

Product Catalog

by Bihl+Wiedemann

Edition 2/2020



**Bihl
+ Wiedemann**
...

THE AS-INTERFACE MASTERS

AS-Interface Master/Gateways



AS-Interface Module/Slaves



Safety Components



Bus Couplers/Master Simulators



Software



Accessories



Services



Glossary



**Product Catalog
Edition 2/2020**

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About Bihl+Wiedemann



CEO of Bihl+Wiedemann: Jochen Bihl (left) and Bernhard Wiedemann (right)

Innovative Partner for Automation

Bihl+Wiedemann is a mid-size owner-operated company founded in 1992 by Jochen Bihl and Bernhard Wiedemann in Mannheim, Germany. We develop and manufacture complete automation solutions for functional safety and for data communication in machines and plants. Our products are in use worldwide across diverse sectors, by leading manufacturers of consumer and capital goods.

Primarily, we want to be an innovative partner for our customers: using our development expertise to meet individual requirements.

Leading the Way with AS-Interface Since 1995

Bihl+Wiedemann is a leader in the field of automation and safety technology with AS-Interface (ASi). We played an important role in the development of each ASi generation. Our ASi Master was the first such



system to be awarded a certificate in 1995 from AS-International e.V., the ASi organization with 300 national and international partners. We also played a pioneering role in the market launch of ASi-5 devices in 2019. The latest ASi generation now allows larger data volumes to be transmitted much faster. We have been among the leading providers in the area of functional safety using ASi Safety at Work for almost 15 years.

Our complete ASi product portfolio covers Master/Gateways, Modules/Slaves, Safety Components, Bus Couplers/Master Simulators as well as in-house developed software.

International Subsidiaries and Sales Partners

A combination of innovative strength and long-standing customer relationships has enabled us to grow continuously for many years. In addition to our headquarter in Mannheim, Bihl+Wiedemann owns subsidiaries in the USA, China, Turkey, Denmark and Spain. We are now also represented by international sales partners in more than 30 countries.

Represented in Numerous Sectors

More and more companies across diverse sectors are now choosing ASi solutions from Bihl+Wiedemann for automation of their plants and systems. The open bus system is particularly widespread in industrial automation, material handling and OEMs.



Application Areas of AS-Interface

- Factory automation
- Process Automation
- Building Automation
- OEM
- Transportation systems (ship, rail, road)
- Industrial Automation
- Packaging Automation
- Machine tools
- Material Handling / Drive Control
- and many more



”

The quick and pragmatic development of new solutions based on very specific customer requirements is our greatest strength.

Bernhard Wiedemann - CEO

”

What sets Bihl+Wiedemann apart




DIN EN ISO 9001
certified

Quality management according to
DIN EN ISO 9001.



The AS-Interface
Masters

Professional partner for
AS-Interface solutions.



Personal expert
advice

Available in person at
any time.



Customized product
solutions

Realization of specific
automation solutions.

Certified according to DIN EN ISO 9001

Assuring consistent quality has always been of utmost importance for Bihl+Wiedemann. The company is DIN EN ISO 9001 certified.

Range of services

Bihl+Wiedemann GmbH's portfolio of services include:

- Development and manufacturing of safety-related automation products
- Development and manufacturing of AS-Interface products based on our own products
- Applications consulting related to AS-Interface and ASi Safety at Work
- Training classes for AS-Interface and ASi Safety at Work
- Certification of ASi networks
- Troubleshooting of ASi networks
- Contract development for custom automation solutions
- Custom developments and production of fieldbus interfaces and components for virtually any system



Products

Bihl+Wiedemann's product offerings includes the following solutions for safety technology issues using ASi Safety at Work:

- Stainless steel Gateways with integrated Safety Monitor for virtually any bus system and Ethernet solution
- PROFIsafe gateways
- Safety monitors for any system size
- Speed monitors
- IP20 and IP67 safety input and output modules
- Safety OEM slaves
- Safety contact expanders
- Control and signal devices
- Wide range of accessories
- Active Distributors ASi Safety



Bihl+Wiedemann also offers:

- ASi Masters/Gateways/Links/Scanners connecting to any commonly used controller
- ASi slaves
 - Digital IP20 and IP67 ASi modules in various housing styles
 - ASi analog modules in various housing styles (IP20, IP65, IP67) for current, voltage, weight and temperature
 - Circuit board modules / board solutions in various configurations with a variety of interfaces
 - IP20 ASi modules with stainless steel housing
 - Counter modules
 - IP67 ASi drive solutions in various sizes
 - Universal IP65 modules
 - Control and Signal devices
 - ASi slaves for building automation
 - Active Distributors ASi
- ASi Tuners, ASi Repeaters (IP20 and IP65) and Bus Terminations for network extension
- Configuration and diagnostics tools (hardware and software) for AS-Interface
- Power supplies
- Accessories

Technological Foundations



AS-Interface

AS-Interface (short for Actuator/Sensor Interface) is an internationally recognized standard for field bus communication. With over 32 million nodes installed world-wide, it is heavily used at the sensor/actuator level of automation systems.

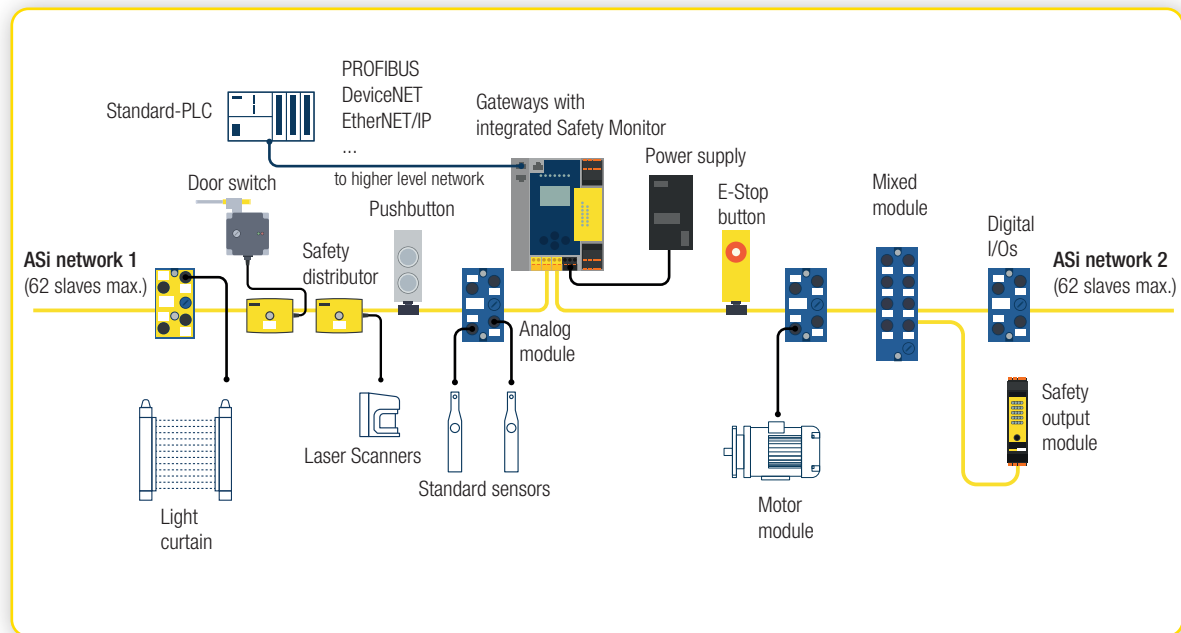
This simple wiring system consists of four components: the ASi Master, an ASi power supply, the yellow ASi cable, and the ASi slaves.

Using piercing technology, sensors and actuators are connected directly to the ASi cable. The unshielded two-conductor cable carries both power and communication, including safety signals. As a result, AS-Interface eliminates cumbersome parallel wiring. The ASi Master controls the data communication on the network. As a Gateway it creates the connection between the ASi network and the controller (e.g. PLC). The upper-level fieldbus treats it like a fieldbus slave. Integrating an ASi network into an existing fieldbus or Ethernet system is no more complicated than adding any other I/O module.

Benefits of AS-Interface

AS-Interface offers the following benefits to the user:

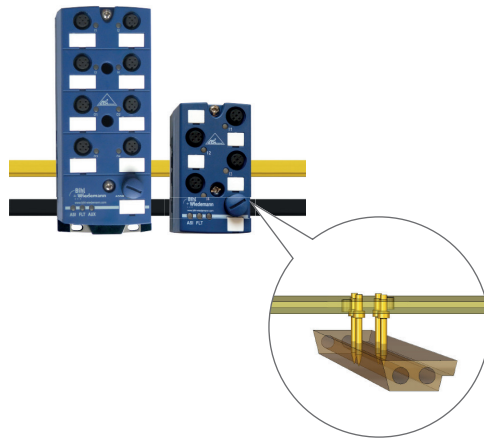
- Ease of use: The system can be operated and maintained with negligible training effort or specialized service personnel
- Free topology: AS-Interface allows cables to be routed according to the mechanical structure of the system (line, star, tree or ring structure)
- Fast, flexible installation and effortless expandability: without error-prone and time-consuming cable assemblies via the use of a piercing technology
- Effortless integration of new slaves due to standardized profiles
- High availability and noise immunity
- Great savings on planning, installation, expansion, and service time compared to parallel wiring systems
- Certified products ensure manufacturer compatibility



ASi network

AS-Interface installation

An AS-Interface installation using IP67 digital modules with M12 quick disconnects from Bihl+Wiedemann offers many advantages. The mounting base of the module contains two sets of two pin vampire connection points for the yellow profile cable. These connections enable a clean and well organized ASi installation where up to four ASi cable end caps and two passive distributors per module can be saved.

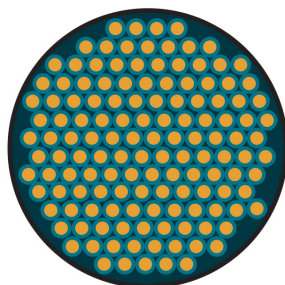


ASi Profile cable with piercing technology

Wiring

To collect data from 31 safety sensors for example, the traditional decentralized peripheral of a fail-safe controller requires at least four conductors. In a traditional wiring method it could equate to as many as 124 conductors from the control panel to the field. When door interlocks are involved, the number is even significantly greater.

With ASi Safety at Work the same application uses just the familiar yellow cable.



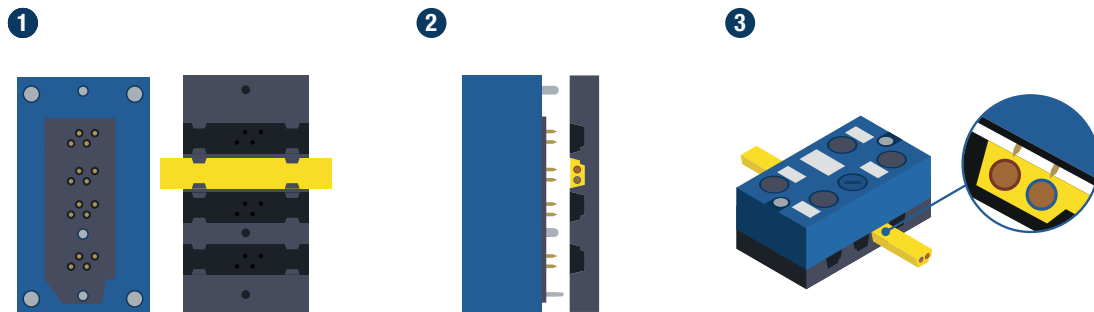
Wiring with individual leads



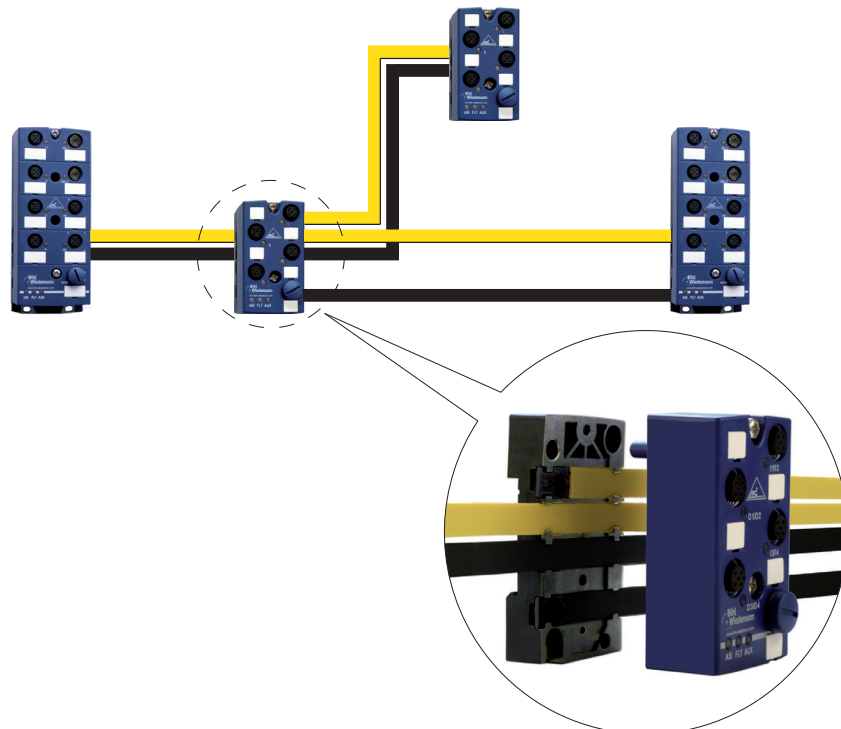
ASi Profile cable

Piercing Technology

The yellow cable has a conductor cross section of $2 \times 1.5 \text{ mm}^2$ and is equipped with a coding strip ensuring correct polarization and contact on the specified side. The connection is achieved via piercing contacts piercers, penetrating the cable jacket and thus establishing a secure contact to the specifically designed fine stranded wire. Cutting, stripping, installing ferrules and attaching a shield can be omitted. Even pre-lengthening the cable is no longer necessary since the cable can be connected at any arbitrary point.



