Overview

BOP20 Basic Operator Panel

The BOP20 Basic Operator Panel can be inserted on any CU310 or CU320 Control Unit and may be used to acknowledge faults, set parameters and read diagnostic information (e.g. warnings and fault messages).

Design

The BOP20 basic operator panel has a backlit two-line display area and 6 keys.

The integrated plug connector on the back of the BOP20 Basic Operator Panel is used for the power supply of the BOP20 Basic Operator Panel and communication with the CU310 or CU320 Control Unit.

Integration

CU310 DP Control Unit with mounted BOP20 Basic Operator Panel

CU320 Control Unit with mounted BOP20 Basic Operator Panel

Selection and ordering data

Description	Order No.
BOP20 Basic Operator Panel	**6SL3055-0AA00-4BA0**

CBC10 Communication Board

Overview

The CBC10 Communication Board is used to interface the CU320 Control Unit and therefore the drives to the CAN (Controller Area Network) protocol. The board's driver software fulfills the standards of the following CANopen specification of the CiA organization (CAN in Automation):

- Communication profiles in accordance with DS 301
- Drive profile in accordance with DSP 402 (in this case Profile Velocity Mode)
- EDS (Electronic Data Sheet) in accordance with DSP 306
- Operational status signaling in accordance with DSP 305

Design

The CBC10 Communication Board plugs into the option slot on the CU320 Control Unit. The CAN interface on the CBC10 has 2 SUB-D connections in each case of input and output.

Technical data

CBC10 Communication Board	
Max. current requirement (at 24 V DC) via CU320 Control Unit	0.05 A
Power loss	< 10 W
Weight, approx.	0.1 kg (0.2 lb)

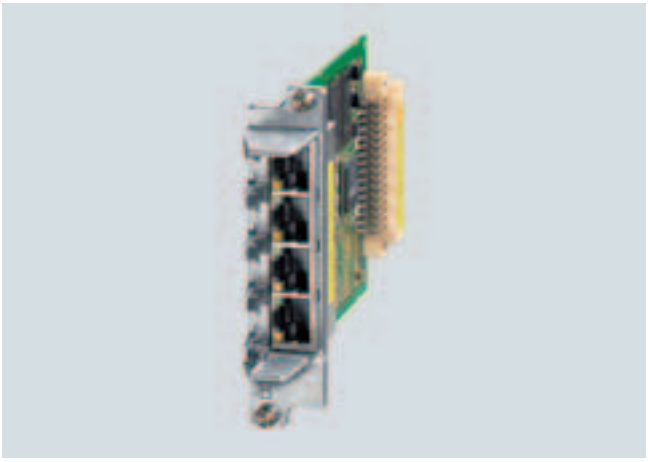
Selection and ordering data

Description	Order No.
CBC10 Communication Board	**6SL3055-0AA00-2CA0**

Accessories

Description	Order No.
SUB-D connector, 9-pin, female (3x)	**6FC9341-2AE**
SUB-D connector, 9-pin, male (3x)	**6FC9341-2AF**

Overview



The CBE20 Communication Board can be used to connect the SINAMICS S120 drive system to a PROFINET IO network via a CU320 Control Unit. The SINAMICS S120 then assumes the function of a PROFINET IO device and can perform the following:

- PROFINET IO device functions
- 100 Mbit/s full duplex
- Supports real-time classes of PROFINET IO:
  - RT (RealTime)
  - IRT (Isochronous RealTime)
- Connects to controls as PROFINET IO devices using PROFIdrive compliant with specification V4
- Standard TCP/IP communication for engineering processes using the STARTER drive/commissioning software
- Integrated 4-port switch with four RJ45 sockets based on the PROFINET ASIC ERTEC400. The optimum topology (line, star, tree) can therefore be configured without additional external switches.

Integration

The CBE20 Communication Board plugs into the option slot on the CU320 Control Unit.

Technical data

CBE20 Communication Board	
Max. current requirement (at 24 V DC)	0.16 A
Permissible ambient temperature	
• Storage and transport	– 40 °C to + 70 °C (– 40 °F to + 158 °F)
• Operation	0 °C to + 55 °C (32 °F to + 131 °F)
Dimensions	130 mm × 78 mm (5.11 in × 3.07 in)
Weight, approx.	76 g (0.17 lb)

Selection and ordering data

Description	Order No.
CBE20 Communication Board	**6SL3055-0AA00-2EB0**

Accessories

The PROFINET cables and connectors listed below are recommended:

Description	Order No.
Industrial Ethernet FC	
• RJ45 plug 145 (1 x)	**6GK1901-1BB30-0AA0**
• RJ45 plug 145 (10 x)	**6GK1901-1BB30-0AB0**
• Stripping tool	**6GK1901-1GA00**
• Standard cable GP 2x2	**6XV1840-2AH10**
• Flexible cable GP 2x2	**6XV1870-2B**
• Trailing cable GP 2x2	**6XV1870-2D**
• Trailing cable 2x2	**6XV1840-3AH10**
• Marine cable 2x2	**6XV1840-4AH10**

For further details about connectors and cables, please refer to Catalog IK PI.

CBE30 Communication Board

Overview

The CBE30 Communication Board for SIMOTION D425, D435 and D445 allows the SIMOTION to be connected to a PROFINET IO network. The SIMOTION D then assumes the function of a PROFINET IO Controller and can perform the following functions:

- PROFINET IO Controller
- 100 Mbit/s full duplex
- Supports real-time classes of PROFINET IO:
  - RT (RealTime)
  - IRT (Isochronous RealTime)
- Connects distributed IOs as PROFINET IO devices
- Connects drives as PROFINET IO devices using PROFIdrive compliant with specification V4
- Supports standard Ethernet communication (TCP/IP), e.g. for interfacing SIMOTION SCOUT, HMI or standard TCP, UDP communication, to devices of any other type
- Integrated 4-port switch with four RJ45 sockets based on the PROFINET ASIC ERTEC400. The optimum topology (line, star, tree) can therefore be configured without additional external switches.

Integration

The CBE30 Communication Board plugs into the option slot on the SIMOTION D Control Unit.

Technical data

CBE30 Communication Board	
Max. current requirement (at 24 V DC)	0.25 A
Permissible ambient temperature	
• Storage and transport	– 40 °C to + 70 °C (– 40 °F to + 158 °F)
• Operation	0 °C to + 55 °C (32 °F to + 131 °F)
Dimensions	113 mm × 77 mm (4.45 in × 3.03 in)
Weight, approx.	100 g (0.22 lb)

Selection and ordering data

Description	Order No.
CBE30 Communication Board	**6FC5312-0FA00-0AA0**

Accessories

The PROFINET cables and connectors listed below are recommended:

Description	Order No.
Industrial Ethernet FC	
• RJ45 plug 145 (1 x)	**6GK1901-1BB30-0AA0**
• RJ45 plug 145 (10 x)	**6GK1901-1BB30-0AB0**
• Stripping tool	**6GK1901-1GA00**
• Standard cable GP 2x2	**6XV1840-2AH10**
• Flexible cable GP 2x2	**6XV1870-2B**
• Trailing cable GP 2x2	**6XV1870-2D**
• Trailing cable 2x2	**6XV1840-3AH10**
• Marine cable 2x2	**6XV1840-4AH10**

For further details about connectors and cables, please refer to Catalog IK PI.

