

VEK M4D / VEK M4DC

## 4-CHANNEL LOOP DETECTORS FOR TRAFFIC LIGHT SYSTEMS AND CAR PARK COUNTING

- Presence detection and direction detection
- 5 frequency bands and 256 sensitivity levels
- Loop-Multiplexing
- Digital- and opto-coupler output per channel
- Common fault output
- Input for loop synchronization
- Available as detector in plastic housing (direct installation on DIN rail) or as 19" board
- High reliability, extreme high MTBF rate



### FEIG Detectors for Controlling Traffic Lights

A generally increasing volume of traffic, dynamic traffic flows and particularly enormously increasing peak loads on the roads are the challenges for an optimally controlled flow of traffic.

Efficient traffic light control in cities is necessary to guarantee the smoothest possible traffic flow.

For this smooth operation of traffic lights, the FEIG 4-channel vehicle detectors VEK M4D are the right choice.

Besides the detection of presence and direction and the ability to program 9 sets of directional logic, the detectors offer a series of additional features such as detecting busy times or choosing between 256 sensitivity levels.

### Additional features:

- > Communication via RS485 or CAN interface
- > Advanced settings with M4D COM software tool
- > High speed open-collector outputs
- > Automatic system adjustment directly after power on
- > Galvanic isolation between loop and detector electronics
- > Sensitivity adjustment independent of loop inductivity
- > Continuous readjustment of frequency drifts in order to avoid environmental influences
- > Quick response time
- > Power, com and synchronization of multiple VEK M4D detectors via flat ribbon cable

Technical Data	VEK M4D	VEK M4DC
Housing	Polyamide PA 6.6, blue	19" board, 3HE / 4(5)TE
Dimensions (w x h x d)	22.5 mm x 99 mm x 114.5 mm	100 mm x 600 mm
Weight	165 g	150 g
Type of protection	IP 30	-
Supply voltage	12 - 24 V DC +/- 20 % (SELV according to EN60950-1)	
Power consumption	typ. 0.5 W / max. 1.2 W	typ. 0.9 W / max. 1.6 W
Temperature range	Operation -20 °C up to 70 °C; Storage -40 °C up to 85 °C	
Terminals	Plug-in terminals 4-pin 0.2 - 2.5 mm <sup>2</sup> (AWG 24 - 14)	Male connector DIN 41612 Design B
Front ribbon cable	10-pin IDC plug	14-pin IDC plug
RS485	VEK M4D protocol 9600, 19200, 38400 Baud	
CAN	CANopen, communication profile CiA 301 DS-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

## Loop Characteristics

Loop channels	4 (multiplexing, 6 ms cycle per channel)
Loop supply cable	up to 300 m
Inductance range	25 - 1200 µH (recommended 80 - 300 µH)
Operating frequency	30 - 140 kHz (5 frequency bands)
Sensitivity range	0.005 - 3.188 % $\Delta f/f$ (256 steps)
Loop hysteresis	off hysteresis 20 - 80 % of threshold
Loop resistance	max. 20 $\Omega$ (including loop supply line)
Loop inputs	galvanic separation (1 kV), 90 V gas arrester to ground contact
Holding time	256 steps, 1 - 255 minutes and infinite

## Order Descriptions

2865	VEK M4D	4-channel-detector
3873	VEK M4DC-A	4-channel-detector, 19" plug-in board, 3HE / 4TE front panel
4235	VEK M4DC-B	4-channel-detector, 19" plug-in board, 3HE / 5TE front panel



VEK M4D



VEK M4DC