Installation with ASi Profile cable



Digital module with 2x2 connection for profile cable

ASi-5

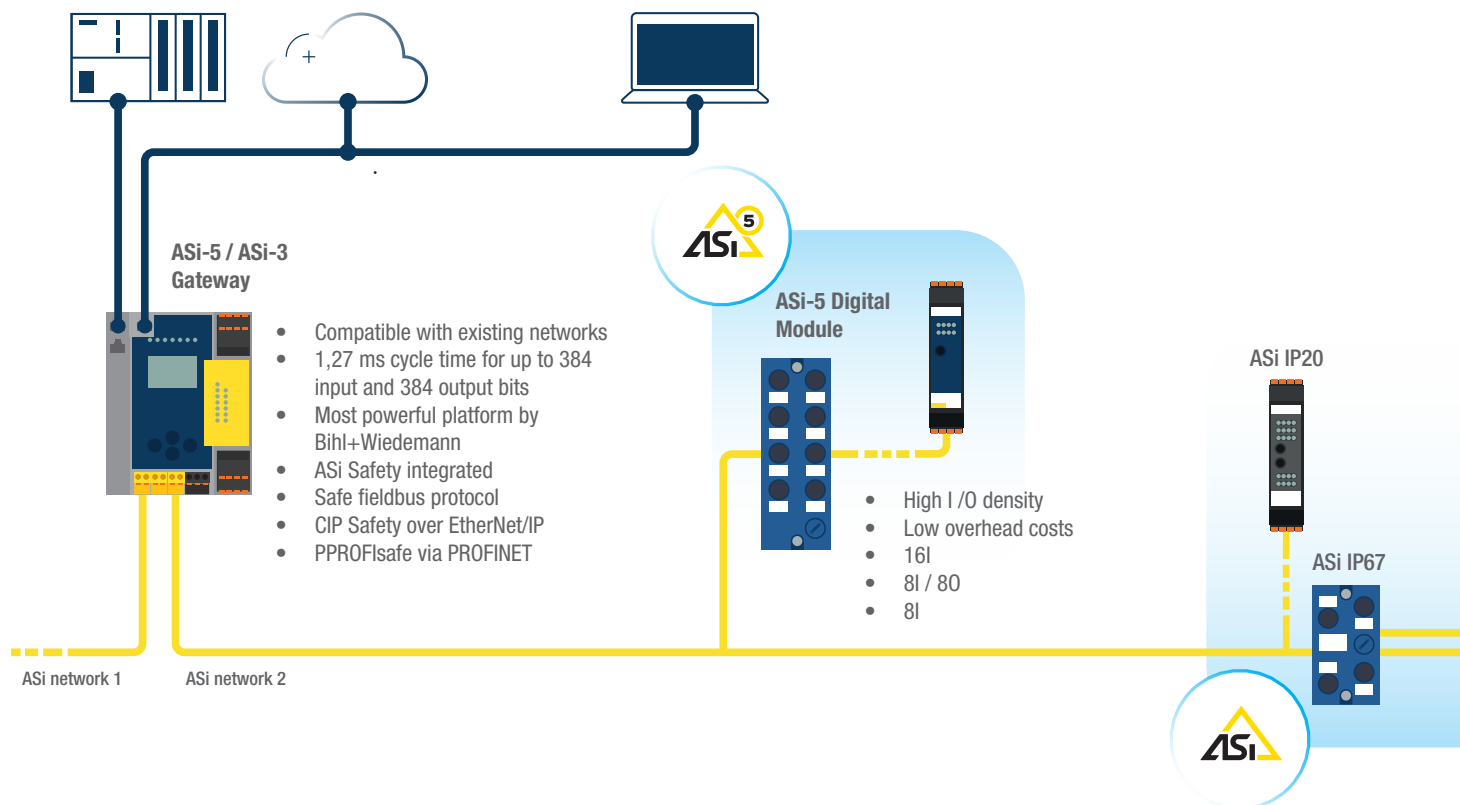
ASi-5 is the latest innovation stage of AS-Interface (ASi), a globally standardized fieldbus system for the first automation level. ASi connects sensors and actuators with a controller via a single two-core profile cable.

ASi-5 – Great Data Bandwidth, Short Cycle Times

ASi-5 now enables you to transmit larger data volumes significantly faster. For example, ASi-5 now transmits analog values much faster and it is easier than ever to integrate smart sensors, e.g., IO-Link sensors with up to 32 bytes.

The increasing digitalization requires a good data layer. As data supplier, smart sensors are becoming more and more important. With ASi-5 you are able to transport more and more data, without restrictions, to where they can yield valuable information. Using the integrated OPC UA servers of our ASi-5/ASi-3 gateways, you can even do this directly and in parallel with the fieldbus.

Our new ASi-5 modules enable the cost-efficient and fast collection of numerous inputs and outputs in one place, making the modules an affordable alternative to other fieldbus solutions.



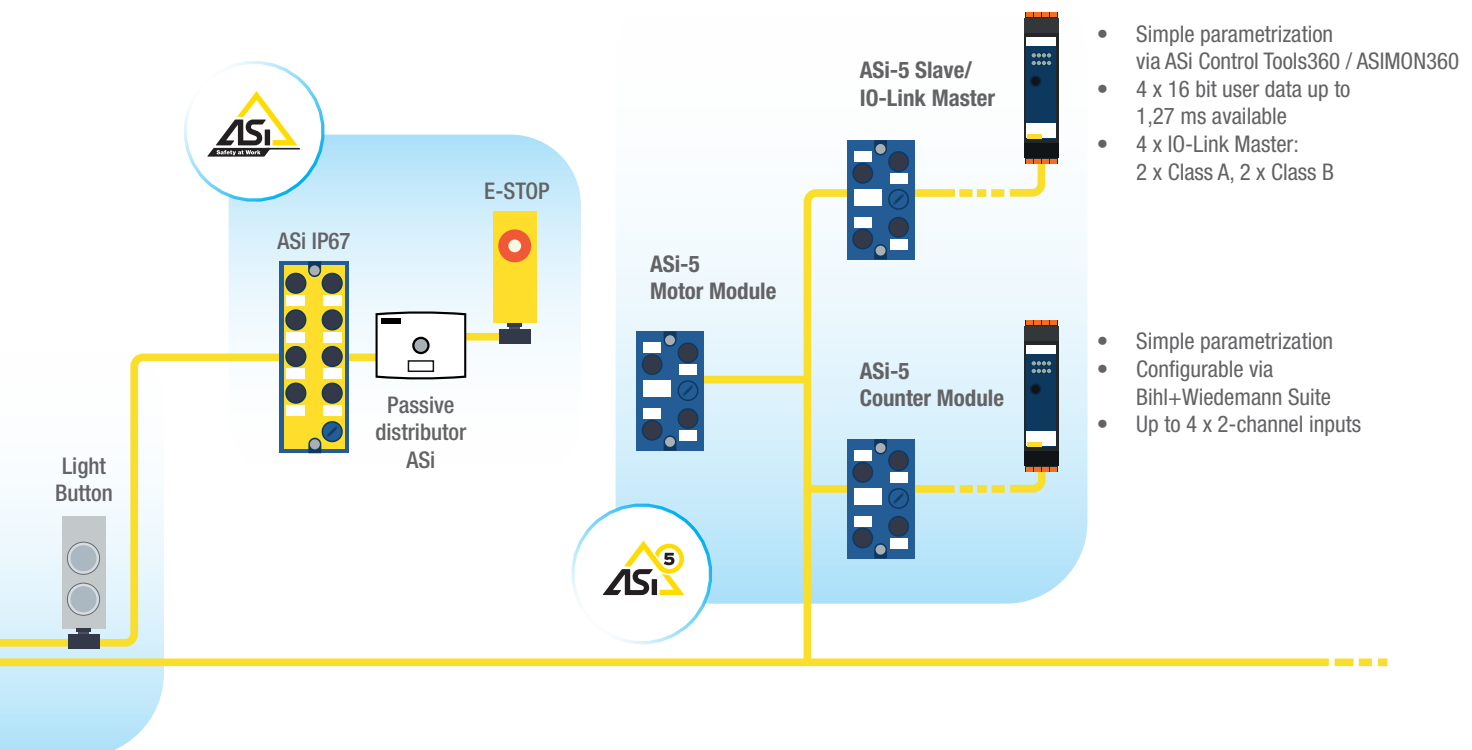
ASi-5 – Compatible with all ASi Generations

You can easily use ASi-5 slaves together with ASi slaves of any previous generation, because all ASi generations work in parallel on the same cable. Simply connect additional ASi-5 slaves, for example, in system sections with additional demands on:

- Speed
- Data volume
- I/O density

To use ASi-5 slaves all you need is a Bihl+Wiedemann ASi-5/ASi-3 gateway. The OPC UA server, which is integrated in the gateway, makes it possible to transmit data directly from the field level to Industry 4.0 applications easily.

Without ASi-5 slaves, the new ASi-5/ASi-3 gateways work exactly as earlier Bihl+Wiedemann gateways because the ASi-3 part remains unchanged. Using our new gateways you can easily replace existing gateways.



ASi-5 – Your advantages at a glance

Benefit from well-proven ASi strengths...

-
- ✓ Transmit data and power in a single two-core profile cable
-
- ✓ Freely choose your topology without costly switches (tree, ring, star, line)
-
- ✓ Cost-efficiently integrate safety on the same infrastructure
-
- ✓ Easily install and expand your system using ASi piercing technology
-
- ✓ Certified products for manufacturer-independent compatibility
-
- ✓ Affordable EMC-resistant system without additional shielding
-

and from the new powerful ASi-5

-
- ✓ 1,27 ms cycle time for up to 384 input and 384 output bits
-
- ✓ 16-bit I/O data and profiles with up to 32 bytes of process data for each slave
-
- ✓ Easily integrate smart IO-Link sensors
-
- ✓ ASi-5 is compatible with all earlier ASi generations for combined use of different ASi slaves
-
- ✓ ASi safety and ASi-5 easily work together
-
- ✓ Highly economical because of reduced costs per input/output
-
- ✓ Advanced diagnostics for predictive maintenance
-

Software

Bihl+Wiedemann Safety Suite (BW2916)

Bihl+Wiedemann Suite (BW2902)

- ASi-5 ability as a free update of the software suites
- Effective support in planning, commissioning and diagnosis of ASi networks
- IO-Link configuration for simple parametrization



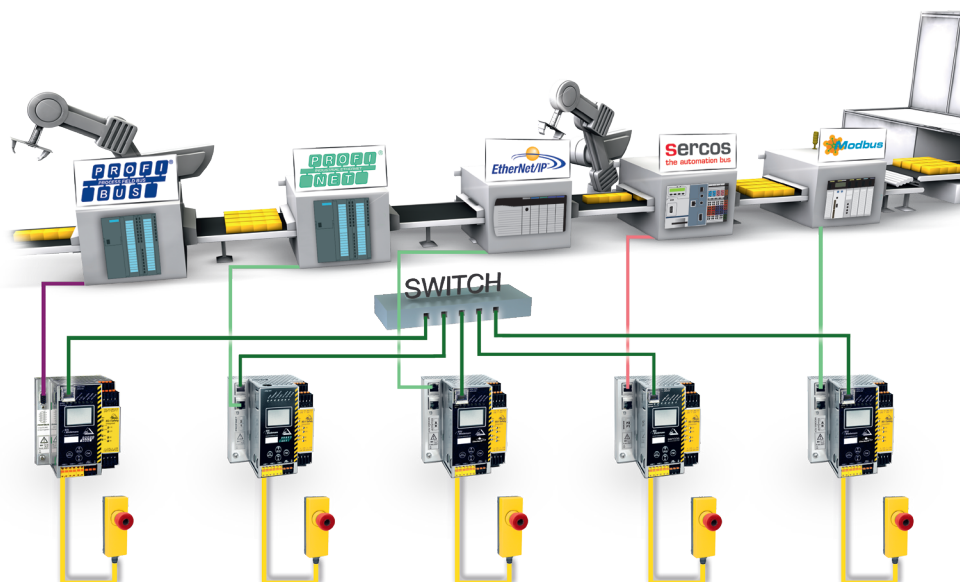
Safety technology using ASi Safety at Work

Safety aspects play an important role in an increasing number of automation systems and designs – especially where personnel safety is at risk through hazardous movements. Safety-related requirements are documented for instance in the EU Machine Directive (Directive 2006/42/EC) or in the occupational safety regulations of various countries.

The Safety at Work concept of AS-Interface makes it possible to seamlessly integrate safety components, i.e. safety sensors and actuators, as well as safety monitors, into virtually any commonly used automation system. Compared to conventional safety solutions, the advantage of ASi Safety at Work is the ability to send safe and unsafe signals over the same cable. This eliminates the previously required redundant infrastructure as well as the costs associated with complex and error-prone parallel wiring.

The ASi safety components can be used just like any other standard slave at any location on the ASi network in combination with standard ASi components without any restrictions or limitations. The ASi master treats the safety components just like any other normal ASi slave. Safety sensors, safety actuators, and the safety monitor interact in a special communications environment.

ASi Safety at Work is approved for applications with up to SIL3 safety requirements according to EN 61508 or PLe according to EN ISO 13849-1:2006.



Safe Link in an application with different fieldbus systems

Safety Gateways

Safety Gateways for the combination with a Safety PLC (F-CPU)

PROFIsafe via PROFINET/PROFIBUS



CIP Safety via EtherNet/IP



Safety Gateways without Safety PLC with fieldbus connection for the safe control of drives

CIP Safety via Sercos



Safety over EtherCAT



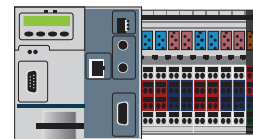
Safety PLC examples:



PROFIsafe via PROFINET / PROFIBUS



CIP Safety via EtherNet/IP



CIP Safety via Sercos

Safe Link

Perfect interaction with all the commonly used automation systems has always been one of the primary strengths of ASi Safety. Now Bihl+Wiedemann has given the AS-Interface safety concept even more team player qualities: Safe Link means not only that multiple ASi networks can be efficiently linked – this innovative feature even makes it possible to network the safety technology of systems with each other when they operate in the standard, non-safe area with different controllers.



