6.2 DRIVE-CLiQ Hub Module DMC20

6.2.1 Description

The DRIVE-CLiQ Hub Module DMC20 is an expansion module for snapping on to a standard mounting rail acc. to EN 60715. It is used to distribute a DRIVE-CLiQ line with a star-type topology. With the DMC20, an axis grouping can be expanded with 5 DRIVE-CLiQ sockets for additional subgroups.

The component is especially suitable for applications which require DRIVE-CLiQ nodes to be removed in groups, without interrupting the DRIVE-CLiQ line and, therefore, the data exchange process.

⚠ WARNING

Risk of fire through overheating if there are insufficient ventilation clearances

Insufficient ventilation clearances lead to overheating with associated risk to persons as a result of smoke and fire. This can also result in more downtimes and a reduced service life for the Hub Module.

- For this reason, it is imperative that you maintain the 50 mm clearances above and below the Hub Module.

6.2.2 Interface description

6.2.2.1 Overview

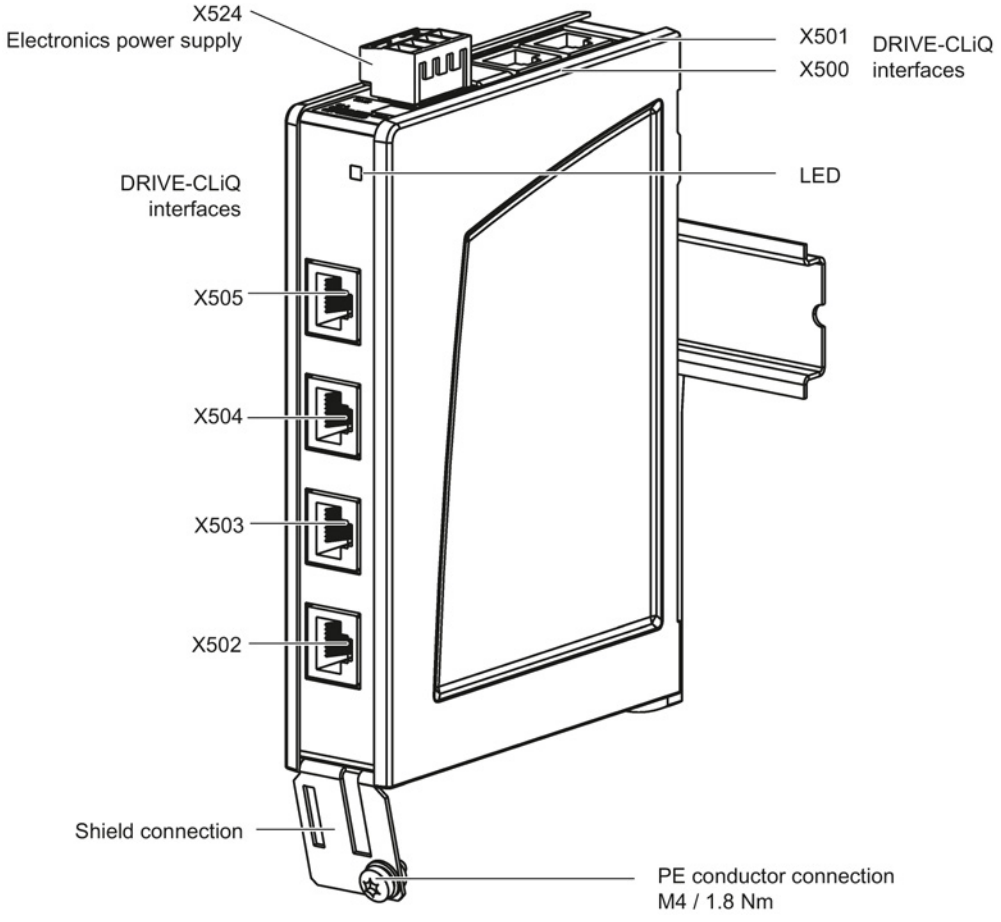
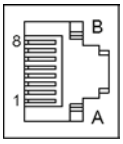


Figure 6-1 Interface overview of the DMC20

6.2.2.2 X500-X505 DRIVE-CLiQ interfaces

Table 6- 1 X500-X505: DRIVE-CLiQ interfaces

	Pin	Signal name	Technical data
	1	TXP	Transmit data +
	2	TXN	Transmit data -
	3	RXP	Receive data +
	4	Reserved, do not use	
	5	Reserved, do not use	
	6	RXN	Receive data -
	7	Reserved, do not use	
	8	Reserved, do not use	
	A	+ (24 V)	Power supply
	B	M (0 V)	Electronics ground
Connector type	DRIVE-CLiQ socket		

The blanking covers for the DRIVE-CLiQ interfaces are included in the scope of delivery.

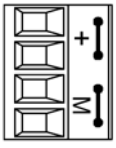
Blanking covers (50 x) Article No.: 6SL3066-4CA00-0AA0

Note

Only MOTION-CONNECT DRIVE-CLiQ cables may be used to establish connections. The maximum length of MOTION-CONNECT 500 is 100 m and for MOTION-CONNECT 800PLUS cables, 75 m.

