

# EFAS – Digital Tachograph

EFAS 4TE



## Highlights EFAS 4TE

- One4All** By deploying excellent software operating system architecture, our Digital Tachograph EFAS 4TE fits all vehicle types. This eliminates the need for multiple hardware versions for different vehicle types
  - ▶ Multiple vehicle software architecture
  - ▶ Wide-range power supply 12/24V
  - ▶ Individual parameter update in line-fitting procedure
- Clever** Easy menu navigation simplifies and speeds up the installation work-flow. Workshop professionals and drivers enjoy a familiar environment.
- Easy** 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 all supported multi-lingually.
- Simple** The 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 TS16949-certified electronics manufacturing facility. Best in class quality and technology leadership comes with many advantages for our customers.

# Digital Tachograph – EFAS 4TE

## Technical data sheet

### 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
- ▶ Comprehensive implementation of EU Regulation 1266/2009
- ▶ Supports Fleet Management System (FMS) interface (Version 2 and higher)
- ▶ Remote data download via vehicle bus
- ▶ Automatic Setup Wizard
- ▶ Exchange of printer module w/o recalibration

### Interfaces

- ▶ Parameters can be set via a range of interfaces
- ▶ Interface for motion sensor
- ▶ CAN interface for connecting to on-board electronics
- ▶ CAN interface to a variety of IMS modules
- ▶ Second CAN interface for adaptation of telematics and fleet management systems (e.g. for remote download via FMS)
- ▶ Configurable K-line interface and info interface
- ▶ 6-pin standard front interface for calibration, diagnosis and data download, compatible with leading 3rd party tools and devices
- ▶ Engine speed input (RPM), alternatively usable as IMS input with adjustable switching threshold
- ▶ Three speed-pulse outputs (one of which is independently configurable)
- ▶ Two digital status inputs D1/D2 (logging of user-specific events)
- ▶ Signal interface for output of tachograph warnings

### Power supply

- ▶ Power supply range: 8 bis 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.)

### 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
- ▶ Switch-able 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)

### System features

- ▶ 128 x 24 pixel Dot-Matrix Display which allows to display 2 x 16 characters
- ▶ 2 automatically controlled card readers
- ▶ Standard radio slot size according to ISO 7736
- ▶ Maximum state-of-the-art protection against manipulation
- ▶ Maximum system reliability
- ▶ Conforms with EU certification standards
- ▶ High-precision real-time clock
- ▶ Parameters can be set via a range of interfaces

### Language features

- ▶ Automatic detection of the cardholder's national language
- ▶ 27 languages installed
- ▶ Additionally available languages can be loaded on request
- ▶ Display messages shown as floating text
- ▶ Easy switching between languages

### Technical data

- ▶ Dimensions of front panel (W x H): 186 mm x 58 mm
- ▶ Protection class of device front after installation: IP54
- ▶ Protection class of device rear: IP40
- ▶ Operational temperature range: -25°C bis +80°C
- ▶ Storage temperature range: -40°C bis +85°C
- ▶ Operational printer temperature: -10°C bis +60°C
- ▶ Weight: 1090 g