Safe Link at a glance

Safety monitors coupled over standard Ethernet

- Connections between the devices over Ethernet are generally already present
- Coupling over Ethernet-based fieldbus interface
- Coupling over Ethernet diagnostics interface
- Safe Link meets SIL3/Cat4/PLe

31 devices can be coupled with each other

- 31 signals per device can be provided
- 31 x SIL3/Cat4/PLe
- "Each one hears all" principle
- Up to 1922 safety signals

Simplest configuration

- Drag and Drop
- Familiar environment
- Concentration on the essentials

Safe coupling regardless of the fieldbus

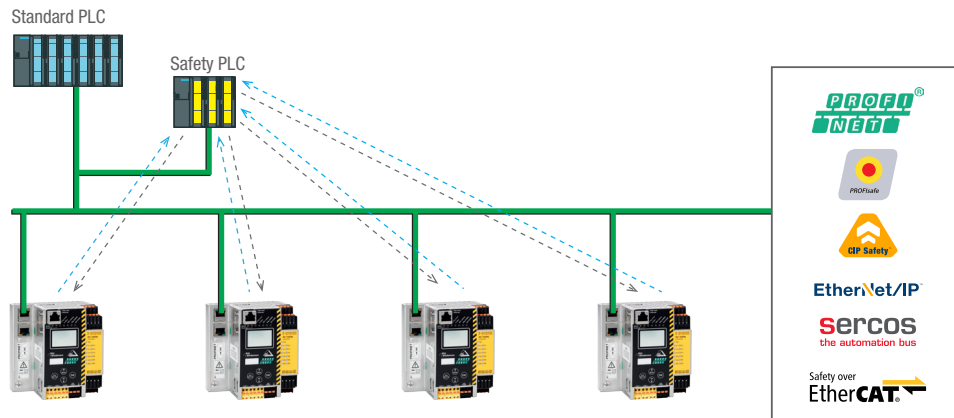
- Full compatibility and integration
- No additional hardware needed
- One system for all applications

Safe Link – the simplest way to safely couple many signals

Comparison of Safe Link and other safe Ethernet systems

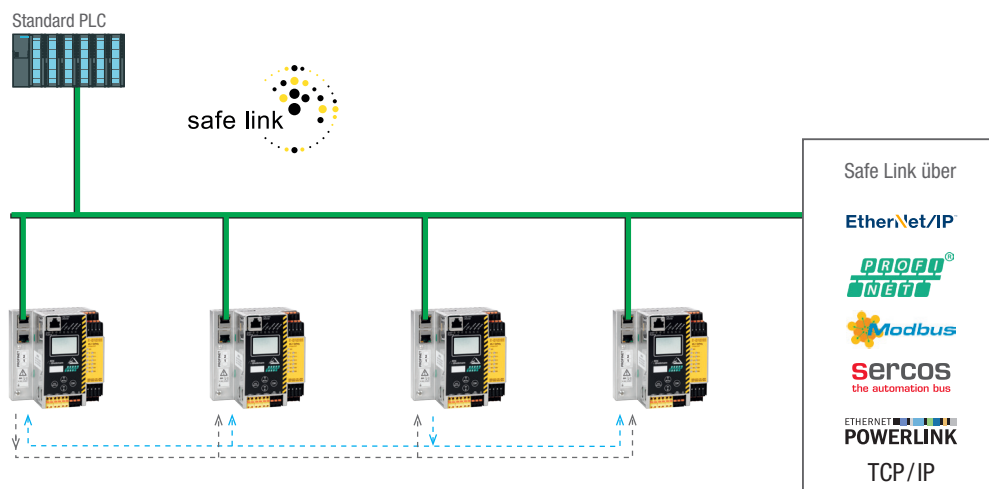
Conventional safe Ethernet systems

- Safe communication over the respective fieldbus via Ethernet
- Additional safety PLC (e.g. F-CPU) required
- Pure Master-Slave communication
- Generally higher device costs
- Separate network



Safe Link from Bihl+Wiedemann

- Safe communication over the respective fieldbus via Ethernet or the already present standard Ethernet (TCP/IP)
- No additional hardware or safety PLC required
- Multicast, each device communicates with all other devices
- Safe Link option at no added cost
- Existing network can be used



Safety via Ethernet

Both factory and process automation are showing a trend towards ever more complex, branched applications. The most efficient possible coupling of safe networks now becomes one of the special challenges in the area of safety.

A simple and cost-effective solution

Bihl+Wiedemann has met this challenge with a simple and cost-effective solution: Safe Link, i.e. safe coupling over the Ethernet interface of the ASi gateways with integrated safety monitor. In the maximum configuration this means up to 1922 safety two-channel input signals can be collected while controlling safety outputs either centrally or locally.

Couple up to 31 gateways

This approach enables up to 31 Safety Basic Monitors or gateways with integrated safety monitor to be coupled to each other – without losing performance at any point and without the use of additional hardware.

Why safe coupling?

Many safe signals

- Up to 62 safe signals per safety monitor
- The more safe signals, the more safety monitors are needed.
 - safety monitors are coupled to each other

Safely couple multiple machines

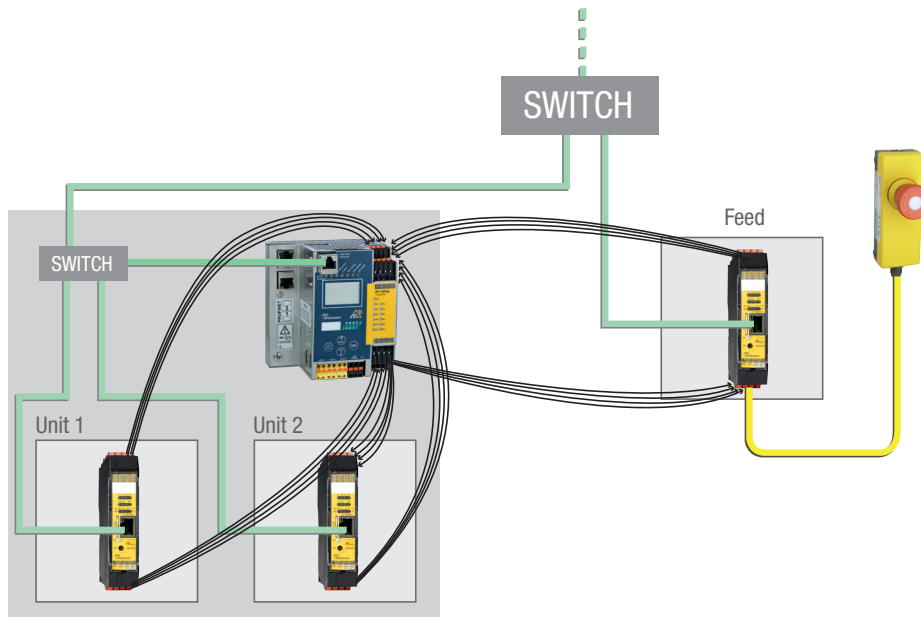
- Central E-Stop works on multiple machines
- E-Stop on one machine works for the neighboring machine

Widely distributed systems

- Encapsulating of system parts, segmenting
 - Individual parts are coupled to each other
- Modular system construction
 - individual modules are coupled to each other

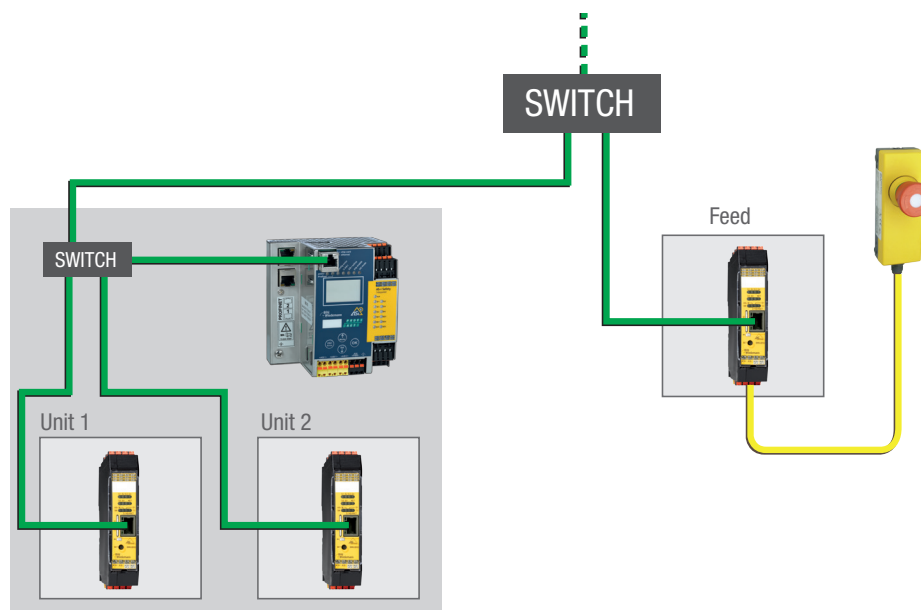
Conventional coupling: potential-free contacts

- High wiring effort
- Confusing and error-prone



Safe Link from Bihl+Wiedemann: safe coupling over Ethernet

- Simple way of safely coupling many signals
- Each safe signal is available to every device



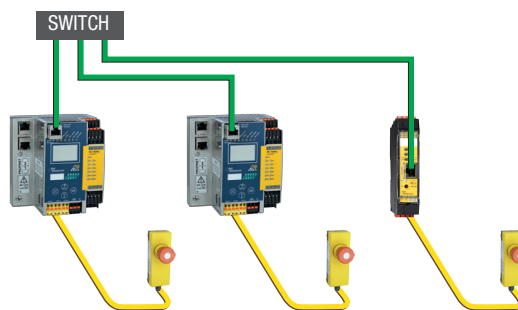
Safe Link either over diagnostic or fieldbus interface

For applications that work with traditional fieldbuses, the exchange of safe information runs over the Ethernet diagnostics interface of the ASi Gateways with integrated safety monitor.

When an industrial Ethernet derivative is being used as the fieldbus, the ASi networks can when desired be coupled over the fieldbus interface of the Gateways and communication takes place over the already existing Ethernet network.

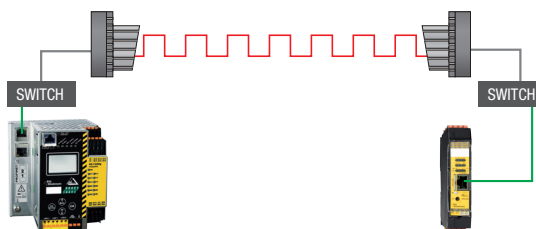
... diagnostics interface

- For traditional fieldbus systems
- Information exchange via Ethernet diagnostics interface



... optical data transmission

- Safety communication over optical data transmission



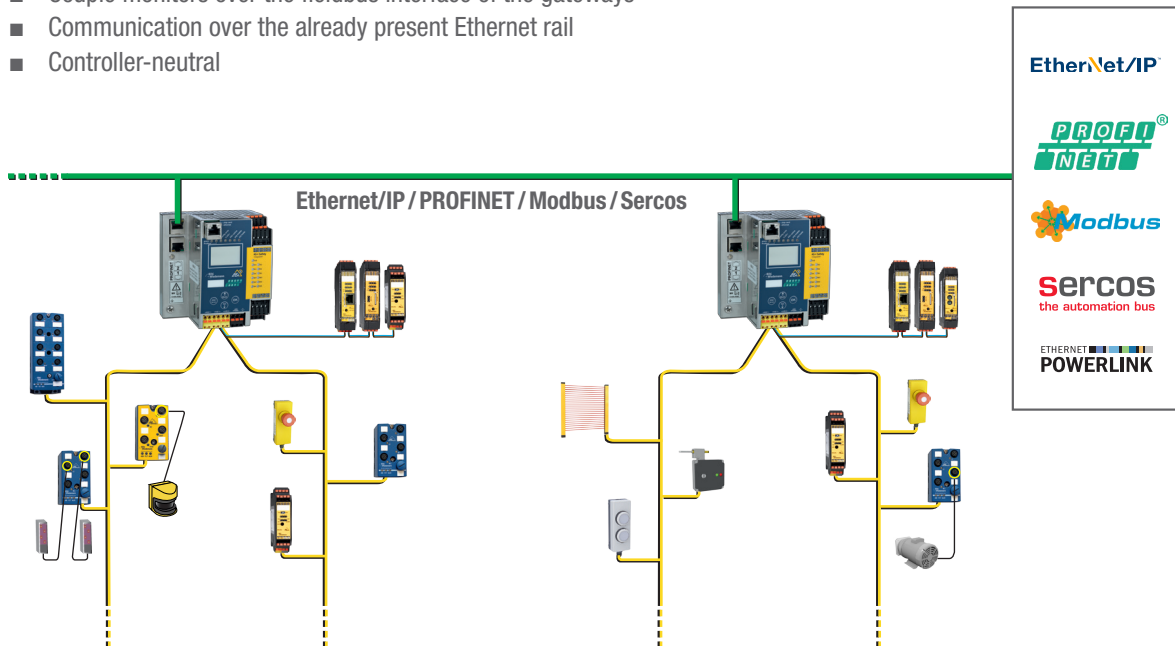
... WLAN

- Safe communication over WLAN networks
- For example driverless transport systems, storage and retrieval systems and other mobile applications

