



This Bosch app makes car keys a thing of the past Safe and stress-free key management by smartphone

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- ▶ Digital, not analog: with Perfectly Keyless, Bosch puts car keys onto smartphones.
- ▶ World first: the first keyless access system for trucks.
- ▶ For fleet operators: they can now flexibly manage which drivers have vehicle access and when.
- ▶ No more hunting for keys: a digital key is always where it is needed.

Stuttgart, Germany – The key of the future is digital, and offers more features than its analog predecessors: impossible to lose or steal, there is never a need to search for it. That is because it is stored securely and specifically for each user in a smartphone app. “Our Perfectly Keyless app is making conventional vehicle keys a thing of the past. Bosch is taking the car key into the digital realm and making it available anywhere, anytime,” says Harald Kröger, president of the Bosch Automotive Electronics division. With Perfectly Keyless, the smartphone replaces the analog vehicle key. This concept can offer owners of private vehicles increased convenience, but where it really shines is in vehicle fleets with multiple drivers. No more key handovers: fleet managers and logistics providers simply use the app to give drivers access to the vehicles. “Bosch’s digital vehicle key gives fleets a boost towards greater connectivity,” Kröger says. The company believes there is a huge market for its solution, which is making its world debut at the IAA Commercial Vehicles in Hannover: potential customers include some 15,000 logistics providers in Germany alone. Most of them manage at least a dozen vehicles and drivers.

A keyless journey

Row upon row of hundreds of keys hanging on large boards – logistics providers still often use this method to organize the keys to their fleet vehicles. A missing key triggers a massive search operation. But every minute counts, especially with commercial vehicles. After all, if a truck isn’t moving, it’s not making any money. At the core of the new system is an app that dispatchers and truck drivers both have on their phones. This makes it possible to grant vehicle access with just a

few clicks. In the future, the Bosch solution will also allow logistics providers to completely integrate digital key management into their dispatch and scheduling systems. As soon as dispatch has assigned drivers and trucks to a route, the system automatically generates digital keys for the vehicles and sends them to the drivers' smartphones. If the route scheduling changes, the software adjusts the keys accordingly. "Thanks to Bosch's fully digital key management, logistics providers enjoy both security and flexibility in their planning. This is the only way the logistics of the future will be able to function efficiently," Kröger says.

Secure key management with app and cloud

Bosch digital key management connects trucks and the smartphone app via the cloud. Dispatchers or fleet managers use the app to assign a truck to a driver for a particular route. Perfectly Keyless generates a personal, secure digital key and sends it via the cloud to the truck and to the driver's smartphone. As the driver approaches the assigned truck, the sensors installed in the truck detect the smartphone via a wireless connection. The vehicle doors will open only if the key on the phone "fits" the digital lock in the vehicle. These sensors can also tell when the driver is in the driver's seat, and the engine starts up as soon as the driver presses the start-stop button. When the driver gets out of the car at the end of the journey, the system detects this and automatically locks the doors.

Battery dead? No problem!

But what happens if the smartphone's battery dies, or the device has gone missing? In the future, the vehicle key in the smartphone will work even if the phone battery is dead. In that case, the phone and truck will communicate using near-field communication (NFC), a wireless protocol for sharing data over short distances. Bosch plans to make it the "double hull" of its solution. If the smartphone is lost or stolen, and the app with it, the digital key can be simply deactivated online, thus blocking access to the vehicle. It cannot be opened and started until the fleet manager uses the app to provide another driver or a new phone with access to the truck.

Press photos: #1452339, #1452340, #1452341, #1452342

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BOSCH AT THE IAA COMMERCIAL VEHICLES 2018

- **Press conference: Wednesday, September 19, 2018, from 1:20 p.m. to 1:40 p.m., with [Dr. Rolf Bulander, chairman of the Mobility Solutions business sector](#), and [Dr. Markus Heyn, Member of the Board of Management, Robert Bosch GmbH](#), at the Bosch booth A01 in Hall 16.**

- **Follow the Bosch IAA 2018 highlights on www.bosch-iaa.com or on Twitter: [#BoschIAA](https://twitter.com/BoschIAA)**
- **Panels with Bosch experts at the New Mobility World Forum, pavilion 11, section D:**
 - **Wednesday, September 26, 10:00 a.m. – 11:00 a.m.:** Presentation “The enhancement of automated driving (and AI)” with Johannes-Jörg Rüger, head of the Commercial Vehicle and Off-Road unit
 - **Thursday, September 27, 11:15 a.m. – 12:15 p.m.:** Panel discussion “Aftermarket – more than just repair and maintenance”
 - **Thursday, September 27, 2:30 p.m. – 3:30 p.m.:** Presentation and discussion “Masters of digitalization: digitizing businesses and mobility ecosystems” with Dr. Rainer Kallenbach, president of the Connected Mobility Solutions division

Mobility Solutions is the largest Bosch Group business sector. In 2017, its sales came to 47.4 billion euros, or 61 percent of total group sales. This makes the Bosch Group one of the leading automotive suppliers. The Mobility Solutions business sector pursues a vision of mobility that is accident-free, emissions-free, and stress-free, and combines the group's expertise in the domains of automation, electrification, and connectivity. For its customers, the outcome is integrated mobility solutions. The business sector's main areas of activity are injection technology and powertrain peripherals for internal-combustion engines, diverse solutions for powertrain electrification, vehicle safety systems, driver-assistance and automated functions, technology for user-friendly infotainment as well as vehicle-to-vehicle and vehicle-to-infrastructure communication, repair-shop concepts, and technology and services for the automotive aftermarket. Bosch is synonymous with important automotive innovations, such as electronic engine management, the ESP anti-skid system, and common-rail diesel technology.

The Bosch Group is a leading global supplier of technology and services. It employs roughly 402,000 associates worldwide (as of December 31, 2017). The company generated sales of 78.1 billion euros in 2017. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT company, Bosch offers innovative solutions for smart homes, smart cities, connected mobility, and connected manufacturing. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to deliver innovations for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is “Invented for life.” The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At 125 locations across the globe, Bosch employs some 64,500 associates in research and development.

Additional information is available online at www.bosch.com, www.bosch-press.com, twitter.com/BoschPresse.