Overview

The CUA31 Control Unit Adapter converts the PM-IF interface to a DRIVE-CLiQ interface. This adapter allows Power Modules in blocksize format to operate on a CU320 or SIMOTION D Control Unit.

Design

The CUA31 Control Unit Adpater features the following interfaces:

- 1 temperature sensor input (KTY84-130 or PTC)
- 3 DRIVE-CLiQ sockets
- 1 connection for the electronics power supply via the 24 V DC power supply connector
- 1 safe standstill input (enable pulses)

The status of the CUA31 Control Unit Adapter is indicated via multi-color LEDs.

Technical data

CUA31 Control Unit Adapter	
Max. current requirement (at 24 V DC) without DRIVE-CLiQ supply	0.15 A
Max. connectable cross section	2.5 mm^2
Width	73 mm (2.87 in)
Height	165.8 mm (6.53 in)
Depth	37.3 mm (1.47 in)
Weight, approx.	0.31 kg (0.68 lb)

Selection and ordering data

Description	Order No.
CUA31 Control Unit Adapter (without DRIVE-CLiQ cable)	**6SL3040-0PA00-0AA0**

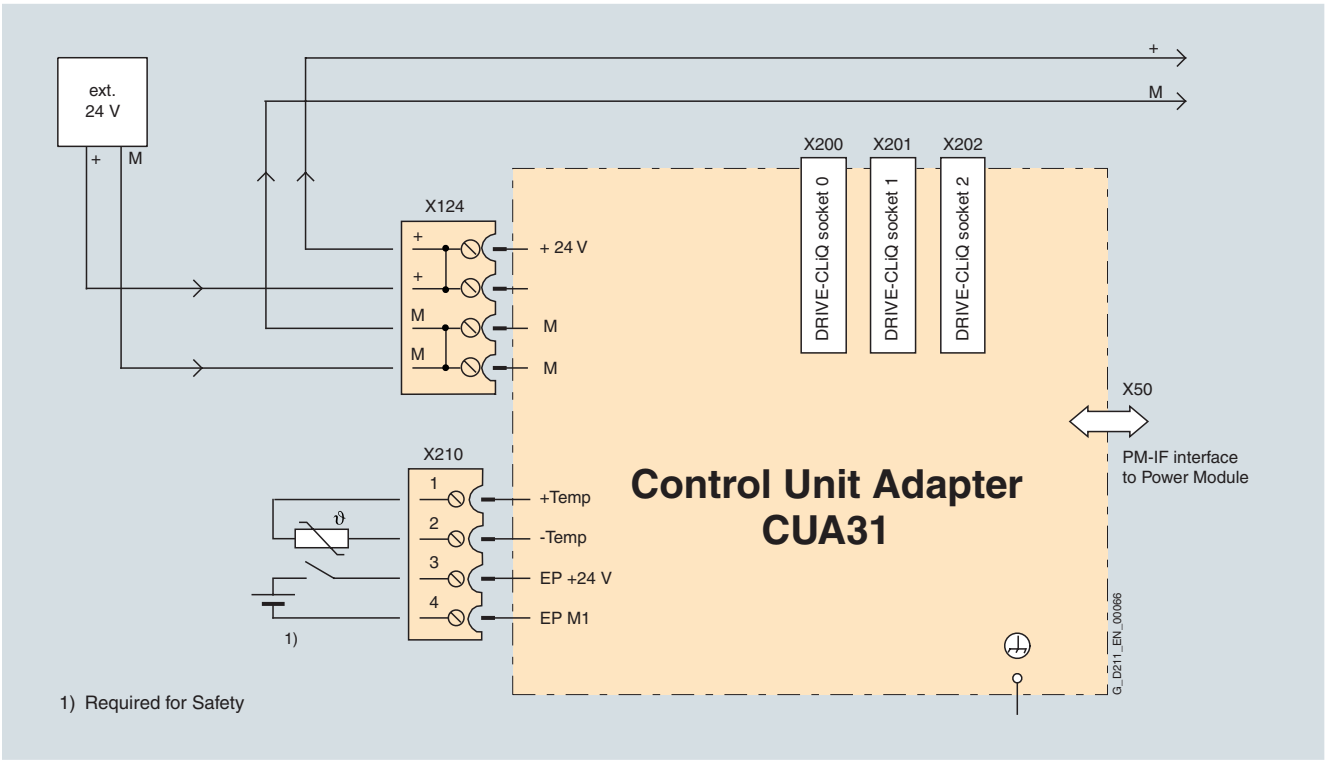
CUA31 Control Unit Adapter

Integration

The CUA31 Control Unit Adapter is snapped onto the Power Module in blocksize format and communicates with the CU320 or SIMOTION D Control Unit by means of a DRIVE-CLiQ link.

The CUA31 Control Unit Adapter's power is supplied by the Power Module via the PM-IF interface. If the CUA31 Control Unit Adapter needs to communicate when the Power Module is switched off, it must be supplied with 24 V DC from an external source.

Other DRIVE-CLiQ devices such as Sensor Modules or Terminal Modules can be connected to the CUA31 Control Unit Adapter.



Overview

The DRIVE-CLiQ DMC20 Hub Module is used to implement star-shaped distribution of a DRIVE-CLiQ line. Two DRIVE-CLiQ DMC20 Hub Modules can be connected in series (cascaded).

Design

The following are located on the DRIVE-CLiQ DMC20 Hub Module:
- 6 DRIVE-CLiQ sockets for connecting 5 DRIVE-CLiQ devices
- 1 connection for the electronics power supply via the 24 V DC power supply connector

The status of the DRIVE-CLiQ DMC20 Hub Module is indicated via a multi-color LED.

Technical data

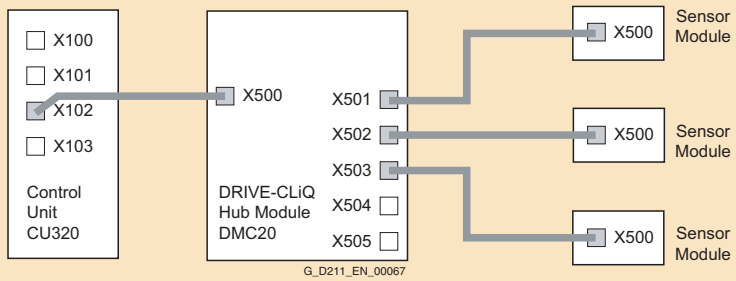
DMC20 DRIVE-CLiQ Hub Module	
Max. current requirement (at 24 V DC) without DRIVE-CLiQ supply	0.15 A
Max. connectable cross section	2.5 mm^2
Width	50 mm (1.97 in)
Height	150 mm (5.91 in)
Depth	111 mm (4.37 in)
Weight, approx.	0.8 kg (2 lb)

