GS33910060800

Dupline® Profinet Gateway

Benefits

- Profinet gateway with the function as a slave
- Up to 7 master generators can be connected via the HS RS485 bus (side connector)
- All Dupline® signals from the master generators are available on Profinet
- Mini webserver for diagnostics of Profinet and Dupline® networks
- Integrated 2-port switch
- 2-DIN UWP housing
- 24-VDC power supply

Description

The GS33910060800 is a Profinet gateway with a built-in 2-port switch.

The module has no settings and works only in association with the master generator GS3390 0000 800.

By installing the GSD file in the PLC, the installer can design the functionallity of e.g. digital in/out, analink, mux BCD and Dupline® safe signals.

After installation and connection it is possible, by using the mini webserver, to perform tests and diagnostics on both Profinet and the Dupline® networks (up to 7 Dupline® networks)

Applications

Any application with the use of digital in/out, analink, MUX BCD, Dupline® Safe and Profinet

Main functions

- Gateway between Dupline® and Profinet

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Features

▶ **Power Supply**

Power supply	24 VDC +/- 20%
Overvoltage category	Overvoltage category II (IEC 60664-1, par. 4.3.3.2)
Rated impulse withstand voltage	500V (1,2/50µs) (IEC 60664-1, tab. F.1)
Rated operational power	2.8 W
Reverse-polarity protection	Yes
Connection	A1 (+) and A2 (-)
Power-ON delay	Typical 4 s
Power-OFF delay	≤ 1 s
Power supply to Ethernet bus	500 V impulse (1.2/50us) 500 V AC for 1 min

▶ **Communication Profinet**

Conformance Class B

- RT_Class 1
- UDP/IP-Comm
- LLDP-Frames
- Alarms
- SNMP-support
- LLDP-MIB

Performance Characteristics

- 100 Mbps, full duplex with auto negotiation enabled as default
- Real Time (RT) communication, 250 µs cycle time

Data

- Up to 128 subslots in total
- 1440 bytes of IO data in each direction, including status bytes

▶ **Environmental**

Degree of protection	Front	IP50
	Screw terminal	IP20
Pollution degree	2 (IEC 60664-1, par. 4.6.2)	
Operating temperature	-20°... +50°C (-4°... +122°F)	
Storage temperature	-50° ... +85°C (-58° ... +185°F)	
Humidity (not condensing)	20 ... 80% relative humidity	

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EMC

Immunity	EN61000-6-2
Emission	EN61000-6-3

Indication

LED description

Name	Colour	Behaviour
HS-BUS	Yellow	ON: Bus OK, OFF: Bus not OK
Error	Red	ON: Error detected, OFF: No error
Profinet Communication	Yellow	ON: Bus OK, OFF: Bus not OK, Flashing: when the PLC requests it
ETH1:RJ45 Link1	Green	ON: Cable connected, OFF: Cable disconnected
EHT1: RJ45 Activity1	Yellow	Flashing: communication
ETH2:RJ45 Link2	Green	ON: Cable connected, OFF: Cable disconnected
EHT2: RJ45 Activity2	Yellow	Flashing: communication
Power supply	Green	ON: Supply ON, OFF: Supply OFF

LED Profinet

LED status	Description	Comments (*)
OFF	Offline	No power, No connection with IO controller
ON	Online (RUN)	Connection with IO Controller established, IO Controller in RUN state
1 flash	Online (STOP)	Connection with IO Controller established, IO Controller in STOP state or IO data bad, IRT synchronization not finished
Blinking	Blink	Used by engineering tools to identify the node on the network

