

Intelligent ripple control receiver

LCR 544

The LCR 544 is a high-quality and modular 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 secured for a few days from a built in supercap (option).

Features

- ◆ Digital filtering of the ripple control signal through the micro controller
- ◆ Processing of all conventional ripple control protocols and its 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 of work schedules
- ◆ Switch-on status (a/b) determinable for each relay
- ◆ Cyclic switching function
- ◆ 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

Internal clock features

- ◆ Internal clock (remotely synchronizable) for autonomous operating of work schedules (weekday based)
- ◆ Real time clock with supercap (option), voltage interruptions can be bridged at min. 48 h
- ◆ Up to 32 work 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 station using the VERSACOM protocol, or locally via the programming interface



Supervision features

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

Programming and test equipment

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

Output relays

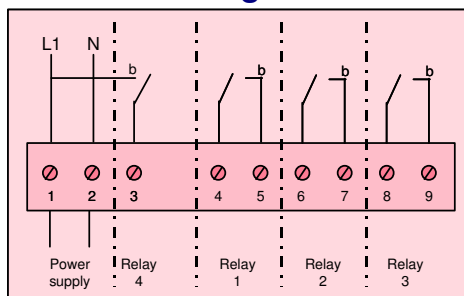
The receiver can be delivered with up to three plugable relays (40A). The optional relay 4 for low loads is ready soldered.

Technical Data

Modifications or deviations are reserved Rev. 1.1

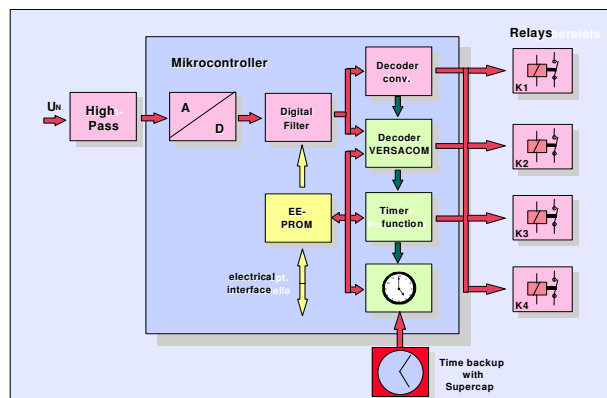
Power supply:	Mains voltage	230V + 11%...-22%
	Mains frequency	50Hz +1%...-2%
	Burden	< 1W / 10VA kap.
	Surge voltage resistance	8kV 1,2/50 according to DIN EN 61 037
Filter data:	Operational frequency	158Hz - 350Hz 350Hz - 1350Hz
	Selection of operational frequency	Per parameter, free selectable
	Min. operational voltage	$U_f > 0.5\% U_n$
	Non-operational voltage	$U_{nf} < 0.3\% U_n$ or according to agreement
	Maximum operational voltage	8-15 times U_f (dependent of frequency)
Output data:	Relay position number 1 to 3	3 (bistable, plugable)
	Nominal switching voltage U_c	250V, 50Hz or 60Hz
	Nominal switching current I_c	40A, $\cos \phi = 1$ 16A, $\cos \phi = 0,4$ ind.
	Relay type (status a/b programmable)	normally closed contact, potentialfree
	Relay position number 4	1 (bistable, soldered)
	Nominal switching voltage U_c	250V, 50Hz or 60Hz
	Nominal switching current I_c	6A, $\cos \phi = 1$ 4A, $\cos \phi = 0,4$ ind.
	Relay type (status a/b programmable)	normally closed contact, potential L1
	Terminal size	Power supply and relay 4 : 2x2,5 mm ² 40A relays : 1 x 10 mm ²
	Internal clock (Option):	Back up
Accuracy		5 +/- 23 ppm
Climatic conditions:	Operating temperature	-20...+60 °C
	Storage temperature	-30...+60 °C
	Type of protection	IP 51
Dimensions:		H=90mm, W=88mm, D=65mm

Connection diagram



Housing

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



Block diagram LCR544

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