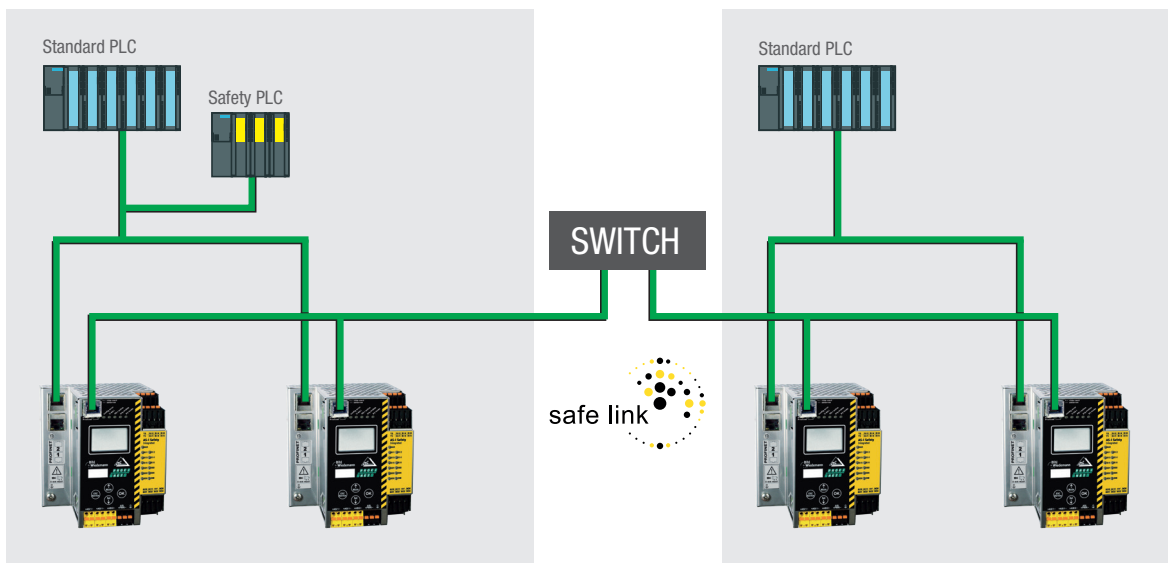


... the fieldbus interface

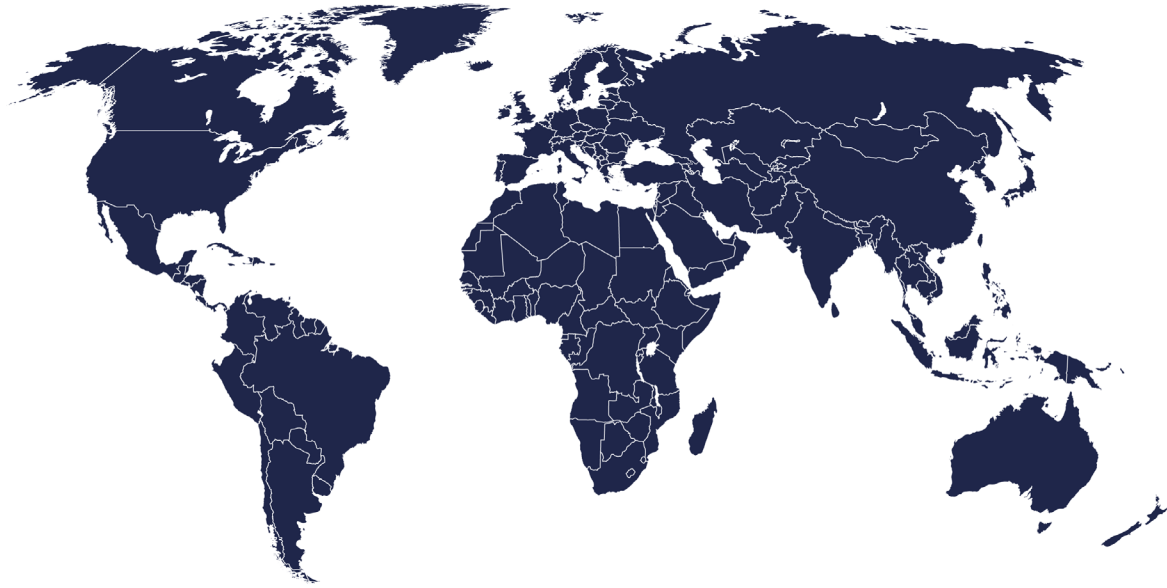
- For industrial Ethernet derivatives
- Couple monitors over the fieldbus interface of the gateways
- Communication over the already present Ethernet rail
- Controller-neutral



Safe Link and PROFIsafe or CIP Safety in one unit



International Sales Network



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AS-Interface Master/Gateways





Gateways

With the ASi gateways from Bihl+Wiedemann you can transmit digital and analog data which have been read remotely through ASi slaves to the host controller and set the output signals from the host controller to the actuators over the respective bus system.

Our gateways communicate according to the ASi-3 resp. ASi-5 standard and therefore ensure optimal exchange of the data. They are simple and quick to install and commission. The user benefits from the variety of standard implemented diagnostics functions such as duplicate address detection, earth fault and EMC monitoring as well as an optional PLC functionality.

Double Masters in one gateway are an especially cost-efficient approach. This allows two ASi circuits to be controlled by one gateway. The “1 Gateway, 1 power supply for 2 ASi circuits” version also requires just one power supply for both ASi circuits.



Gateways: Product Overview






- The devices can be operated directly on a 24 V (PELV) power supply.
- With integrated data coupling coils and adjustable self-resetting fuses optimized for safe use also of powerful 24 V power supplies.








24 Volt ASI Gateways in Stainless Steel							
Figure	Type	Model	Fieldbus interface	Number of Asi networks, number of Asi Masters	Recognition of duplicate Asi addresses	Asi fault detector	Article No.
	24 Volt ASI-5/ ASI-3 Gateway	Gateway	PROFINET, OPC UA	1 Asi network, 1 Asi Master	yes	yes	BWU3847
	24 Volt ASI-5/ ASI-3 Gateway	Gateway	EtherNet/IP + Modbus TCP, OPC UA	1 Asi network, 1 Asi Master	yes	yes	BWU3849
	24 Volt ASI-5/ ASI-3 Gateway	Gateway	EtherCAT, OPC UA	1 Asi network, 1 Asi Master	yes	yes	BWU3854
	24 Volt ASI Gateway	Gateway	PROFIBUS	1 Asi network, 1 Asi Master	yes	yes	BWU3053
	24 Volt ASI Gateway	Gateway	POWERLINK	1 Asi network, 1 Asi Master	yes	yes	BWU3312
	24 Volt ASI Gateway	Gateway	CC-Link	1 Asi network, 1 Asi Master	yes	yes	BWU3051










AS-Interface Master/Gateways

PROFIBUS ASi									
Figure	Type	Model	Fieldbus interface	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASi addresses	ASi fault detector	Article No.
	PROFIBUS ASi	Gateway	PROFIBUS	2 ASi networks, 2 ASi Masters	yes, max. 4 A/ ASi network	Ethernet diagnostic	yes	yes	BWU2546
	PROFIBUS ASi	Gateway	PROFIBUS	2 ASi networks, 2 ASi Masters	no, max. 8 A/ ASi network, redundant supply	Ethernet diagnostic	yes	yes	BWU2545
	PROFIBUS ASi	Gateway	PROFIBUS	1 ASi network, 1 ASi Master	no, max. 8 A/ ASi network	Ethernet diagnostic	yes	yes	BWU2544
	24 Volt ASi Gateway	Gateway	PROFIBUS	1 ASi network, 1 ASi Master	yes, max. 4 A/ ASi network	–	yes	yes	BWU3053
	PROFIBUS ASi Basic	Gateway	PROFIBUS	1 ASi network, 1 ASi Master	no, max. 8 A/ ASi network	–	no	yes	BWU1746

PROFINET ASi									
Figure	Type	Model	Fieldbus interface	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASi addresses	ASi fault detector	Article No.
	PROFINET ASi-5/ASi-3	Gateway	PROFINET, OPC UA	2 ASi networks, 2 ASi Masters	yes, max. 4 A/ASi network	Ethernet fieldbus + Ethernet diagnostic	yes	yes	BWU3852
	PROFINET ASi-5/ASi-3	Gateway	PROFINET, OPC UA	1 ASi network, 1 ASi Master	yes, max. 4 A/ASi network	Ethernet fieldbus + Ethernet diagnostic	yes	yes	BWU3848
	PROFINET ASi	Gateway	PROFINET, OPC UA	2 ASi networks, 2 ASi Masters	yes, max. 4 A/ASi network	Ethernet fieldbus	yes	yes	BWU3759
	PROFINET ASi	Gateway	PROFINET, OPC UA	2 ASi networks, 2 ASi Masters	no, max. 8 A/ ASi network, redundant supply	Ethernet fieldbus	yes	yes	BWU3844
	PROFINET ASi	Gateway	PROFINET, OPC UA	1 ASi network, 1 ASi Master	no, max. 8 A/ ASi network	Ethernet fieldbus	yes	yes	BWU3758
	PROFINET ASi	Gateway	PROFINET	1 ASi network, 1 ASi Master	no, max. 8 A/ASi network	Ethernet fieldbus + Ethernet diagnostic	yes	yes	BWU3431
	PROFINET ASi	Gateway	PROFINET, OPC UA	1 ASi network, 1 ASi Master	yes, max. 4 A/ ASi network	Ethernet fieldbus	yes	yes	BWU3847


EtherNet/IP + ModbusTCP ASi									
Figure	Type	Model	Fieldbus interface	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASi addresses	ASi fault detector	Article No.
	EtherNet/IP + ModbusTCP ASi	Gateway	EtherNet/IP + Modbus TCP OPC UA	2 ASi networks, 2 ASi Masters	yes, max. 4 A/ ASi network	Ethernet fieldbus	yes	yes	BWU3736
	EtherNet/IP + ModbusTCP ASi	Gateway	EtherNet/IP + Modbus TCP OPC UA	2 ASi networks, 2 ASi Masters	no, max. 8 A/ ASi network, redundant supply	Ethernet fieldbus	yes	yes	BWU3735
	EtherNet/IP + ModbusTCP ASi	Gateway	EtherNet/IP + Modbus TCP OPC UA	2 ASi networks, 2 ASi Masters	no, max. 8 A/ ASi network	Ethernet fieldbus	yes	yes	BWU3734
	Start Sets	Gateway	EtherNet/IP + Modbus TCP, OPC UA	1 ASi network, 1 ASi-5 / ASi-3 Master	yes, max. 4 A/ ASi network	Ethernet fieldbus	yes	yes	BWU4229
	24 Volt ASi-5/ASi-3 Gateway	Gateway	EtherNet/IP + Modbus TCP, OPC UA	1 ASi network, 1 ASi Master	yes, max. 4 A/ ASi network	Ethernet fieldbus	yes	yes	BWU3849


BACnet/IP ASi									
Figure	Type	Model	Fieldbus interface	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASi addresses	ASi fault detector	Article No.
	BACnet/IP ASi	Gateway	BACnet/IP	2 ASi networks, 2 ASi Masters	no, max. 8 A/ASi network, redundant supply	Ethernet fieldbus + Ethernet diagnostic	yes	yes	BWU3356



DeviceNet ASi									
Figure	Type	Model	Fieldbus interface	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASi addresses	ASi fault detector	Article No.
	DeviceNet ASi	Gateway	DeviceNet	2 ASi networks, 2 ASi Masters	yes, max. 4 A/ ASi network	RS 232	yes	yes	BWU1820
	DeviceNet ASi	Gateway	DeviceNet	2 ASi networks, 2 ASi Masters	no, max. 8 A/ ASi network, redundant supply	RS 232	yes	yes	BWU1819
	DeviceNet ASi	Gateway	DeviceNet	1 ASi network, 1 ASi Master	no, max. 8 A/ ASi network	RS 232	yes	yes	BWU1818









ControlLogix ASI									
Figure	Type	Model	Fieldbus interface	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASI addresses	ASI fault detector	Article No.
	ControlLogix ASI	Gateway	ControlLogix	2 ASI networks, 2 ASI Masters	no, max. 8 A/ ASI network	RS 232	no	no	BWU1488
	ControlLogix ASI	Gateway	Complete set ControlLogix	2 ASI networks, 2 ASI Masters	no, max. 8 A/ ASI network	RS 232	no	no	BW1611


Compact- / MicroLogix ASI									
Figure	Type	Model	Fieldbus interface	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASI addresses	ASI fault detector	Article No.
	Compact- / MicroLogix ASI	Gateway	CompactLogix, MicroLogix1500	1 ASI network, 1 ASI Master	no, max. 8 A/ ASI network	RS 232	no	no	BWU1416
	Compact- / MicroLogix ASI	Gateway	complete set CompactLogix, MicroLogix1500	1 ASI network, 1 ASI Master	no, max. 8 A/ ASI network	RS 232	no	no	BWU1610


EtherCAT ASI									
Figure	Type	Model	Fieldbus interface	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASI addresses	ASI fault detector	Article No.
	EtherCAT ASI	Gateway	EtherCAT	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet diagnostic	yes	yes	BWU2720
	EtherCAT ASI	Gateway	EtherCAT	2 ASI networks, 2 ASI Masters	no, max. 8 A/ ASI network, redundant supply	RS 232	yes	yes	BWU2163
	EtherCAT ASI	Gateway	EtherCAT	1 ASI network, 1 ASI Master	no, max. 8 A/ ASI network	RS 232	yes	yes	BWU2162
	24 Volt ASI-5/ASI-3 Gateway	Gateway	EtherCAT, OPC UA	1 ASI network, 1 ASI master	yes, max. 4 A/ ASI network	Ethernet fieldbus	yes	yes	BWU3854

CC-Link ASI									
Figure	Type	Model	Fieldbus interface	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASI addresses	ASI fault detector	Article No.
	CC-Link ASI	Gateway	CC-Link	1 ASI network, 1 ASI Master	no, max. 8 A/ ASI network	–	no	yes	BWU2611
	24 Volt ASI Gateway	Gateway	CC-Link	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	–	yes	yes	BWU3051

POWERLINK ASI									
Figure	Type	Model	Fieldbus interface	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASI addresses	ASI fault detector	Article No.
	POWERLINK ASI	Gateway	POWERLINK	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet Diagnose	yes	yes	BWU3593
	POWERLINK ASI	Gateway	POWERLINK	2 ASI networks, 2 ASI Masters	no, max. 8 A/ ASI network, redundant supply	Ethernet Diagnose	yes	yes	BWU3537
	POWERLINK ASI	Gateway	POWERLINK	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	–	yes	yes	BWU3312




CANopen ASI									
Figure	Type	Model	Fieldbus interface	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASI addresses	ASI fault detector	Article No.
	CANopen ASI	Gateway	CANopen	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	RS 232	yes	yes	BWU1823
	CANopen ASI	Gateway	CANopen	2 ASI networks, 2 ASI Masters	no, max. 8 A/ ASI network, redundant supply	RS 232	yes	yes	BWU1822
	CANopen ASI	Gateway	CANopen	1 ASI network, 1 ASI Master	no, max. 8 A/ ASI network	RS 232	yes	yes	BWU1821


RS 485 Modbus ASI									
Figure	Type	Model	Fieldbus interface	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Recognition of duplicate ASI addresses	ASI fault detector	Article No.
	RS 485 Modbus ASI	Gateway	Modbus/RTU; RS 485	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	RS 232	yes	yes	BWU1643
	RS 485 Modbus ASI	Gateway	Modbus/RTU; RS 485	2 ASI networks, 2 ASI Masters	no, max. 8 A/ ASI network, redundant supply	RS 232	yes	yes	BWU1642
	RS 485 Modbus ASI	Gateway	Modbus/RTU; RS 485	1 ASI network, 1 ASI Master	no, max. 8 A/ ASI network	RS 232	yes	yes	BWU1641




RS 232 ASI									
Figure	Type	Model	Fieldbus interface	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Recognition of duplicate ASI addresses	ASI fault detector	Article No.	
	RS 232 ASI	Gateway	RS 232	1 ASI network, 1 ASI Master	yes, max. 8 A/ ASI network	no	yes	BWU1955	












