

Intelligent ripple control receiver LCR 160

Compact ripple receiver for DIN rail with one load control relay and one auxiliary relay

The LCR160 is a high-quality ripple control receiver including switch clock. It can be used in standard ripple control applications as well as in modern systems with “distributed intelligence” (VERSACOM) as a remotely programmable switch clock.

Digital filtering of the ripple control signal is done by a micro-controller in most modern technology using an algorithm developed by Elster.

Functionality

- Processing of all common ripple control protocols and their specific pulse patterns
- Internal clock with optional buffering by a supercap or a battery, flexible synchronisation using VERSACOM Protocol
- Switch clock depending on weekdays, with remote parameterisation using the ‘VERSACOM’ protocol (DIN 43861-301)
- Switch clock for a year with calculated dawn and dusk times for illumination control (e.g. street light)
- Programming and test via the electrical interface (USB) is possible without the 230VAC power supply
- Signal absence sensing, detection of transmitter failures
- Cyclic switching function
- Switching delay (1 s – 24 h)
- Passing contact function (1 s – 24 h)
- Anti – Tampering and supervision
 - Automatic refreshing of relay positions every 60 seconds
 - Counter for number of switching actions per relay
 - Log file for storage of pulse pattern and signal levels of last telegrams received (minimum 10 telegrams)
 - Log file for storage of events (power failure, low network frequency, signal absence)
- Logical interconnection of relays
- User friendly programming tool *LCRset6*
- The receiver is fitted as standard with one load control 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.

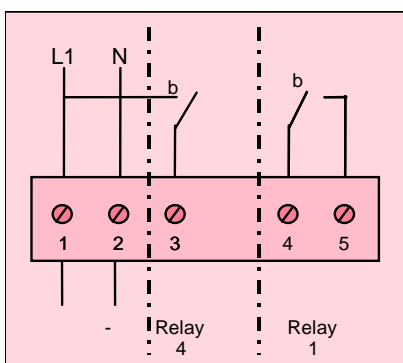


Technical Data

subject to alterations

Power supply	Voltage Un	230V + 15%...-20%
	Frequency of power supply	50Hz +2%...-2%
	Lightning impulse strength	8kV 1,2/50 according to DIN EN 61 000-4-5
Filter data	Audio frequency	158Hz – 1600Hz
	Selection of audio frequency	any frequency can be set
	Minimum respond signal voltage	$U_f > 0.5\% U_n$
	None respond signal voltage	$U_{nf} < 0.3\% U_n$ or according to agreement
	Maximum signal level	8-15 times U_f (dependent on frequency)
Real time backup	Supercap	> 48 h without power
	Battery	> 3 years without power at 25° Celsius > 10 years with power
	Time deviation	< 2 s/day
Output data	Number of relays	2
	Nominal switching voltage U_c	250V, 50Hz or 60Hz
	Nominal switching current I_c	Relay 1: 40A, $\cos \phi = 0.4 \dots 1$, Relay 4: 6 A, $\cos \phi = 0.4 \dots 1$
	Relay type	Normally closed contact, bistable Relay 1 : floating, Relay 4: non floating
	Terminal size	Power supply and relay 4: 1 x 2,5 mm ² or 2 x 1,5 mm ² Relay 1: 1 x 6 mm ²
Climate conditions	Operating temperature	-20...+60°C
	Storage temperature	-30...+60°C
Housing		The ripple control receiver housing is designed to be mounted on a DIN - rail. For mounting on a wall a cover is available.
	Protection class	IP51
Dimensions	Without cover	H=92mm, W=37mm, D=65mm
	With cover	H=150mm, W=62mm, D=67mm

Connection diagramm



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