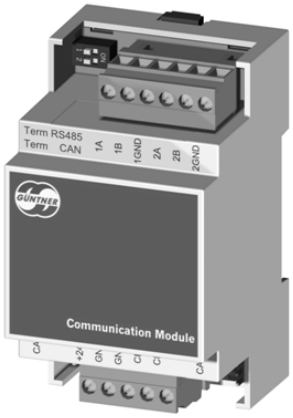
Data sheet GCM MOD xxx Rail.1/.2
Communications module Modbus



ERP no. 5204182	GCM MOD GMM Rail.1
ERP no. 5204182.2	GCM MOD GMM Rail.2
ERP no. 5206138	GCM MOD GHMspray Rail.1
ERP no. 5206139	GCM MOD GHMpad Rail.1
ERP no. 5206139.2	GCM MOD GHMpad Rail.2
ERP no. 5206759	GCM MOD GHMpump Rail.2

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Contents

1 GCM MOD xxx Rail.1 / GCM MOD xxx Rail.2

1.1 Functional description

The GCM MOD xxx Rail.1 / GCM MOD xxx Rail.2 communication module is used to connect a Güntner control unit to external communication systems. It facilitates reading out data as well as external control via an RS485 interface. The protocol used is Modbus RTU.

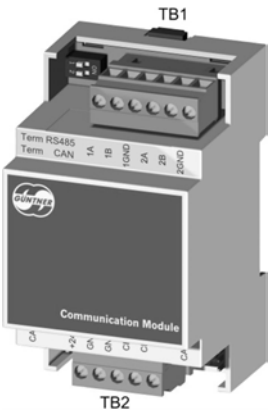
The following different Modbus modules are available:

GCM MOD GMM Rail.1 / GCM MOD GMM Rail.2:	Modbus module for Güntner Motor Management (GMM EC, GMM sincon, GMM step and GMM phase-cut)
GCM MOD GHMspray Rail.1:	Modbus module for Güntner Hydro Management GHM spray
GCM MOD GHMpad Rail.1 / GCM MOD GHMpad Rail.2:	Modbus module for Güntner Hydro Management GHM pad
GCM MOD GHMpump Rail.2:	Modbus module for Güntner Hydro Management GHM pump

Both the information transmitted via the bus interface and the protocol used are described in detail in the relevant interface specification of the controller. The RS485 interface is galvanically isolated.

1.2 Connections

In addition to the RS 485 connection (Modbus RTU), a proprietary CAN bus connection is also available. Only units approved by Güntner may be connected to the CAN bus.



Upper row of connections		
	Name	**Description**
	Term RS485	DIP switch for Modbus bus termination (120Ω)
	Term CAN	DIP switch for CAN bus termination (120Ω)
TB1(1)	1A	Signal A / data + of Modbus interface
	1B	Signal B / data – of Modbus interface
	1GND	Common / GND reference potential of the Modbus interface
	2A	Signal A / data + of Modbus interface
	2B	Signal B / data – of Modbus interface
	2GND	Common / GND reference potential of the Modbus interface

Lower row of connections		
	Name	**Description**
	CAN	CAN bus plug including power supply (2) (3)
TB2	+24V	Voltage +24V
	GND	Ground / reference potential of the CAN interface
	GND	Ground / reference potential of the CAN interface
	CH	CAN high signal (2)
	CL	CAN low signal (2)
	CAN	CAN bus plug including power supply (2) (3)

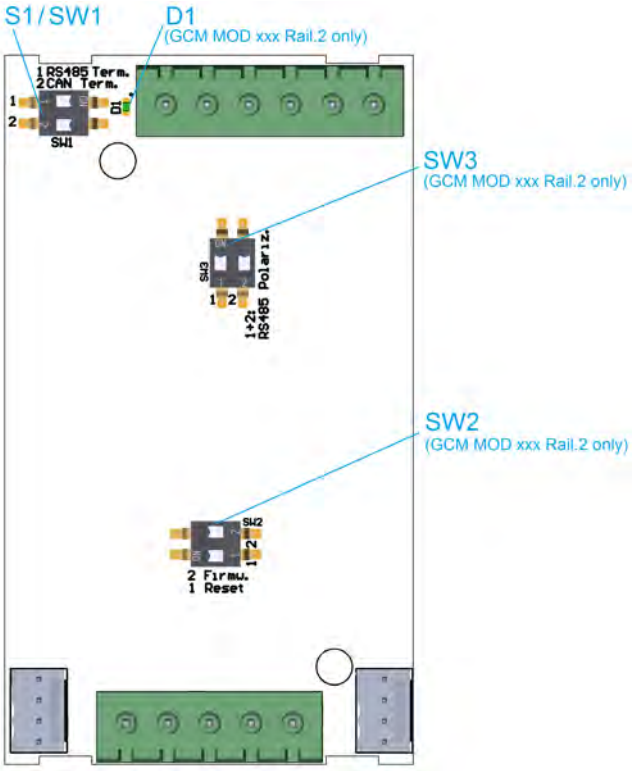
TB: Terminal block

(1) Terminals 1A + 2A, 1B + 2B as well as 1GND + 2GND are each switched in parallel and thus facilitate connection in the case of through-wiring of the Modbus cabling.

