



AS-Interface | Development

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## ASi-5 UND ASi HIGHLIGHTS FROM BIHL+WIEDEMANN

### ASi-5/ASi-3 Safety Gateways with ASi-5/ASi-3 Safety Monitor

ASi-5 Safety is the right complement to ASi Safety at Work whenever safe signals and standard signals need to be collected in the field, safe high-end sensors need to be connected, more complex safety applications need to be solved, a large quantity of safe bits have to be transmitted from different devices, or diagnostic and additional information has to be used. When it comes to integrating the new safety generation of AS-Interface, which is compatible with all previous ASi devices and components, runs in parallel on the same infrastructure and can therefore be easily integrated into existing applications, Bihl+Wiedemann offers the perfect solution with the ASi-5/ASi-3 Safety Gateways.

The ASi-5/ASi-3 fieldbus gateways with integrated ASi-5/ASi-3 safety monitor are available now in different variants for PROFINET and EtherNet/IP, some with safe fieldbus and local I/Os. For the SPS, the existing range will be extended by the addition of ASi-5/ASi-3 EtherNet/IP+Modbus TCP gateways, CIP Safety via EtherNet/IP, with integrated ASi-5/ASi-3 safety monitor, Safe Link, OPC-UA and web server. Other variants for Ethernet/IP, Sercos, EtherCAT and POWERLINK (also together with CIP Safety and FSoE) are in development.

Even when the devices are not currently destined for use in ASi-5 safety applications, users will benefit directly from new gateways that have the same price level as comparable models with the ASi-3 safety monitor: on the one hand from the functional improvements, and on the other hand from the modern 16 gigabyte chip card. A complete project can now be stored on it – including safety and hardware configuration, parameter data of connected devices and user comments from the ASIMON360 software.



## ASi-5 Safety Modules in IP20 and IP67

Connect and transmit many safe signals and standard signals under a single address: in addition to the significantly higher transmission speed and the greater data bandwidth, the advantage of significantly more efficient node addressing is also an argument for why ASi-5 Safety is the ideal supplement for ASi Safety at Work.

In addition to the new ASi-5/ASi-3 Safety Gateways with integrated ASi-5/ASi-3 Safety Monitor, Bihl+Wiedemann is also introducing a series of new ASi-5 Safety Modules. The two ASi-5 Safety Input Modules BWU4209 for floating contacts and BWU4210 for OSSDs in IP67, each with two safe two-channel inputs and 12 self-configuring I/Os for standard signals, are supplemented by the BWU4395 a third variant for a floating contact and an OSSD. Also published with the models BWU4186, BWU4187 and BWU4188 are control cabinet modules with protection rating IP20, which are comparable in their range of functions. And lastly, at the SPS fair in Nuremberg, the company will also be introducing the BWU4411, the first ASi-5 safety solution for muting applications.



## ASi-5 Safety Muting Module BWU4411

In material handling technology, muting refers to the momentary bypassing of contactless protective devices, for example a light barrier or a light curtain, in order to safely move automated material transports into and out of hazardous areas using muting sensors without endangering persons. The new ASi-5 Safety Muting Module BWU4411 in IP67 from Bihl+Wiedemann offers different muting solutions up to SIL3/Plc, which can now be implemented easily, efficiently and significantly more cost-effectively than with comparable Ethernet-based solutions.

Whether cross-muting or sequential muting, all the sensors and safety components required for this can be flexibly connected to the new ASi-5 Safety Muting Module BWU4411. This means all the signals required for muting are available in one module under a single ASi-5 address. Unused inputs and outputs can also be used for other applications, for example to control muting lamps or to integrate push-button modules. As an alternative to processing in the ASi safety monitor, all relevant signals can also be passed on using safe fieldbuses – PROFIsafe, CIP Safety, FSoE or openSAFETY.

The Bihl+Wiedemann software suite ASIMON360 includes ready-certified building blocks for convenient parameterization in many applications. No complex programming in the control system is necessary. The ASi-5 muting solution from Bihl+Wiedemann stands out not only from a technical point of view, but also from a cost perspective. The ASi-5 Muting Module BWU4411 from Bihl+Wiedemann is a good 60% less expensive than comparable Ethernet-based fieldbus solutions on the market. In addition, the user saves assembly and material costs due to the simple, fast and fail-safe installation thanks to the ASi profile cable and the piercing technology.