6.2.2.3 X524 Electronics power supply

Table 6- 2 X524: Electronics power supply

	Terminal	Designation	Technical data
	+	Electronics power supply	Voltage: 24 V DC (20.4 ... 28.8 V) Current consumption: max. 2.4 A Max. current through the jumper in the connector: 20 A (15 A according to UL/CSA)
	+	Electronics power supply	
	M	Electronics ground	
	M	Electronics ground	
Type: Screw terminal 2 (Page 336)			

The maximum cable length that can be connected is 30 m.

Note

The two "+" or "M" terminals are jumpered in the connector. This ensures that the supply voltage is looped through.

The current consumption increases by the value for the DRIVE-CLiQ participants.

6.2.3 Meaning of the LED

Table 6- 3 Description of the LEDs on the DRIVE-CLiQ Hub Module DMC20

LED	Color	Status	Description, cause	Remedy
READY	–	Off	The electronics power supply is missing or outside the permissible tolerance range.	–
	Green	Continuous light	The component is ready for operation. Cyclic DRIVE-CLiQ communication is taking place.	–
	Orange	Continuous light	DRIVE-CLiQ communication is being established.	–
	Red	Continuous light	This component has at least one fault. **Note:** LED is controlled irrespective of the corresponding messages being reconfigured.	Remove and acknowledge the fault.
	Green/red	Flashing light 0.5 Hz	Firmware is being downloaded.	–
		Flashing light 2 Hz	Firmware download is complete. The system waits for POWER ON.	Carry out a POWER ON.
	Green/ orange or Red/ orange	Flashing light	Component recognition via LED is activated[1]. **Note:** Both options depend on the LED status when component recognition is activated.	–

[1] The parameters for activating component recognition using LEDs can be taken from the following reference: Reference: /LH1/ SINAMICS S120/S150 List Manual

Cause and rectification of faults

Additional information about the cause and resolving faults can be taken from the following references:

- Reference:/LH1/SINAMICS S120/S150 List Manual
- Reference: /IH1/ SINAMICS S120 Commissioning Manual

