BRIEF INFORMATION

Smart Vehicle Access
via Bluetooth with Electronic Control Unit (ECU)

- Hands free smart access to your vehicle by smartphone
- User identification with welcome functions like lights or sound
- Vehicle specific smartphone key generation and sharing
- Integration into existing customer cloud & Apps, uncompromised security and safety as well as a new dimension in comfort
- Communication via Bluetooth Low Energy and access without internet connectivity

PRODUCT FEATURES

Application
FORVIA HELLA develops and produces different types of control units and is one of the leading suppliers of vehicle access systems. Passive Entry / Go Systems are used to enable the keyless locking and unlocking of vehicle doors as well as keyless ignition.

This smart vehicle access technology enables hands-free access and localization via Bluetooth Low Energy (BTLE) for easy vehicle usage. In addition it's possible to grant access to other drivers with generated operator keys. All you need is a smartphone! The Bluetooth standard can be used as standalone system without internet connectivity.

PRODUCT FEATURES

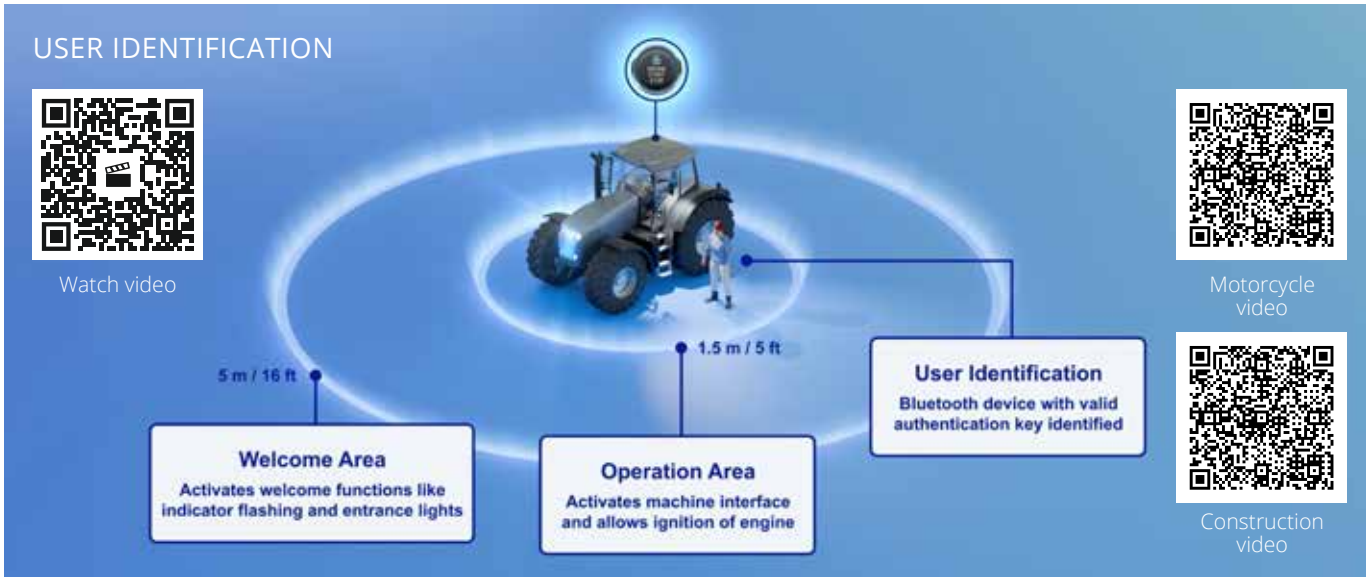
Design and Function
The smart vehicle access system enables keyless vehicle access with uncompromised security and safety. It consists of a connectivity ECU with Bluetooth.

There is an easy user identification in the close range of the vehicle. At a distance of up to 10 meters it detects the mobile device: The vehicle welcomes the operator with automatically turn on of e. g. flashing lights and also the work lamps to light up the way. This welcome function can be individually programmed and the distance of user identification is adjustable.

There is no unintended use of starting the vehicle because it is only possible to start the engine when the driver approaches a distance of 1.5 meter or less. The vehicle is locked as the user moves away from the vehicle.

FORVIA HELLA's smart vehicle access gives another keyless advantage when it comes to vehicle sharing. The customer cloud controls the owner key generation wich is based on the VIN of the vehicle. The owner can easily grant access to operators via cloud. The operator keys can contain properties such as the expiry date or certain vehicle functions.

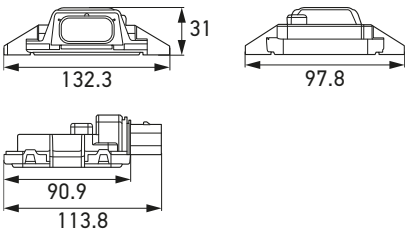
APPLICATION EXAMPLE



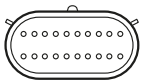
TECHNICAL DETAILS

Technical data	
Operating voltage range	Single-voltage (7 – 18 V or 18 – 32 V)
Rated voltage	12 V or 24 V
Temperature range	-40 °F to +185 °F
Protection class	IP 67
Mating connector	Molex MX150 Series, 334722001
Approved	ECE-R10
Compliant	Bluetooth SIG Certificate
Protection	Over- / reversevoltage protection, short circuit protection
Digital Inputs	6 (3 / w PWM)
Analog Inputs	1
Digital Outputs	6 (HSD), e.g. horns, worklamps or turn indicators
CAN Interface	1
LIN Interface	1
Bluetooth LE	1

Dimensional sketch



Pin assignment



Position	Function	I/O
PIN 1	CAN High	BUS
PIN 2	Ignition Switch	In
PIN 3	Brake Lamp	Out
PIN 4	Headlamp	Out
PIN 5	Compartment Lamp	Out
PIN 6	Right Indicator Lamp	Out
PIN 7	Indicator Status Lamp	Out
PIN 8	Left Indicator Lamp	Out
PIN 9	VBat	Supply
PIN 10	GND	Supply
PIN 11	CAN Low	BUS
PIN 12	GND	Supply
PIN 13	PWM	In

Position	Function	I/O
PIN 14	Left Indicator Switch	In
PIN 15	Right Indicator Switch	In
PIN 16	PWM	In
PIN 17	Digital Input	In
PIN 18	Analog Input	In
PIN 19	GND	Supply
PIN 20	LIN	BUS
Wireless	Bluetooth LE	BUS

PROGRAM OVERVIEW

Product picture	Description	Rated voltage	Part number	VPE*
	Electronic Control Unit	12 V	**On request**	1
		24 V	**On request**	1

* Packaging unit