Selection and ordering data

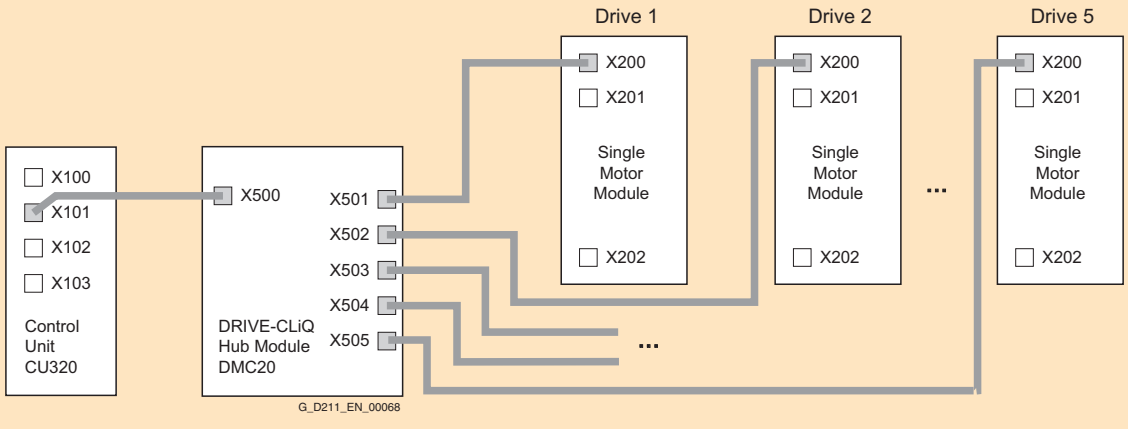
Description	Order No.
DRIVE-CLiQ DMC20 Hub Module (without DRIVE-CLiQ cable)	**6SL3055-0AA00-6AA0**

Integration

Signals from more than one encoder can be collected by the DRIVE-CLiQ DMC20 Hub Module and forwarded to the Control Unit on a single DRIVE-CLiQ cable.



The DRIVE-CLiQ DMC20 Hub Module allows individual DRIVE-CLiQ devices to be removed without interrupting the data exchange with the remaining devices in the DRIVE-CLiQ line.



TB30 Terminal Board

Overview

The TB30 Terminal Board supports the addition of digital inputs/digital outputs and analog inputs/analog outputs to the CU320 and SIMOTION D Control Units.

Design

The following are located on the TB30 Terminal Board:

- Power supply for digital inputs/digital outputs
- 4 digital inputs
- 4 digital outputs
- 2 analog inputs
- 2 analog outputs

The TB30 Terminal Board plugs into the option slot on a Control Unit.

A shield connection for the signal cable shield is located on the Control Unit.

Technical specifications

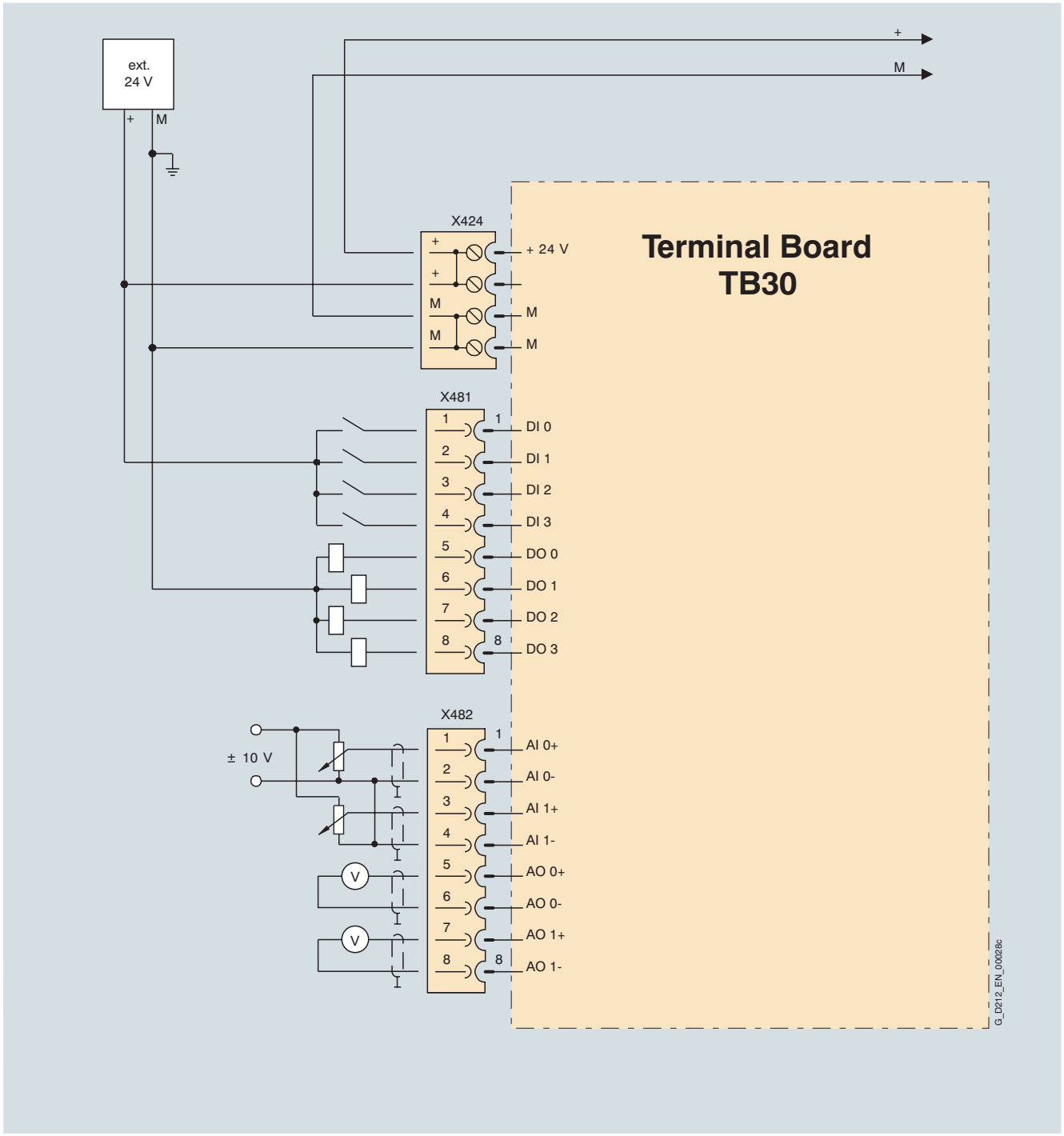
TB30 Terminal Board	
Max. current requirement (at 24 V DC) via CU320 Control Unit without taking account of digital outputs	0.05 A
Max. connectable cross section	2.5 mm^2
Max. fuse protection	20 A
Digital inputs	
• Voltage	– 3 V to + 30 V
• Low level (an open digital input is interpreted as "low")	– 3 V to + 5 V
• High level	15 V to 30 V
• Current consumption (at 24 V DC)	Type 10 mA
• Signal propagation delays for digital inputs [1]	L → H: approx. 50 µs H → L: approx. 100 µs
• Max. connectable cross section	0.5 mm^2
Digital outputs (continued-short-circuit-proof)	
• Voltage	24 V DC
• Max. load current per digital output	500 mA
• Max. connectable cross section	0.5 mm^2
Analog inputs (difference)	
• Voltage range (an open analog input is interpreted as 0 V)	– 10 V to + 10 V
• Internal resistance R_i	65 kOhm
• Resolution	13 bit, + sign
• Max. connectable cross section	0.5 mm^2
Analog outputs (continued-short-circuit-proof)	
• Voltage range	– 10 V to + 10 V
• Max. load current	– 3 mA to + 3 mA
• Resolution	11 bit, + sign
• Max. connectable cross section	0.5 mm^2
Power loss	< 3 W
Weight, approx.	0.1 kg (0.2 lb)
Approvals	cULus (File No.: E164110)