Safety, PROFIBUS									
Figure	Type	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Article No.
	PROFIsafe, PROFIBUS	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	Ethernet diagnostic	max. 31 x 2 channels	6 release circuits; 6 x fast electronic safe outputs	max. 31	PROFIsafe (F-CPU) + ASIMON Programm	BWU2819
	Safety PROFIBUS	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 32, max. 992 in max. configuration	Safe Link	BWU2822
	Safety, PROFIBUS	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	BWU2793




Safety, PROFINET									
Figure	Type	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Article No.
	PROFIsafe, PROFINET, ASI-5 / ASI-3	2 ASI networks, 2 ASI-5/ASI-3 masters	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 64, max. 1984 in max. configuration	PROFIsafe (F-CPU) + ASIMON program + Safe Link	BWU3674
	PROFIsafe, PROFINET, ASI-5 / ASI-3	1 ASI networks, 1 ASI masters	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 64, max. 1984 in max. configuration	PROFIsafe (F-CPU) + ASIMON program + Safe Link	BWU3862
	Safet, PROFINET, ASI-5 / ASI-3	1 ASI networks, 1 ASI master	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	BWU3863
	Safet, PROFINET, ASI-5 / ASI-3	2 ASI networks, 2 ASI masters	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	BWU4000
	Safet, PROFINET, ASI-5 / ASI-3	1 ASI networks, 1 ASI-5/ASI-3 master	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration		max. 64, max. 1984 in max. configuration	Safe Link	BWU3998
	Safety, PROFINET	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 32, max. 992 in max. configuration	Safe Link	BWU2828
	Safety, PROFINET	1 ASI networks, 1 ASI masters	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	BWU2798


Safety, Sercos									
Figure	Type	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Article No.
	Safety Sercos, ASI-5/ ASI-3	2 ASI networks, 2 ASI Master	yes, max. 4 A / ASI network	Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	–	max. 64, max. 1992 in max. configuration	CIP Safety over sercos + Safe Link	BWU3845
	Safety, Sercos, ASI-5/ ASI-3	2 ASI networks, 2 ASI Master	yes, max. 4 A / ASI network	Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 64, max. 1987 in max. configuration	CIP Safety over sercos + Safe Link	BWU3860
	Safety, Sercos, ASI-5/ ASI-3	2 ASI networks, 2 ASI Master	yes, max. 4 A / ASI network	Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 64, max. 1987 in max. configuration	Schneider motos via Sercos + Safe Link	BWU3861


Safety, EtherNet/IP + ModbusTCP									
Figure	Type	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Article No.
	Safety, EtherNet/IP + Modbus TCP, ASI-5 / ASI-3	2 ASI networks, 2 ASI-5 / ASI-3 Masters	yes, max. 4 A / ASI network	Ethernet fieldbus + Ethernet Diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 64, max. 1984 in configuration	CIP Safety over EtherNet/IP + Safe Link	BWU3857
	Safety, EtherNet/IP + Modbus TCP, ASI-5 / ASI-3	2 ASI networks, 2 ASI-5 / ASI-3 Masters	yes, max. 4 A / ASI network	Ethernet fieldbus + Ethernet Diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 64, max. 1984 in configuration	Ethernet fieldbus + Ethernet Diagnostic	BWU3825
	Safety, EtherNet/IP + ModbusTCP	2 ASI networks, 2 ASI Masters	yes, max. 4 A / ASI network	Ethernet fieldbus + Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 32, max. 992 in max. configuration	Safe Link	BWU3543
	Safety, EtherNET/ IP + Modbus TCP	2 ASI networks, 2 ASI Masters	no, max. 8 A / ASI network, redundant supply	Ethernet fieldbus + Ethernet diagnostics	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 32, max. 992 in max. configuration	Safe Link	BWU3544
	Safety, EtherNet/IP + ModbusTCP	1 ASI networks, 1 ASI Master	yes, max. 4 A / ASI network	Ethernet fieldbus + Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	BWU3542
	Safety, EtherNet/IP + ModbusTCP	2 ASI networks, 2 ASI Masters	yes, max. 4 A / ASI network	Ethernet fieldbus + Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 32, max. 992 in max. configuration	Safe Link	BWU3693




Safety, DeviceNet									
Figure	Type	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Article No.
	Safety, DeviceNet	1 ASi network, 1 ASi Master	yes, max. 4 A/ ASi network	Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	BWU2972




Safety, EtherCAT									
Figure	Type	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Article No.
	Safety, EtherCAT, ASi-5/ ASi-3	2 ASi networks, 2 ASi Masters	yes, max. 4 A/ ASi network	Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 64, max. 1984 in max. configuration	FSoE + Safe Link	BWU3858
	Safety, EtherCAT, ASi-5/ ASi-3	1 ASi network, 1 ASi Master	yes, max. 4 A/ ASi network	Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 64, max. 1984 in max. configuration	Safe Link	BWU3991
	Safety EtherCAT	2 ASi networks, 2 ASi Masters	yes, max. 4 A/ ASi network	Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 32, max. 992 in max. configuration	Safe Link	BWU2944
	Safety EtherCAT	1 ASi network, 1 ASi Master	yes, max. 4 A/ ASi network	Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 32, max. 991 in max. configuration	FSoE + Safe Link	BWU3509
	Safety, EtherCAT	1 ASi network, 1 ASi Master	yes, max. 4 A/ ASi network	Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	BWU2797

Safety, POWERLINK									
Figure	Type	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Article No.
	Safety, POWERLINK	2 ASi networks, 2 ASi Masters	yes, max. 4 A/ ASi network	Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 32, max. 992 in max. configuration	Safe Link	BWU3176
	Safety, POWERLINK	1 ASi network, 1 ASi Master	yes, max. 4 A/ ASi network	Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	BWU3177

Safety, CANopen									
Figure	Type	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Article No.
	Safety CANopen	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	BWU2804

Safety, CC-Link									
Figure	Type	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Article No.
	Safety CC-Link	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	Ethernet diagnostic	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	BWU2833

- Fully assembled and wired in a practical case

Starter Kits									
Figure	Type	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Article No.
	Starter Kits	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet diagnostic	max. 62 x 2 channels, max. 1922 in max. configuration	4 release circuits; 2 x relay, 2 x fast electronic safe outputs	max. 32, max. 992 in max. configuration	Safe Link	BW2695
	Starter Kits	2 ASI networks, 1 ASI-5 / ASI-3 Master	yes, max. 4 A/ ASI network	Ethernet fieldbus	-	-	-	-	BW4211
	Starter Kits	1 ASI network, 1 ASI-5 / ASI-3 Master	yes, max. 4 A/ ASI network	Ethernet fieldbus	-	-	-	-	BW4229





PC-Boards/PCB Modules

Bihl+Wiedemann offers not only Gateways with fieldbus and Ethernet interface or devices with USB interface, but all common hardware and software interfaces for PC based automation. For each problem the Bihl+Wiedemann has the right ASi master solution.

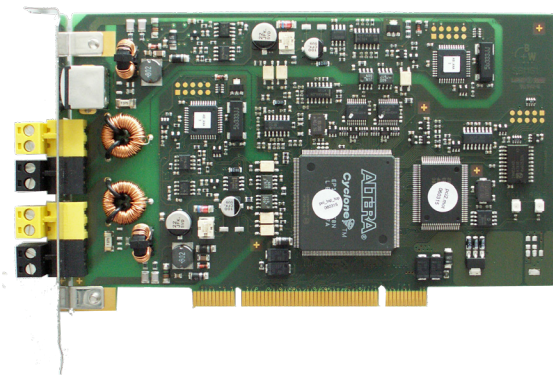
ASi master for computer-assisted automation

All PC-related technology (hardware and software) is gaining higher performance capability with continually falling prices.

This is a result of the increasing use of PC technology in industrial environments. The many options for using a PC together with a soft PLC, programs written in higher program languages such as C, C++, Pascal, Delphi, Visual Basic etc. have also led to an increased use of the AS-Interface products in PC controlled systems.



ASi master for “Embedded Applications“: ASi master OEM-Module

The ASi master OEM modules are ideal for integrating into a custom electronic design. The ASi master OEM Modules from Bihl+Wiedemann support all the traditional ASi functions.



PC-Boards/PCB Modules: Product Overview

- Solutions using all common hardware and software solutions

PC-Boards/PCB Modules						
Figure	Type	Number of ASi networks, number of ASi Masters	Diagnostic and configuration interface	Recognition of duplicate ASi addresses	ASi fault detector	Article No.
	Raspberry Pi	1 ASi network, 1 ASi-5 / ASi-3 Master	–	yes	yes	BW4061
	PCI board	2 ASi networks, 2 ASi Masters	RS 232	yes	yes	BW1922
	PCI board	2 ASi networks, 2 ASi Masters	–	no	no	BW2087



AS-Interface Master/Gateways

AS-Interface Module/Slaves

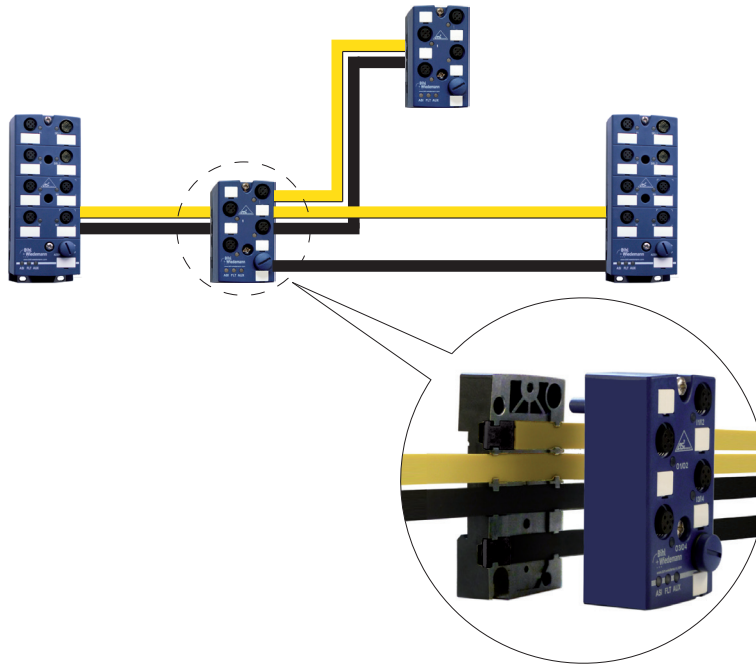


I/O Modules

Even with as little as three I/O field modules or three I/O stations, AS-Interface offers cost advantages over all other fieldbus systems.

Bihl+Wiedemann offers a wide variety of ASi modules. The modules are equipped with a various number of inputs and outputs allowing Bihl+Wiedemann to offer the right module for any application. Special requirements, such as sensors powered from ASi or external voltage (AUX) modules are not a problem for Bihl+Wiedemann. The large selection of analog modules is a display of our commitment to offer the right module for any application. Deserving special mention are high-resolution 16-bit analog modules or modules for especially fast transmission of the analog values.



AS-Interface Modules/Slaves





Installation with ASi Profile cable. The IP67 modules are suitable as a start or end point of the profile cables.

I/O Modules: Product Overview




- 100% protection against moisture
- High resistance to salt spray
- High corrosion resistance to chemically active substances
- Assured functionality at extreme temperatures from – 40 °C to 70 °C
- Shock resistant to 30g (11 ms)
- Vibration rated for a frequency of 5...500 Hz at an amplitude of 50 mmpp / 6g

EXTREME product line for ASi: Digital Modules ASi, IP67, M12										
Figure	Type	Housing	Inputs digital	Outputs digital	M12 wiring	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi connection	ASi address	Article No.
	IP67, 4 x M12, EXTREME	4 x M12	4	–	Y	out of ASi	–	ASi profile cable	1 AB Slave	BWU3145
	IP67, 8 x M12, EXTREME	8 x M12	4	4 x electronic	Y	out of ASi	out of AUX	ASi profile cable	1 AB Slave	BWU3144

- IP67, M12: 2 x 2 connectors for profile cable
- 2 color LEDs per output, state yellow, overload red




Digital Modules ASi: IP67, M12										
Figure	Type	Inputs digital	Outputs digital	Inputs analog	M12 wiring	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi connection	ASi address	Article No.
	IP67, 4 x M12, EXTREME	4	–	–	Y	out of ASi	–	ASi profile cable	1 AB Slave	BWU3145
	IP67, 4 x M12	2	2 x electronic	–	Y	out of ASi	out of AUX	ASi profile cable	1 AB Slave	BWU3456
	IP67, 4 x M12	2	2 x electronic, special ASi bit assignment	–	Y	out of ASi	out of AUX	ASi profile cable	1 AB Slave	BWU3539
	IP67, 4 x M12	2	2 x electronic, special ASi bit assignment	–	Y	out of ASi	out of AUX	ASi profile cable	1 Single Slave	BWU3775
	IP67, 4 x M12	2	2 x electronic	–	Single	out of ASi	out of AUX	ASi profile cable	1 AB Slave	BWU3141
	IP67, 4 x M12	2	2 x electronic	–	Single	out of ASi	out of AUX	ASi profile cable	1 AB Slave	BWU3517


