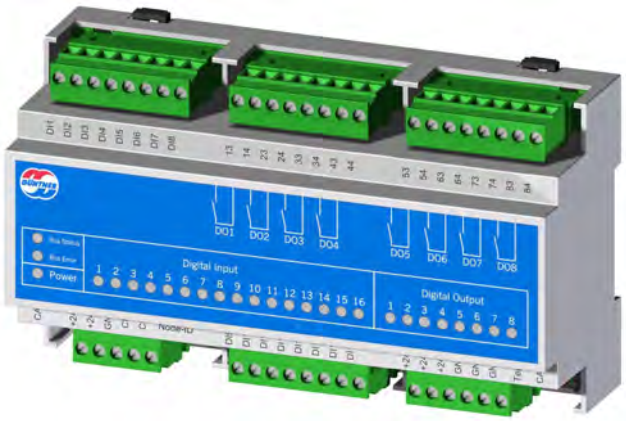
Data sheet GIOD.1
Input/output module with CAN bus



ERP no.: 5204183

www.guentner.de

Contents

1 GIOD.1

1.1 Functional description

The GIOD.1 is controlled via CAN by a Güntner controller. The GIOD.1 possesses 16 digital inputs with a rated voltage of 24V DC and 8 relay outputs. The bus address of the GIOD.1 (node ID) is set up using a rotary encoding switch. The address 0xF may not be used for this.

To ensure the bus connection between the controller and one or more other units works correctly, bus termination must be activated at the beginning and end of the bus connection by setting the units' DIP switches labelled "Term". They must be placed in the "ON" position to activate the termination. Units that are in the middle of the bus and therefore permitted to transfer the bus signal may not have bus termination activated.

The status of the inputs and outputs is indicated by LEDs on the front of the casing. A lit LED against the digital inputs signifies that the corresponding input is receiving a "high" signal. A lit LED against the relay outputs signifies that the closer contact is closed. A power LED signifies that the internal electronic components are receiving power.
There is also a status display for the bus connection that involves two LEDs.

Bus status LED	Description
On	The GIOD.1 is in operation
Flashing 50:50	The GIOD.1 can be taken into operation
Brief single flash	The GIOD.1 is currently stopped
Three flashes with error LED	The software is attempting to overrun the stack on the GIOD.1
Alternate flashing with error LED	A “layer setting service” is being performed on the GIOD.1
Synchronous fast flashing with error LED	Reset to default has been selected on the rotary coding switch (setting “F”)

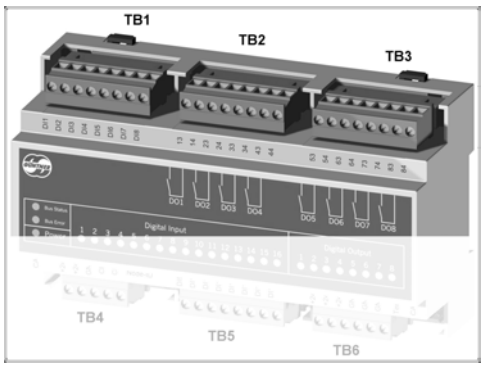
Bus error LED	Description
Off	Unit is operating correctly
On	There is a static fault on the CAN bus
Brief single flash	The warning limit has been reached in the CAN controller
Double flashing	A fault was detected in the lifeguard, nodeguard or heart-beat
Three flashes with the bus status LED	The software is attempting to overrun the stack on the GIOD.1
Alternate flashing with the bus status LED	A “layer setting service” is being performed on the GIOD.1
Synchronous fast flashing with error LED	Reset to default has been selected on the rotary coding switch (setting “F”)

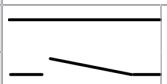
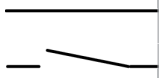
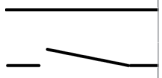
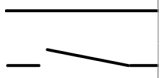
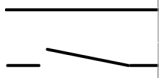
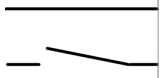
Power LED	Description
On	The internal electronics are receiving power
Off	The unit is not powered or is reverse-poled

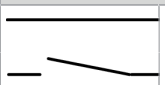
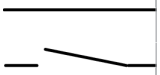
Digital input LED	Description
On	The digital input detects a “High” signal
Off	The digital input detects a “Low” signal

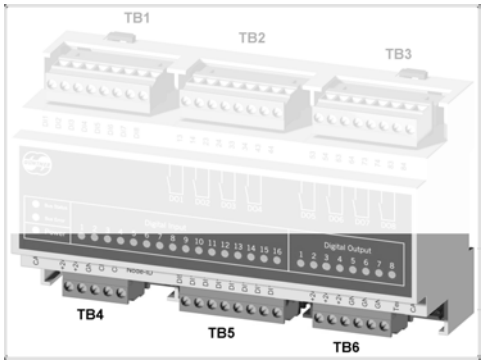
Digital output LED	Description
On	The digital output is closed
Off	The digital output is open

