

EFAS 5

Smart Tachograph Vehicle Unit

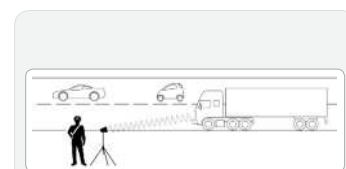
according to Reg. (EU) 165/2014 and CIR (EU) 2016/799



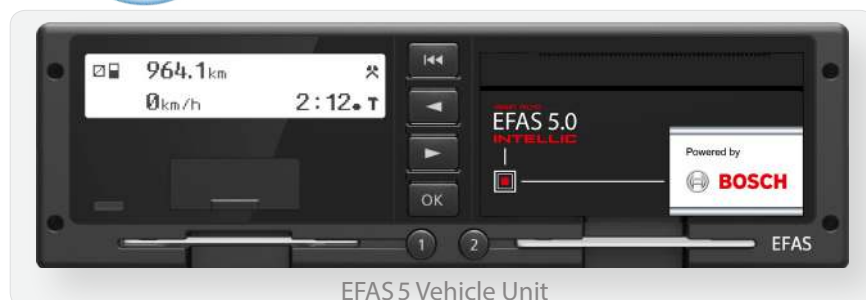
GNSS



ITS Interface (wireless optional)



EFAS 5 DSRC Unit



EFAS 5 Vehicle Unit

Starting June 2019, Smart Tachographs are mandatory in commercial vehicles registered for the first time where the maximum permissible mass of the vehicle, including any trailer, or semi-trailer, exceeds 3,5 tonnes.

The Smart Tachograph System consists of the Smart Tachograph Vehicle Unit, the GNSS receiver, the remote communication facility (DSRC Unit) and further equipment like smart cards and motion sensor.

Highlights of EFAS 5

- ▶ By deploying excellent system architecture, EFAS 5 Smart Tachograph Vehicle Unit fits in almost all vehicle types. This eliminates the need for multiple hardware versions (e.g. 12 or 24V power supply) for different vehicle types
- ▶ EFAS 5 Smart Tachograph Vehicle Unit supports the remote communication facility "E5.DU" DSRC Unit.
- ▶ EFAS 5 provides an internal GNSS antenna to determine the position.
Optional: Connection to an external GNSS antenna via FAKRA connector is possible.
- ▶ The easy menu navigation simplifies and speeds up the installation work-flow.

The easy-to-use software EFAS Service Tool for workshop professionals enables the setting of vehicle parameters in the blink of an eye. Configuration of EFAS Tachographs, software updates, diagnostics and test routines are available in many languages.

An Installation Setup Wizard simplifies installation and parametrization by automatic setup of basic parameters like CAN bus data transfer rate. The Setup Wizard minimizes workload and accelerates the installation process.

Manufactured by BOSCH

High quality manufacturing by BOSCH automotive TS 16949-certified electronics manufacturing facility. Best in class quality and technology leadership comes with many advantages for our customers.

Smart Tachograph – EFAS 5

Technical data sheet

Compliance

EFAS 5 VU is compliant with all relevant legal requirements

- ▶ Tachograph Legislation EU Reg. No 165/2014
- ▶ Technical Annex EU 2016/799 Annex 1C) and amendment CIREU 2018/502.
- ▶ Compatible with all approved motion-sensors and tachograph cards (Generation 1 and 2)

Vehicle Integration

- ▶ Standard CAN bus communication according to ISO 16844 (Road vehicles - tachograph systems)
- ▶ CAN ISO 15765 (Diagnostic communication over Controller Area Network)
- ▶ Automatic CAN bus adaptation at installation
- ▶ Adjustable CAN speed (250, 500 kbps), CAN MIX operation - 11/29-Bit identifier
- ▶ CAN termination integrated (120Ω)
- ▶ K-Line / RS 232 with diagnostic functions according to ISO 14229 (UDS - Unified Diagnostic Services) and ISO 14230 (Diagnostic communication over K-Line)
- ▶ High-precision real-time clock

Interfaces

- ▶ Internal GNSS antenna to determine the position (FAKRA connection to an external GNSS antenna optional)
- ▶ CAN-C interface for connecting to DSRC unit as well as for adaptation of telematics and fleet management systems (e.g. for remote download via FMS)
- ▶ Optional ITS interface
- ▶ Parameters can be set via a range of interfaces
- ▶ Interface for motion sensor
- ▶ Configurable K-line interface/info interface via D7 and D8
- ▶ Three speed-pulse outputs (one of which is independently configurable)
- ▶ Two digital status inputs D1/D2 (logging of user-specific events)
- ▶ Output interface for tachograph warnings

EFAS 5 Special Features

- ▶ iCounter calculates driving/rest times per shift/week/fortnight. Even while driving, it informs the driver of upcoming changes of activity and their duration.
- ▶ 1-Minute Rule - activity per minute is calculated according to EU Regulation 1266/2009
- ▶ Supports Fleet Management System (FMS) interface (Version 2 and higher)
- ▶ Installation Setup Wizard
- ▶ Easy exchange of printer paper

GUI Features

- ▶ 128×24 pixel Dot-Matrix display, 2 lines with 16 characters
- ▶ 2 card readers
- ▶ Automatic detection of the cardholder's national language
- ▶ 32 languages installed
- ▶ Display messages shown as floating text
- ▶ Easy switching between languages

Power Supply

- ▶ Power supply range: 8 to 34V
- ▶ Operating power consumption (without printer active or card ejection): 70 mA @ 24V (max.)
120 mA @ 12V (max.)
- ▶ Power consumption on standby: 2,5 mA @ 24V (max.)
5 mA @ 12V (max.)

Technical Data

- ▶ Dimensions of front panel (B×H) in mm: 186×58
- ▶ Protection class of device front after installation: IP54
- ▶ Protection class of device rear: IP40
- ▶ Operational temperature range: -25 °C to +80 °C
- ▶ Storage temperature range: -40 °C to +85 °C
- ▶ Operational printer temperature: -10 °C to +60 °C
- ▶ Standard radio slot size according to ISO 7736
- ▶ Weight: 928g