

### Main characteristics

- Ethernet-IP slave- Modbus RTU Master
- Indirizzo IP Address configurable with DHCP/BOOTP or by fixed address
- Baud rate 10/100Mbit/s
- Auto-Negotiation
- Auto-Crossover
- Switch Ethernet
- Internal installation

### PROFILE

The GFX4-ETH1 module can be installed inside GFX4/GFXTERMO4 products and expands communication by means of the ETH/IP protocol.

The module has two communication channels:

- Ethernet (switch) 2 port
- Modbus Master: allows communication with a maximum of 20 Slave devices.

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

### Note:

The GFX4-ETH1 card **CANNOT** be inserted in GFX4 and GFXTERMO4 products equipped with the 4 auxiliary inputs option (mV/TC Aux).

### TECHNICAL DATA

| ETHERNET port               |   |
|-----------------------------|---|
| Protocol                    | Ethernet-IP slave                                       |
| Function                    | Connects GFX4/GFXTERMO4 to a Ethernet-IP Master device  |
| Baud rate                   | 10/100 Mbit/s automatic                                 |
| Connector                   | RJ45 CAT5 10/100 BaseT conforming                       |
| Address                     | SW: MAC Address, IP Address, ID Modbus                  |
| Msg. supported              | CIP Object 0x44<br>CIP Service 0x4B,4C,4D,4E,40,50      |
| Diagnostic                  | for every ETH port                                      |
| Green LED ON                | Packet activity   |
| Yellow LED ON               | Link integrity  |
| Modbus port                 |   |
| Protocol                    | ModBus RTU (master) serial RS485                        |
| Function                    | Connects GFX4/GFXTERMO4 to a ModBus RTU network         |
| Baud rate                   | 19200   |
| Connector                   | RJ10 4-4 N° (max 32 node without repeater)              |
| General characteristics     |   |
| Dimensions                  | 106x56x17mm (A x L x P)                                 |
| Installation                | Inside module   |
| Weight                      | 35g   |
| Power supply                | +24V, 3VA max. taken directly from GFX4/GFXTERMO4       |
| Working/storage temperature | 0...40°C/-20...70°C                                     |
| Relative humidity           | 20...85% UR non-condensing                              |
| Ambient conditions of use   | Internal use, altitude up to 2000m                      |
| Installation                | Inside module<br>(see "INSTRUCTION AND WARNING" manual) |
| Certifications              | See GFX4/GFXTERMO4 modules                              |

### ELECTRICAL CONNECTIONS

|  | <b>Connector J2</b><br>RJ10 4-4 pin | <table border="1"> <thead> <tr> <th>N°Pin</th> <th>Name</th> <th>Description</th> <th>Note</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GND1 (**)</td> <td>-</td> <td rowspan="4">(**) Connect the GND signal among Modbus devices with a line distance &gt; 100 m.</td> </tr> <tr> <td>2</td> <td>Rx/Tx+</td> <td>Data reception/transmission (A)</td> </tr> <tr> <td>3</td> <td>Rx/Tx-</td> <td>Data reception/transmission (B)</td> </tr> <tr> <td>4</td> <td>+V (riservato)</td> <td>-</td> </tr> </tbody> </table> <p><b>Cable type:</b> flat telephone cable for fin 4-4 conductor 28AWG</p> | N°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 (riservato) | -    |  |   |     |                  |   |      |  |   |      |  |                                    |
|--|-------------------------------------|---|--|------|-------------|------|---------------------|-----------|---|--|---------------------|--------|---------------------------------|------------------|--------|---------------------------------|---|----------------|------|--|---|-----|------------------|---|------|--|---|------|--|------------------------------------|
|  | N°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 (riservato)                      | -   |  |      |             |      |                     |           |   |  |                     |        |                                 |                  |        |                                 |   |                |      |  |   |     |                  |   |      |  |   |      |  |                                    |
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| N°Pin  | Name                                | Description   | Note   |      |             |      |                     |           |   |  |                     |        |                                 |                  |        |                                 |   |                |      |  |   |     |                  |   |      |  |   |      |  |                                    |
| 1  | TX+                                 | Data transmission +   |  |      |             |      |                     |           |   |  |                     |        |                                 |                  |        |                                 |   |                |      |  |   |     |                  |   |      |  |   |      |  |                                    |
| 2  | TX-                                 | Data transmission -   |  |      |             |      |                     |           |   |  |                     |        |                                 |                  |        |                                 |   |                |      |  |   |     |                  |   |      |  |   |      |  |                                    |
| 3  | RX+                                 | Data reception +  |  |      |             |      |                     |           |   |  |                     |        |                                 |                  |        |                                 |   |                |      |  |   |     |                  |   |      |  |   |      |  |                                    |
| 4  | n.c.                                |   |  |      |             |      |                     |           |   |  |                     |        |                                 |                  |        |                                 |   |                |      |  |   |     |                  |   |      |  |   |      |  |                                    |
| 5  | n.c.                                |   |  |      |             |      |                     |           |   |  |                     |        |                                 |                  |        |                                 |   |                |      |  |   |     |                  |   |      |  |   |      |  |                                    |
| 6  | RX-                                 | Data reception -  |  |      |             |      |                     |           |   |  |                     |        |                                 |                  |        |                                 |   |                |      |  |   |     |                  |   |      |  |   |      |  |                                    |
| 7  | n.c.                                |   |  |      |             |      |                     |           |   |  |                     |        |                                 |                  |        |                                 |   |                |      |  |   |     |                  |   |      |  |   |      |  |                                    |
| 8  | n.c.                                |   |  |      |             |      |                     |           |   |  |                     |        |                                 |                  |        |                                 |   |                |      |  |   |     |                  |   |      |  |   |      |  |                                    |

