Intelligent ripple control receiver

LCR 120 (for DB board mounting)

The LCR120 is a high-quality ripple control receiver. It can be used in standard ripple control applications as well as in modern systems with "Distributed Intelligence" as a remotely programmable tariff switching unit

The operation of the internal clock during a power failure can be maintained for a few days via a built in super-cap (option).

Photo : Ripple control receiver LCR120

Features

- Digital filtering of the ripple control signal via the micro-controller
- Processing of all conventional ripple control protocols and their specific pulse patterns
- Processing of a second protocol with secured data transmission according to DIN 43861-301 (VERSACOM)
- Remote parameterisation of switching times and weekday assignment of the work schedules (using the VERSACOM protocol)
- Enable/disable work schedules
- Switch-on status (a/b) programmable
- Cycling switching function (Relay 1)
- Switching delay for switch-on operations (1 s – 24 h)
- Wiping timer function (1 s – 24 h)
- Ripple control signal absence detection (e.g. for enabling a work schedule)
- Memorized schedule function (Relay 1 and 2)

Internal clock features

- Internal clock (remotely synchronically) for autonomous operation of work schedules (weekday based)
- Real-time clock with super-cap (option), voltage interruptions can be bridged for a minimum of 48 hours
- Up to 32 schedules programmable per receiver
- Up to 14 switching times programmable per work schedule
- Free assignment of work schedules to the relays
- Changes of switching times from the central master control station using the VERSACOM protocol, or locally via the programming interface

Supervision features

- Storage of pulse pattern and signal level of the last telegram received
- Signal absence sensing, detection of transmitter failures
- Counter for number of switching actions per relay

Programming and test equipment

Programming is performed as standard via the RS 232 serial interface (also possible when receiver is without its own power supply).

Output relays

The receiver is fitted as standard with one load relay, rated at 40A. In addition, a second relay rated at 6A and suitable for switching TOU registers can also be fitted. Both relays are directly soldered to the PCB.

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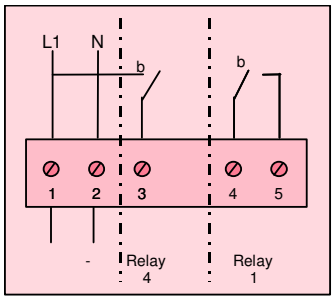
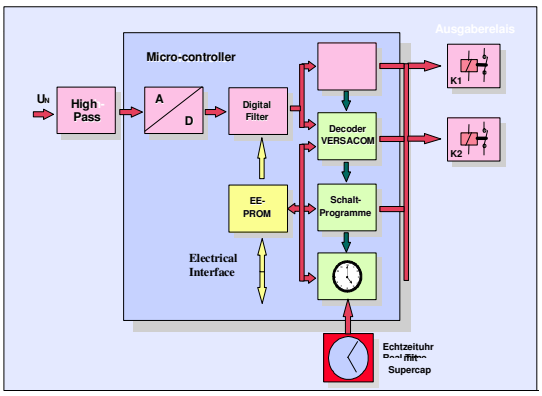
Technical Data

Modifications or deviations are reserved Rev. 1.0

Power supply:	Mains voltage	230V + 11%...-22%
	Mains frequency	50Hz +1%...-2%
	Power consumption	< 1W/10VA cap.
	Surge voltage resistance	8kV 1,2/50 according to DIN EN 61 037
Filter data:	Operating frequency	158Hz - 350Hz 350Hz - 1350Hz
	Selection of operating frequency	Programmable, freely selectable
	Minimum operating voltage Non-operating voltage	Uf > 0.5% Un Unf < 0.3% Un or according to agreement
	Maximum operating voltage	8-15 times Uf (dependent on frequency)
Output data:	Relay 1 Nominal switching voltage Uc Nominal switching current Ic Relay type (status a/b programmable)	Bistable 250V, 50Hz or 60Hz 40A, cos phi = 1 16A, cos phi = 0,4 ind. Normally closed contact, potential free
	Relay 4 Nominal switching voltage Uc Nominal switching current Relay type (status a/b programmable)	Bistable 250V, 50Hz or 60Hz 6A, cos phi = 1 4A, cos phi = 0,4 ind. Normally closed contact, potential L1
	Terminal size	Power supply and TOU relay 2: 2 x 2,5 mm² 40A load relay 1: 1 x 10 mm²
Internal clock (Option):	Back up Accuracy	> 48 h 5 +/- 23 ppm
Climatic conditions:	Operating temperature Storage temperature	-20...+60°C -30...+60°C
	Type of protection	IP 51
Dimensions:		H=92mm, W=37mm, D=65mm

Connection diagram





Block diagram LCR120

Housing

The ripple control receiver housing is designed to be mounted on a DIN - rail. For mounting on a wall a cover is available.

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