(*)Test sequences are performed on the network and module status LEDs during startup
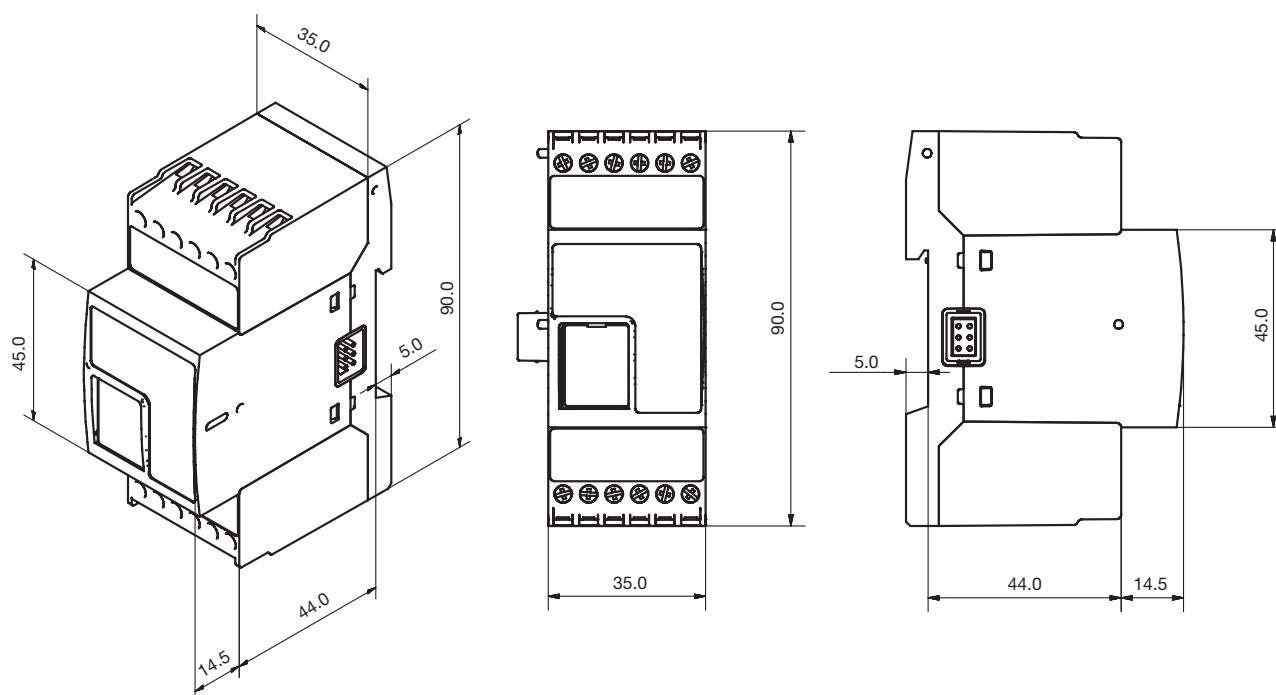
Error LED indication

LED status	Description	Comments (*)
ON	Fatal event	Major internal error
1 flash	Station name error	Station name not set
2 flashes	IP address error	IP address not set
3 flashes	Configuration error	Expected Identification differs from Real Identification

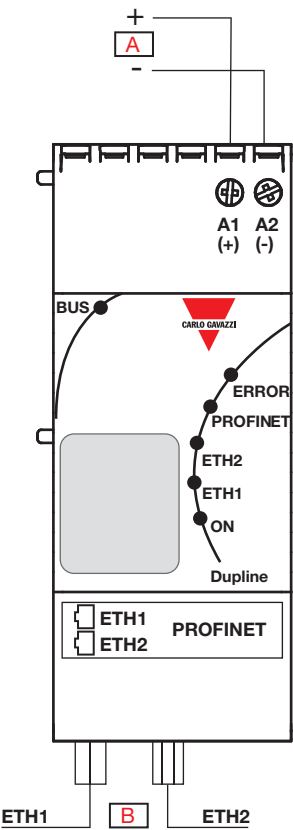(*)Test sequences are performed on the Network and module-status LEDs during startup

Mechanics

▶ **Housing**

Housing material	Noryl
Colour	Light grey
Dimensions (HxWxD)	90 x 35 x 58.5 mm
Weight	110 g

► Wiring

```
        +
     ┌─────┐
     │  A  │
     └─────┘
        -
```

A1   A2
(+)   (-)

BUS

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ERROR
PROFINET
ETH2
ETH1
ON

Dupline

ETH1   PROFINET
ETH2

ETH1   ┌───┐   ETH2
         │ B │
         └───┘

A	24-VDC Supply	B	Ethernet switch

► Connection

Terminal	2-screw type
Cable cross-section area	max. 1.5 mm^2
Tightening torque	0.4 Nm / 0.8 Nm

