

# Telematics eCall Plug | TEP120

## Smart Driving Behavior Determination



**BOSCH**  
Invented for life

The Telematics eCall Plug is a smart sensor device designed for crash detection and driving behavior analysis in passenger cars. Together, with an App\* and call center services\* it can increase the safety of the driver and help to accelerate road side assistance. In addition, it gives insights to improve driving behavior when supported by the App\*. The eCall functionality may give you peace of mind every time you or your loved ones get behind the wheel. Relax and concentrate on your every-day activities while your partner is on the road with the kids. The Telematics eCall Plug helps to support safe driving when supported by the App\*.



### FEATURES

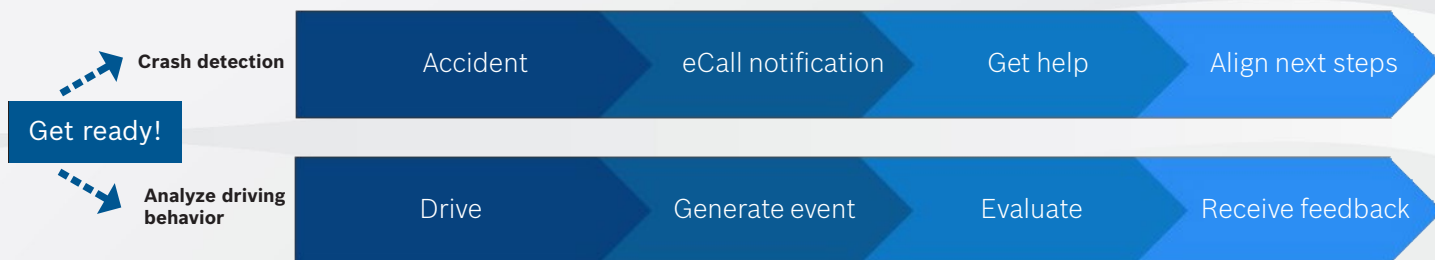
- ▶ Crash detection reporting crash severity
- ▶ Start/Stop and Driving Event detection as well as event scoring for acceleration, braking and cornering
- ▶ Software development kit available for easy integration into existing Smartphone App\*
- ▶ Possibility to run the features separately and combined
- ▶ Memory for approx. 10.000 offline events

### BENEFITS FOR BUSINESS CUSTOMERS

- ▶ Frequent customer contact and improved customer relationship
- ▶ Enable competitive differentiation and new business models
- ▶ Event detection and scoring for “pay how you drive, pay as you drive and usage based insurance offerings” applications
- ▶ Helps insurers reduce fraudulent claims
- ▶ Data generation through driving style information or gamification
- ▶ Minimal installation effort and well known application for end customer, interaction through Smartphone App\*
- ▶ Low investment for device enables fast penetration of consumer base



### HOW IT WORKS



\*App not part of product offering

## FEATURES

### Sensing

eCall	Crash detection
Event detection + event scoring	Acceleration, Braking, Cornering(left + right)
Motion sensor	3 Axis - Accelerometer BMA255
Temperature sensor	Included in motion sensor

### Communication

Radio communication	Bluetooth® 4.0 (Smart, Low Energy)
Frequency	2400 - 2483.5 MHz
Max. transmission power	0.47 mW

### Charging

USB Charger	1.5A at 5V (depending on temperature)
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### User interface

LED	Green LED ( find the blink codes in the section of 'LED behavior')
User interaction	Provided through Smartphone App*

### Mechanical

Dimensions of TEP110/120	69.6mm x 33.9mm x 33.9mm
Weight	20g
12V car jack	Designed to fit into SAE J563 12 V socket



## OPERATIONAL CONDITIONS AND RANGES

USB charging current	max 1.5A
USB output voltage	max 5V
Input voltage	8.0 ... 16.0V
Nominal input voltage	12V
Accelerometer measurement range	±16g
Crash heaviness range	0 ... 100
Event scoring range	1 ... 255

### Mounting Position for driving behavior analysis

The TEP120 must be mounted along the longitudinal axis (length-wise in the direction of travel) of the passenger car.

### Power consumption

Operating mode	Device paired, with load: 9.5W
	Device paired, without load: 0.65W
	Device unpaired, with load: 9.3W
	Device unpaired, without load: 0.44W
Sleep mode	0.11W

### Operating temperatures

No devices attached to USB port	-30°C ... +75°C
Device attached to USB port	Lower limit: -30°C Upper limit: dependent on outside temperature and current consumption of attached device (see below)
Charging current at 5V depending on temperature: (all values are assumed to be constant, peak rates may differ)	1.2A at 23°C w. 12-13V supply voltage
	1.1A at 23°C w. 16.5V supply voltage
	1.1A at 27°C w. 12-13V supply voltage
	see storing conditions

### Operating humidity ranges

see storing conditions

## STORING CONDITIONS

Storing temperatures	Allowed storage conditions (1 year until use): -40°C ... 10°C: 7 h 10°C ... 25°C: 6132 h 25°C ... 30°C: 1752 h 30°C ... 40°C: 860 h 40°C ... 90°C: 7 h
Temperature range	-30°C ... 75°C (over 2 years lifetime)
Humidity	Allowed storage conditions (1 year until use + 2 years lifetime): 30 ... 60%: 23700h (90% of lifetime) ≤ 80%: 2600h (10% of lifetime)

## ORDER AND PACKAGING

BOSCH Hardware part number	0273.600.036 (Bosch label)
BOSCH Software Function	eCall, PHYD, eCall + PHYD
Delivery lead time	15 working days
Order quantities	112 plugs (box), 1792 (pallet)
Weight of package	4kg (box); 100kg (pallet)
Dimension of package	577mm x 377mm x 225mm (box) 1200mm x 800mm x 1040mm (pallet)
Documentation (available languages)	English

### Quality and standards

Enclosure protection class	IP X0
Electrical protection class	Class III
ISO	Designed in Germany and manufactured in China according to ISO 9001 and ISO 50001 standard
Technical standards	EN 301489-1, EN 301489-17, EN 301489-34, EN 300328, EN 60950-1, EN 62479
CE	RE-Directive 2014/53/EU
WEEE	WEEE Registration DE-83475985
Certifications	CE (EU), FCC (US), IC (Canada), SRRC (China), Anatel (Brazil), IMDA (Singapore), MIC (Japan), ACMA (Australia), SIRIM (Malaysia), WPC/ETA (India)

### Housing testing procedure

Drop test: 10 drops from 100cm height on granite

### Environmental

### LED behavior

Off	LED blinking codes (continuous) TEP is off (no functionality available)
On	TEP120 connected & ready, no error set or recognized Mode 1 +2 eCall active Mode 3 PHYD active & calibration completed Mode 4 eCall + PHYD & calibration for PHYD completed
3 s off - 1 s on	TEP is ready to connect; no Smartphone currently connected
0.5 s off - 0.5 s on	TEP120 is in error mode (see error codes chapter)
3 s off - 3 s on	TEP is in setup mode (Custom 1)
1.5 s off - 1.5 s on	Custom 2

\*App not part of product offering

## GET IN CONTACT WITH US

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