Selection and ordering data

Description	Order No.
TB30 Terminal Board	**6SL3055-0AA00-2TA0**

[1] The specified signal propagation delays refer to the hardware. The actual reaction time depends on the time slot in which the digital input is processed.

Integration



Connection example of TB30 Terminal Board

TM15 Terminal Module

Overview

The number of available digital inputs and outputs within a drive system can be expanded with the TM15 Terminal Module.

Design

The following are located on the TM15 Terminal Module:

- 24 bidirectional digital inputs/outputs (isolation in 3 groups with 8 channels each)
- 24 green status LEDs for indicating the logical signal status of the relevant terminal
- 2 x DRIVE-CLiQ sockets
- 1 connection for the electronics power supply via the 24 V DC power supply connector
- 1 PE (protective earth) connection

The TM15 Terminal Module can be snapped onto a TH 35 top-hat rail to EN 60715 (IEC 60715).

The signal cable shield can be connected to the TM15 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 TM15 Terminal Module is indicated via a multi-color LED.

Technical data

TM15 Terminal Module	
Max. current requirement (at 24 V DC) without load	0.15 A
Max. connectable cross section	2.5 mm^2
Max. fuse protection	20 A
Number of DRIVE-CLiQ sockets	2
I/O	
• Digital inputs/outputs	Channelwise parameterizable as DI or DO
• Number of digital inputs/outputs	24
• Isolation	Yes, in groups of 8
• Cables and connections	Plug-in screw-type terminals
• Max. connectable cross section	1.5 mm^2
Digital inputs	
• Voltage	– 30 V to + 30 V
• Low level (an open digital input is interpreted as "low")	– 30 V to + 5 V
• High level	15 V to 30 V
• Current consumption (at 24 V DC)	5 mA to 11 mA
• Signal propagation delays for digital inputs, typical [1]	L → H: 50 µs H → L: 100 µs
Digital outputs (continued-short-circuit-proof)	
• Voltage	24 V DC
• Max. load current per digital output	0.5 A
• Output delay (ohmic load) [1]	
- Typical	L → H: 50 µs H → L: 150 µs
- Maximum	L → H: 100 µs H → L: 225 µs
• Max. total current of outputs (per group)	
- Up to 60 °C (140° F)	2 A
- Up to 50 °C (122° F)	3 A
- Up to 40 °C (104° F)	4 A
Power loss	< 3 W
PE connection	On housing with M4 screw
Width	50 mm (1.97 in)
Height	150 mm (5.91 in)
Depth	111 mm (4.37 in)
Weight, approx.	0.86 kg (2 lb)
Approvals	cULus (File No.: E164110)

Selection and ordering data

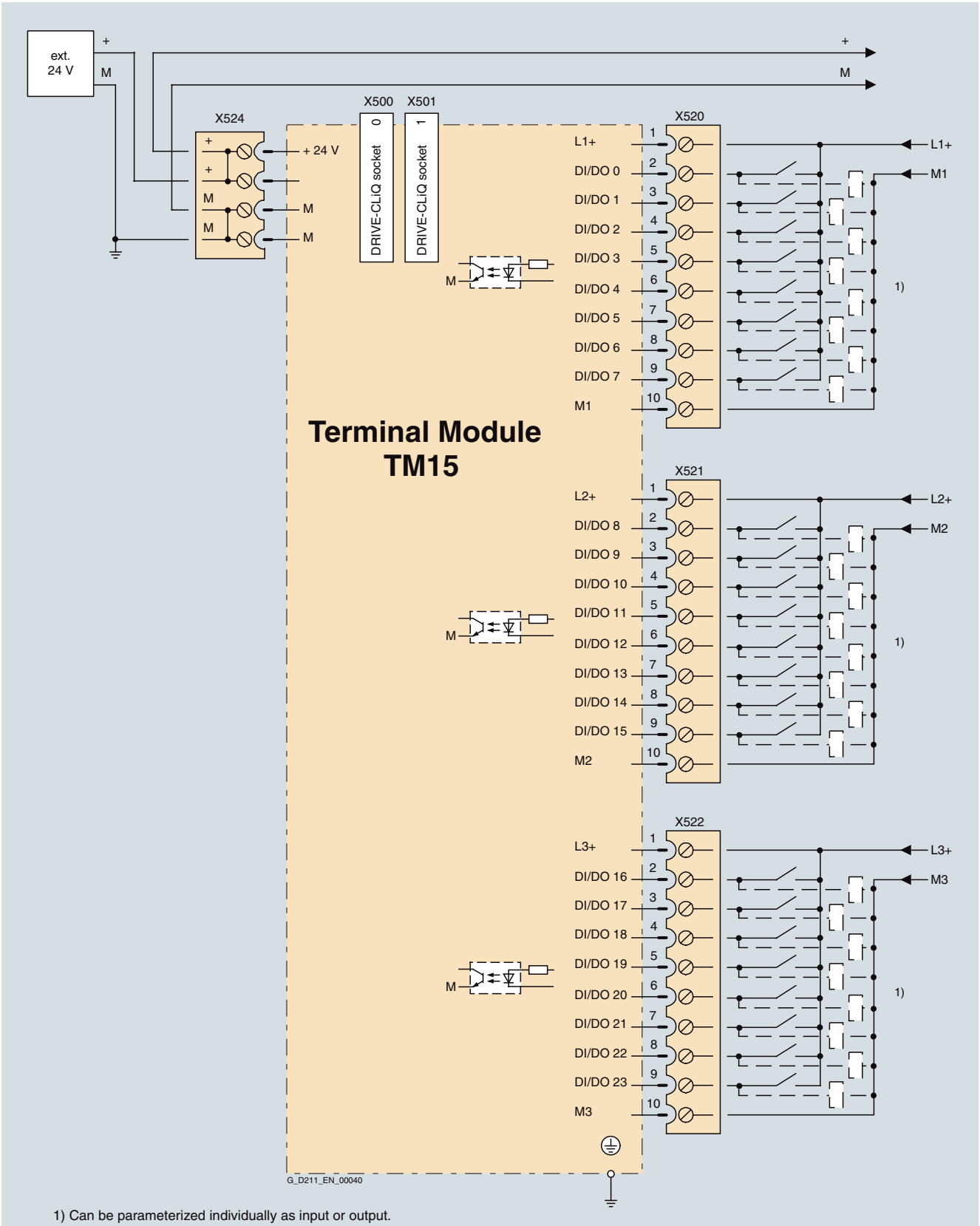
Description	Order No.
TM15 Terminal Module (without DRIVE-CLiQ cable)	**6SL3055-0AA00-3FA0**

[1] The specified signal propagation delays refer to the hardware. The actual reaction time depends on the time slot in which the digital input/output is processed.

