

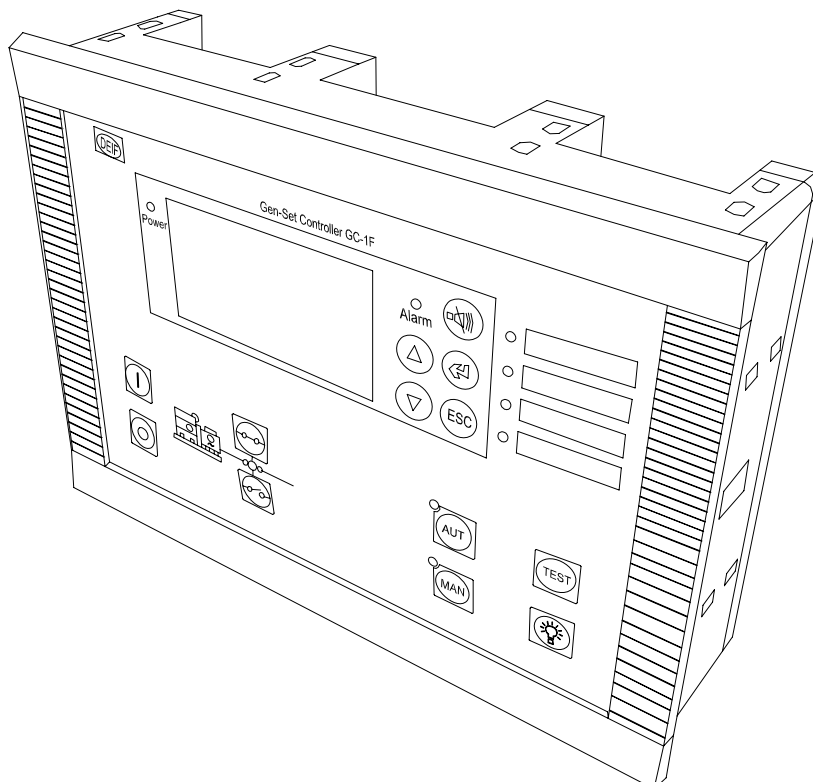
Description of options



Option X4, Additional operator's panel GC-1F

4189340484A

SW version 1.1X.X



- *Description of option*
- *Functional description*
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1. Warnings and legal information

Legal information and responsibility

DEIF takes no responsibility for installation or operation of the generator set. If there is any doubt about how to install or operate the generator set controlled by the unit, the company responsible for the installation or the operation of the set must be contacted.

The units are not to be opened by unauthorised personnel. If opened anyway, the warranty will be lost.

Electrostatic discharge awareness

Sufficient care must be taken to protect the terminals against static discharges during the installation. Once the unit is installed and connected, these precautions are no longer necessary.

Safety issues

Installing the unit implies work with dangerous currents and voltages. Therefore, the installation should only be carried out by authorised personnel who understand the risks involved in working with live electrical equipment.



Be aware of the hazardous live currents and voltages. Do not touch any AC measurement inputs as this could lead to injury or death.

Definitions

Throughout this document a number of notes and warnings will be presented. To ensure that these are noticed, they will be highlighted in order to separate them from the general text.

Notes



The notes provide general information which will be helpful for the reader to bear in mind.

Warning



The warnings indicate a potentially dangerous situation which could result in death, personal injury or damaged equipment, if certain guidelines are not followed.

2. Description of option

X4 option

This option includes an additional operator's panel (AOP-2) which can be connected to the GC-1F via a CANbus communication line. The AOP-2 has 16 configurable LEDs and 8 configurable buttons, which are programmed with the PC utility software. It can be used as an interface to the GC-1F units for indication of status and alarms together with buttons for e.g. alarm acknowledge and mode selection.



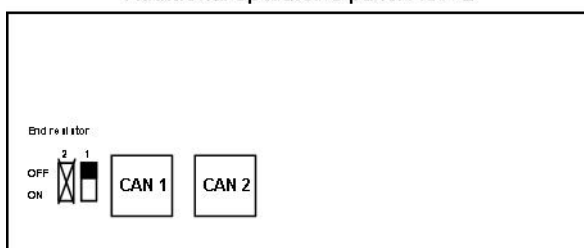
A maximum of 2 AOP-2 units can be connected to each ML-2 unit.



The maximum length of the CANbus line is 200m.

Back side view

Additional operator's panel AOP-2

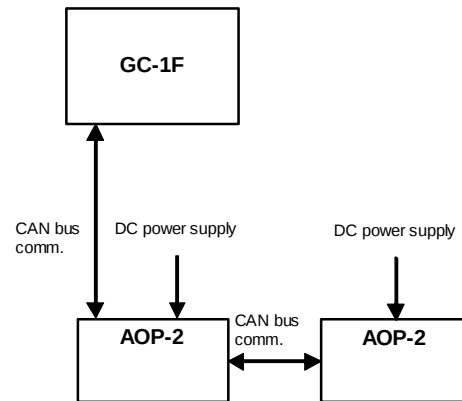


Connectors:

- CAN 1: DC supply and CANbus communication to/from GC-1F or AOP-2 units.
CAN 2: CANbus communication to/from GC-1F or AOP-2 units and status relay output.
End resistor: Dip switch for 120ohm end resistor for the CANbus communication. Dip switch no. 2 is not to be used.

