

VEK S4 / VEK S4C

## 4 CHANNEL LOOP DETECTOR FOR ACQUISITION OF VEHICLE SPEED AND VEHICLE CLASS

- Detection of vehicle speed, vehicle length, classification of vehicles with a double loop system
- Classification of vehicles and data transfer according to the TLS-guidelines in 8+1 classes accuracy class 2
- Detection of vehicles in both directions
- 4 open collector outputs with selectable function
- Available as detector in plastic housing (direct installation on DIN rail) or as 19" board
- High reliability, extreme high MTBF rate



### FEIG Induction Loop Detectors for traffic counting and management

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.

The FEIG 4-channel traffic detectors VEK S4 are specially designed for use in traffic management systems and reliably collect all the relevant vehicle data for a full evaluation: speed, length, classification into 8 + 1 vehicle categories, gap time intervals and loop status.

FEIG also provides a settings and diagnostics program free of charge via RS485. All FEIG detectors are certified by the Federal Highway Research Institute (BAST).

### Additional features:

- › Communication via RS485 or CAN interface
- › Advanced settings with S4 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 S4 detectors via flat ribbon cable

Technical Data	VEK S4	VEK S4C
Housing	Polyamide PA 6.6, blue	19" board, 3HE/STE
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. 0.9 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 S4 protocol (option: SiTOS) VEK S3 protocol and VEK S3 TLS protocol 2400, 4800, <u>9600</u> , 19200, 38400 Baud	
CAN	CANopen, communication profile CiA DS-301 100, 125, <u>250</u> , 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, 2 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)
Loop resistance	max. 25 Ω (including loop supply line)
Loop inputs	galvanic separation (1 kV), 90 V gas arrester to ground contact
Loop geometry	max. head space 650 cm, max. loop length 400 cm (recommended TLS loop type 2)

## Classification

Lanes	2, both directions
Vehicle classes	8+1 classes according to TLS guidelines 2012, BAST certified (Motor cycle, car, car + trailer, lorry, truck, truck + trailer, bus, semitrailer, other vehicles with lane changer)
Vehicle length	10 – 255 dm, tolerance +/-3 dm
Vehicle speed	10 – 255 km/h, tolerance +/-3 km/h < 100 km/h, +/-3% > 100 km/h
Further vehicle data	Net time gap, occupation time, jam recognition, vehicle counter in RAM, option: axis information
TLS classification accuracy	A2

## Order Descriptions

5044	VEK S4	4-channel induction loop detector
5054	VEK S4C	4-channel induction loop detector, 19" plug-in board 3HE/STE



VEK S4



VEK S4C