• VDO Counter
• 1 Minute Rule
• VDO GeoLoc

'DTCO® 2.1 active'

Digital tachograph

The 'DTCO® 2.1 active' digital EU tachograph offers an impressive combination of reliability, technology and handling.

The new Digital Tachograph not only includes the integration of the latest "1 Minute Rule",

so drivers can optimise their driving time during the working day, but also stores vehicle position data via a GPS receiver (optional). By connecting a DTCO® GeoLoc module (GPS-Receiver), vehicle position data can be recorded (cyclic data transmission via CAN 1 or 2 connections). The stored GEO coordinate data inside the 'DTCO® 2.1 active' can then be downloaded manually using a download tool or remotely using a Remote Download Device (DLD®) and then uploaded into TIS-Web Service Data Management System. Using the TIS-Web Mapping Service a road map can then be displayed. This enables fleet managers, to view vehicle journey data, including for example delivery locations.

The DTCO® GeoLoc module can also be used to generate the second motion signal (IMS / Independent Motion Signal), if for example the IMS cannot be provided via the vehicle's CAN.

Another special feature of the new digital tachograph is the VDO Counter, an intelligent on-board computer which provides the driver with real-time information on remaining driving and breaks / rest times. Using this data, it's possible to plan routes and times more efficiently. When using optional accessories like e.g. the DTCO® SmartLink, you can view this additional information on a Smartphone.

The 'DTCO® 2.1 active' mainly consists of the recording unit (with mass memory), two automatic chip card readers, an integrated printer and a display. The 'DTCO® 2.1 active' meets the requirements of Regulation (EC) No. 1360 / 2002 when used with a KITAS 2+ speed sensor and installed in accordance with the requirements of EU and national legislation.

The integral mass memory stores the vehicle's activities, covering a period of approx. 365 days. Driver data is recorded on a personal Driver Card (chip card) which is inserted in the digital tachograph before the start of a journey.

Featuring "1 minute rule" integration, Remote Download (DLD®) support and VDO Counter and GPS functionality, the 'DTCO® 2.1 active' combines four major benefits in one device.

For example, the 'DTCO® 2.1 active' enables mass memory and driver card data to be transferred easily by wireless using the Remote Download Device (DLD®). The downloaded data can then be evaluated and archived using a suitable analysis solution, for example via the VDO TIS-Web® online service.

VDO

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'DTCO® 2.1 active' System Components
- DIN radio slot format, 2 fully automatic chip card readers, printer, display, real-time clock, operating controls and memory
- Smart KITAS 2+ speed sensor
- Can be connected to an analogue speed indicator or instrument cluster

Data recording
The 'DTCO® 2.1 active' records driving, working, availability and rest times for drivers and co-drivers, the current speed and distance travelled, journey specific parameters such as rpm and further vehicle activities and events. Driving and rest times are also recorded on a personal Driver Card.

Highlights 'DTCO® 2.1 active'
- VDO GeoLoc (optional): A position logger (DTCO® GeoLoc) can be connected to the DTCO® via CAN.
  Position logging can be enabled and disabled by the driver.
- VDO Counter (optional): The driver is provided with real-time information on remaining driving and breaks / rest times and includes 'Double manning' and ferry / train operations.
- Latest "1 Minute Rule" calculates driving time according to EU Regulation 1266/2009, so drivers can optimise driving time during the working day.
- Remote download of data (including digital signature)
- Context-sensitive menu and simplified user guidance (manual entries)
- Graphical printouts
- VRN entry after initial calibration using a company card (once only)

Suitable data download solutions
- DLK Pro Download Key
- Download Device (optional)
  (DLD® Short Range and DLD® Wide Range)

Operation and functions
- Recording of additional data (i.e. 168 hours of speed recording, odometer reading when vehicle becomes stationary)
- Early warning of periodic inspection due, tachograph card expiry and Driver card download
- Intuitive user guidance (menu texts)
- Indication of download status shown on the display

Interfaces
- 2 CAN interfaces for on-board electronics, DTCO® GeoLoc or Download Device (DLD®) (optional)
- Sensor interface for smart sender unit (KITAS2+)
- Signal outputs (2 × v pulse, 1 × 4 imp / m)
- Logical diagnostic interface on CAN and / or K-Line
- Info interface for on-board computer and other telematic systems (independent of ignition)
- 6-pin front interface for programming, calibration, data download (wireless as an option)

Technical specifications
- 1-DIN radio slot format, installation dimensions:
  178 × 50 × 150 mm (W × H × D).
- Real-time clock (based on UTC time)
- Operating voltage: 24 V (12 V optional)
- Measuring range: 0 - 250 km / h
- Operating temperature: 25 °C - +70 °C
- Storage temperature: 40 °C - +85 °C
- Pulse range: 4,000 - 25,000 imp / km
- Inputs: KITAS 2+ 2171, n sender unit, additional inputs
- Outputs: 2 × v pulse, 1 × 4 imp / m
- Accuracy: speed: ±1 km / h, distance: ±1%, clock: ±2 s / day
- Weight: approx 1,300 g

VDO Counter:

The driver continually receives up-to-date information about his driving and rest times.
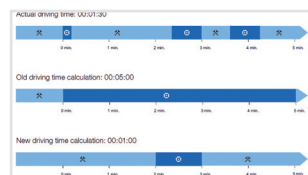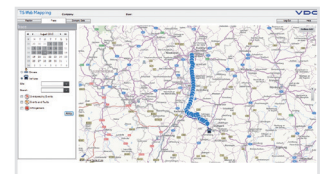

1 Minute Rule:

Sample calculation with three stops in five minutes.

DTCO® SmartLink:

All important data directly on your smartphone.

VDO GeoLoc:

Vehicle position data recording. Evaluation in TIS-Web Mapping.