

PRESS INFORMATION

Everything under control

Susan Strauss | 06/14/2022 | USA | MH22004

Multifunctional control grip Sense+ from Rexroth is scalable and allows intuitive human-machine interaction thanks to a vibration element

- Ergonomic joystick features numerous functions
- Vibration feedback for better human-machine interaction
- Robust design and straightforward machine integration

Bosch Rexroth asked drivers all over the world about their needs and preferences. The result is Sense+, a multifunctional, ergonomic joystick which can be adjusted to suit various applications and can provide the driver with feedback via haptic vibration patterns.

Increasingly complex machines with a greater number of integrated functions are increasingly demanding to operate. Nowadays, machine operators work hand in hand with automation and assistance functions. They use a wide range of attachments, and they must heed numerous notices and warnings. Bosch Rexroth asked itself how machine operators could control their mobile machines more easily and intuitively. The answer is an ergonomic multifunctional joystick which brings humans and machines even closer together with the help of haptic vibration feedback.

Global needs addressed intuitively

The joystick was developed in response to a survey carried out among machine operators who work in a range of fields throughout the world. Sense+ is a universal joystick with a unique design that is available in a left-handed and right-handed version. The joystick guides the machine operator and warns them of incorrect operation and hazards via an optional haptic vibration feedback element. For example, different vibration patterns can signal distances to a specific level surface, a virtual wall or approaching obstacles. This allows intuitive, convenient interaction between the machine and the driver.

Numerous designs and functions

With various grip configurations and flexible pushbutton, finger wheel and rocker switch arrangements, the joystick can be adjusted to suit various machine types and functions. Sense+ is available in 156 different configurations. Optional LED backlighting for individual operating elements in the grip can also show which machine functions are currently activated. All components in the grip are positioned ergonomically to ensure maximum efficiency and productivity and to prevent fatigue on the part of the machine operator.

Simple CAN interface

The analog signals from the grip are read into the joystick's base and converted into CAN messages. Sense+ can be connected to the machine control device with just one CAN plug, which means less wiring in the armrest console. Because the base processes up to 29 inputs and outputs, even external devices can be connected to use the base as a CAN gateway.

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Basic Information Bosch Rexroth

As one of the world's leading suppliers of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe movement in machines and systems of any size. The company bundles global application experience in the market segments of Mobile Applications, Machinery Applications and Engineering, and Factory Automation. With its intelligent components, customized system solutions and services, Bosch Rexroth is creating the necessary environment for fully connected applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology and linear motion and assembly technology, including software and interfaces to the Internet of Things. With locations in over 80 countries, more than 31,000 associates generated sales revenue of around 6.2 billion euros in 2019.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 395,000 associates worldwide (as of December 31, 2020). The company generated sales of 71.5 billion euros in 2020. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. 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 facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. 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 some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first quarter of 2020. The basis for the company's future growth is its innovative strength. At 129 locations across the globe, Bosch employs some 73,000 associates in research and development, of which nearly 34,000 are software engineers.

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