GEFRAN

GFX4-CAN
CANopen MODULE

CE

Main characteristics

- *CANopen Slave- Modbus RTU Master*
- *Network address from rotary switches*
- *Baud Rate: 10, 20, 50, 100, 125, 250, 500 (default), 800, 1000 kBit/s*
- *Internal installation*

PROFILE

The GFX4-CAN module can be installed inside GFX4/GFXTERMO4 products and expands communication by means of the CANopen protocol.
The module has two communication channels:
• the first channel is a serial port with Modbus RTU protocol, and lets you connect a maximum of four GFX4/GFXTERMO4 products including the product on which the module is installed, for a total of sixteen controlled zones (4x4);
• the second channel is a serial port with CANopen slave protocol, and lets you connect to a CANopen Master.
The node address is assigned by means of the two rotary switches (1...99) on the product that houses the module or by means of a software message.
The network Master (typically a PLC) recognizes the slave node by means of this address.
The slave node recognized by the Master consists of the GFX4/GFXTERMO4 that houses the module plus the GFX4/GFXTERMO4 products connected to the Modbus serial port.
*The expansion can be installed when the above-mentioned products are ordered or at a later date.*

TECHNICAL DATA

| CANopen port	
Protocol	CANopen (NMT slave)
Function	Connects GFX4/GFXTERMO4 to a CANopen Master device
Baud rate	10, 20, 50, 100, 125, 250, 500 (default), 800, 1000 kBit/s selected via: HW: set with rotary switches on the GFX4/GFXTERMO4 SW: Layer Setting Services (LSS), Layer Management (LMT)
Connector	9 pin D-type male
Address	HW: 1...99 set with rotary switches on the GFX4/GFXTERMO4 SW: Layer Setting Services (LSS), Layer Management (LMT)
EDS file	GFX4CAN.eds
Service Data Object (SDO)	1 Server, 0 Client
Process Data Object (PDO)	32 Tx - 32 Rx
Types (PDO)	Event driven, Event timer, Sync cyclic, Sync acyclic, Remote transmission request
Predefined messagges	Life/node guarding, Heartbeat, Emergency
Administrative messagge	Layer Setting Services (LSS), Layer Management (LMT)
CANopen version	DS301 v 3.0, DS301 v 4.0
Device Profile	DS404 v 1.2
Diagnostics	
Green "STATUS" LED	
ON	Device is in "OPERATIONAL" state
OFF	Device is in "INIT" state (temporary state at power-up) or fault
Flickering	Device in Configuration mode during LMT/LSS services. Switched on alternatively with RUN LED
Blinking	Device is in "PREOPERATIONAL" state
Single Flash	Device is in "PREPARED" (or "STOPPED") state
Double/Triple Flash	Not supported
Red "ERROR" LED	
ON	CAN controller is in Bus Off. No communication is possible
OFF	No error. The device functions correctly
Flickering	Device in "Configuration" mode during LMT/LSS services. Switched on alternatively with RUN LED
Blinking	Not supported
Single Flash	CAN controller error counter has reached "Warning" level
Double Flash	Error detected in NODE GUARDING protocol
Triple Flash	Not supported
Modbus Port	
Protocol	ModBus RTU (master) RS485 serial
Function	Connects GFX4/GFXTERMO4 to ModBus RTU network
Baud rate	19200
Connector	RJ10 4-4
General characteristics	
Dimensions	106x56x17mm (H x L x D)
Installation	Inside module
Weight	35g
Power supply	+24V, 1VA taken directly from GFX4/GFXTERMO4 module
Working/storage temperature	0...40°C/-20...70°C
Relative humidity	20...85% RH non-condensing
Ambient conditions of use	Internal use, altitude up to 2000m
Installation	Inside modules (see "INSTRUCTION AND WARNING" manual)
Approvals and certifications	See GFX4/GFXTERMO4 modules

ELECTRICAL CONNECTIONS

Connectors / LEDs

S5 male connector

S4 female connector

Red Led
Green Led
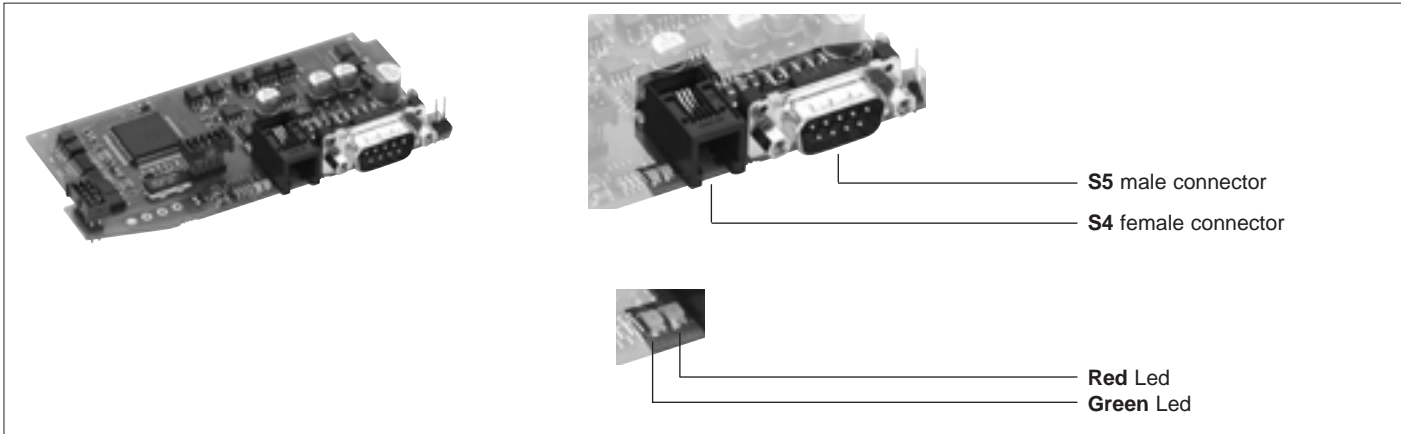
Connector S4 RJ10 4-4 pin	Nr. Pin	Name	Decription	Note
	1	GND1 (**)	-	**(**)** Connect the GND signal among Modbus devices with a line distance > 100 m.
	2	Rx/Tx+	Data reception/transmission (A)	
	3	Rx/Tx-	Data reception/transmission (B)	
	4	+V (reserved)	-	
Cable type: flat telephone cable for fin 4-4 conductor 28AWG				

Connector S5 D-SUB 9 pins female	Nr. Pin	Name	Decription	Note
	1	-	Reserved	Connect the terminal resistances as shown in the figure.
	2	CAN_L	CAN_L bus line (domination low)	
	3	CAN_GND	CAN Ground	
	4	-	Reserved	
	5	(CAN_SHLD)	Optional CAN Shield	
	6	(GND)	Optional Ground	
	7	CAN_H	CAN_H bus line (domination high)	
	8	-	Reserved	
	9	(CAN_V+)	Optional CAN external positive supply (dedicated for supply of transceiver and optocouplers, if galvanic isolation of the bus node applies)	
Cable type: Shielded 2 pairs 22/24AWG conforming to CANopen.				
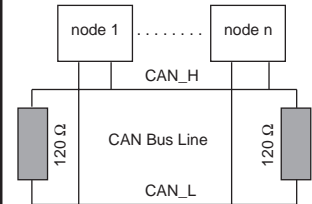
ORDER CODE

GFX4	CAN

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