|    |              |               |
|----|--------------|---------------|
| H1 | Led LINK     | Port ETH0     |
| H2 | Led RX-TX    | Port ETH0     |
| H7 | Led RX-TX    | Port ETH1     |
| H8 | Led LINK     | Port ETH1     |
| H3 | Led FIELDBUS |               |
| H4 | Led ERROR    |               |
| H5 | Led STATUS   |               |
| J1 | Connector    | Port ETH0     |
| J3 | Connector    | Port ETH1     |
| J2 | Connector    | Modbus serial |

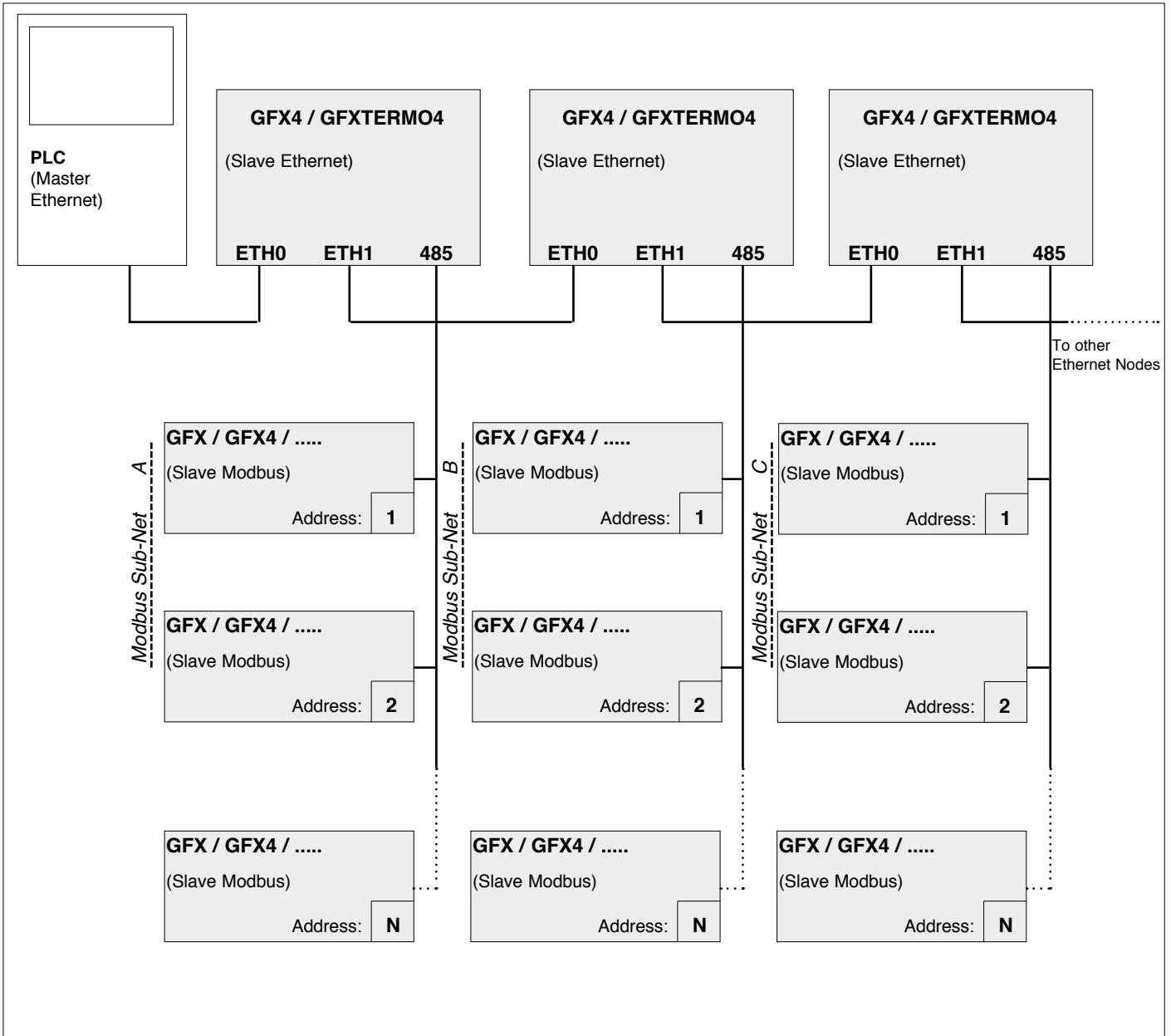
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**EXAMPLE OF CONNECTION**



**ORDER CODE**

|      |
|------|
| GFX4 |
|------|

|      |
|------|
| ETH1 |
|------|

|  |
|--|
|  |
|--|

|   |                 |
|---|-----------------|
| 0 | DHCP (*)        |
| 1 | IP Address (**) |

(\*\*) IP\_Address

Netmask

Gateway

(\*) At the product will be associated one Ethernet Address (MAC)