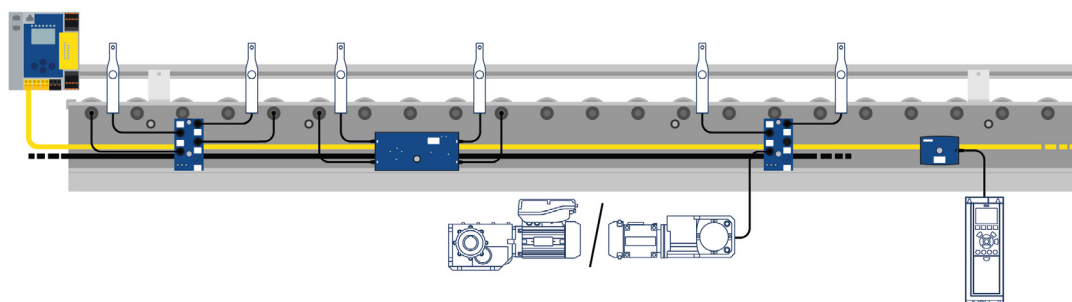


## Portfolio of ASi-5 and ASi-3 drive solutions for motorized rollers, DC motors and frequency inverters continues to grow

Bihl+Wiedemann already offers an extensive range of motor modules for a wide variety of drive solutions with ASi-5 and ASi-3. This applies both to the control of motorized rollers and to DC motors and frequency inverters. And the portfolio continues to grow. There are additions to the ASi-5 modules for installation in the cable duct, which can currently be used to control up to four 48 V or 24 V motorized rollers from Interroll or two 24 V motorized rollers from Itoh Denki. In addition to the two self-configuring ASi-5 I/O modules BWU4977 and BWU4979, whose 16 and 8 digital signals respectively can be used bidirectionally as inputs or outputs, allowing many different applications to be realized with one and the same device, the ASi-5 cable duct module BWU4942 is also new in the product range.

Two 24 V motorized rollers from Interroll, Itoh Denki or RULMECA can be connected to the motor module. It is accordingly equipped with two M8 and M12 cable sockets each, plus four digital inputs for connecting sensors. These modules are therefore also perfect fits in the long list of ASi-5 or ASi-3 drive solutions in IP54 and IP67 for roller drives from leading manufacturers such as Interroll, Itoh Denki, Rollex or RULMECA. But the range of motor modules for DC motors and frequency inverters also continues to grow. In addition to the currently available solutions for SEW MOVIMOT, SEW MOVI-C, NORD NORDAC frequency inverters, ebm-papst K4, Rockwell PF525, Bonfiglioli DGM/DGM-R as well as for Lenze Smart motors and Lenze i550, the BWU4980 motor module now also offers compatibility with Danfoss: an ASi-5 active distributor with protection rating IP67 which is connected to the Danfoss VLT frequency inverter via connecting wires.

All of the above drives can thus be efficiently controlled via ASi-5, allowing access to performance parameters such as speed, acceleration and braking behavior as well as advanced diagnostics during operation. What applies to roller drives is also true of course for DC motors and frequency inverters: for all applications where less complex functions need to be implemented cost-effectively, Bihl+Wiedemann also offers a wide range of ASi-3 motor modules for many drives in different versions, in addition to the ASi-5 modules.



### Simple, flexible, needs-based, cost-effective: IO-Link integration with ASi-5

Connecting IO-Link devices to the control level or cloud offers a number of advantages when using ASi-5 and the ASi-5 modules with integrated IO-Link master from Bihl+Wiedemann.

With the fieldbus-independent solution, users benefit not only from perfect embedding of IO-Link in ASi-5 and in the user-friendly configuration tools ASIMON360 and ASi Control Tools360, but also from the freedom in the choice of topology, reduced wiring effort requiring no assembled connectors and switches, minimal IP management, and a smart power supply concept. Another key point: they save costs.

Because ASi-5 modules with integrated IO-Link master are generally not only significantly less expensive than Ethernet fieldbus modules or IO-Link hubs, they are also available on demand. A finely graduated range of variants with one, two and four IO-Link ports Class A and Class B as well as with eight IO-Link ports Class A is available for field application.

These are complemented by an OEM module and control cabinet modules with configurable connections for four IO-Link ports, whereby the new ASi-5 control cabinet module BWU4775 also provides four analog inputs (4 ... 20 mA). This means that the user always gets and pays for the exact connection module equipped the way he really needs it.



## ASi-5/ASi-3 Address Programming Device – regular updates for continuous improvement

The modern ASi-5/ASi-3 address programming device BW4925 for all ASi generations from Bihl+Wiedemann undergoes constant further development. New functions such as extended setting or diagnostic options are regularly made available to users via free field updates. And together with the ASIMON360 PC software, the advantages of decentralized addressing can be perfectly combined with those of central planning and parameterization when commissioning an ASi system.

An OLED color display, six rugged buttons for easy operation, a high-performance power supply for fast charging while in use, a USB-C port as PC and charging interface, and extensive accessories with addressing cables and power supply – the ASi-5/ASi-3 address programming device from Bihl+Wiedemann is a standout not only due to its features. The clearly organized display menu with plain text error messages in different languages, display of operating and input functions, and the use of easily recognizable icons also ensure a positive user experience.

In addition to addressing ASi-5 and ASi-3 nodes, the address programming device can be used to check and change I/O data and settings of connected ASi nodes, among other things. It is also possible to access the display of the gateway remotely via a module in the ASi circuit.