2

Integration

The TM15 Terminal Module communicates with the CU320 Control Unit via DRIVE-CLiQ.



1) Can be parameterized individually as input or output.

TM31 Terminal Module

Overview

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

The TM31 Terminal Module also features relay outputs with changeover contact and a temperature sensor input.

Design

The following are located on the TM31 Terminal Module:

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

The TM31 Terminal Module can be snapped onto a TH 35 top-hat rail to EN 60715 (IEC 60715).

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

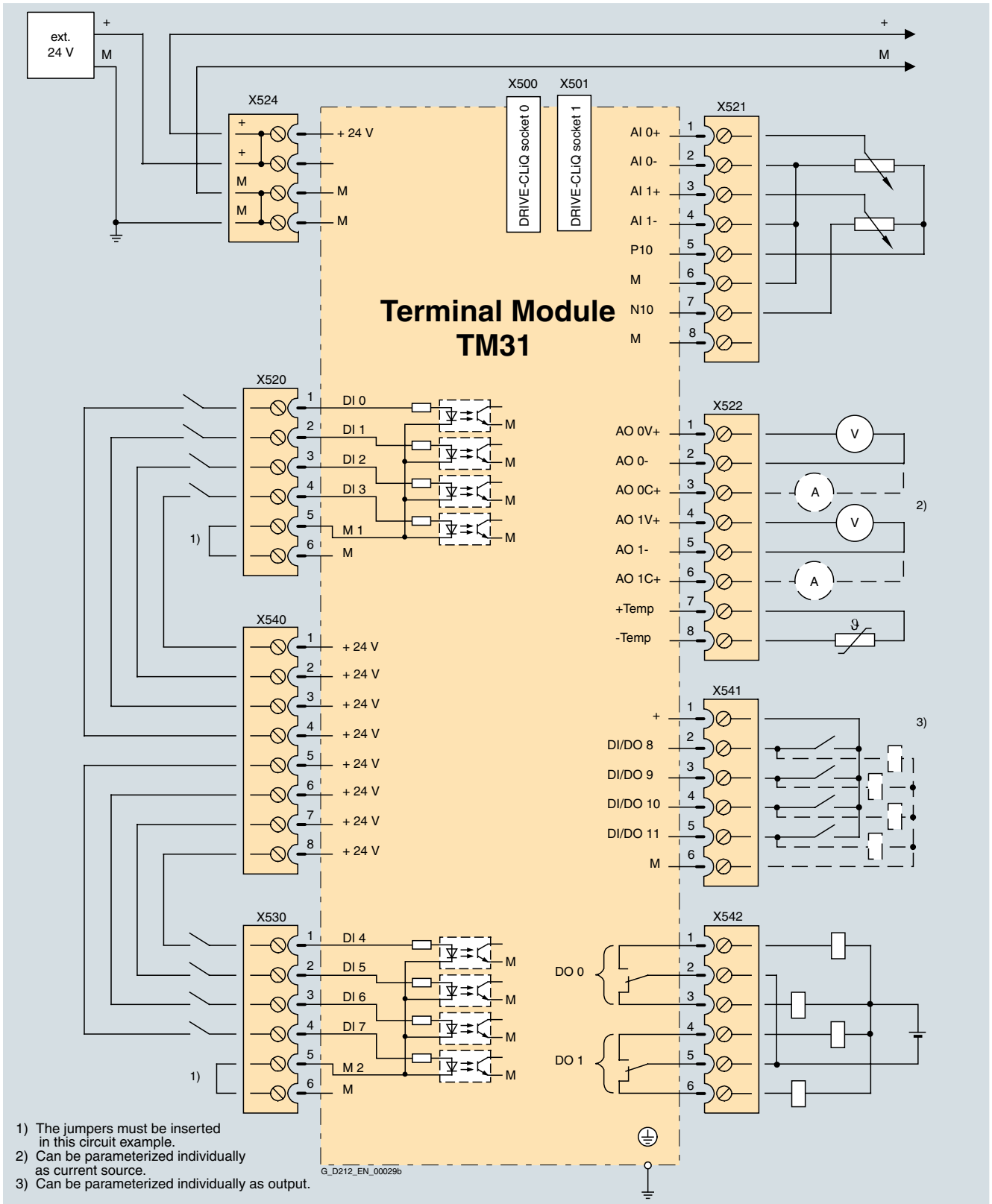
TM31 Terminal Module	
Max. current requirement (at 24 V DC), not taking into account digital outputs	0.2 A
Max. connectable cross section	2.5 mm^2
Max. fuse protection	20 A
Digital inputs	
• Voltage	– 3 V to + 30 V
• Low level (an open digital input is interpreted as "low")	– 3 V to + 5 V
• High level	15 V to 30 V
• Current consumption (at 24 V DC)	Type 10 mA
• Signal propagation delays for digital inputs [1]	L → H: approx. 50 µs H → L: approx. 100 µs
• Max. connectable cross section	1.5 mm^2
Digital outputs (continued-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 kOhm
• 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 ohm
- Resolution	11 bit, + sign
• Max. connectable cross section	1.5 mm^2
Analog outputs (continued-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 ohms for outputs in the range – 20 mA to + 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 (1.97 in)
Height	150 mm (5.91 in)
Depth	111 mm (4.37 in)
Weight, approx.	0.87 kg (2 lb)
Approvals	cULus (File No.: 164110)

[1] The specified signal propagation delays refer to the hardware. The actual reaction time depends on the time slot in which the digital input is processed.

2

Integration

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



Connection example of TM31 Terminal Module

TM41 Terminal Module

Overview

The TM41 Terminal Module supplies TTL signals which simulate an incremental encoder, e.g. to a higher-level control. The encoder interface (incremental encoder simulation) can be linked to an encoder signal from the Control Unit, e.g. incremental encoder sin/cos, by parameter assignment.

The TM41 Terminal Module increases the number of digital inputs/outputs and analog inputs that are available in the drive system.

Design

The following are located on the TM41 Terminal Module:

- 4 bidirectional digital inputs/outputs
- 4 digital inputs (with electrical isolation)
- 1 analog input
- 1 interface for simulation of TTL incremental encoder (RS422)
- 1 LED for signaling zero mark detection for encoder interface
- 2 DRIVE-CLiQ sockets
- 1 connection for the 24 V DC supply to digital outputs
- 1 connection for the electronics power supply via the 24 V DC power supply connector
- 1 PE (protective earth) connection

The TM41 Terminal Module can be snapped onto a TH 35 top-hat rail to EN 60715 (IEC 60715).