Example of an installation with two MCG networks
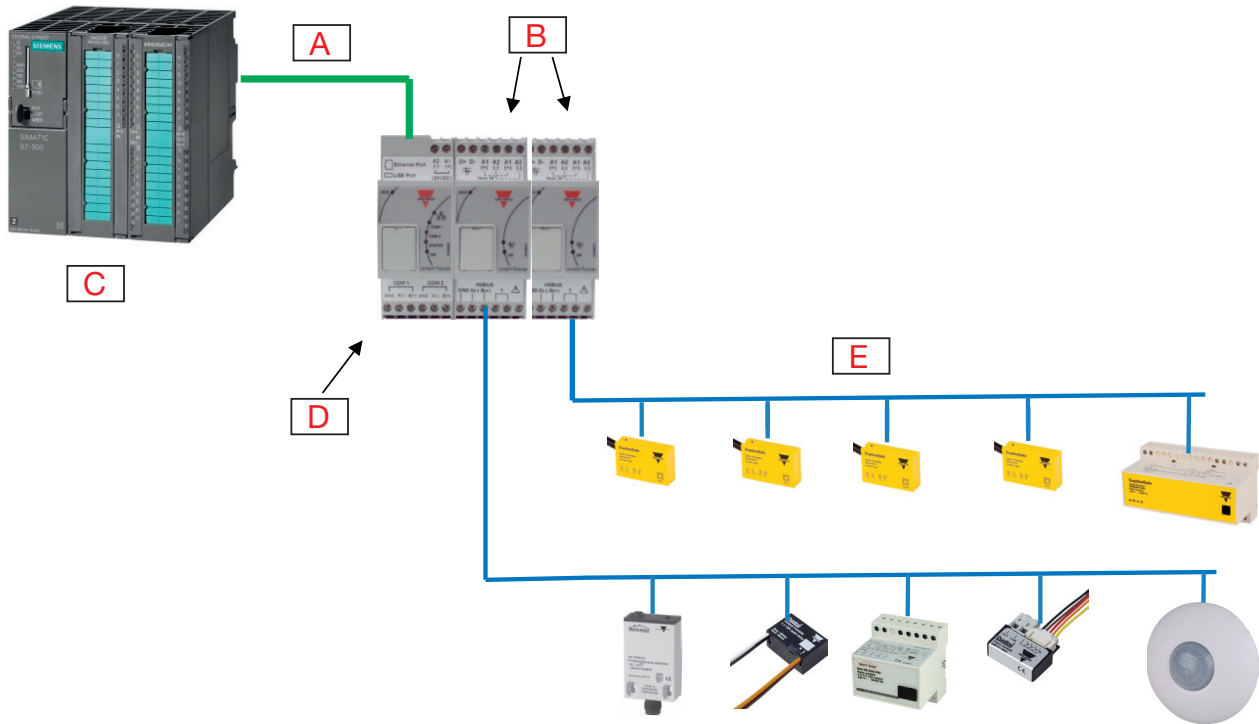
A	Profinet	D	Profinet gateway (Ethernet module)
B	MCG1+2 (up to 7 connected to one Profinet gateway)	E	Dupline® & Dupline®Safe
C	Siemens S7 PLC		

Compatibility and conformity

▶ **Approvals**	

CE-marking	$C\epsilon$

Mode of operation

▶ Mode of operation

The GS3391 0060 800 is a Profinet gateway with the function as a slave.
The module has a 2-port Ethernet switch RJ45 for connection to Profinet.
The module is to be mounted in association with the master generator GS3390 0000 800, to which up to 7 master generators can be connected.
Each master generator can operate with 128 Dupline® addresses.
All Dupline® signals from the master generator are available on Profinet.
By using the GSD file in the PLC configuration tool, the installer can design the functionallity of e.g digital in/out, analink, mux BCD and Dupline® safe signals.*
After installation and connection it is possible, by using the mini webserver, to perform tests and run diagnostics on both profinet and the Dupline® networks (up to 7 Dupline® networks).
The Profinet gateway is equipped with LEDs to show communication status.

* The GSD file can be downloaded from: Productselection.net

▶ Web server

The Gateway has a built-in web server for diagnostics and IP addressing. When connected to an IP network, the gateway is selected as DHCP by default. Finding the gateway can be done by using an IP scanner, such as "Advanced IP Scanner".
Search the local network, and the gateway will emerge. Keywords for finding the correct module could be for instance "Manufacture: Carlo Gavazzi Controls SPA-Controls Division or MAC address start: 00:19:EE:xx:xx:xx". When the IP address is discovered, enter it in a browser, and the "Overview" of the module will start up by default.

By selecting "Parameters", you can see the status of the Dupline addresses using the 8-bit protocol. It is also possible to select one or more (up to seven) MCGs. Refer to the datasheet for MCG GS3390 0000 800.
In the section "Network Status", you can see current IP settings and Ethernet status.

In the section "Network Configuration", you can select between DHCP and static IP addressing including host and domain name.

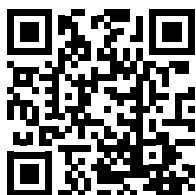Press "Save settings" before leaving the web server, or the changes are lost.

References

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