



- Attractive design
- Remote control via VDO Driver or TIS-Web Fleet app
- Various settings via the DTCO Configuration app

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# DTCO<sup>®</sup> 3.0

## Digital Tachograph

The EC digital tachograph DTCO<sup>®</sup> 3.0 features impressive dependability, technology and handling. A new front design with a negative display in various colors and single-button operation for changing activities gives the DTCO<sup>®</sup> 3.0 a high quality look.

The DTCO<sup>®</sup> 3.0 consists essentially of the tried and tested recording unit with mass storage device, two chip card readers, a built-in printer and a display. Connected to the KITAS2+ speed sensor, the DTCO<sup>®</sup> 3.0 complies with Directive (EC) No. 1266/2009.

Vehicle related activities are stored in the integrated mass storage device. This device has a capacity of approximately 365 days. Driver-related data are recorded on the personal driver card (chip card), which is inserted into the digital tachograph before starting the journey.

It records digital data such as driving and rest periods (1-minute rule), speed, engine speed, vehicle weight, additional events (via D1/D2) and other vehicle-related physical parameters. A connected DTCO<sup>®</sup> GeoLoc module (GPS receiver) is used to determine the vehicle positions. These positions can be saved in the DTCO<sup>®</sup> 3.0 in relation to distance and/or times.

Data is transferred cyclically via one of the two CAN connections. This makes it possible to assign all events in the tachograph and other physical parameters in the vehicle (e.g. fuel consumption, tyre pressure) to a time and place. The DTCO<sup>®</sup> GeoLoc module can also generate the second motion signal (IMS: independent motion signal). Another feature is the

enhanced VDO Counter, which calculates the remaining driving and rest periods in real time and shows these directly on the display of the DTCO<sup>®</sup> 3.0.

The data from the mass storage device is now downloaded quicker (up to 30% less time). This data can be evaluated and archived for business purposes.

As a convenience feature, the DTCO<sup>®</sup> 3.0 has the option of easily transferring data from the mass storage device and driver card wirelessly using the Download Device (DLD<sup>®</sup>).

VDO provides suitable solutions here, such as the TIS-Web<sup>®</sup> service. If DTCO<sup>®</sup> SmartLink is used, the information from the enhanced VDO Counter can also be accessed from a smartphone and additional information can also be displayed on the phone, such as the minimum duration of the next break or the latest start of the week's rest period. There is also the option of conveniently calling up the most recent driving, working and rest periods. With DTCO<sup>®</sup> 3.0 and higher, a company card allows drivers or businesses to make various DTCO<sup>®</sup> settings directly from a smartphone. In addition, after authorization is given on the tachograph, manual changes can also be made remotely from a smartphone, such as changing the activity.

**VDO**

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## Digital Tachograph

### System components of the digital tachograph

- DIN radio compartment format, two chip card readers, printer, display, real-time clock, controls and memory.
- KITAS2+ intelligent speed sensor.
- Can be connected to analogue speed display or an instrument cluster

### Classic data capture

The DTCO<sup>®</sup> 3.0 records the driver's and co-driver's driving, working and rest periods, the current speed and distance, job-specific parameters such as the engine speed, and other work operations or additional events on the vehicle. Data are saved in vehicle-specific form.

Driving and rest periods are recorded on the personal driver card.

### Highlights of DTCO<sup>®</sup> 3.0

- Records up to eight CAN messages
  - VDO GeoLoc +4: vehicle position data capture with the help of a connected DTCO<sup>®</sup> GeoLoc module (position sensor via CAN interface)
  - Plus recording of up to four further physical parameters for the vehicle.Can be deactivated/activated by the driver.
- DTCO remote control via a smartphone (plus SmartLink).
- Enhanced VDO Counter acts like a personal assistant, keeping the driver informed at all times of the current situation regarding driving and rest periods. Also "team mode" and taking ferries and trains into account on time, now with information about the minimum duration of the next break and the latest start of the week's rest period.
- Business-friendly driving period calculation based on an interpretation to the second (1-minute rule).
- Remote download/local download, saves up to 30% time.
- Context-sensitive menu and simplified user guidance (manual changes).
- Negative display/illuminated keyboard available in 8 different colors.
- Graphical printouts.
- The 1st registration number is entered once with the business card after initial calibration.
- Various settings can be made using the DTCO Configuration app (smartphone/SmartLink) by the driver or business if there is a valid business card in either slot 1 or slot 2. The following configuration parameters are available:
  - Entering the 1st registration number
  - Displaying the VDO Counters with enhanced information (historical data)
  - Activating remote control
  - Change of activity when ignition is switched off
  - Company logo on printouts
  - Reminders for downloads
  - Warning of imminent speeding

### Operation and functions

- Records additional data (e.g. 168 hours-speed recording, mileage when vehicle comes to a stop).
- Early warnings (upcoming regular inspection, tachograph cards have expired, driver card download).
- Clear user guidance with menu text.
- Download status indicated on the display.

### Interfaces

- Two CAN interfaces to the on-board electrical system, DTCO<sup>®</sup> GeoLoc or Download Device (DLD<sup>®</sup>) (optional).
- Sensor interface for intelligent sensor (KITAS2+).
- Signal outputs (3 × v-pulse, 1 × 4 pulse/m).
- Logical CAN diagnostic interface
- Ignition-independent information interface for on-board computer or other telematics systems.
- 6-PIN interface on front for programming, calibration, data download (with wireless option).

### Technical data

- 1-DIN radio compartment format, installation dimensions: 178 × 50 × 150 mm (W × H × D)
- Protection class: IP54
- Real-time clock based on UTC time
- Operating voltage: 24 V (optionally 12 V)
- Current consumption: typically 12 mA (24 V)  
typically 15 mA (12 V)\*
  - During operation: typically 4.2 A (24 V)  
typically 5.0 A (12 V)
- Measurement range: 0 to 250 km/h
- Operating temperature: -20 °C to +70 °C  
(-20 °C to +65 °C in ADR case)
- Storage temperature: -40 °C to +85 °C
- Pulse range: 2,400 to 25,000 pulse/km,  
max. 1.5 kHz
- Inputs: KITAS 2+ 2171, speed sensor (RPM),  
additional inputs
- Outputs: 3 × v-pulse, 1 × 4 pulse/m
- Accuracy: speed: ±1 km/h,  
distance: ±1%, time: ±2 s/day
- Weight: approx. 600 g.

### Suitable solutions for direct data download

- DLK Pro Download Key
- DTCO<sup>®</sup> SmartLink Pro
- DLD<sup>®</sup> Short Range II and DLD<sup>®</sup> Wide Range II

\* Stand-by: averaged mean value over 24 hours of a standard DTCO version.  
See technical manual for ADR versions.