The signal cable shield can be connected to the TM41 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 TM41 Terminal Module is indicated via a multi-color LED.

An LED next to the interface for TTL pulse encoder simulation is illuminated as soon as a zero mark is detected.

Selection and ordering data

Description	Order No.
TM41 Terminal Module (without DRIVE-CLiQ cable)	**6SL3055-0AA00-3PA0**

Technical data

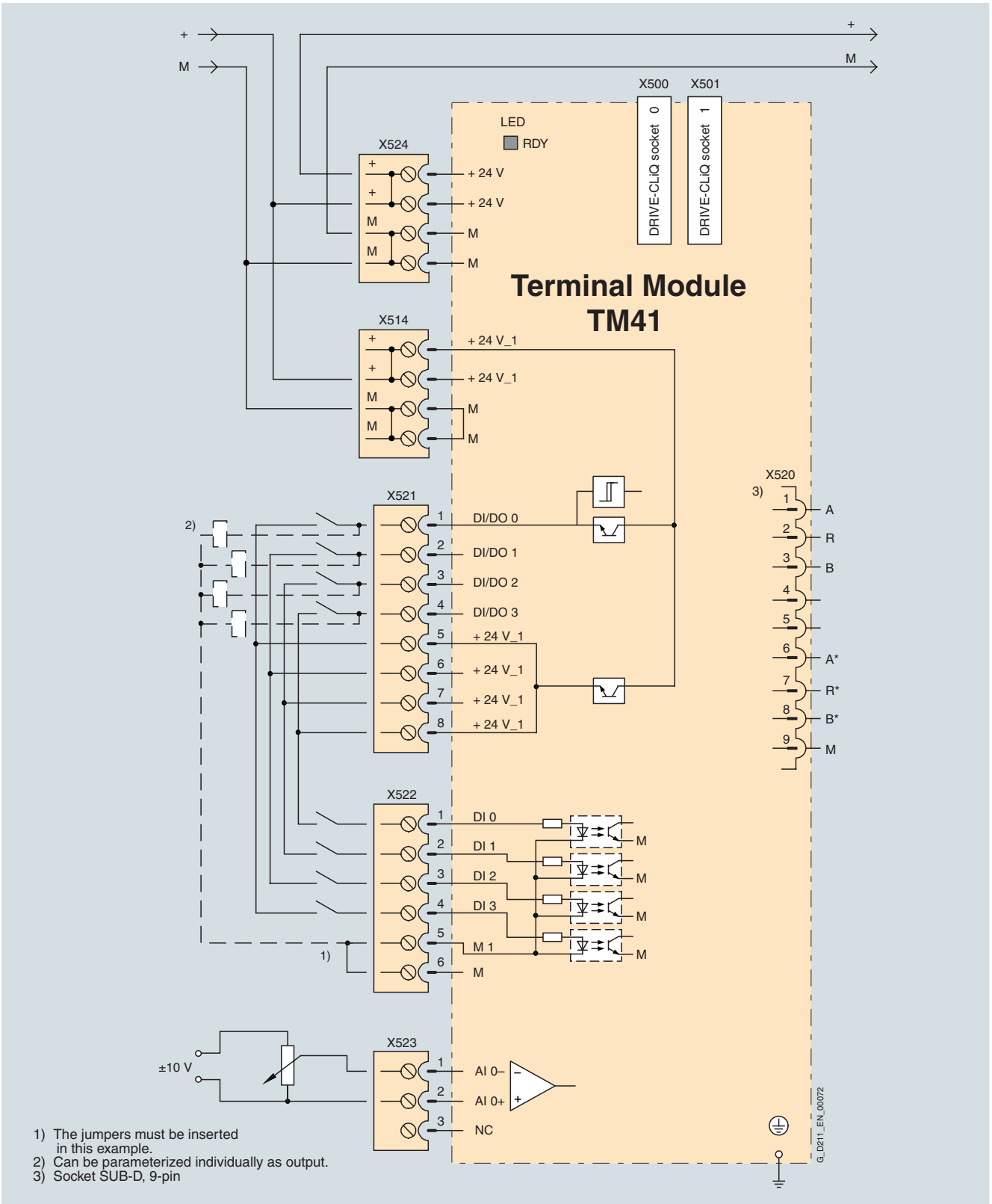
TM41 Terminal Module	
Current requirement (X524 at 24 V DC) without DRIVE-CLiQ supply or digital outputs (X514)	0.2 A
Max. connectable cross section	2.5 mm^2
Max. fuse protection	20 A
I/O	
• Digital inputs/outputs	Individually parameterizable as DI or DO
• Number of digital inputs/outputs	4
• Number of digital input/outputs (with electrical isolation)	4
• Cables and connections	Plug-in screw-type terminals
• Max. connectable cross section	1.5 mm^2
Digital inputs	
• Voltage	– 3 V to + 30 V (digital inputs without electrical isolation) – 30 V to + 30 V (digital inputs with electrical isolation)
• Low level (an open digital input is interpreted as "low")	– 3 V to + 5 V (digital inputs without electrical isolation) – 30 V to + 5 V (digital inputs with electrical isolation)
• High level	15 V to 30 V
• Current consumption (at 24 V DC), typ.	< 9 mA
• Signal propagation delays for digital inputs, max. [1]	L → H: 3 ms H → L: 3 ms
Digital outputs (continued-short-circuit-proof)	
• Voltage	24 V DC
• Max. load current per digital output	0.5 A
• Output delay (ohmic load) [1]	
- Typical	L → H: 50 µs H → L: 75 µs
- Maximum	L → H: 100 µs H → L: 150 µs
Analog input (difference)	
• Voltage range	– 10 V to + 10 V
• Internal resistance	≥ 40 kOhm
• Resolution	13 bit, + sign
Pulse encoder emulation	
• Level	TTL (RS422), A+, A-, B+, B-, zero track N+, N-
• Limit frequency $f_{max.}$	256 kHz
• Ratio Encoder pulses : encoder emulation	1 : 1 with incremental encoder sin/cos and TTL/HTL (resolver evaluation in preparation)
PE connection	On housing with M4 screw
Width	50 mm (1.97 in)
Height	150 mm (5.91 in)
Depth	111 mm (4.37 in)
Weight, approx.	0.85 kg (2 lb)
Approvals	cULus (File No.: E164110)

[1] The specified signal propagation delays refer to the hardware. The actual reaction time depends on the time slot in which the digital input/output is processed.

2

Integration

The TM41 Terminal Module communicates with a CU310, CU320 or SIMOTION D Control Unit via DRIVE-CLiQ.



1) The jumpers must be inserted in this example.
2) Can be parameterized individually as output.
3) Socket SUB-D, 9-pin

Connection example of TM41 Terminal Module

VSM10 Voltage Sensing Module

Overview

The VSM10 Voltage Sensing Module can detect the exact line voltage characteristic and supports fault-free operation of Line Modules when power supply conditions are unfavorable, e.g. with severe voltage fluctuations or short-time interruptions.

