

Achieving more with less space

With up to 20 channels within a width of only 12.5mm, the new modular I/O system from **Sigmatek** sets new standards for package density. The construction of the S-DIAS modules also provides high user friendliness with installation, wiring and operating reliability

With dimensions of only 12.5 x 103.5 x 72mm (WxHxD) and up to 20 channels per module, the S-DIAS I/Os save significant space in the control cabinet.

The modular, high performance S-DIAS I/O system is intentionally designed as a robust, complete module solution. This means standard DIN-rail mounting, electronics and bus connection are combined in one housing for greater reliability and simpler logistics. The design also provides quick and toolless mounting of the modules (simple locking mechanism). Also, the S-DIAS I/Os can be pre-assembled into blocks. Since standard connectors with push-in wiring are used, they can be prefabricated in series and easily disconnected during servicing. Assembly and wiring times are thereby reduced to a minimum.

Module status LEDs and signal LEDs, which are directly next to the individual channels, give fast and clear status indication. Individual module labelling provides module identification. For diagnostic purposes, the user is also provided with a test point for each channel.

The S-DIAS I/Os are mechanically interlocked. Furthermore, the module supply and bus connection were implemented with multi-contacts for maximum reliability. A cooling concept ensures that the modules are well ventilated. With this design, the highest mechanical reliability and vibration resistance is achieved. S-DIAS offers the option of 1-, 2- or 3-wire technology.

High performance

The S-DIAS I/O system communicates over the open standard, real time Ethernet system VARAN with a bus speed of 100Mbit/s and is optimally suited for very fast applications. Individual I/O modules can be accessed within 1.12µs. In addition to the super fast transmission rate, high data security is also ensured. All data in the module bus is backed up using the VARAN principle and are therefore repeated in the same cycle automatically if an error occurs. In the maximum configura-

Right: S-DIAS achieves more I/Os in more compact packaging



tion, up to 64 I/O modules with up to 1,280 I/Os per VARAN bus interface can be mounted. Update time here is under 60µs. Expansion of the I/O system is unlimited.

TÜV certification for safety

Safety is an integral component of the S-DIAS I/O system. Through this seamless integration, the reaction times for signal processing are also very short with safety applications - they are in the range of a few millisec-

onds. S-DIAS Safety can be seamlessly integrated into the standard system of the I/O series as desired and is available as a stand alone solution. Existing systems can also be easily expanded with safety functions. The S-DIAS Safety system is TÜV certified according to SIL 3 and SIL CL 3 according to IEC 62061 and EN ISO 12100-1, Category 4, PL e.

The right I/Os for any application

The S-DIAS series can be combined with existing I/O components from SIGMATEK as desired. I/Os can be tailored to the specific needs of the application, including safety. With the S-DIAS standard I/O system and VARAN bus interface, modules are currently available with 4, 8, or 20 digital inputs - one with 12, 2-A digital outputs as well as one for up to 20 potential distributor terminals and one for 20 power distribution terminals for 2- or 3-wire connection technology. Additional standard modules are continually added to the Sigmatek development program to further increase solution flexibility.

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