6.2.4 Dimension drawing

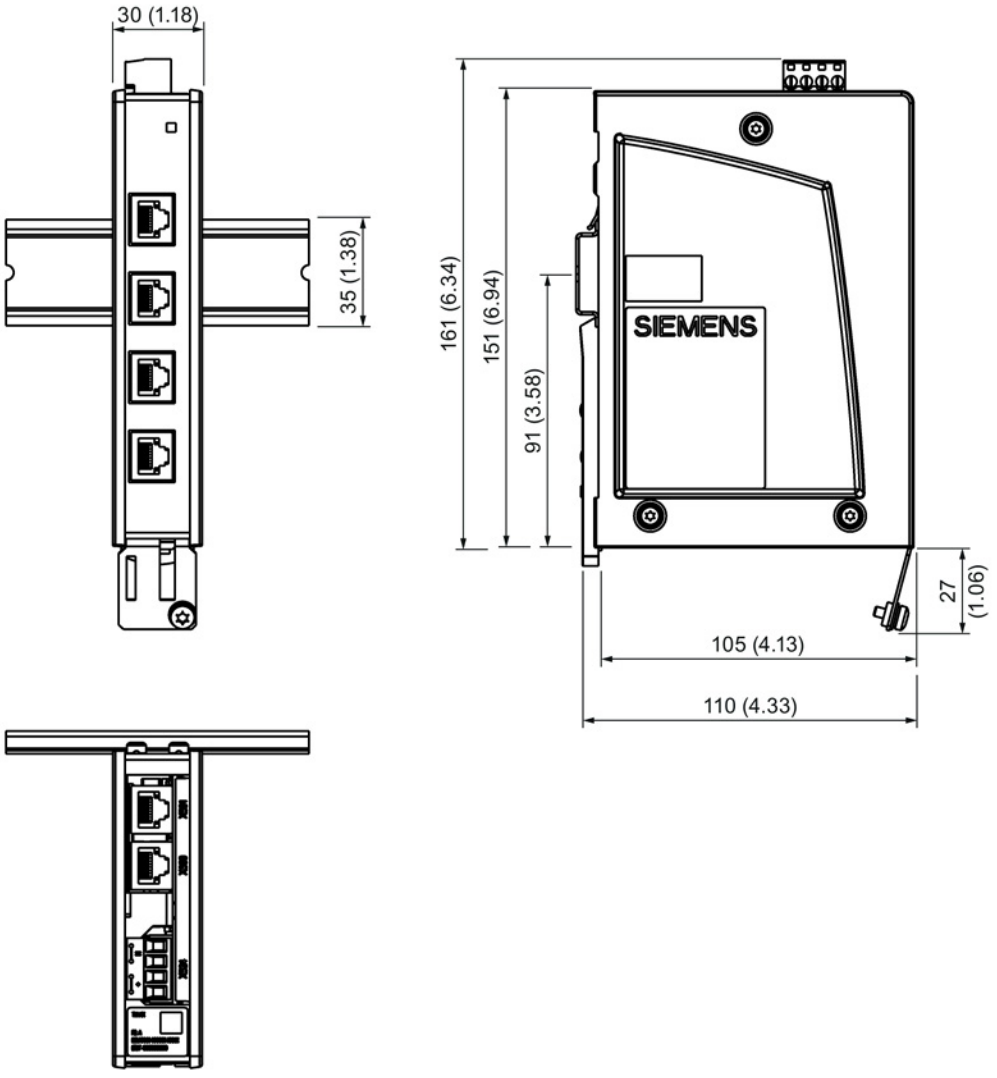


Figure 6-2 Dimension drawing of the DRIVE-CLiQ Hub Module DMC20, all data in mm and (inches)

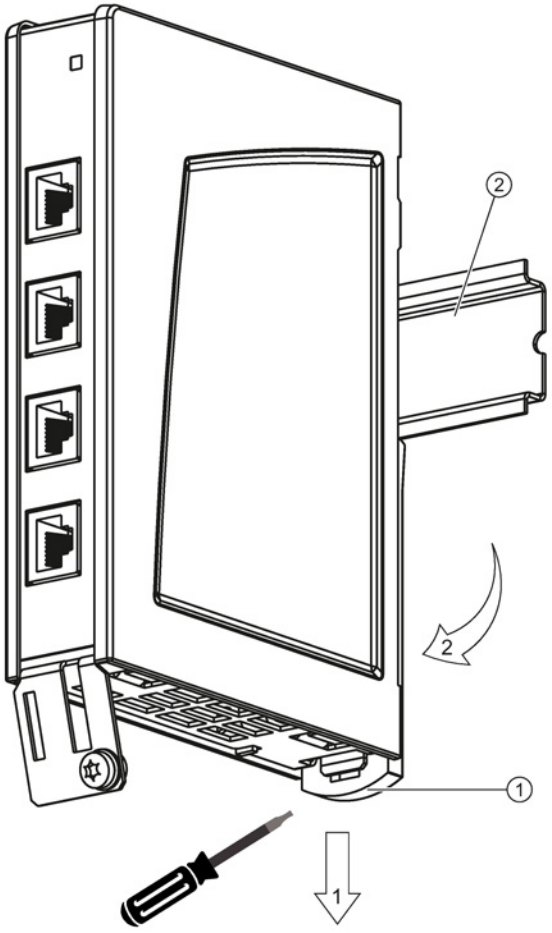
6.2.5 Installation

Installation

1. Tilt the component backwards slightly and attach it to the DIN rail using the hooks.
2. Swivel the component onto the DIN rail until you hear the mounting slide at the rear latch into position.
3. Slide the components along the mounting rail to either the left or right up to their final position.

Removal

1. First shift the mounting slide downwards at the lug to release the interlocking with the mounting rail.
2. Swivel the component to the front and withdraw it upwards from the DIN rail.

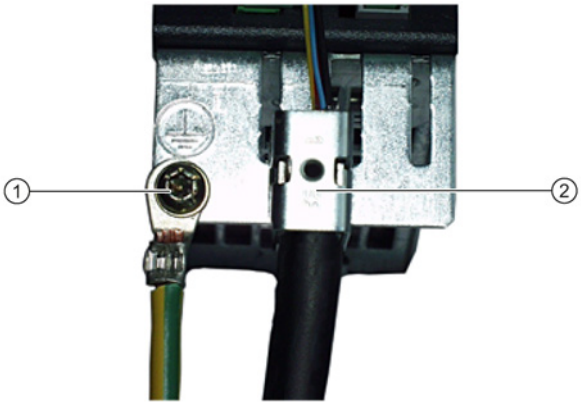


① Mounting slide
② Mounting rail

Figure 6-3 Removing from a DIN mounting rail

6.2.6 Protective conductor connection and shield support

The following diagram shows a typical Weidmüller shield connection clamp for the shield supports.



① Protective conductor connection M4 / 1.8 Nm
② Shield connection terminal, Weidmüller, type: KLBÜ CO1, Article No.: 1753311001

Figure 6-4 Shield support and protective conductor connection

NOTICE
Damage or faulty operation due to incorrect shielding or inadmissible cable lengths If the correct shielding procedures or the permissible cable lengths are not observed, it can cause damage or the machine may malfunction. • Only use shielded cables. • Do not exceed the cable lengths stated in the technical data.

6.2.7 Technical data

Table 6- 4 Technical data of the DMC20

6SL3055-0AA00-6AA1	Unit	Value
Electronics power supply		
Voltage	V_{DC}	24 V DC (20.4 ... 28.8)
Current (without DRIVE-CLiQ node)	A_{DC}	0.15
Maximum cable length	m	30
PE/ground connection	At the housing with M4/1.8 Nm screw	
Weight	kg	0.36