminal Module is indicated via a multi-color LED.

Selection and ordering data

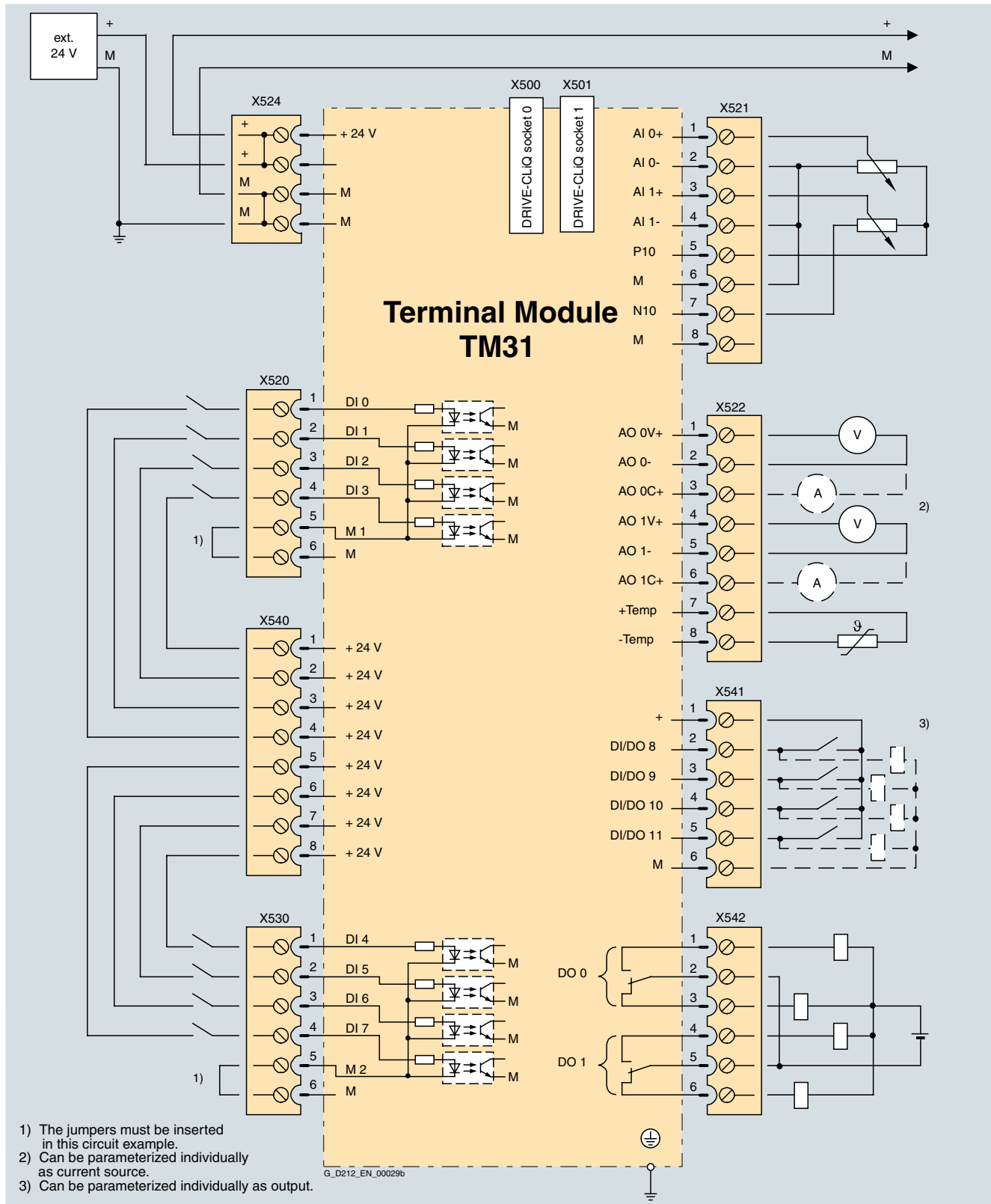
Description	Order No.
TM31 Terminal Module (without DRIVE-CLiQ cable)	6SL3055-0AA00-3AA0

Technical data

TM31 Terminal Module	
Max. current requirement (at 24 V DC) without taking account of digital outputs	0.5 A
Max. connectable cross-section	2.5 mm ²
Max. fuse protection	20 A
Digital inputs	
• Voltage	-3 V to +30 V
• Low level (an open digital input is interpreted as "low")	-3 V to +5 V
• High level	15 V to 30 V
• Current consumption (at 24 V DC)	typ. 10 mA
• Signal propagation delays for digital inputs	L → H: approx. 50 μs H → L: approx. 100 μs
• Max. connectable cross-section	1.5 mm ²
Digital outputs (continuously short-circuit-proof)	
• Voltage	24 V DC
• Max. load current per digital output	100 mA
• Max. total current of digital outputs	400 mA
• Max. connectable cross-section	1.5 mm ²
Analog inputs (a switch is used to toggle between voltage and current input)	
• As voltage input	
- Voltage range	-10 V to +10 V
- Internal resistance R_i	100 kΩ
• As current input	
- Current range	4 mA to 20 mA/-20 mA to +20 mA/0 mA to 20 mA
- Internal resistance R_i	250 Ω
- Resolution	11 bit + sign
• Max. connectable cross-section	1.5 mm ²
Analog outputs (continuously short-circuit-proof)	
• Voltage range	-10 V to +10 V
• Max. load current	-3 mA to +3 mA
• Current range	4 mA to 20 mA, -20 mA to +20 mA, 0 mA to 20 mA
• Max. load resistance	500 Ω for outputs in the range -20 mA bis +20 mA
• Resolution	11 bit + sign
• Max. connectable cross-section	1.5 mm ²
Relay outputs (changeover contacts)	
• Max. load current	8 A
• Max. switching voltage	250 V AC, 30 V DC
• Max. switching power (at 250 V AC)	2000 VA (cos phi = 1) 750 VA (cos phi = 0.4)
• Max. switching power (at 30 V DC)	240 W (ohmic load)
• Required minimum current	100 mA
• Max. connectable cross-section	2.5 mm ²
Power loss	< 10 W
PE connection	On housing with M4 screw
Width	50 mm
Height	150 mm
Depth	111 mm
Weight, approx.	0.87 kg

Integration

The TM31 Terminal Module communicates with the CU320 Control Unit via DRIVE-CLiQ.



Connection diagram for the TM31 Terminal Module