(2) Only equipment approved by Güntner may be connected to this bus.

(3) If this cable is used there is no need for an additional external +24V power supply

1.3 Components



LED		
Designator	State	Description
D1 *	on	Module in operational state, no active RS485 communication
	flashing	Module in operational state, exchange of data packets via RS485 Bus
	off	No supply voltage or module not in operational state

Slide Switches		
Designator	Name	Description
S1/SW1	1 RS485 Term.	DIP switch 1: RS485 bus termination (120 Ω)
	2 CAN Term.	DIP switch 2: CAN bus termination (120 Ω)
SW2 *	1 Reset	DIP switch 1: Reset Controller (Default = OFF)
	2 Firmware	DIP switch 2: Firmware Update Controller (Default = OFF)
SW3 *	RS485 Polarization	DIP switch 1: Bus-Polarization Data + (Default = OFF)
	RS485 Polarization	DIP switch 2: Bus-Polarization Data - (Default = OFF)

** only available at GCM MOD xx Rail.2*

1.4 Electrical properties of

	Min	Type	Max	Unit
DC power supply	20	24	30	V
Current consumption		80(1)/50(2)	250	mA
RS485 interface				
Termination (can be switched in)		120		Ω
Insulation voltage galvanic separation			1,000	Vrms
Data rate	1.2	9.6	115.2	kbit/s
Withstand voltage A/B	-18		+18	V
CAN interface				
Termination (can be switched in)		120		Ω
Galvanic separation		Not available		
Data rate		125		kbit/s
Dielectric strength CH/CL	-24		+24	V

(1) - GCM MOD xxx Rail.1
(2) - GCM MOD xxx Rail.2

1.5 Installation / Operating conditions

•The module is designed for mounting on a top-hat rail.

•The shielding of bus lines must be earthed.

•Suitable shielding and routing measures must be taken to ensure that mains cables and motor cables do not cause any interference in signal and control lines.

•Bus cables must be connected via shielded cables.

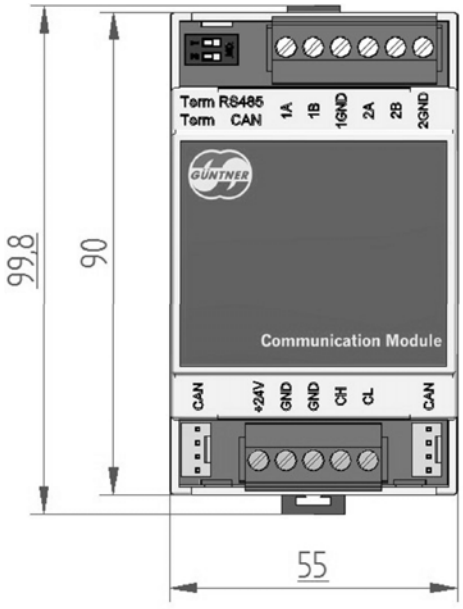
•In the case of Modbus and CAN bus wiring, make sure that termination resistance is only set for the **first** and **last** unit in the network. Termination should be switched **off**for all other units.

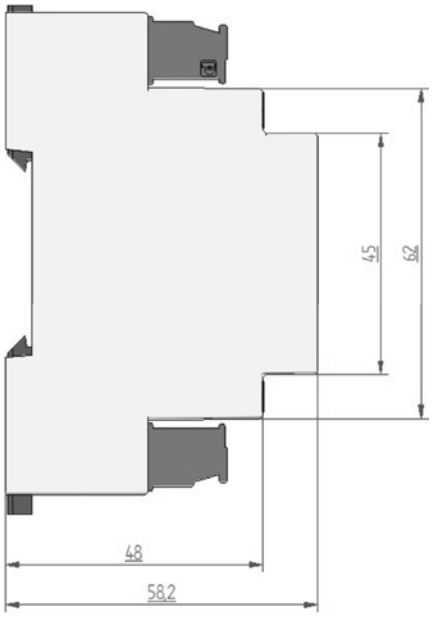
•Ambient temperature: -20°C .. +70°C

•Storage temperature: -25°C .. +50°C, dry

•Protection class: IP 20

1.6 Dimensions and weight





All values in mm

Weight:
approx. 115 g (GCM MOD xxx Rail.1)
approx. 97 g (GCM MOD xxx Rail.2)