Industriefunkuhren

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Elektronik **GmbH**

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Technical Manual

6875LAN-7270
GPS DIN Rail TimeServer
for NTP / SINEC H1

- with AC power supply with wide input range
- two independent serial interfaces
- DCF77 antenna simulation
- IRIG-B output - analogue and digital
- three programmable pulse outputs (optical coupler)

Optional: LAN interface with 10/100 MBit (autosensing)
Optional: Output of pulses and serial data strings via fiber optic (ST)

ENGLISH

Version: 01.00 – 20.10.2005

Symbols and Characters

Operational Reliability

Disregard may cause damages to persons or material.

Functionality

Disregard may impact function of system/device.

Information

Notes and Information.

Safety regulations

The safety regulations and observance of the technical data serve to ensure trouble-free operation of the device and protection of persons and material. It is therefore of utmost importance to observe and compliance with these regulations.

If these are not complied with, then no claims may be made under the terms of the warranty. No liability will be assumed for any ensuing damage.

Safety of the device

This device has been manufactured in accordance with the latest technological standards and approved safety regulations

The device should only be put into operation by trained and qualified staff. Care must be taken that all cable connections are laid and fixed in position correctly. The device should only be operated with the voltage supply indicated on the identification label.

The device should only be operated by qualified staff or employees who have received specific instruction.

If a device must be opened for repair, this should only be carried out by employees with appropriate qualifications or by *hopf* Elektronik GmbH.

Before a device is opened or a fuse is changed all power supplies must be disconnected.

If there are reasons to believe that the operational safety can no longer be guaranteed the device must be taken out of service and labelled accordingly.

The safety may be impaired when the device does not operate properly or if it is obviously damaged.

CE-Conformity

This device fulfils the requirements of the EU directive 89/336/EWG "Electromagnetic compatibility" and 73/23/EWG "Low voltage equipment".

Therefore the device bears the CE identification marking
(CE = Communautés Européennes = European communities)

The CE indicates to the controlling bodies that the product complies with the requirements of the EU directive - especially with regard to protection of health and safety for the operator and the user - and may be released for sale within the common markets.

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1 General

The GPS DIN rail TimeServer for NTP / SINEC H1 consists of the following components:

1. AC wide range power supply unit
2. GPS Module 6875
   - optionally available with FO output
3. NTP LAN board 7270 DIN rail – Version for DIN rail
   - Optionally available with 10/100 MBit LAN Port

There is an appropriate technical manual for each of those single components available.

Version 2nd November 2005

Ref. 1)   **Technical Manual 1**: Power Supply Unit

Description: AC power supply type AC-M05-D

File name: e_4465AC_4475AC_6870AC_6875AC_Netzteil_AC-M05-D_0100.pdf

Version: 01.00

Ref. 2)   **Technical Manual 2**: Module 6875

Description: GPS radio controlled clock

File name: e6875_0300.pdf

Version: 03.00

Ref. 3)   **Technical Manual 3**: Board 7270

Description: NTP LAN board 7270 for DIN rail – DIN rail module 7270

File name: e7270-DIN-Rail_0100.pdf

Version: 01.00

2 Principle of Function

The integrated power supply unit AC-M05-D supplies the GPS Module 6875 and the NTP LAN board 7270 with the required operating voltage. Once the Module 6875 has been synchronized by the GPS signal or the module was set manually to the status "SYNC", it emits every second a high-precision time information to the NTP LAN board 7270. This time information is transferred to the NTP LAN board 7270 as a serial string. The cyclic sending of the serial string can be controlled by the LED "Serial RxD" on the NTP LAN board 7270.

When the LED1 shines, the client PCs can request the time information with stratum 1 level from board 7270 via LAN.
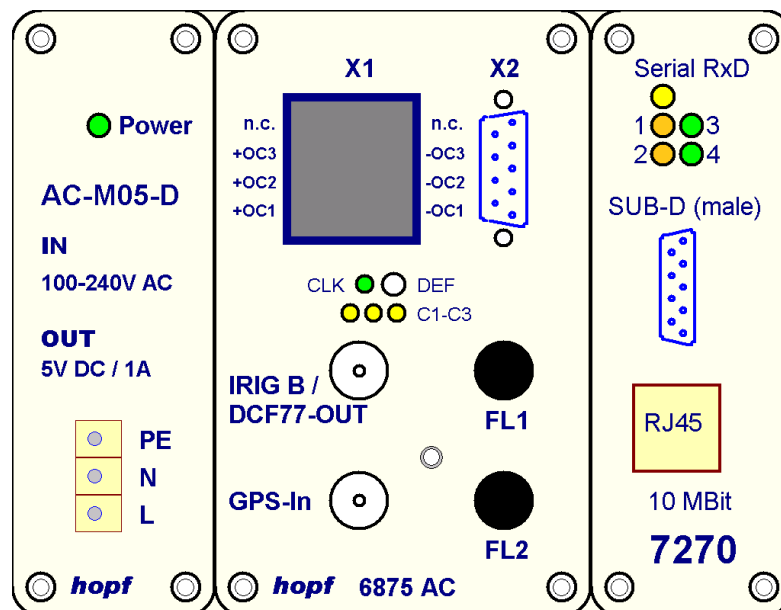
Type of Housing 6 (L = 175.0 mm; W = 135.0 mm; Clip = 80.0 mm)

3 Commissioning

- Mounting of unit (see *technical manual 1 – power supply unit*)

- Connect unit to mains voltage (see *technical manual 1 – power supply unit*)

- Set basis parameters of Module 6875 (see *technical manual 2 - Module 6875*) by using programming cable KA6870 - 2m

- Connect GPS antenna system with Module 6875 (see *technical manual 2 - Module 6875*)

- Check synchronisation of Module 6875 (see *technical manual 2 - Module 6875*)

- Configure NTP LAN board 7270

  1. If the IP address is known or in delivery status, configuration is to be done via LAN (see *technical manual 3 - board 7270*).

  2. If the IP address is unknown, configuration is to be done via serial interface by using programming cable KA5870 and the serial adapter (see *technical manual 3 - board 7270*).

- Enter the NTP LAN board as NTP Server in NTP client PC