

CAR TRAFFIC

# VEK M4D / VEK M4DC

## 4-channel loop detectors for traffic light systems and car park counting



### FEATURES

- 5 frequency bands resp. 8 frequency steps
- 256 sensitivity levels
- Loop-Multiplexing
- Digital- and opto-coupler output per channel
- Common fault output
- RS485 interface and CANopen interface
- Input for loop synchronization



## TECHNICAL DATA (1 / 2)

4-channel loop detector	VEK M4D	VEK M4DC
<b>Mechanics:</b>		
Housing	Plastic housing, blue Polyamide PA 6.6	19" board Aluminium front panel 3 HE/5 TE
Dimensions	22.5 x 99 x 114.5 mm	100 x 160 mm
Protection class	IP30	-
Assembly	DIN rail mounting	Plug-in board
Weight	165 g	150 g
<b>Electrical connection:</b>		
Power supply	12-24 V <sub>DC</sub> +/-20% (SELV according to EN60950-1)	
Power consumption	typ. 500 mW max. 1200 mW	typ. 900 mW max. 1200 mW (1600 mW with opto coupler)
Temperature range	operation -20°C up to 70°C; storage -40°C up to 85°C	
Humidity	max. 95% not condensing	
<b>Induction loops:</b>		
Loop channels	4 (multiplexing, 6 ms cycle per channel)	
Loop inductance range	25 – 1200 µH (recommended 80 – 300 µH)	
Supply line	max. 300 m	
Operating frequency	30 – 140 kHz (5 frequency bands or 8 steps)	
Loop resistance	max. 20 Ω (including loop supply line)	
Loop inputs	galvanic separation (1 kV), 90 V gas arrester to ground contact	
<b>Functions:</b>		
Main functions	Presence detection, direction detection, 9 logics	
Sensitivity / hysteresis	256 steps, 0,005 – 3,188% Δf/f off hysteresis 20 – 80% of threshold	
Holding time	256 steps, 1 – 255 minutes and infinite	
Other	on delay resp. off delay for Open-Drain outputs, occupancy time, time gap, inverted hardware outputs, counter for presence and direction detection, channels can be switched off, multiplexing order adjustable	

## TECHNICAL DATA (2 / 2)

4-channel loop detector	VEK M4D	VEK M4DC
<b>Interfaces:</b>		
RS485	VEK M4D protocol 9600, 19200, 38400 Baud	
CAN	CANopen, communication profiles CiA 301 and CiADS-401 100, 125, 250, 500, 800, 1000 kBits/s	
Device address	DIP switch 4 Bit (+ Adr.-Offset)	DIP switch 4 Bit (+ Adr.-Offset) or via male connector 5 Bit
<b>Plugs / Connectors:</b>		
	Plug-in terminals 4-pin 0.2 – 2.5 mm <sup>2</sup> (AWG 24 – 14) Phoenix Combicon MSTBT 2.5	Male connector DIN 41612 Design B
Power supply	GND, 12 – 24 V <sub>DC</sub>	
Loop inputs	4	
Interfaces	optional CAN or RS485	
Open-Drain outputs	4	
Opto-coupler outputs	-	4x output, 1x common fault
Synchronization	(only via ribbon cable)	yes
Reset input	-	yes
Address coding	-	5 Bit
	Front ribbon cable	
	10-pin IDC plug	14-pin IDC plug
Power supply	GND, 12 – 24 V <sub>DC</sub>	
Synchronization	yes	
RS485 interface	RS485 A-, RS485 B+	
CAN interface	CAN Low, CAN High	
<b>Other:</b>		
Standards / Guidelines / Approvals	CE: DIN EN 61000-6-2, DIN EN 61000-6-3, DIN EN 60950-1	
	ElektroG: RoHS guideline 2002/95/EG, WEEE guideline 2002/96/EG	
Ground contact	via DIN rail	via DIN male connector or front plate