The VSM10 Voltage Sensing Module is integrated in chassis format Active Interface Modules. It can be used optionally with all booksize format Active Line Modules and 16 kW or 36 kW Smart Line Modules.

Design

The VSM10 Voltage Sensing Module has the following interfaces:

- 1 connection for direct line voltage detection up to 690 V
- 1 connection for line voltage detection using voltage transformers, maximum voltage 100 V
- 2 analog inputs
- 1 temperature sensor input (KTY84-130 or PTC)
- 1 DRIVE-CLiQ socket
- 1 connection for the electronics power supply via the 24 V DC power supply connector
- 1 PE (protective earth) connection

The VSM10 Voltage Sensing Module can be snapped onto a TH 35 top-hat rail to EN 60715 (IEC 60715).

The status of the VSM10 Voltage Sensing Module is indicated by a two-color LED.

Technical data

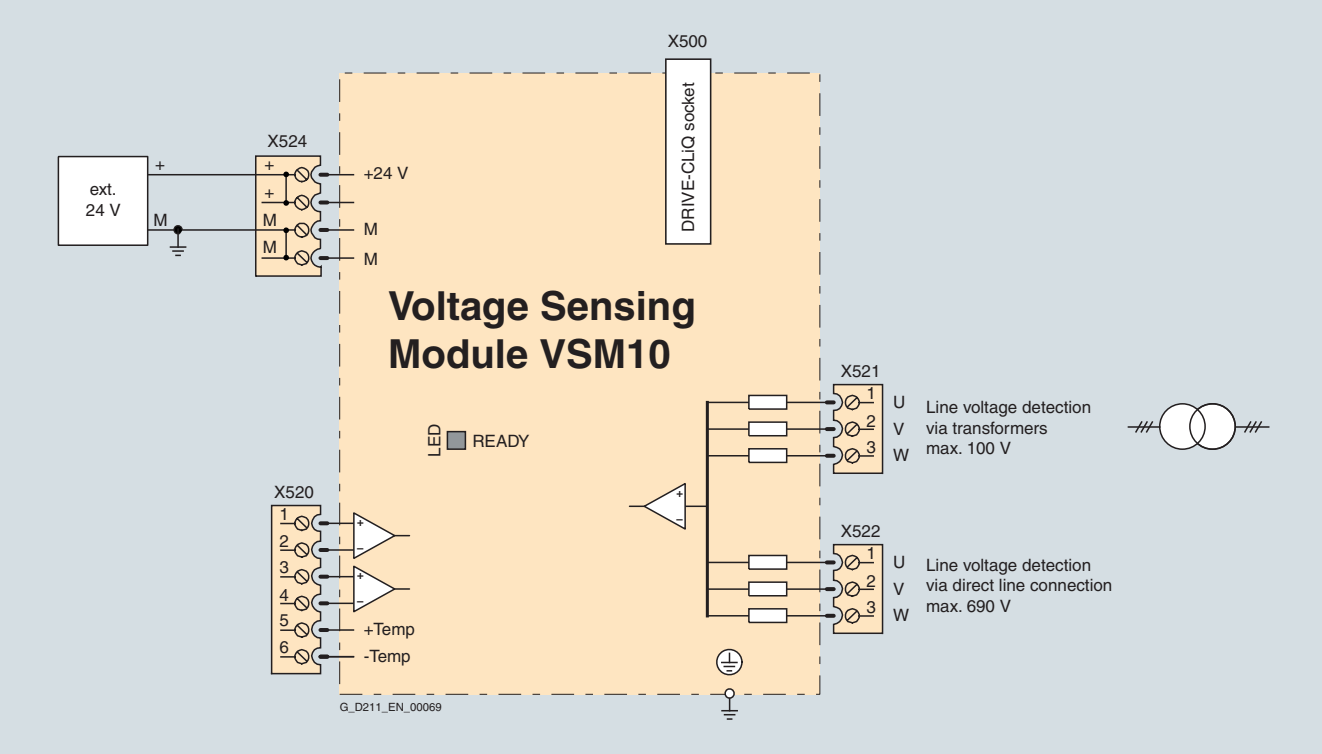
VSM10 Voltage Sensing Module	
Max. current requirement (at 24 V DC)	0.15 A
Max. connectable cross section	2.5 mm^2
Power loss, approx.	7.2 W
PE connection	On housing with M4 screw
Width	50 mm (1.97 in)
Height	150 mm (5.91 in)
Depth	111 mm (4.37 in)
Weight, approx.	1.0 kg (2 lb)
Approvals	cULus (File No.: E164110)

Selection and ordering data

Description	Order No.
VSM10 Voltage Sensing Module (without DRIVE-CLiQ cable)	**6SL3053-0AA00-3AA0**

Integration

The VSM10 Voltage Sensing Module communicates with the CU320 or SIMOTION D Control Unit via DRIVE-CLiQ.



Connection example of VSM10 Voltage Sensing Module

Brake Relay/Safe Brake Relay

Overview

Brake Relay and Safe Brake Relay

The Brake Relay in conjunction with Power Modules in blocksize format can be used to control a motor brake.

In the case of the Safe Brake Relay, the brake is controlled in accordance with EN 954-1 safety class 3 and IEC 61508 SIL2 (available soon).

Design

The Brake Relay has the following interfaces:

- 1 switch contact (NO contact) to control the motor brake solenoid
- 1 connection for the cable harness (CTRL) to the Power Module in blocksize format

The Safe Brake Relay has the following interfaces:

- 1 two-channel transistor output stage to control the motor brake solenoid
- 1 connection for the cable harness (CTRL) to the Power Module in blocksize format
- 1 connection for the 24 V DC power supply

The connection between the 24 V DC supply and the Safe Brake Relay must be kept as short as possible.

The Brake Relay or Safe Brake Relay can be installed below the Power Module on the shield connection plate.

The supplied Brake Relay and Safe Brake Relay includes the cable harness (CTRL) for connection with the Power Module.