1.2 Connections



	Upper row of connections	
	Name	**Description**
TB1	DI1	Digital input 1
	DI2	Digital input 2
	DI3	Digital input 3
	DI4	Digital input 4
	DI5	Digital input 5
	DI6	Digital input 6
	DI7	Digital input 7
	DI8	Digital input 8
TB2	13	 Relay contact 1 closer
	14	
	23	 Relay contact 2 closer
	24	
	33	 Relay contact 3 closer
	34	
	43	 Relay contact 4 closer
	44	
TB3	53	 Relay contact 5 closer
	54	
	63	 Relay contact 6 closer
	64	

	Upper row of connections		
	Name	Description	
	73		Relay contact 7 closer
	74		
	83		Relay contact 8 closer
	84		



	Lower row of connections	
	Name	**Description**
	CAN	CAN bus plug including power supply
TB4	+24V	External feed for power supply
	+24V	
	GND	Contact ground for external power feed
	CH	CAN high signal
	CL	CAN low signal
	Node ID	Rotary switch for setting the bus node address 0: Address 0 1: Address 1 - - E: Address 14 F: Reset CANopen parameters to their default values
TB5	DI9	Digital input 9
	DI10	Digital input 10
	DI11	Digital input 11
	DI12	Digital input 12
	DI13	Digital input 13
	DI14	Digital input 14
	DI15	Digital input 15
	DI16	Digital input 16
TB6	+24V	Voltage +24V
	+24V	
	+24V	
	GND	Ground
	GND	

	Lower row of connections	
	Name	**Description**
	GND	
	Term	DIP switch for CAN bus termination (120Ω)
	CAN	CAN bus plug including power supply

1.3 Electrical properties of

	Min	Type	Max	Unit
Power supply DC	21	24	30	V
Current consumption		100	250	mA
Digital inputs				
High level	15	24	30	V
Low level	-3	0	5	V
Relay outputs				
Power supply DC		24	30	V
Voltage AC			250	V
Current resistive load 24V DC/250V AC			1	A
Current inductive load 24V DC/250V AC			1	A
Switch cycles, mechanical	$1*10^6$			Switching cycles
Switch cycles, electrical	$1*10^5$			Switching cycles
CAN bus				
Dielectric strength	-24		24	V
Transmission rate		125		kbit/s

1.4 Installation / Operating conditions

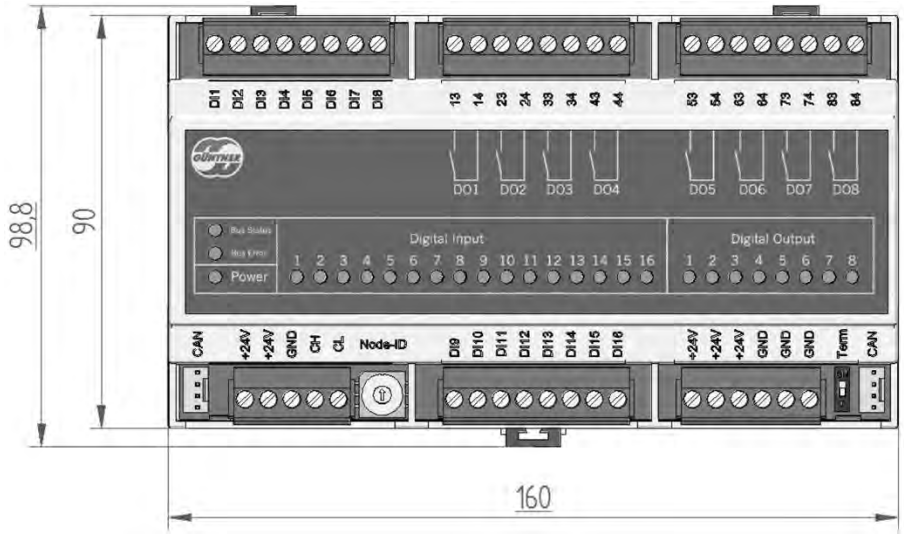
- The module is designed for mounting on a top-hat rail.
- Bus lines that are not wired via the supplied ribbon cable must be shielded.
- The shielding of bus lines must be earthed at one end only.
- Suitable shielding and routing measures must be taken to ensure that mains cables and motor cables do not give rise to any interference in signal and control lines.
- Temperature:

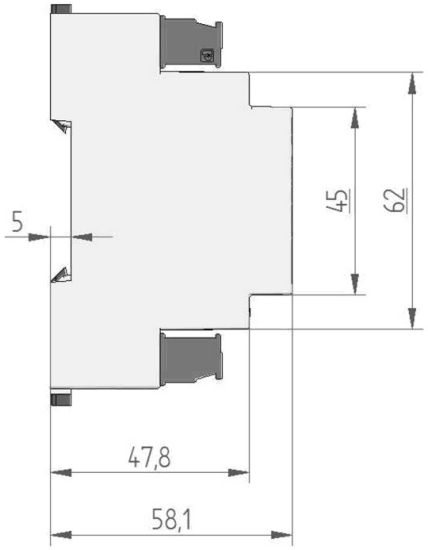
Storage location,
Transport -20°C .. +70°C
Operation: -20°C .. +65°C

- Protection rating: IP 20

1.5 Dimensions / Weight

You will find the casing dimensions below. All dimensions are given in millimetres.





Dimensions of casing of GIOD.1

Weight:
ca. 340g