

**1 Characteristic features**

- 11-pole circular connector
- Galvanic separation of loop and detector electronics
- Automatic system adjustment directly after power-on
- Sensitivity adjustment independent of loop inductivity
- Loop busy signal emitted by LED-display
- Potential-free relay contacts at the outputs
- Loop fault message via LED-signal
- Indication of historical loop fault
- Continuous rebalancing of frequency drifts in order to avoid environmental influences
- Diagnostics by external Service Program via USB-Mini connector

**2 Settings**

Use the following DIP Switches for the standard settings.

**2.1 Sensitivity**

DIP 1 DIP 3	DIP 2 DIP 4	Function
OFF	OFF	Low
ON	OFF	Medium Low
OFF	ON	Medium High
ON	ON	High

DIP 1/2 → Loop 1  
 DIP 3/4 → Loop 2

*More detailed Sensitivity settings via USB Interface!*

**2.2 Frequency**

DIP 5	Function
OFF	Low
ON	High

**2.3 Hold Time**

DIP 6	Function
OFF	5 Minutes
ON	Infinite

*More detailed Hold Time settings via USB Interface!*

**2.4 Output Mode Relay 2**

DIP 7	Function
OFF	Presence Output on Relay 2
ON	Pulse Output on Relay 2

*Setting doesn't affect Relay 1!*

**2.5 Output Edge Relay 2**

DIP 8	Function
OFF	Pulse on Loop Entry
ON	Pulse on Loop Exit

*Available only if Relay 2 is in Pulse Output Mode!*

**2.6 Direction Mode**

DIP 9	Function
OFF	Presence Output
ON	Direction sensitive Output

**2.7 Direction Logic**

DIP 10	Function
OFF	Dir. Logic Presence Output
ON	Dir. Logic Pulse Output

*Available only if Direction Sensitive Output is active!*

**2.8 Fail Save / Fail Secure**

DIP 11 DIP 12	Function
OFF	Non Inverted Output Signal
ON	Inverted Output Signal

*DIP Switch 11 inverts output signal on Relay 1 and DIP Switch 12 on Relay 2.*

More settings (Delay, Extension, Loop Fail Output, ...) or more detailed settings (Sensitivity, Hold Time, Output Modes, ...) can be done via USB Interface with the Service Program.

**3 Reset-Button**

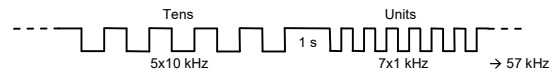
Press Reset Button 1 s until red LED is flashing to reset/retune detector and clear historical Loop Fault.

**4 LED**

Red	Blue	Function
OFF	OFF	No supply voltage
OFF	Fast Flashing	Calibration/Retuning Loops
OFF	ON	Ready for operation, Loop free
ON	ON	Ready for operation, Loop active
ON	OFF	Loop Fault
x	Flashing	Historical Loop Fault or DIP Switch setting overwritten by USB*
Blinking	Blinking	Output Loop Frequency in kHz

\*) If one or more DIP Switch setting is overwritten by the service program via USB interface.

Example for loop frequency 57 kHz:



**5 Diagnostics**

To display more details of the induction loop system, e.g. frequency, detuning, busy time, output signals, ... use the Service Program.

**6 Pin Assignment**

Pin	Function	-R24		-R230
1	Power	+10-30 VDC	10-30 VAC	L 100-240 VAC
2	Power	GND		N
3	Relay 2 N.C.			
4	Relay 2 COM			
5	Relay 1 N.C.			
6	Relay 1 COM			
7	Loop 1			
8	Loop 1			
9	-			
10	Loop 2			
11	Loop 2			

**7 Technical Data**

Dimensions (H x W x L)	76 x 38 x 71 mm
Power Supply	-R24: 10-30 V AC/DC, max. 1 W -R230: 100-240 V AC, 50-60 Hz, max. 2 W
Operating Temp.	-37 °C...+70 °C
Relays	max. 2 A, 230 VAC, 60 W/125 VA
Loop Inductivity	20-700 µH, recommended 100-300 µH
Frequency	30-130 kHz, 2 steps
Supply Line	max. 200 m
Resistance	max. 20 Ohm, incl. Loop Supply Line
Connectors	Power, Loop, Relay: 11-pole circular connector Diagnostic: USB-Mini AB

