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C600RS: DCF77 radio clock with serial RS232 interface

The C600RS is a compact DCF77-synchronised time signal receiver equipped with two independent serial interfaces. Time and status messages can be provided via an RS-232 interface and via a 20 mA current loop.

This DCF77 receiver can be used for synchronisation and monitoring of signalling technology and signalling systems. The C600RS is equipped with programmable pulse outputs via optocouplers (55 V/50 mA) and a pulse per second (PPS) output (RS-232 level).

Key Features

- Integrated Power Supply
- Two programmable pulses outputs via optocouplers
- 4-20 mA Current Loop Interface
- RS-232 interface
- Four LEDs for visual status indication
- Synchronization by DCF77 signal

Description

The radio remote clock C600RS has been designed for applications where only the serial interface is used to transmit information on date and time to other devices. The clock has an enhanced LF receiver and is manufactured using surface mounting technology (SMT). The elevtronic assembly is mounted in a plastic case with four LEDs in the front panel which let the user monitor the clock's status.

RS232 interface and 20mA input/output circuits. Pulse per second and pulse per minute. These pulses are made available at the DB25 connector via optocoupler outputs. The P_SEC pulse is also available with RS-232 level (-3..12V/+3..12V).

Characteristics

Receiver Type	Narrowband tuned radio frequency receiver with automatic gain control, reception frequency: 77.5 kHz, bandwidth approx. 40 Hz
Status Indicators	Modulation and field strength visualized by LEDs Free running state visualized by LED after switching to free running quartz clock mode
Type of Antenna	Scope of supply includes an active ferrite antenna AI01 and 5m of RG174 coaxial cable with BNC male connectors. **Option:** [1]AW02 with RG58 and patch cord, other length of cable
Reception Monitoring	Incoming time string undergoes multiple checks Plausibility test using two full consecutive time strings
Pulse Outputs	Pulse per second and pulse per minute (optocoupler), pulse width: 200 msec
Interface	Two independent serial interfaces (RS-232 and 4-20 mA current loop), 25-pin D-SUB female connector
Serial Time String Output	Baud rate: 19200 baud (adjustable from 600-19200 baud) Framing: 8N1 (adjustable 7E1, 7E2, 8N1, 8N2) 1 active / passive 20 mA current loop output (selectable) 1 active / passive 20 mA current loop input (selectable) Output string: 32 ASCII characters with date, time and status information
Electrical Connectors	25 pin sub D female connector BNC female connector power cord receptacle
Power Consumption	ca. 0.75 W
Backup Battery Type	In case of supply voltage failure the on-board RTC keeps the time based on XTAL for more than 150 hours (buffer capacitor) Optional: lithium backup battery (life time: 10 years)

Operating Voltage	230 V AC / 50 Hz (optional 12 V DC or 24 V DC)
Form Factor	technoBOX TBA 084 (optional for rail mounting) Protection class: IP 66 / EN 60529
Current Draw	ca. 20 mA
Driver / Software	Meinberg Device Manager software for Windows, as an executable exe or zip file, and for Linux-based systems as a free [2]**download**.
Physical Dimensions	60 mm x 160 mm x 80 mm (height x width x depth)
Supported Temperature	Operational: 0 - 50 °C (32 - 122 °F) Storage: -20 - 70 °C (-4 - 158 °F)
Supported Humidity	Max. 85 % (non-condensing) at 40 °C
Contents of Shipment	Scope of supply includes an active ferrite antenna [3]**AI01 and 5 m of RG174 coaxial cable with BNC connectors.** **Option:** **[1]AW02 with RG58 and patch cord, other length of cable** **Holder for 35 mm rail mount**
Warranty	Three-year warranty
RoHS Status of Product	This product is fully RoHS-compliant.
WEEE Status of Product	This product is handled as a B2B (Business to Business) category product. To ensure that the product is disposed of in a WEEE-compliant fashion, it can be returned to the manufacturer. Any transportation expenses for returning this product (at end-of-life) must be covered by the end user, while Meinberg will bear the costs for the waste disposal itself.

Manual

The English manual is available as a PDF file: [4]**Download (PDF)**

Links:

[1] https://www.meinbergglobal.com/english/products/dcf77-outdoor-antenna.htm
[2] https://www.meinbergglobal.com/english/sw/mbg-devman.htm
[3] https://www.meinbergglobal.com/english/products/dcf77-indoor-antenna.htm
[4] https://www.meinbergglobal.com/download/docs/manuals/english/c600rs.pdf