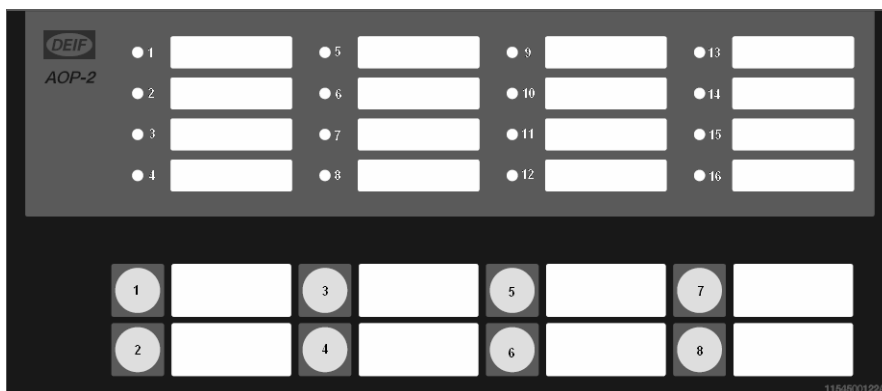
3. Functional description

Below is a principle diagram of the connection of the additional displays and operator's panels.



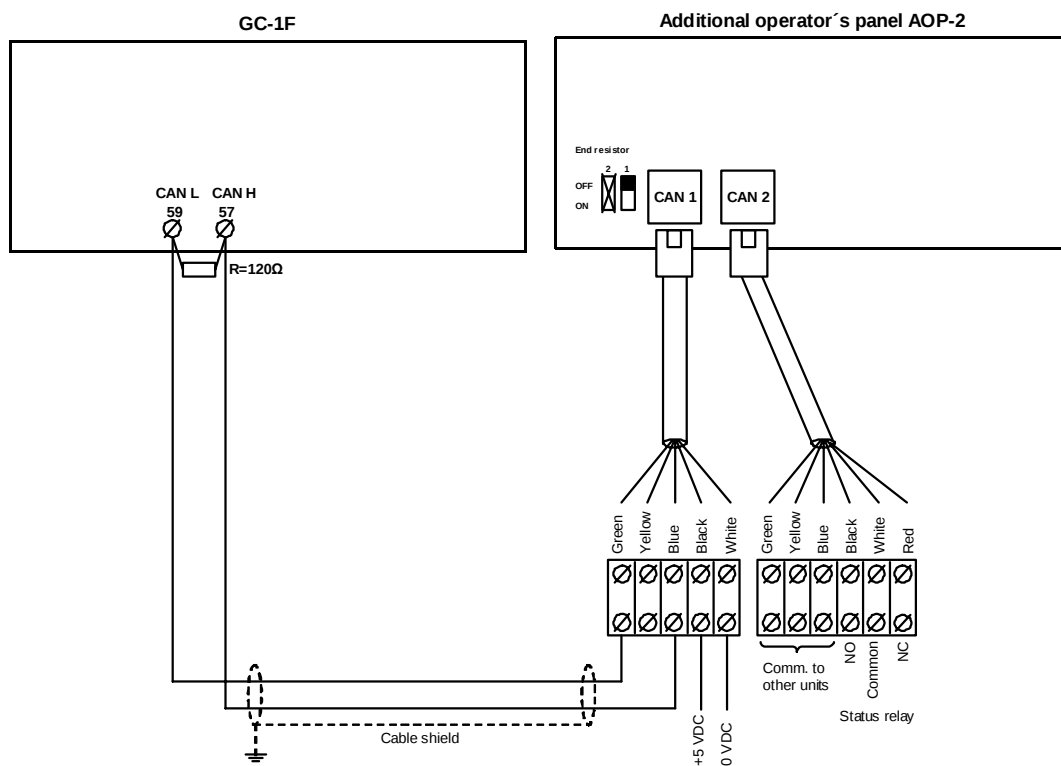
AOP-2

Front side view



As shown on the drawing, the configurable LEDs are named 1 to 16, and the buttons are named 1 to 8.

Wiring



A DC/DC converter for the DC supply voltage and 2x1m cable with an RJ12 plug in one end and stripped wires in the other end is included in the AOP-2 delivery.



The cable between the terminal blocks should be shielded twisted pair.



The maximum length of the CANbus line is 200m.

End resistor:

The 120Ω end resistor on the GC-1F is needed at all times. The default setting of the end resistor on the AOP-2 panel is ON. Thus, the dip switch is at the right position if only one AOP-2 is connected. If there are two AOP-2s connected, the end resistor of the AOP-2 with a connector plug in both CAN 1 and CAN 2 must be switched off.

- | | |
|--------------------|---|
| 1 unit connected: | Dip switch no. 1 on the unit should be set to ON. |
| 2 units connected: | Dip switch no. 1 on AOP-2 no. 1 should be set to OFF and dip switch no. 1 on AOP-2 no. 2 should be set to ON. |

CAN ID configuration

The CAN ID for the AOP-2 can be changed by the following procedure:

1. Press buttons no. 7 and no. 8 at the same time to activate the CAN ID change menu, this will activate the LED for the present CAN ID number, and LED no. 16 will be flashing.
2. Use button no. 7 (increase) and button no. 8 (decrease) to change the CAN ID according to the table below.
3. Press button no. 6 to save the CAN ID and return to normal operation.

Selection of CAN ID:

CAN ID	Indication of CAN ID selection
0	CANbus OFF: LED 16 flashes
1	LED 1 light steady + LED 16 flashes (default value)
2	LED 2 light steady + LED 16 flashes

Status relay

The status relay will activate approximately 5 seconds after power up.

Programming

The programming of the AOP-2 is made with the PC utility software, which can be downloaded from www.deif.com. Please refer to the Help function in the PC utility software for instructions regarding the programming.

Error handling**Duplicate CAN ID**

AOP-2:

If two units on the CANbus have the same CAN ID, LED no. 1 to 4 will flash quickly. In this case press button no. 6 to jump into the CAN ID change menu and select another CAN ID for the unit.

DEIF A/S reserves the right to change any of the above