

Industriefunkuhren



**Additional
Technical Manual**

**for Board 7271RC with Option FG7271/PPM
(Output of Minute Pulses)**

ENGLISH

Version: 01.00 - 18.03.2009

Base Description

NTP/SINEC H1 LAN Board Model 7271RC

Version: 04.00 or higher

Valid for Device 7271RC with **SET** Version: **04.xx**

IMAGE Version: **04.xx**
FIRMWARE Version: **04.03 or higher**

Version number (Firmware / Manual)

THE TERM **SET** DEFINES THE FIXED RELATIONSHIP BETWEEN THE IMAGE VERSION AND THE ASSOCIATED H8 FIRMWARE VERSION.

THE FIRST TWO DIGITS OF THE TECHNICAL DESCRIPTION VERSION NUMBER, THE **SET** VERSION AND THE IMAGE VERSION **MUST BE THE SAME!** THEY DESIGNATE THE SHARED FUNCTIONAL IDENTITY BETWEEN DEVICE, SOFTWARE AND TECHNICAL DESCRIPTION.

THE VERSION NUMBER OF THE IMAGE AND THE H8 SOFTWARE CAN BE READ IN THE WEBGUI OF BOARD 7271RC.

THE TWO DIGITS AFTER THE DOT IN THE VERSION NUMBER DESIGNATE CORRECTIONS TO THE FIRMWARE AND/OR DESCRIPTION WHICH HAVE NO EFFECT ON FUNCTIONALITY.

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Homepage: <http://www.hopf.com>

E-mail: info@hopf.com

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 In General for Board 7271RC with Minute Pulse

This expansion of documentation is based on the technical manual of board 7271RC and describes the optional function with "Board 7271RC with Minute Pulse".

With this option a high active isolated minute pulse of +12V DC is distributed on the 9-pole SUB-D male connector. The length of the pulse can be adjusted in 4 steps.

The output is an "open collector" with a current limiter.

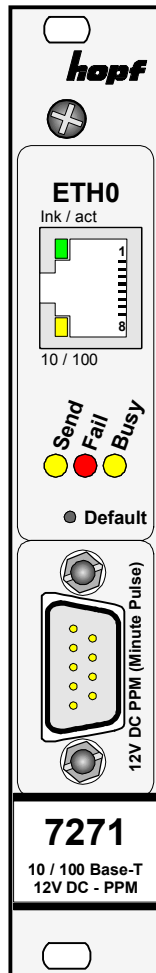


This minute pulse is fully compatible to the minute pulse of the **hopf** board 7270 (the assignment of the 9-pole SUB-D connector as well as the electrical properties and the adjustable parameters).

2 Front Panel Board 7271RC with Minute Pulse

The Board 7271RC has a 3U/4HP front panel for 19" systems. It is equipped with the following components:

3U/4HP Front Panel



ETH0-RJ45 bush

Ink/act LED

10/100 LED

Send-/System Bus LED

Fail LED

Boot LED

Default Key

SUB-D male connector (9-pole)

Pin-No.	Assignment
1	Minute pulse with defined duration (isolated, to potential GND1)
2	reserved
3	reserved
4	reserved
5	GND
6	+12 V DC (isolated, to potential GND1)
7	reserved
8	reserved
9	GND1 (isolated for minute pulse / +12 V DC)

3 Configuration of the Minute Pulse Length

The Technical Description of the respective Base System is the basis for configuration. The following covers only the functional specific menus of the respective Base System.

3.1 Input Control Byte at Base Systems 6842, 6850 and 6855



After they have been entered fully, the parameters configured through the system menu are transferred to the control board by pressing the **ENT** key. In order for the parameters to be transferred from the control board to Board 7271RC it is necessary to exit the respective menu by pressing the **BR** key.

The control byte is entered via the following selection frames:

```

SET LAN 1
CNTRL.-BYTE Y/N
    
```

or

```

SET LAN 2
CNTRL.-BYTE Y/N
    
```

After entering **Y** the display changes to the input frame.

For editing purposes, the individual bits of the new byte are entered on the second line with "0" and "1".

The bits of the parameter byte are numbered consecutively in descending order:

e.g.:

```

BIT 7654 3210
    0000 0000
    
```

The entry must be concluded by pressing the **ENT** key.

3.1.1 Bit 5/4, Minute Pulse Output at SUB-D Connector (Pin 1)

The pulse length of the minute pulse is scaleable in four steps:

Bit5	Bit4	Pulse Length of the Minute Pulse
0	0	10 msec
0	1	100 msec
1	0	500 msec
1	1	1000 msec

3.2 Input Control Byte at Base System 7001



After they have been entered fully, the parameters configured through the system menu are transferred to the base system by pressing the **ENT** key.

Via System 7001 the Control Byte (CB:) will be parameterized for the appropriate board such as displayed here.

```

No : 1  CB : 00000000  IP : 192.168.017.001
NEW      > 7 6 5 4 3 2 1 0      > . . . <
    
```

The individual bits of the control byte are configured by entering and .

The complete entry is completed by pressing the **ENT** key. The new control byte appears on the top line.

The meaning of the bits is as follows:

3.2.1 Bit 5/4, Minute Pulse Output at SUB-D Connector (Pin 1)

The pulse length of the minute pulse is scaleable in four steps:

Bit5	Bit4	Pulse Length of the Minute Pulse
0	0	10 msec
0	1	100 msec
1	0	500 msec
1	1	1000 msec

4 Technical Data

Minute Pulse	12V DC, potential isolated via an 'open collector unit'
Current Source	typical: 20mA (max. 30 mA) The output load should be ($R_L < 600 \text{ Ohm}$), because of a to small edge steepness.
Activity	high active
ext. 12V DC Voltage	12V DC, max. 100mA, potential isolated
Isolation	min. 1000V DC