AS-Interface Modules/Slaves



Digital Modules ASI: IP67, M12										
Figure	Type	Inputs digital	Outputs digital	Inputs analog	M12 wiring	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi connection	ASi address	Article No.
	IP67, 4 x M12	4	–	–	Y	out of ASi	–	ASi profile cable	1 AB Slave	BWU2552
	IP67, 4 x M12	4	–	–	Y	out of ASi	–	ASi using M12	1 AB Slave	BWU3077
	IP67, 4 x M12	4	–	–	Single	out of ASi	–	ASi profile cable	1 AB Slave	BWU2620
	IP67, 4 x M12	4	–	–	Single	out of ASi	–	ASi profile cable	1 AB Slave S-0.A.7.0	BWU3556
	IP67, 4 x M12	4	–	–	Single	out of ASi	–	ASi via M12	1 AB Slave	BWU3457
	IP67, 4 x M12	4	–	–	Single	out of AUX	–	ASi profile cable	1 AB Slave	BWU2725
	IP67, 4 x M12	4	2 x electronic	–	Mixed	out of AUX	out of AUX	ASi profile cable	1 AB Slave	BWU2767
	IP67, 4 x M12	4	3 x electronic	–	Y	out of ASi	out of AUX	ASi profile cable	1 AB Slave	BWU3375
	IP67, 4 x M12	4	4 x electronic	–	Y	out of ASi	out of AUX	ASi profile cable	1 AB Slave	BWU2487
	IP67, 4 x M12	4	4 x electronic	–	Y	out of AUX	out of AUX	ASi profile cable	1 AB Slave	BWU3032
	IP67, 4 x M12	4	4 x electronic	–	Mixed (inputs/ outputs reversed)	out of AUX	out of AUX	ASi profile cable	1 AB Slave	BWU3887
	IP67, 4 x M12	4	4 x electronic	–	Mixed	out of AUX	out of AUX	ASi profile cable	1 AB Slave	BWU2547
	IP67, 4 x M12	4	4 x electronic	–	Mixed	out of ASi	out of ASi	ASi profile cable	1 AB Slave	BWU3240
	IP67, 4 x M12	–	4 x electronic	–	Y	–	out of AUX	ASi profile cable	1 AB Slave	BWU2713
	IP67, 4 x M12	–	4 x electronic	–	Y	–	out of AUX	ASi profile cable	1 AB Slave	BWU2594
IP67, 4 x M12	–	4 x electronic	–	Y	–	out of AUX, 2 A per output	ASi profile cable	1 AB Slave	BWU2728	
	IP67, 8 x M12, EXTREME	4	4 x electronic	–	Y	out of ASi	out of AUX	ASi profile cable	Slave	BWU3144
	IP67, 8 x M12, ASI-5	16	–	–	Y	out of AUX	–	ASi profile cable	1 ASI-5 Slave	BWU3890
	IP67, 8 x M12, ASI-5	8	–	–	Single	out of ASi	–	ASi profile cable	1 ASI-5 Slave	BWU3802
	IP67, 8 x M12, ASI-5	8	–	–	Single	out of ASi	out of AUX	ASi via M12	1 ASI-5 Slave	BWU4195
	IP67, 8 x M12, ASI-5	8	8	–	Y	out of ASi	out of AUX	ASi profile cable	1 ASI-5 Slave	BWU3163
	IP67, 8 x M12, ASI-5	8	8 x electronic	–	Y	out of ASi	out of AUX	ASi via M12	1 ASI-5 Slave	BWU4193
	IP67, 8 x M12, ASI-5	16	–	–	Y	out of ASi	–	ASi profile cable	1 ASI-5 Slave	BWU3164
	IP67, 8 x M12, ASI-5	16	–	–	Y	out of AUX	out of ASi	ASi profile cable	1 ASI-5 Slave	BWU4196







Digital Modules ASI: IP67, M12										
Figure	Type	Inputs digital	Outputs digital	Inputs analog	M12 wiring	Input voltage (sensor supply)	Output voltage (actuator supply)	ASI connection	ASI address	Article No.
	IP67, 8 x M12, ASI-5	16	–	–	Y	out of ASI	–	ASI via M12	1 ASI-5 Slave	BWU4194
	IP67, 8 x M12	4	4 x electronic	–	Y	out of AUX	out of AUX	ASI profile cable	1 AB Slave	BWU3510
	IP67, 8 x M12	4	4 x electronic	–	Y	out of ASI	out of AUX	ASI profile cable	1 AB Slave	BWU2626
	IP67, 8 x M12	4	4 x electronic	–	Single	out of ASI	out of AUX	ASI profile cable	1 AB Slave	BWU2617
	IP67, 8 x M12	4	4 x electronic	–	Single	out of ASI	out of AUX	ASI profile cable	1 Single Slave	BWU2684
	IP67, 8 x M12	4	4 x electronic	–	Single	out of AUX	out of AUX	ASI profile cable	1 AB Slave	BWU2810
	IP67, 8 x M12	4	4 x electronic	–	Single	out of AUX	out of AUX	ASI profile cable	1 AB Slave	BWU2645
	IP67, 8 x M12	4	4 x electronic	–	Single	out of ASI	out of AUX, 2 A per output	ASI profile cable	1 Single Slave	BWU3540
	IP67, 8 x M12	4	4 x electronic	–	Single	out of AUX	out of AUX, 2 A per output	ASI profile cable	1 Single Slave	BWU3895
	IP67, 8 x M12	4	3 x electronic	–	Single	out of ASI	out of AUX, 2 A per output	ASI profile cable	1 AB Slave	BWU3496
	IP67, 8 x M12	8	–	–	Y	out of AUX	–	ASI profile cable	2 AB Slaves	BWU2770
	IP67, 8 x M12	8	–	–	Y	out of ASI	–	ASI profile cable	2 AB Slaves	BWU2651
	IP67, 8 x M12	8	–	–	Single	out of ASI	–	ASI profile cable	2 AB Slaves	BWU2983
	IP67, 8 x M12	8	8 x electronic	–	Y	out of ASI	out of AUX	ASI profile cable	2 AB Slaves	BWU2619
	IP67, 8 x M12	–	8 x electronic	–	Y	–	out of AUX	ASI profile cable	2 AB Slaves	BWU2652
IP67, 8 x M12	4	4 x electronic	–	2 x Pt100	Signal at pin2/pin4	out of AUX	out of AUX	ASI profile cable	2 AB Slaves	BWU2313




AS-Interface Modules/Slaves

ASI Slaves / IO-Link Master, IP67/IP20										
Figure	Type	Number of IO-Link Ports	IO-Link Port Class A	IO-Link Port Class B	Sensor supply (IO-Link supply and input/output supply)	Actuator supply (for IO-Link ports class B)	Connection	ASI connection	ASI address	Article No.
	IP67, 4 x M12, ASI-5	4	2	2	out auf AUX	out auf AUX	4 x M12 sockets, 5 poles	ASI profile cable	1 ASI-5 Slave	BWU4067
	Starter Kits	4	2	2	out auf AUX	out auf AUX	4 x M12 sockets, 5 poles	ASI profile cable	1 ASI-5 Slave	BWU4211
	Starter Kits	4	2	2	out auf AUX	out auf AUX	4 x M12 sockets, 5 poles	ASI profile cable	1 ASI-5 Slave	BWU4229

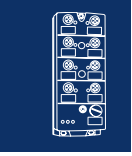
Digital Modules ASi: IP67, M8										
Figure	Type	Housing	Inputs digital	Outputs digital	M12 wiring	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi connection	ASi address	Article No.
	IP67, 8 x M8	8 x M8	8	–	Single	out of ASi	–	ASi profile cable	2 AB Slave	BW3521
	IP67, 8 x M8	8 x M8	4	4 x electronic	Single	out of ASi	out of AUX	ASi profile cable	1 AB Slave	BW3661

Counter Modules			
Figure	Module	Specification	Article No.
	ASI-5 Counter Module	4 x 2-channel input or 4 x 1-channel input	BWU3875
	ASI-5 Counter Module	4 x 2-channel input or 4 x 1-channel input	BW4042

Digital Modules ASi: Active Distributors ASi, IP67/IP20										
Figure	Type	Housing	Inputs digital	Outputs digital	Inputs Safety, SIL 3, Cat.	Input voltage (sensor supply)	Output voltage (actuator supply)	Profile cable connection	ASi address	Article No.
	Active distributor ASi	depth: 35 mm	4	4 x electronic	–	out of ASi	out of AUX	1 x ASi, 1 x AUX	1 AB Slave	BWU3675
	Active distributor ASi	depth: 35 mm	4	4 x electronic	–	out of AUX	out of AUX	1 x ASi, 1 x AUX	1 AB Slave	BWU3676
	Active distributor ASi	depth: 35 mm	4	2 x electronic	–	out of ASi	out of AUX	1 x ASi	1 AB Slave	BWU3577
	Active distributor ASi	depth: 35 mm	4	4 x electronic	–	out of ASi	out of AUX	1 x ASi, 1 x AUX	1 AB Slave	BWU3555
	Active distributor ASi	depth: 35 mm	4	2 x electronic	–	out of ASi	out of ASi	1 x ASi	1 AB Slave	BWU3695
	Active distributor ASi	depth: 35 mm	4	–	–	out of ASi	–	1 x ASi	1 AB Slave	BWU3633
	Active distributor ASi	depth: 35 mm	4	–	–	out of ASi	–	1 x ASi	1 AB Slave	BWU3632
	Active distributor ASi	depth: 35 mm	4	–	–	out of AUX	–	1 x ASi, 1 x AUX	1 AB Slave	BWU3608
	Active distributor ASi	depth: 35 mm	4	–	–	out of ASi	–	1 x ASi	1 AB Slave	BWU3730


Digital Modules ASI: Active Distributors ASI, IP67/IP20										
Figure	Type	Housing	Inputs digital	Outputs digital	Inputs Safety, SIL 3, Cat.	Input voltage (sensor supply)	Output voltage (actuator supply)	Profile cable connection	ASI address	Article No.
	Active distributor ASI	depth: 35 mm	4	4 x electronic	–	out of ASI	out of AUX	1 x ASI, 1 x AUX	1 AB Slave	BWU3317
	Active distributor ASI	depth: 35 mm	4	4 x electronic	–	out of ASI	out of AUX	1 x ASI, 1 x AUX	1 AB Slave	BW3507
	Active distributor ASI	depth: 35 mm	4	4 x electronic	–	out of ASI	out of ASI	1 x ASI	1 AB Slave	BW3326
	Active distributor ASI	depth: 35 mm	4	–	–	out of ASI	–	1 x ASI	1 AB Slave	BWU3374
	Active distributor ASI	depth: 35 mm	1	4 x electronic	–	out of ASI	out of ASI	1 x ASI	1 AB Slave	BWU3534
	Active distributor ASI	depth: 35 mm	–	4 x electronic	–	–	out of ASI	1 x ASI	1 AB Slave	BWU3729
	Active distributor ASI	depth: 35 mm	4	4 x electronic	–	out of ASI	out of ASI	1 x ASI	1 AB Slave	BWU3606
	Active distributor ASI	depth: 35 mm	4	4 x electronic	–	out of ASI	out of ASI	1 x ASI	1 AB Slave	BW3500
	Active distributor ASI	depth: 35 mm	4	4 x electronic	–	out of AUX	out of AUX	1 x ASI, 1 x AUX	1 AB Slave	BW3377
	Active distributor ASI	depth: 35 mm	2	2 x electronic	–	out of AUX	out of AUX	1 x ASI, 1 x AUX	1 AB Slave	BWU3607
	Active distributor ASI	depth: 35 mm	1	3 x electronic	–	out of ASI	out of ASI	1 x ASI	1 AB Slave	BWU3639
	Active distributor ASI	depth: 19 mm	4	–	–	out of AUX	–	1 x ASI, 1 x AUX	1 AB Slave	BWU3498
	Active distributor ASI	depth: 19 mm	2	2 x electronic	–	out of AUX	out of AUX	1 x ASI, 1 x AUX	1 AB Slave	BWU3497
	Active distributor ASI	depth: 19 mm	2	2 x electronic	–	out of AUX	out of AUX	1 x ASI, 1 x AUX	1 AB Slave	BWU3602
	Active distributor ASI	depth: 19 mm	2	1 x electronic	–	out of AUX	out of AUX	1 x ASI, 1 x AUX	1 AB Slave	BW3250
	Active distributor ASI	depth: 19 mm	2	2	–	out of AUX	out of AUX	1 x ASI, 1 x AUX	1 AB Slave	BWU3628







AS-Interface Modules/Slaves


Digital Modules ASi: Active Distributors ASi, IP67/IP20											
Figure	Type	Housing	Inputs digital	Outputs digital	Inputs Safety, SIL 3, Cat.	Input voltage (sensor supply)	Output voltage (actuator supply)	Profile cable connection	ASi address	Article No.	
	Active distributor ASi	depth: 19 mm	2	2 x electronic	–	out of ASi	out of ASi	1 x ASi	1 AB Slave	BWU3400	
	Active distributor ASi	depth: 19 mm	2	–	–	out of AUX	–	1 x ASi, 1 x AUX	1 AB Slave	BWU3564	
	Active distributor ASi	depth: 19 mm	4	4 x electronic	–	out of AUX	–	1 x ASi, 1 x AUX	1 AB Slave	BWU4087	
	Active distributor ASi	depth: 19 mm	–	4 x electronic	–	–	out of AUX	1 x ASi, 1 x AUX	1 AB Slave	BW3300	
	Active distributor ASi	depth: 19 mm	–	4 x electronic	–	–	out of AUX	1 x ASi, 1 x AUX	1 AB Slave	BWU3487	
	Active distributor ASi	depth: 19 mm	–	4 x electronic	–	–	out of AUX	1 x ASi, 1 x AUX	1 AB Slave	BWU4087	
	Active distributor ASi	depth: 19 mm	4	–	–	out of AUX	–	1 x ASi, 1 x AUX	1 AB Slave	BW3349	
	Active distributor ASi	depth: 19 mm	3	1 x electronic	–	out of AUX	out of AUX	1 x ASi, 1 x AUX	1 AB Slave	BWU3414	
	Active distributor ASi	depth: 19 mm	–	4 x electronic	–	–	out of AUX	1 x ASi, 1 x AUX	1 AB Slave	BWU3342	
	Active distributor ASi Safety	depth: 35 mm	–	1 x electronic	1 x 2 channels	out of ASi	out of AUX	1 x ASi, 1 x AUX	1 Single Slave	BWU3425	
	Active distributor ASi Safety	depth: 35 mm	–	1 x electronic	1 x 2 channels	out of ASi	out of AUX	1 x ASi, 1 x AUX	1 Single Slave	BWU3750	
	Active distributor ASi Safety	depth: 19 mm	–	2 x electronic	1 x 2 channels	out of AUX	out of AUX	1 x ASi, 1 x AUX	1 Single Slave	BWU3718	
	Active distributor ASi Safety	depth: 19 mm	–	1 x electronic	1 x 2 channels	out of ASi	out of ASi	1 x ASi	1 Single Slave	BWU3249	
	Active distributor ASi Safety	19 mm tief	–	–	1 x 2 channels	out of ASi	–	1 x ASi	1 Single Slave	BWU3600	

