

# Intelligent ripple control receiver LCR 170

## Compact ripple receiver for DIN rail with up to 4 control relays

The LCR170 is a high-quality ripple control receiver including switch clock. It can be used for various control functions and being installed in metering cabinets, switching boxes and sub-distribution housings.

Four bistable relays - each with two separate terminals – allow flexible potential-free connections. Relay contacts with gold-plating ensure particularly permanent contact voltages of 5 VDC.



## Functionality

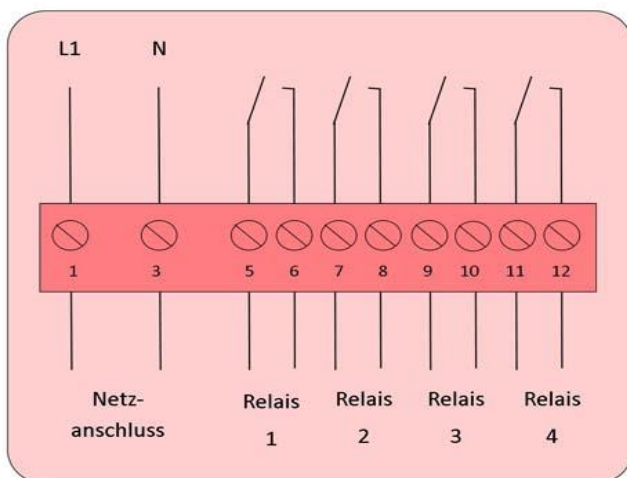
- Processing of all common ripple control protocols and their specific pulse-patterns
- Internal clock with optional buffering by a supercap or a battery, flexible time synchronisation using VERSACOM Protocol (DIN 43861-301)
- Switch clock depending on weekdays, with remote parameterisation using the VERSACOM protocol
- Switch clock for a year with calculated dawn and dusk times for illumination control (e.g. street light) (option)
- Programming, test and readout of status via the electrical USB interface is possible without mains power supply
- Four output relays, potential-free, 8A normally closed contact, AgNi contacts with gold-plating, good for low loads (5V, 2mA – 30V, 50mA), resistant against corrosion and pollution
- 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)
- Cyclic switching function
- Switching delay (1 s – 24 h)
- Passing contact function (1 s – 24 h)
- User friendly programming tool *LCRset6*

## Technical Data

subject to alterations

<b>Power supply</b>	Voltage Un	230V + 15%...-20%
	Frequency of power supply	50Hz +2%...-2%
	Lightning impulse strength	6kV 1,2/50 according to DIN EN 61 000-4-5
<b>Filter data</b>	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)
<b>Real time clock with backup</b>	Supercap	> 48 h without power
	Battery	> 3 years without power at 25° Celsius > 10 years with power
	Time deviation	< 2 s/day
<b>Output data</b>	Number of relays	4 (bistable)
	Nominal switching voltage $U_c$	250VAC, 50Hz or 60Hz, 30VDC
	Nominal switching current $I_c$	8 <sup>a</sup> , $\cos \phi = 1$ ; 5 <sup>a</sup> , $\cos \phi = 0,4$ ,
	Relay type	Normally closed, potentialfree,
	Contact material	AgNi with gold-plating good for low loads (5V, 2mA – 30V, 50mA)
	Terminal size	1 x 2,5 mm <sup>2</sup> or 2 x 1,5 mm <sup>2</sup>
<b>Climate conditions</b>	Operating temperature	-20...+60°C
	Storage temperature	-30...+60°C
<b>Housing</b>		Small casing for DIN rail mounting (DIN 43880), polycarbonate, non-inflammable, self-extinguishing synthetic material, RAL 7035
	Protection class	IP51
<b>Dimensions</b>		H = 92 mm, W = 72 mm, D = 60 mm 4 pitches according DIN 43880

## Connection diagramm



**Elster GmbH**  
Steinern Straße 19-21  
55252 Mainz-Kastel  
Deutschland  
T +49 (0) 6134 / 605-777  
F +49 (0) 6134 / 605-750  
e-info@elster.com  
www.elstersolutions.com / www.elster.com