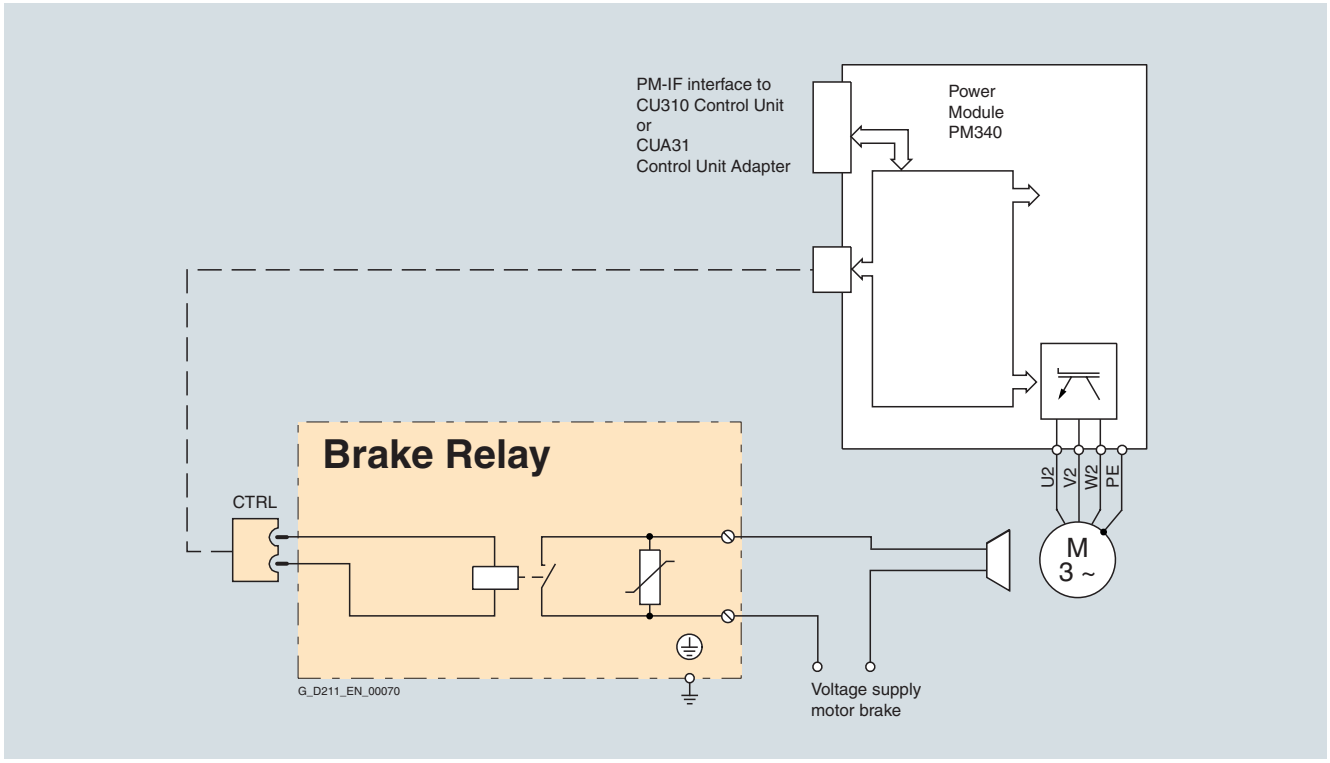
Technical data

	Brake Relay	Safe Brake Relay
Switching capability of the NO contact	Max. 240 V AC/12 A 30 V DC/2 A	–
Power supply	–	20.4 V to 28.8 V DC Recommended rated supply voltage 26 V DC (to compensate for voltage drop in feeder cable to 24 V DC motor brake solenoid)
Max. permissible current requirement of the motor brake	–	2 A
Max. current requirement (at 24 V DC)	–	0.05 A + the current requirement of motor brake
Max. connectable cross section	2.5 mm^2	2.5 mm^2
Width	69 mm (2.72)	69 mm (2.72)
Height	67.5 mm (2.66)	63 mm (2.66)
Depth	33 mm (1.3)	33 mm (1.3)
Weight, approx.	0.17 kg (0.4 lb)	0.17 kg (0.4 lb)

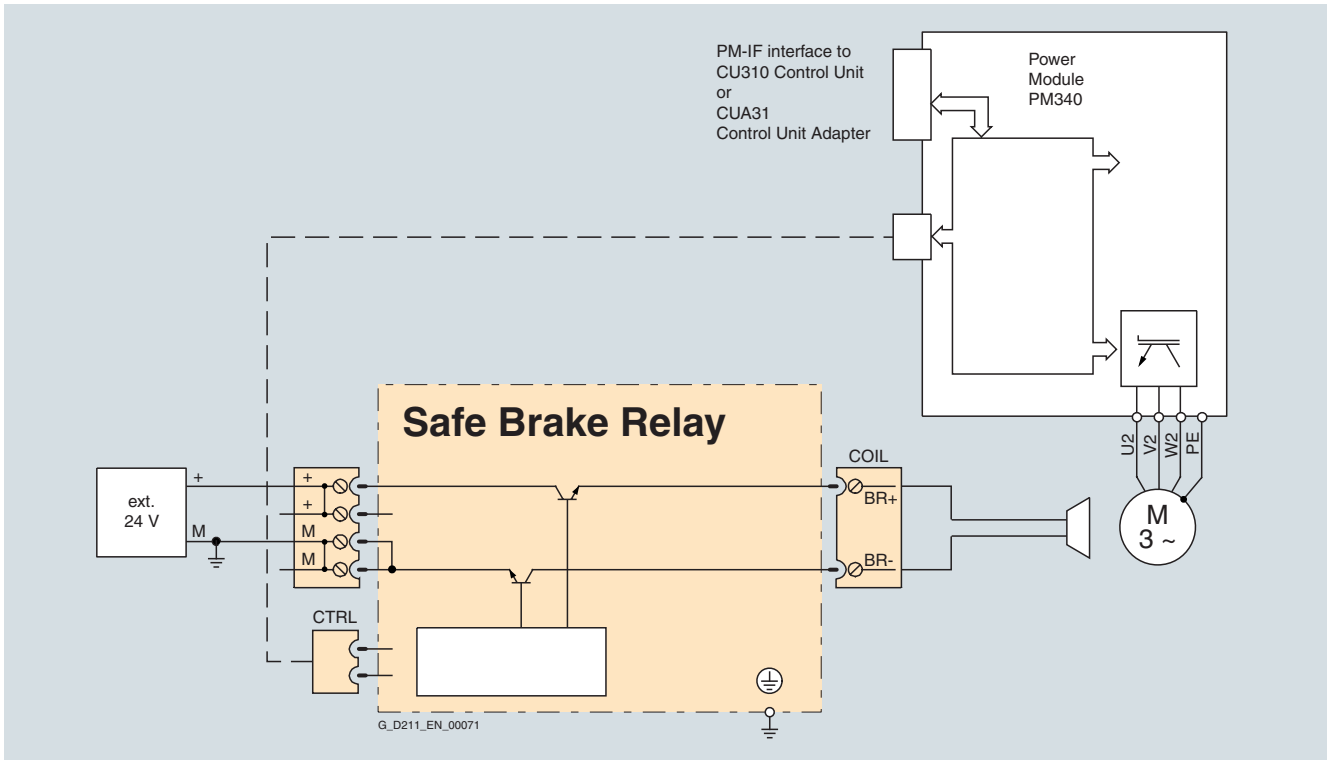
Selection and ordering data

Description	Order No.
Brake Relay (including cable harness for connection to PM340 Power Module)	**6SL3252-0BB00-0AA0**
Safe Brake Relay (including cable harness for connection to PM340 Power Module)	**6SL3252-0BB01-0AA0**

Integration



Connection example of Brake Relay



Connection example of Safe Brake Relay

The 24 V DC solenoid of the motor brake is directly connected to the Safe Brake Relay. External overvoltage limiters are not required.