Digital Modules ASi: Active Distributors ASi, IP67/IP20										
Figure	Type	Housing	Inputs digital	Outputs digital	Inputs Safety, SIL 3, Cat.	Input voltage (sensor supply)	Output voltage (actuator supply)	Profile cable connection	ASi address	Article No.
	Active distributor ASi Safety	depth: 19 mm	1	1 x electronic	1 x 2 channels	out of AUX	out of AUX	1 x ASi, 1 x AUX	1 Single Slave	BWU3721
	Active distributor ASi Safety	depth: 19 mm	1	1 x electronic	1 x 2 channels	out of AUX	out of AUX	1 x ASi, 1 x AUX	1 Single Slave	BWU3488
	Active distributor ASi Safety	depth: 19 mm	1	1 x electronic	1 x 2 channels	out of AUX	out of AUX	1 x ASi	1 Single Slave	BWU3565
	Active distributor ASi Safety	depth: 19 mm	1	1 x electronic	1 x 2 channels	out of AUX	out of AUX	1 x ASi	1 Single Slave	BWU3635
	Active distributor ASi Safety	depth: 19 mm	–	2 x electronic	1 x 2 channels	out of AUX	out of AUX	1 x ASi	1 Single Slave	BWU3719
	Active distributor ASi Safety	depth: 19 mm	–	1 x electronic	1 x 2 channels	out of ASi	out of ASi	1 x ASi	1 Single Slave	BWU3599
	Active distributor ASi Safety	depth: 19 mm	–	1 x electronic	1 x 2 channels	out of ASi	out of ASi	1 x ASi	1 Single Slave	BWU3248
	Active distributor ASi Safety	depth: 19 mm	–	1 x electronic	1 x 2 channels	out of AUX	out of AUX	1 x ASi, 1 x AUX	1 Single Slave	BWU3299
	Active distributor ASi Safety	depth: 19 mm	–	1 x electronic	1 x 2 channels	out of AUX	out of AUX	1 x ASi, 1 x AUX	1 Single Slave	BWU3627
	Active distributor ASi Safety	depth: 19 mm	–	1 x electronic	1 x 2 channels	out of AUX	out of AUX	1 x ASi, 1 x AUX	1 Single Slave	BWU3376
	Active distributor ASi Safety	depth: 19 mm	–	–	1 x 2 channels	out of ASi	–	1 x ASi	1 Single Slave	BWU3373
	Active distributor ASi Safety	depth: 19 mm	–	1 x electronic	1 x 2 channels	out of ASi	–	1 x ASi	1 Single Slave	BWU3553
	Active distributor ASi Safety	depth: 19 mm	–	–	1 x 2 channels	out of ASi	–	1 x ASi	1 Single Slave	BWU3413
	Active distributor ASi Safety	depth: 19 mm	–	–	1 x 2 channels	out of ASi	–	1 x ASi	1 Single Slave	BWU3626







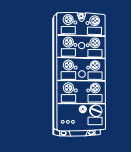
ASi Slaves/I0-Link Master: Aktive Verteiler, IP67										
Figure	Type	Number of I0-Link Ports	I0-Link Port Class A	I0-Link Port Class B	Sensor supply (I0-Link supply and input/output supply)	Actuator supply (for I0-Link ports class B)	Connection	ASi connection	ASi address	Article No.
	Active distributor ASi-5	2	–	1	out of AUX	out of AUX	2 x M12 cable sockets, straight, 5 poles	ASi profile cable	1 ASi-5 Slave	BWU4077
	Active distributor ASi-5	1	–	1	out of AUX	out of AUX	1 x M12 cable socket, straight, 5 poles	ASi profile cable	1 ASi-5 Slave	BWU4088

Analog Modules ASi: IP65/IP67, M12								
Figure	Type	Inputs analog	Outputs analog	M12 wiring	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi address	Article No.
	IP67, 4 x M12	2 x 4 ... 20 mA	–	Signal at pin2/pin4	out of ASi	–	1 AB Slave	BWU3100
	IP67, 4 x M12	2 x 0 ... 10 V	–	Signal at pin2/pin4	out of ASi	–	1 AB Slave	BWU3102
	IP67, 4 x M12	2 x Pt100	–	Signal at pin1/pin3	out of ASi	–	1 AB Slave	BWU3104
	IP67, 4 x M12	–	2 x 0 ... 20 mA	Signal at pin1/pin3	–	out of AUX	1 Single Slave	BWU3105
	IP67, 4 x M12	–	2 x 0 ... 20 mA	Signal at pin2/pin4	–	out of AUX	1 Single Slave	BWU3106
	IP67, 4 x M12	–	2 x 0 ... 10 V	Signal at pin1/pin3	–	out of AUX	1 Single Slave	BWU3107
	IP65, M12, width: 45 mm	2 x 4 ... 20 mA	–	Signal at pin2/pin4	out of ASi	–	1 AB Slave	BWU1893
	IP65, M12, width: 90 mm	1 x 4 ... 20 mA/ 0 ... 10 V	1x 0 ... 10 V	Signal In at pin2/pin4, Signal Out at pin1/pin3	out of ASi	out of AUX	2-4 Single Slaves	BWU1853
	IP65, M12, width: 90 mm	4 x 4 ... 20 mA	–	Signal at pin2/pin4	out of ASi or out of AUX, auto switching	–	1 Single Slave	BWU1359
	IP65, M12, width: 90 mm	4 x 0 ... 10 V	–	Signal at pin2/pin4	out of ASi or out of AUX, auto switching	–	1 Single Slave	BWU1360
	IP65, M12, width: 90 mm	4 x Pt100, 2/4 wire mode	–	Signal at pin2/pin4	out ASi	–	1 Single Slave	BWU1363
	IP65, M12, width: 90 mm	4 x Pt100, 2/3 wire mode	–	Signal at pin2/pin4	out of ASi	–	1 Single Slave	BWU2532
	IP65, M12, width: 90 mm	–	4 x 0 ... 20 mA	Signal at pin1/pin3	–	out of AUX	1 Single Slave	BWU1722
	IP65, M12, width: 90 mm	–	4 x 0 ... 20 mA	Signal at pin1/pin3	–	out of ASi or out of AUX, auto switching	1 Single Slave	BWU1361
	IP65, M12, width: 90 mm	–	4 x 0 ... 10 V	Signal at pin1/pin3	–	out of ASi or out of AUX, auto switching	1 Single Slave	BWU1362
	IP65, M12, width: 90 mm	–	4 x 0 ... 10 V 24 V, 0 V at M12	Signal at pin1/pin3	–	out of ASi or out of AUX, auto switching	1 Single Slave	BWU2857

Analog Modules ASi: IP65/IP67, M12								
Figure	Type	Inputs analog	Outputs analog	M12 wiring	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi address	Article No.
	IP67, 8 x M12	2 x Pt100	–	Signal at pin2/pin4	out of AUX	out of AUX	2 AB Slaves	BWU2313


- Cost efficient solution in IP20, 22,5 mm

Analog Modules ASi: IP65, PG							
Figure	Type	Inputs analog	Outputs analog	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi address	Article No.
	IP65, 3 x PG	2 x 4 ... 20 mA	–	selectable, out of ASi or out of AUX, Default out of ASi	–	1 Single Slave	BWU1232
	IP65, 3 x PG	2 x 0 ... 10 V	–	selectable, out of ASi or out of AUX, Default out of ASi	–	1 Single Slave	BWU1233
	IP65, 3 x PG	Load cell	–	out of ASi	–	1 Single Slave	BWU2240
	IP65, 3 x PG	–	2 x 0 ... 20 mA	–	selectable, out of ASi or out of AUX, Default out of ASi	1 Single Slave	BWU1234
	IP65, 3 x PG	–	2 x 0 ... 10 V	–	selectable, out of ASi or out of AUX, Default out of ASi	1 Single Slave	BWU1235
	IP65, 8 x PG	4 x Pt100	–	out of ASi	–	1 Single Slave	BWU1254
	IP65, 8 x PG	4 x Pt1000	–	out of ASi	–	1 Single Slave	BWU1509




AS-Interface Modules/Slaves


Digital Modules ASI: IP20, 22,5 mm									
Figure	Type	Primary application	Inputs digital	Outputs digital, EDM	Input voltage (sensor supply)	Output voltage (actuator supply)	ASI connection	ASI address	Article No.
	IP20, 22,5 mm x 50 mm, 4 x COMBICON	decentralized control cabinet	4	4 x electronic	out of ASI	out of ASI	clamps	1 AB Slave	BWU2783
	IP20, 22,5 mm x 50 mm, 4 x COMBICON	decentralized control cabinet	4	4 x electronic	out of ASI	out of ASI	clamps	1 Single Slave	BWU3272
	IP20, 22,5 mm x 50 mm, 4 x COMBICON	decentralized control cabinet	4	–	out of ASI	–	clamps	1 AB Slave (S-0.A.7.0)	BWU3747
	IP20, 22,5 mm x 92 mm, 4 x COMBICON	decentralized control cabinet	4	4 x electronic	out of AUX	out of AUX	clamps	1 AB Slave	BWU3559
	IP20, 22,5 mm x 92 mm, 4 x COMBICON	control cabinet	4	4 x electronic	out of AUX	out of AUX	clamps	1 AB Slave	BWU3842
	IP20, 22,5 mm x 92 mm, 4 x COMBICON	control cabinet	4	3 x electronic	out of AUX	out of AUX	clamps	1 AB Slave	BWU3733
	IP20, 22,5 mm x 114 mm, 4 x COMBICON	control cabinet	4	–	out of AUX	–	clamps	1 AB Slave	BWU2723
	IP20, 22,5 mm x 114 mm, 4 x COMBICON	control cabinet	4	4 x electronic	out of AUX	out of AUX	clamps	1 AB Slave	BWU1938
	IP20, 22,5 mm x 114 mm, 4 x COMBICON	control cabinet	4	4 x electronic	out of AUX	out of AUX	clamps	1 Single Slave	BWU2759
	IP20, 22,5 mm x 114 mm, 4 x COMBICON	control cabinet	8	–	out of AUX	–	clamps	2 AB Slaves	BWU2721
	IP20, 22,5 mm x 114 mm, 4 x COMBICON	decentralized control cabinet	4	–	out of AUX	–	clamps	1 AB Slave	BWU3266
	IP20, 22,5 mm x 114 mm, 4 x COMBICON	decentralized control cabinet	4	–	out of ASI	–	clamps	1 AB Slave	BWU3265
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, ASI-5	control cabinet	8	–	out of AUX	–	clamps	1 ASI-5 Slave	BWU3873
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, ASI-5	control cabinet	8	8 x electronic	out of AUX	out of AUX	clamps	1 ASI-5 Slave	BWU3872
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, ASI-5	control cabinet	16	–	out of AUX	–	clamps	1 ASI-5 Slave	BWU3874
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	control cabinet	4	4 x relais	out of ASI	–	clamps	1 Single Slave	BWU3878
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	control cabinet	4	4 x relais	out of ASI	–	clamps	1 Single Slave	BWU3435
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	control cabinet	4	4 x relais	out of ASI	–	clamps	1 Single Slave (S-7.0.F.E)	BWU3658
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	control cabinet	4	4 x relais	out of ASI	–	clamps	1 AB Slave	BWU3549

Digital Modules ASi: IP20, 22,5 mm									
Figure	Type	Primary application	Inputs digital	Outputs digital, EDM	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi connection	ASi address	Article No.
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	control cabinet	8	8 x electronic	out of AUX	out of AUX	clamps	2 AB Slaves	BWU2490
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	control cabinet	8	8 x electronic	out of AUX	out of AUX	clamps	2 Single Slaves	BWU2800
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	control cabinet	8 (NPN)	8 x electronic (NPN)	out of AUX	out of AUX	clamps	2 AB Slaves	BWU3359
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	control cabinet	8	8 x electronic	out of ASi	out of AUX	clamps	2 AB Slaves	BWU3364
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	decentralized control cabinet	4	4 x electronic	out of AUX	out of AUX	clamps	1 AB Slave	BWU3268
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	decentralized control cabinet	4	4 x electronic	out of ASi	out of AUX	clamps	1 AB Slave	BWU3267
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	decentralized control cabinet	4	4 x electronic	out of ASi	out of AUX	clamps	1 Single Slave	BWU3754







AS-Interface Modules/Slaves

Digital Modules ASi: IP20, 22,5 mm									
Figure	Type	Number of IO-Link Ports	IO-Link Port Class A	IO-Link Port Class B	Sensor supply (IO-Link supply and input/output supply)	Actuator supply (for IO-Link ports class B)	ASi connection	ASi address	Article No.
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, ASi-5	4	configurable terminals	configurable terminals	out of AUX	–	clamps	1 ASi-5 Slave	BWU3873

ASi Counter Modules, IP20, 22,5 mm								
Figure	Type	Model	Inputs digital	Input voltage (sensor supply)	Connection	ASi connection	ASi address	Artikel Nr.
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, ASi-5	counter module, pulse counter	4 x counter inputs	out of AUX	clamps	clamps	1 ASi-5 Slave	BWU3875

■ Robust, Stainless Steel in IP20

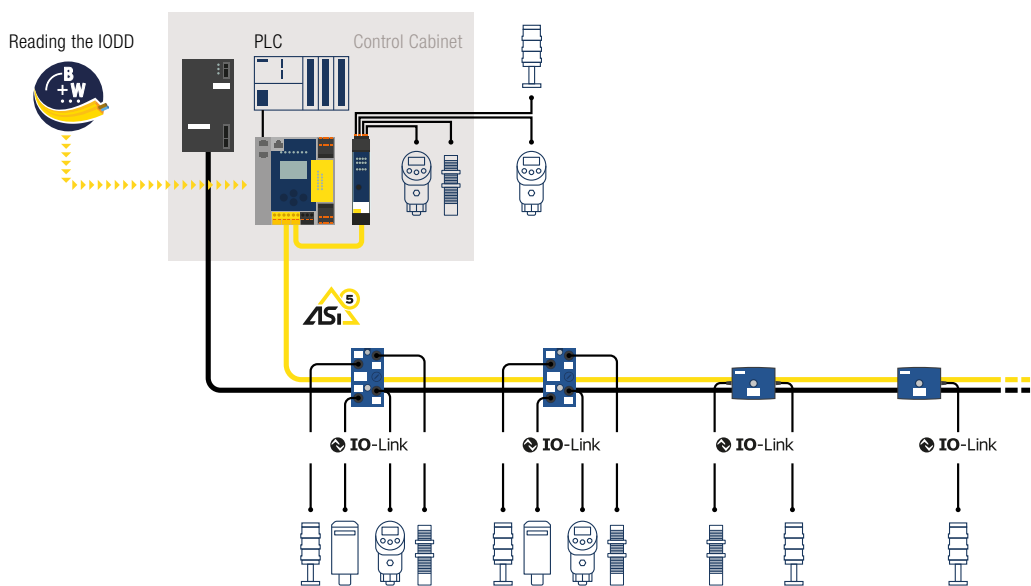
Digital Modules ASI in Stainless Steel: IP20							
Figure	Type	Inputs digital	Outputs digital, EDM	Input voltage (sensor supply)	Output voltage (actuator supply)	ASI address	Article No.
	Stainless Steel in IP20, depth: 45 mm	4	4 x relay	out of ASI	–	1 Single Slave	BW1926
	Stainless Steel in IP20, depth: 45 mm	4	3 x relay	out of ASI	–	1 AB Slave	BW1808
	Stainless Steel in IP20, depth: 45 mm	4	4 x electronic	out of AUX	out of AUX	1 AB Slave	BWU1907
	Stainless Steel in IP20, depth: 45 mm	4	4 x electronic	out of AUX	out of AUX	1 Single Slave	BWU2565
	Stainless Steel in IP20, depth: 45 mm	8	–	out of AUX	–	2 AB Slaves	BWU2077
	Stainless Steel in IP20, depth: 45 mm	–	8 x electronic	–	out of AUX	–	2 AB Slaves
	Stainless Steel in IP20, 90 mm depth	4	4 x relay	out of ASI	–	1 Single Slave	BW2555
	Stainless Steel in IP20, 90 mm depth	8	–	out of AUX	–	2 AB Slaves	BW2556

