

LC10 Loop Detector
Data Sheet



Model Number

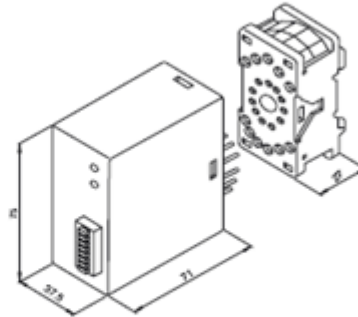
LC10

Loop detector with connector for one induction loop
230 V AC

Features

- Reliable detection with long service life
- Different operating modes
- Boost function for increasing sensitivity
- Changeable loop frequency
- Display of loop frequency and sensitivity
- Fault display for loop break and loop short circuit
- Test function

Dimensions



Electrical connection



Number	Explanation	Connector terminals
3	Loop connection	7/8
4	Signal output, maintained contact	5/6 = NO 6/10 = NC
5	Signal output, pulse contact	3/4 = NO 4/11 = NC
6	Operating voltage	1/2

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Technical data

General specifications

Marking	CE
Operating mode	Pulsed and continuous signal

Indicators/operating means

Operating elements	DIP-switch
Switching state	LED

Electrical specifications

Operating voltage	U_B	230 V AC (electrically isolated from loop)
Ripple		-15 %/+10 %
Power consumption	P_0	1.6 VA
Settling time		2 s
Loop inductivity		100 ... 1000 μ H
Loop frequency		20 ... 120 kHz

Input

Number of channels	1
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Output

Switching voltage	250 V AC
Switching current	6 A
Output type	relay
Pulse length	period or 800 ms Pulse
Response time	100 ms

Ambient conditions

Ambient temperature	-20 ... 70 °C (253 ... 343 K)
Storage temperature	-40 ... 70 °C (233 ... 343 K)

Mechanical specifications

Protection degree	IP30
Connection	Plug socket ; 11-pin Terminal connection $\leq 1.5 \text{ mm}^2$

Settings:

Sensitivity:

The response sensitivity of the loop detector can be set in three stages by switches 3 and 4.

Switch 3	Switch 4	Sensitivity
OFF	ON	low
ON	OFF	medium
ON	ON	high

In the switch position 'OFF', 'OFF' the loop evaluation is switched off.

Frequency switches:

The loop frequency can be set in four stages using the switches 1 and 2.

Switch 1	Switch 2	Frequency
OFF	OFF	Basic frequency f
ON	OFF	f - 10 %
OFF	ON	f - 15 %
ON	ON	f - 20 %

After actuation of the frequency switches 1 and 2 the loop must be readjusted with switches 3 and 4 set to 'OFF', 'OFF'.

Operating mode switches:

The following operating modes can be set with switches 5 and 6:

Switch 5	Switch 6	Result
OFF	-	Pulse (0.8 s) when loop is allocated
ON	-	Pulse (0.8 s) when loop is abandoned

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Switch 5	Switch 6	Result
-	ON	Increased sensitivity (Boost)

The increased sensitivity (Boost) is used for the detection of vehicles with high body assemblies, e.g. HGVs.

Automatic adjustment:

When the operating voltage is applied to the device automatic adjustment with the loop takes place. The output relays are switched in the switch position 'Loop not allocated'. The adjustment takes 2 s, the device is then ready for operation.

Automatic adjustment also takes place when both sensitivity switches 3 and 4 are set to 'OFF' and then set to another switch position.

Indications:

LED 2 signals the allocation state of the loop (Loop allocated = LED On). A fault in the loop due to a short-circuit or lead breakage and loop inductance outside the permissible range is indicated by flashing of LED 2.

Test function:

The loop detector is provided with an integrated test function, which enables the loop frequency and sensitivity to be optimally set without additional devices or instrumentation.

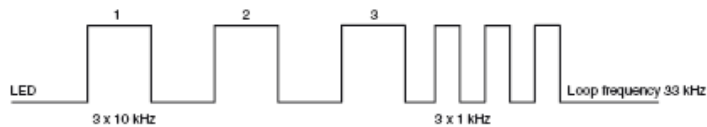
Indication of the recommended sensitivity:

The vehicle must be driven onto the loop. The loop detector measures and stores the frequency change. When switches 3 and 4 are changed over the recommended sensitivity is indicated by flashing of the LED.



Measurement of the loop frequency:

The loop frequency can be measured via the LED. Set switches 3 and 4 from 'OFF' to 'ON'. The LED indicates the loop frequency via a signal sequence:



Loop fault:

In the event of lead breakage or short-circuit the LED flashes continuously and the switch contact reverts to the 'Loop allocated' state.