

### Main characteristics

- Profibus DP Slave – Modbus RTU Master
- Network address from rotary switches
- Baud Rate autosynchronization
- Internal installation

### PROFILE

The GFX4-PROFI module can be installed inside GFX4/GFXTERMO4 products and expands communication by means of the PROFIBUS DP protocol.

The module has two communication channels:

- the first channel is a serial port with Modbus RTU protocol, and connects a maximum of four GFX4/GFXTERMO4 devices including the product on which the module is installed, for total of 16 controlled zones (4x4);
- the second channel is a serial port with PROFIBUS DP slave protocol, and lets you connect to a Profibus 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.

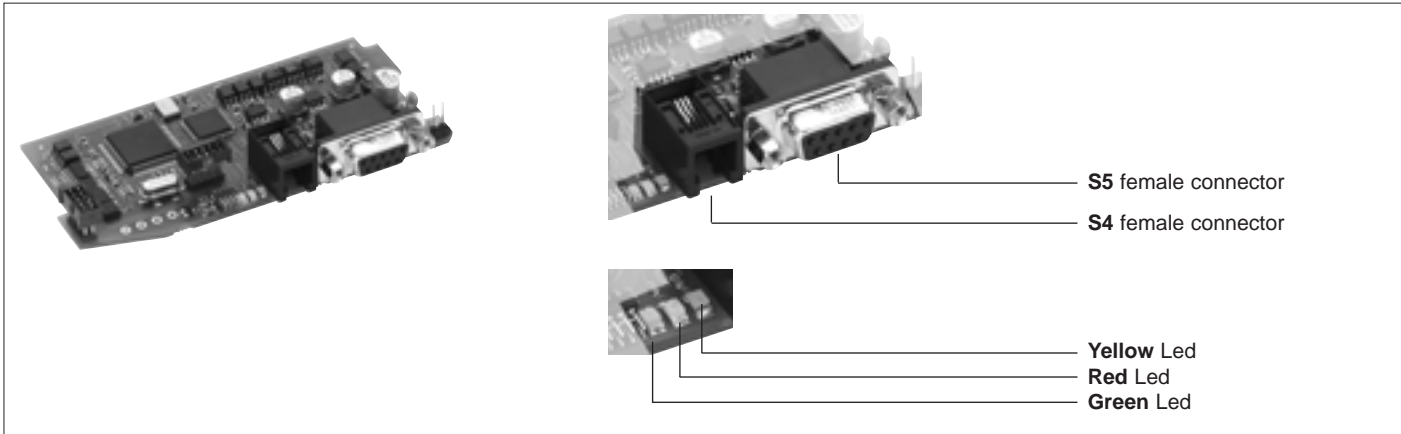
The expansion can be installed when the above-mentioned products are ordered or at a later date.

### TECHNICAL DATA

PROFIBUS port	
Protocol	Profibus DP V0 (slave)
Function	Connects GFX4/GFXTERMO4 to a Profibus DP Master device
Baud rate	Autosynchronization (9.6 ... 12000 kBit/s)
Connector	9 pin D-Type
Address	HW: 1...99 set with rotary switches on the GFX4/GFXTERMO4 SW: 1...124 by means of specific sw message
I/O dimensions	Input/Output: depends on configuration min. I/O: 47 bytes for 4 zone max. I/O: 167 bytes for 16 zone
Msg. supported	Data_Exchange, Slave_Diag, Set_Prm, Chk_Cfg, Get_Cfg, Global_Control, Set-Slave-Add
GSD file	GFX40720.gsd
Diagnostics	
GREEN led	
OFF	No communication with PROFIBUS Master
Flashing	1000msec = "AUTOMATIC BAUDRATE RESEARCH" state
"	250msec = "WAIT FOR PARAMETRIZATION" state
"	50msec = "WAIT FOR CONFIGURATION" state
ON	Steady = "DATA EXCHANGE" state
YELLOW led	
OFF	"DATA EXCHANGE" state
ON	Steady = other operative states
RED led	
OFF	No communication error
Flashing	1000msec = "State not possible" error
"	250msec = "DP_State not possible" error
"	50msec = "WD_State not possible" error
ON	Steady = board fault
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, 3VA max. 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 module (see "INSTRUCTION AND WARNING" manual)
Approvals and certifications	See GFX4/GFXTERMO4 modules

## ELECTRICAL CONNECTIONS

### Connectors / LEDs



Connector S4 RJ10 4-4 pin	Nr. Pin	Name	Description	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 male	Nr. Pin	Name	Description	Note
	1	SHIELD	EMC protection	Connect the terminal resistances as shown in the figure.
	2	M24V	Output voltage - 24V	
	3	RxD/TxD-P	Data reception/transmission (B)	
	4	n.c.	n.c.	
	5	DGND	Massa di Vp	
	6	VP	Positive power supply +5V	
	7	P24V	Output voltage +24V	
	8	RxD/TxD-N	Data reception/transmission (A)	
	9	n.c.	n.c.	

Cable type: Shielded 1 pair 22AWG conforming to PROFIBUS.

## ORDER CODE

GFX4

PROFI

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