

Press Message

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Pilz offers new radar sensors plus analysing unit for safe protection zone monitoring - Safe protection zone monitoring, including for robotics!

Ostfildern, 23.09.2021 - **For safe protection zone monitoring even in rugged conditions, the Pilz portfolio now includes another sensor for the safe radar system PSENradar: the new radar sensor PSEN rd1.2 can be used for Cat. 3 / PL d and so can safely protect robot applications too. In conjunction with the equally new analysing unit PSEN rd1.x I/O PN, it is now even easier to incorporate the safe radar system into existing applications, so optimising commissioning. The safe radar system is used anywhere that optoelectronic sensors reach their limits. Particularly in rugged application conditions, such as in woodworking, mineral and steel processing / heavy industry, and the transport and logistics sector, PSENradar in conjunction with the configurable small controller PNOZmulti 2 represents a safe, complete solution for protection zone monitoring - including conformity assessment.**

The new PSEN rd1.x I/O PN analysing unit in the safe radar system now offers both an Ethernet and a Profisafe interface in addition to the existing interfaces. As a result the safe radar system can be more versatile when it is incorporated into existing applications. It is also possible to generate more zone sets. That makes configuration easier and ensures greater plant availability.

New sensor for even greater safety

PSEN rd1.2 supplements the existing radar sensor PSEN rd 1.1 in the [safe radar system PSENradar](#). In comparison it has a dual-channel structure, enabling advanced protection up to Performance Level (PL) d Cat. 3. As such the new radar sensor can be used for applications with increased safety requirements. This radar sensor is mounted on three axes, so that vertical ceiling installation is also possible due to the rotation around the X- and Y-axis. So PSEN rd1.2 can be installed and implemented quickly and flexibly. It can also be commissioned more quickly.

At the same time the new radar sensor PSEN rd1.2 provides an operating range of 5 metres as well as a narrow opening angle of 20° vertical or 20-100° horizontal. Another benefit is that the opening angle on the new sensor is configurable in 10° increments. The fact that the operating range and opening angle are flexible and adaptable enables the application to be arranged quickly and individually. This too contributes towards higher availability.

Categorical safety, including for robotics

Due to its Category 3 design and operating range of up to 5 metres, the new radar sensor can also be used in [robotics applications](#). The safety-related functions covered by this system solution include area monitoring, i.e. the machine is brought to a safe state as soon as the danger zone is violated. There's also protection against encroachment behind the protected area. This prevents the machine from restarting automatically if there is still somebody within the danger zone. As a result downtimes can be avoided and the availability of the robot application can be guaranteed.

Learning by doing saves time

The self-teaching background function of the safe radar system is also new and can be used to make changes within the warning or protection zones during operation. This includes depositing a tool box or material waste, for example. Teach-in mode ensures that this is not evaluated as a protection zone violation but as an adjustment. A new configuration is not required. Users benefit from more flexible handling of the material flow when changes are made retrospectively; this saves unnecessary extra work when setting up the application.

Complete radar solution including conformity assessment

For protection zone monitoring in rugged application conditions, Pilz offers a [complete, one-stop service solution from risk assessment to system implementation and conformity assessment](#) for the whole machine. As part of this service users also receive a radar solution that includes a conformity assessment. In conjunction with the configurable [safe small controller PNOZmulti 2](#), the result is a safe, economical, comprehensive and complete solution for protection zone monitoring in rugged conditions.



Caption: The safe radar system PSEnradar now includes the new radar sensor PSEN rd1.2 for safe protection zone monitoring up to Cat. 3 / PL d. As a result, PSEN rd1.2 can now safely protect robot applications too. (Photo: © Pilz GmbH & Co. KG)

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