ENG-VDR

Digital tachograph

The ENG-VDR is a digital vehicle data recorder that has been developed with the aim for application on commercial vehicles in regions without specific tachograph legislation. The system and human machine interface language is English.
It benefits from the worldwide experience of VDO in tachographs and combines a high quality with a wide range of functionalities.

It allows driver identification via smart cards and data, such as driving and rest times, speed, engine speed, 10 status inputs, as well as information needed for calibration, to be digitally recorded.

The ENG-VDR fits into a standard 1-DIN radio slot and consists of a recording unit with mass memory. Different configurations regarding the illumination and the CAN interface are available in order to meet all customers' requirements.

Because of the seals applied on the housing the VDR itself is tamper-proofed. All connectors as well as the fitments can be sealed as well if required.

Data relating to the vehicle and driver are stored in an integral mass memory with capacity for recording activities for approx. 720 hours. Accident data stored into the mass memory can provide important information for the vehicle accident analysis. Additionally important driver-related data are stored on a personal driver card (smart card) inserted into the digital tachograph before each journey or shift begins.

For typical aftermarket application the ENG-VDR will be installed as stand-alone version. Mass memory data can be downloaded via the front RS232 and USB interfaces. RS232 interface is also used to calibrate the system (note, that only authorized service partners are permitted to perform system calibration).

VDO is offering various software packages for down-loading, archiving and evaluating the data provided by the ENG-VDR.

As well tools to personalize and administer driver cards within the individual fleet would be available on request .

VDO

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System components

The radio slot-sized ENG-VDR includes a smart card reader, a dot-matrix display, an integrated thermal printer, a real time clock, operating controls and a data storage facility.

Data recording

The ENG-VDR records the following data:
- Driver related driving time, break/rest time, log in/ log out time, data upload & download time
- Vehicle speed: average speed per minute for the last 720 hours
- Engine speed / rpm: average speed per minute for the last 720 hours
- Accident data: 16 events (speed and status input signals) of the last 20 sec. before vehicle stop are recorderded at 0,2 sec resolution.
  The last 3 ADP records can be locked/unlocked
- Fatigue driving events with programmable limits for driving and rest-time
- Programmable Over speed events : 3 differently configurable speed limits
- Vehicle moving with ignition off
- Door open/close
- Events and faults
- Graphical printout of vehicle speed for actual calendar day

Access rights/Data protection

Special chip cards are used in the ENG-VDR to comply with data protection requirements and to ensure security. Authorized workshops can activate the calibration function of the ENG-VDR by utilizing their workshop card.

Functionality/Options

- Manual smart card reader for driver identification via driver card and workshop authentification via work shop card
- Integrated thermal printer
- KITAS speed sensor/normal speed sensor
- English menu text
- CAN bus
- K-Line diagnostics
- Vehicle speed input
- 10 status inputs
- Warning for different events
- In case of line installations at a truck manufacturer (OE application) VDR can be connected to the vehicles instrument cluster

Technical specifications

- Installation dimensions: 178 mm x 50 mm x 150 mm (w x h x d), 1-DIN radio slot format
- Operating voltage: 12V -24V
- Measuring range: 0 to 220 km/h
- Operating temperature: -25°C to +70°C
- Storage temperature: -40°C to +85°C
- Pulse range: 2.400 to 62.000 pulses per km
- Clock: real-time clock
- Inputs: vehicle speed sensor, engine speed sensor, 10 additional inputs
- Outputs: 2 x v pulse; 1 x 4 pulses/meter
- Accuracy:
  Speed: ± 1 km/h
  Distance: 5 km ± 0.1 km
  Time: ± 5 s per day
- Data keeping time: > 1 years (without power)
- Protection: IP32
- Weight: approx. 1000g

Interfaces

- CAN interface
- K-Line diagnostics interface
- Signal output (v pulse, 4 pulses/m)
- RS232 interface for programming, calibration and data download and communication to external device
- USB interface for data download by specific USB memory stick

VDO
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