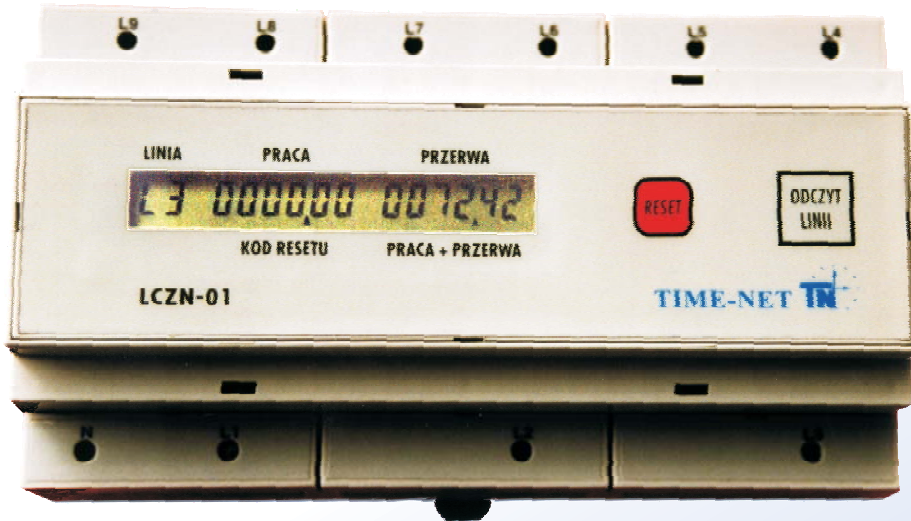


MULTI-PHASE COUNTER FOR DURATION OF VOLTAGE BREAKS TYPE LCZN-01



Multi-phase counter is designed for **monitoring the continuity of supply in low voltage networks.**

Features and functions of this apparatus are following:

- Monitoring of 9 lines (3 three-phase circuits or 9 one-phase circuits).
- Displaying separately the time of operation and the duration of voltage breaks for each of the monitored lines on two independent counters.
- Total time counter, totalizing the time of operation and the duration of breaks in supply.
- Readout of seconds at request.
- Resetting function for counters protected with a four-digit code.
- Triple buffered supply from lines L1, L2, L3.
- Reserve supply from build-in accumulators, which can support its operation for the duration of 150 hours.
- Counters with capacity 9999,99 hours.
- Compact dimensions : 160 x 90 x 58 mm.
- Convenient module-type housing of DIN type.

Multi-phase **counter for duration of voltage breaks** type LCZN-01 is designed for monitoring the continuity of supply (i.e. **checking the presence of voltage**) in low voltage networks. This apparatus monitors maximum nine lines (3 three-phase circuits or 9 one-phase circuits), displaying the duration of line operation (when $U > 150$ V) and duration of power supply breaks ($U < 150$ V) on two separate 6-digit counters.

On the basis of these counters indications one can estimate the operational efficiency of technical services responsible for the continuity of power supply, and by this to mobilize them for fast reaction and to minimize the losses related with breaks in power supply.

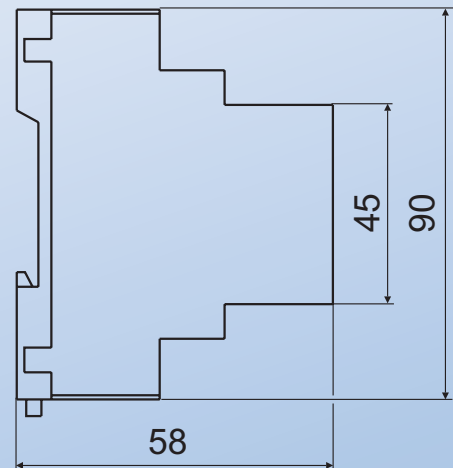
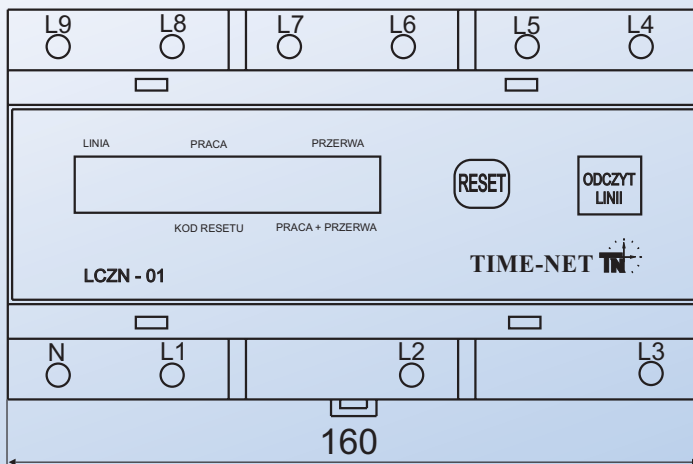
Multi-phase counter LCZN-01 is correctly supplied if in at least one of the lines L1, L2 or L3 appears the voltage $U > 150$ V. Only when there is lack of such voltage in all three lines simultaneously, the apparatus goes to reserve supply from **built-in accumulators**, which can support its operation for **150 hours**. After this time accumulators are discharged and the apparatus goes into the sleep mode, in which it remembers indications of all the counters. Such a state can last approximately 180 days. In the moment, when the voltage returns to any of lines L1, L2 or L3 there starts a process of automatic charging of accumulator, and LCZN-01 counter starts its operation from the values stored in its memory.

Multi-phase counter LCZN-01 is equipped with the **4-digit access code** to the counters resetting function, which makes it impossible to reset these counters by unauthorized persons.

Multi-phase counter LCZN-01 has got **convenient panel-type housing** enabling fast clasp locking the apparatus on the **standard DIN bus**.

Technical data

Basic supply	150 VAC to 250 VAC from L1, L2 or L3
Reserve supply	3 x NiCd 800 mAh, 1,2 V
Display	LCD
Power consumption with basic supply	Maximum 5VA
Duration for charging of accumulators	Minimum 48 hours
Duration of operation when supplied from accumulators	Minimum 150 hours
Duration of supporting counter's memory when display is switched off	Minimum 180 days
Number of input lines	Maximum 6
Number of time counters for each line	Two: "Operation" and "Break"
Threshold voltage value for starting "Operation" counters	Line voltage U 150 V 2,5%
Threshold voltage value for starting "Break" counters	Line voltage U < 150 V 2,5%
Total time counter (Operation + Break durations)	Yes, designated with symbol L0
Capacity of counters	9999,99 hours
Precision of time measurement	2,5 x 10 ⁻⁵ (2s / 24 hours)
Voltage test in each line	Every 1 second
Possibility of resetting counters	Yes
Weight	0,4 kg
Overall measurements	465,8 x x 76,2 x 291 mm (see Drg. 1)
Protection class of housing	IP20
Allowed operating environment conditions:	
- temperature range	-10C - +55C
- pressure range	86 - 106 kPa
- relative humidity range	Maximum 90% (without water vapor condensation)
- insolation	No direct sunlight
- ventilation	Natural



Overall measurements of power supply breaks time counter