VEK MNE1-R24-A
VEK MNE1-R230-A

Operating Instructions
Single-Channel Inductive Loop Detector

GBR

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 2	Function
OFF	OFF	Low
ON	OFF	Medium Low
OFF	ON	Medium High
ON	ON	High

More detailed Sensitivity settings via USB Interface!

2.2 Frequency

DIP 3	Function
OFF	Low
ON	High

2.3 Hold Time

DIP 4	Function
OFF	5 Minutes
ON	Infinite

More detailed Hold Time settings via USB Interface!

2.4 Output Mode Relay 2

DIP 5	Function
OFF	Pulse Output on Relay 2
ON	Presence Output on Relay 2

Setting doesn't affect Relay 1!

2.5 Output Edge Relay 2

DIP 6	Function
OFF	Pulse on Loop Entry
ON	Pulse on Loop Exit

Setting doesn't affect Relay 1!

2.6 Operating principle Relay 1 (Inv. Out 1)

DIP 7	Function
OFF	Closed circuit current principle
ON	Open circuit current principle

2.7 Operating principle Relay 2 (Inv. Out 2)

DIP 8	Function
OFF	Open circuit current principle
ON	Closed circuit current principle

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

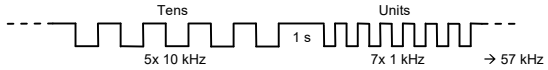
Pressing push button	LED-display	Operation
1 s	red LED flashes	Triggers a hardware reset with recalibration and resets the LED output for resolved loop faults
5 s	blue LED flashes	Triggers factory settings and resets USB-overwrite

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

The relay contacts are shown in de-energized state!
Observe the settings of DIP switches 7 and 8!

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

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

Additional note: Maybe only one frequency adjustment level is available when using induction loops outside of the recommended range. Additionally using lower induction loop values than recommended, can lead to reduced loop resistance values.