

Press Release

Real-time communication with the peripherals IndraControl S20 and S67 I/O systems

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Robust, easy, fast: IndraControl S20 and S67 I/O systems for flexible automation

Sensors for position, temperature, vibration, image processing and an ever-increasing number of actuators for automated processes: With the increased networking of machines, the scope and importance of control peripherals are also growing. Bosch Rexroth provides users with a comprehensive and high-performance I/O portfolio for this purpose. The IndraControl S20 and S67 I/O families reduce the engineering effort by means of easy integration. Even in extreme ambient conditions, they fit in the protection classes IP20 and IP67. With high performance thanks to very short update times and the highest synchronicity, they provide data communication in real time, allowing for higher control quality between the controller and peripherals.

The Rexroth I/O portfolio includes all the necessary assemblies for connecting faster I/O devices in different topologies. The bus couplers support the communication with the Sercos automation bus, PROFINET, PROFIBUS and EtherNet/IP. Rexroth is now supplementing technology modules for counting functions or encoder analyses with assemblies for

Contact for Journalists:
Bosch Rexroth AG
Susanne Herzlieb
97816 Lohr am Main
Tel.: +49 9352 18-1573
Fax: +49 711 811 3621-384
susanne.herzlieb@boschrexroth.de

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secure I/O processing via PROFIsafe on PROFINET, as well as PROFIBUS and CIP safety on Sercos.

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Simple commissioning

With the IndraControl S20 series in the protection class IP20, the push-in technology enables tool-free direct wiring of rigid and ready-made circuit boards. This considerably reduces the wiring costs. With the help of the integrated electronic nameplates, commissioning and maintenance engineers are able to uniquely identify all modules. Diagnosing system, bus or peripheral errors takes place locally via diagnostic and status displays. Location-independent technicians retrieve advanced channel-specific diagnostic messages using the IndraWorks engineering environment, as well as the PLC program.

Technicians also connect the modules from IndraControl S67 in the protection class IP67 without tools via the M8 and M12 plugs, as well as using prefabricated cables. The modules can be mounted directly on the machine or via an adapter on a top-hat rail or sectional rail. All modules have an electronic nameplate and channel setting for multiple parameters, even those in the higher protection category. Thanks to the optimized supply voltage concept, IndraControl S67 is also suitable for extended systems because they allow a distance of up to 50 meters between the two modules and a total length of up to 500 meters per station.

Robust against temperature, shocks and EMC

All I/O modules from Rexroth can handle temperatures ranging from -25 to +60 degrees Celsius. The robust electromechanical design of the S20 version resists shocks of up to 10 g, the fully encapsulated IndraControl S67 can even handle continuous shocks of up to 30 g. The robust design with high EMC protection stands up to the test, even under extreme environmental conditions.

The benchmark for speed

The real-time processing of signals is currently becoming more and more important. The high-performance system bus from IndraControl, in conjunction with the internationally standardized Sercos automation bus, sets the standard when it comes to speed: The update rates for signal processing are only 1 µs per module, depending on the version. External encoder measurement systems can thus be integrated in the control loop, without the

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need for an encoder cable to be laid to the control cabinet. However, they allow for the high-dynamic control of axes. At the same time, the high-speed modules solve challenging counting functions. The interplay of extremely short cycle times and fast signal processing reduce response time and increase measuring accuracy. And that enhances the control quality when in operation.

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Secure and flexible

The new safety modules in the IndraControl S20 series provide safe communication with CIP Safety on Sercos, or PROFIsafe on PROFINET and PROFIBUS. The safe modules can be freely combined with standard modules and offer the same advantages of simple commissioning, high robustness and short cycle times. The IndraControl S20 safety modules are certified according to SIL 3 (EN 61508), SILCL 3 (EN 62061) and category 4 / PL e (EN ISO 13849-1).

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