

Weidmüller “u-remote”: Safe, digital I/O modules for PROFIsafe. – Integrated protection and precise diagnosis in a small format.

In producing the two safety modules “4DI/4DO” and “8DI” for connection to PROFIsafe, Weidmüller is continuing to build on its “u-remote” remote I/O system, which already has a firm foothold on the market. The two new and innovative safety modules complement the existing safe power-feed modules of the “u-remote” system.

In modular systems, safety protocols such as PROFIsafe ensure that machines are switched to a safe state. To achieve this, the safety control communicates via the bus system with the digital I/O safety modules, which are simple enough to integrate in a standard “u-remote” station. This integration process significantly reduces the time and effort needed to design and implement a safety concept.

Weidmüller is now expanding its well-established “u-remote” remote I/O system to include two new safety modules, the “4DI/4DO” module and the “8DI” module. The safe input and output modules for PROFIsafe can be used to selectively switch off plant components as required. Users can keep an eye on their machine or plant’s current status at all times via a web server. Even after triggering an emergency stop, it is still possible to call up the plant’s current status – regardless of how big the safety application is. This allows reliable diagnosis operations to be performed and production facilities to be restarted sooner. At 11.5 mm wide, the “4DI/4DO module” is extremely compact and yet boasts several safety functions. These impressive features allow you to create a highly compact safety architecture and eliminate the need to purchase other special modules. The fact that the module has high parameterisation capabilities for specific functions via DIP switches considerably reduces the number of variants and also speeds up the module selection process. As a result, engineering processes become faster and the amount of capital tied up in stock is reduced. Emergency stop circuits and light curtains can be easily connected to the safety module’s inputs, while on the output side, the modules accurately switch off contactors and motors via a switching amplifier. The switching amplifier can be designed as a relay module or an opto module. The outputs of the “4DI/4DO module” allow Integrated Safety solutions to be implemented with ease,

even without a safety control. When the output current path is safely switched off, only the actuator system is shut down, while the sensor system remains fully active. This means that the machine's status is transmitted to the control at all times, allowing the machine to be quickly restarted once any problems have been rectified. Emergency stop chains, to name but one example, can be connected to the inputs of the "8DI" module, thereby achieving the high "SIL 3 CL" safety level according to DIN EN IEC 62061 as well as the "Category 4, PL e" performance level according to DIN EN ISO 13849-1.

Safety monitoring takes place with the "u-remote" web server. Operators can use it to keep the status of the safe I/O modules in their sights at all times and across all platforms – without compromising the relevant system's safety integrity. It goes without saying that both safety modules feature the "system benefits" of the innovative "u-remote" remote I/O system, such as diagnosis directly on the module and "quick installation" with pre-assembled lines, which reduces cabling errors. LEDs on every channel, positioned directly on the wire connection, and status indicators on the modules make diagnosis operations and status queries a great deal easier.

Weidmüller – electrical connection, transmission and conversion of power, signals and data in the industrial environment. – Let's connect.

Keyword: Weidmüller "u-remote" – safe, digital I/O module

Additional information: www.weidmueller.com