



Meinberg Funkuhren

Lange Wand 9

31812 Bad Pyrmont, Germany Phone: +49 (5281) 9309-0 Fax: +49 (5281) 9309-30 https://www.meinbergglobal.com

info@meinberg.de

UA509: DCF77 Radio Clock

DCF77 Radio Clock UA509 with 2 serial interfaces, pulses per minute and per second, and a 2.5mm LED Display.

Important Note

This product is no longer available. We will of course continue to provide support for units that have already been purchased and are still in use. Please contact our [1] Sales Team for further details.

Key Features

- Direct conversion Quadrature Receiver
- Pulses per second and per minute
- 20mA input/output circuits
- 2,5mm LED-display
- 2 RS-232 interfaces
- Reception status indicated by LED
- Buffered hardware clock
- Flash-EPROM with bootstrap loader



Description

The hardware of UA509 is a 100mm x 160mm microprocessor board. The 20mm wide front panel contains an 8-digit LED display (2.5mm), three LED indicators and a time/date switch. The receiver is connected to the external ferrite antenna Al01 that is included in the sope of supply by the 5 meter 50 ohm coaxial cable (other lengths available). The radio controlled clock UA509 has been designed for applications where two independent serial interfaces are needed. The UA509 contains a flash EPROM with bootstrap loader that allows to upload a new firmware via the serial interface without removal of the clock.

Characteristics

Receiver Type	Narrowband DCF77 quadrature receiver with automatic gain control, bandwidth: approx
	20Hz
Status Indicators	Modulation and field strength visualized by LEDs
	Free running state visualized by LED after switching to free running quartz clock mode
Display	8 digit 7-segment LED display (2.5mm) for time or date (switch-selectable) optional: 20HP (100mm) wide front panel with 10mm height 7-segment LED display
Synchronization Time	2
Accuracy free run	Accuracy of the quartz base after min. 24hrs of synchronized operation: ±1·10-6
Reception Monitoring	Incoming time string undergoes multiple checks
	Plausibility test using two full consecutive time strings
Pulse Outputs	Pulse per second (PPS) and pulse per minute (PPM). TTL level, pulse width: 200 msec
Interface	Two independent serial RS232/current loop interfaces, configurable
Serial Time String Output	COM0:
	Baudrate: 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600 baud
	Framing: 7E2 or 8N1 (others on request)
	2 active and 2 passive 20mA current loop outputs
	1 active/passive 20mA current loop input
	COM1:
	Baudrate: 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600 baud
	Framing: 7E2 or 8N1 (others on request)
	1 active and 1 passive 20mA current loop output
	1 active/passive 20mA current loop input
	[2]Output string: 32 ASCII characters with date, time and status information
Dimensions of the front panel	4HP/3U (20mm x 128mm)
Electrical Connectors	64-pin rear VG edge connector DIN 41612
	SMB male connector



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	+5V DC
Current Draw	approx. 250mA
Board Type	Eurocard
Board Dimensions	160 mm x 100 mm, 1,5 mm Epoxy
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]AlO1 and 5m of RG174 coaxial cable with BNC connectors.
	Optional: [4]AW02 with RG58 and patch cord, other length of cable
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: [5] Download (PDF)

Links:

- [1] mailto:sales@meinberg.de
- [2] https://www.meinbergglobal.com/english/specs/timestr.htm
- $\hbox{[3] https://www.meinbergglobal.com/english/products/dcf77-indoor-antenna.htm}$
- $\hbox{[4] https://www.meinbergglobal.com/english/products/dcf77-outdoor-antenna.htm}\\$
- [5] https://www.meinbergglobal.com/download/docs/manuals/english/ua509.pdf