Analog Modules ASI: IP20							
Figure	Type	Inputs analog	Outputs analog	Input voltage (sensor supply)	Output voltage (actuator supply)	ASI address	Article No.
	IP20, 22,5 mm x 92 mm, 4 x COMBICON	2 x 4 ... 20 mA / 0 ... 10 V	–	selectable, out of ASI or out of AUX, Default out of ASI	–	1 AB Slave	BWU1897
	IP20, 22,5 mm x 92 mm, 4 x COMBICON	2 x 4 ... 20 mA / 0 ... 10 V	–	selectable, out of ASI or out of AUX, Default out of ASI	–	1 Single Slave	BWU1345
	IP20, 22,5 mm x 92 mm, 4 x COMBICON	–	2 x 0 ... 20 mA / 0 ... 10 V	–	selectable, out of ASI or out of AUX, Default out of ASI	1 Single Slave	BWU1412
	IP20, 22,5 mm x 92 mm, 4 x COMBICON	–	2 x 0 ... 20 mA / 0 ... 10 V	–	selectable, out of ASI or out of AUX, Default out of ASI	1 Single Slave	BWU1727
	IP20, 22,5 mm x 92 mm, 4 x COMBICON	–	2 x ±10 V	–	out of AUX	1 Single Slave	BWU2224
	IP20, 25 mm x 105 mm, 6 x COMBICON	4 x 4 ... 20 mA	–	out of ASI or out of AUX, auto switching	–	1 Single Slave	BWU1364
	IP20, 25 mm x 105 mm, 6 x COMBICON	4 x 0 ... 10 V	–	out of ASI or out of AUX, auto switching	–	1 Single Slave	BWU1365
	IP20, 25 mm x 105 mm, 6 x COMBICON	4 x Pt100	–	out of ASI	–	1 Single Slave	BWU1368
	IP20, 25 mm x 105 mm, 6 x COMBICON	4 x thermocouple Type J	–	out of ASI	–	1 Single Slave	BWU1933
	IP20, 25 mm x 105 mm, 6 x COMBICON	4 x thermocouple Type K	–	out of ASI	–	1 Single Slave	BWU2243
	IP20, 25 mm x 105 mm, 6 x COMBICON	–	4 x 0 ... 20 mA	–	out of ASI or out of AUX, auto switching	1 Single Slave	BWU1366
	IP20, 25 mm x 105 mm, 6 x COMBICON	–	4 x 0 ... 10 V	–	out of ASI or out of AUX, auto switching	1 Single Slave	BWU1367

AS-Interface Modules/Slaves

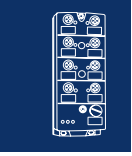
IO-Link

With the ASi Slaves/IO-Link Masters from Bihl+Wiedemann intelligent IO-Link sensors and actuators can now be easily incorporated into ASi – exactly there, where they are needed. The IO-Link sensors can be easily parametrized using the configuration tool from Bihl+Wiedemann. In many application scenarios, IO-Link solutions from Bihl+Wiedemann are much more cost-efficient than similar solutions from other providers. An application with Bihl+Wiedemann is already cheaper than comparable PROFINET variants from three 4-port IO-Link masters. Another factor is the finer granularity. Our 1-port IO-Link master allows you to integrate an IO-Link device exactly where you need it. Thanks to cable-piercing technology, it is extremely easy to install our IO-Link master. You can substantially reduce the time required for assembly.



IO-Link mit Bihl+Wiedemann



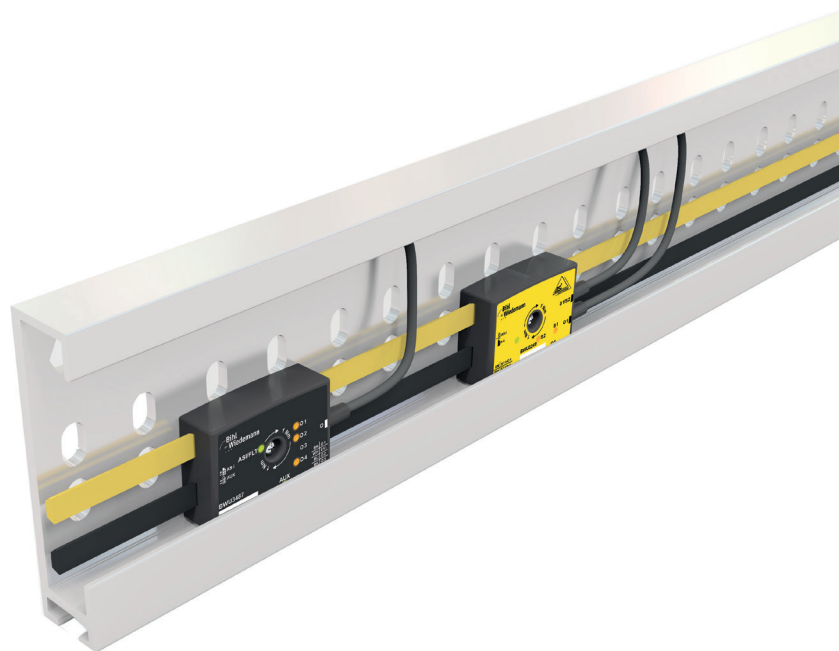


AS-Interface Modules/Slaves

ASi Slaves / IO-Link Master, IP67/IP20										
Figure	Type	Number of IO-Link Ports	IO-Link Port Class A	IO-Link Port Class B	Sensor supply (IO-Link supply and input/output supply)	Actuator supply (for IO-Link ports class B)	Connection	ASi connection	ASi address	Article No.
	IP67, 4 x M12, ASI-5	4	2	2	out of AUX	out of AUX	4 x M12 sockets, 5 poles	ASi profile cable	1 ASI-5 Slave	BWU4067
	Active distributor ASI-5	2	1	1	out of AUX	out of AUX	2 x M12 cable sockets, straight, 5 poles	ASi profile cable	1 ASI-5 Slave	BWU4077
	Active distributor ASI-5	1	–	1	out of AUX	out of AUX	1 x M12 cable socket, straight, 5 poles	ASi profile cable	1 ASI-5 Slave	BWU4088
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, ASI-5	4	configurable terminals	configurable terminals	out of AUX	–	clamps	clamps	1 ASI-5 Slave	BWU3843
	Starter Kit	Gateway	2	2	out of AUX	out of AUX	4 x M12 sockets, 5 poles	ASi profile cable	1 ASI-5 Slave	BWU4211
	Starter Kit	Gateway	2	2	out of AUX	out of AUX	4 x M12 sockets, 5 poles	ASi profile cable	1 ASI-5 Slave	BWU4229

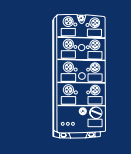
Active Distributors ASi

Active distributors ASi from Bihl+Wiedemann allow you to make any sensor or actuator AS-Interface capable. Even modules without their own ASi terminal can be easily integrated into an existing ASi network using these active distributors ASi. Other features include individually configurable connection options using M8 or M12 connectors, flying leads or push-in terminals to conform to the customer's application, as well as a compact form factor, making them ideal for use in cable ducts.








Active distributors in cable duct







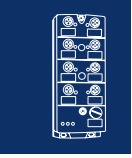
AS-Interface Modules/Slaves

Digital Modules ASi: Active Distributors ASi, IP67/IP20											
Figure	Type	Housing	Inputs digital	Outputs digital	Inputs Safety, SIL 3, Cat.	Input voltage (sensor supply)	Output voltage (actuator supply)	Connection	Profile cable connection	ASi address	Article No.
	Active distributor ASi	depth: 35 mm	4	4 x electronic	–	out of ASi	out of AUX	8 x M12 cable sockets, straight, 5 poles + 1 x addressing cable socket	1 x ASi, 1 x AUX	1 AB Slave	BWU3675
	Active distributor ASi	depth: 35 mm	4	4 x electronic	–	out of AUX	out of AUX	3 x M12 cable sockets, straight, 5 poles + 2 x M8 snap-in cable sockets, straight, 4 poles + 1 x ASi addressing cable socket	1 x ASi	1 AB Slave	BWU3676
	Active distributor ASi	depth: 35 mm	4	2 x electronic	–	out of ASi	out of AUX	6 x M8 cable sockets, straight, 4 poles	1 x ASi	1 AB Slave	BWU3577
	Active distributor ASi	depth: 35 mm	4	4 x electronic	–	out of ASi	out of AUX	6 x M8 cable sockets, straight, 4 poles	1 x ASi, 1 x AUX	1 AB Slave	BWU3555
	Active distributor ASi	depth: 35 mm	4	2 x electronic	–	out of ASi	out of ASi	2 x M12 cable sockets, straight, 5 poles + 2 x cable sockets M8, straight, 3 poles	1 x ASi	1 AB Slave	BWU3695
	Active distributor ASi	depth: 35 mm	4	–	–	out of ASi	–	4 x M12 cable sockets, straight, 5 poles	1 x ASi	1 AB Slave	BWU3633
	Active distributor ASi	depth: 35 mm	4	–	–	out of ASi	–	4 x M12 cable sockets, straight, 5 poles	1 x ASi	1 AB Slave	BWU3632
	Active distributor ASi	depth: 35 mm	4	–	–	out of ASi	–	4 x M12 cable sockets, straight, 5 poles + 1 x ASi addressing cable socket	1 x ASi	1 AB Slave	BWU3730
	Active distributor ASi	depth: 35 mm	4	–	–	out of AUX	–	3 x round cable/connecting wires + 1 x M8 cable socket, straight, 4 poles	–	1 AB Slave	BWU3608
	Active distributor ASi	depth: 35 mm	4	4 x electronic	–	out of ASi	out of AUX	2 x round cables/connecting wires	1 x ASi, 1 x AUX	1 AB Slave	BWU3317
	Active distributor ASi	depth: 35 mm	4	4 x electronic	–	out of ASi	out of AUX	2 x M12 cable sockets, straight, 5 poles	1 x ASi, 1 x AUX	1 AB Slave	BW3507
	Active distributor ASi	depth: 35 mm	4	4 x electronic	–	out of ASi	out of ASi	2 x round cables/connecting wires	1 x ASi	1 AB Slave	BW3326
	Active distributor ASi	depth: 35 mm	3	4 x electronic	–	out of AUX	out of AUX	2 x round cables/connecting wires	1 x ASi, 1 x AUX	1 AB Slave	BWU3785
	Active distributor ASi	depth: 35 mm	4	–	–	out of ASi	–	2 x round cables/connecting wires	1 x ASi	1 AB Slave	BWU3374
	Active distributor ASi	depth: 35 mm	1	4 x electronic	–	out of ASi	out of ASi	1 x M12 cable socket, straight, 5 poles + 1 x M12 cable socket, angled, 5 poles	1 x ASi	1 AB Slave	BWU3534

Digital Modules ASI: Active Distributors ASI, IP67/IP20											
Figure	Type	Housing	Inputs digital	Outputs digital	Inputs Safety, SIL 3, Cat.	Input voltage (sensor supply)	Output voltage (actuator supply)	Connection	Profile cable connection	ASI address	Article No.
	Active distributor ASI	depth: 35 mm	–	4 x electronic	–	–	out of ASI	1 x round cable/ connecting wires without ferrules + 1 x ASI addressing cable socket	1 x ASI	1 AB Slave	BWU3729
	Active distributor ASI	depth: 35 mm	4	4 x electronic	–	out of ASI	out of ASI	1 x round cable/ connecting wires	1 x ASI	1 AB Slave	BW3500
	Active distributor ASI	depth: 35 mm	4	4 x electronic	–	out of ASI	out of ASI	1 x round cable/ connecting wires	1 x ASI, 1 x AUX	1 AB Slave	BWU3606
	Active distributor ASI	depth: 35 mm	4	4 x electronic	–	out of AUX	out of AUX	1 x M12 cable socket, straight, 8 poles	1 x ASI, 1 x AUX	1 AB Slave	BW3377
	Active distributor ASI	depth: 35 mm	2	2 x electronic	–	out of AUX	out of AUX	1 x round cable/ connecting wires	1 x ASI, 1 x AUX	1 AB Slave	BWU3607
	Active distributor ASI	depth: 35 mm	1	3 x electronic	–	out of ASI	out of ASI	1 x M12 cable socket, angled, 8 poles	1 x ASI, 1 x AUX	1 AB Slave	BWU3639
	Active distributor ASI	depth: 19 mm	4	–	–	out of AUX	–	2 x M12 cable socket, straight, 5 poles	1 x ASI, 1 x AUX	1 AB Slave	BWU3498
	Active distributor ASI	depth: 19 mm	2	2 x electronic	–	out of AUX	out of AUX	2 x M12 cable socket, straight, 5 poles	1 x ASI, 1 x AUX	1 AB Slave	BWU3497
	Active distributor ASI	depth: 19 mm	2	2 x electronic	–	out of AUX	out of AUX	2 x round cables/ connecting wires	1 x ASI, 1 x AUX	1 AB Slave	BWU3602
	Active distributor ASI	depth: 19 mm	2	1 x electronic	–	out of AUX	out of AUX	2 x M12 cable sockets, angled, 5 poles	1 x ASI, 1 x AUX	1 AB Slave	BW3250
	Active distributor ASI	depth: 19 mm	2	2 x electronic	–	out of ASI	out of ASI	1 x M12 cable socket, straight, 8 poles	1 x ASI	1 AB Slave	BWU3400
	Active distributor ASI	depth: 19 mm	2	–	–	out of ASI	–	1 x M12 cable socket, straight, 5 poles	1 x ASI	1 AB Slave	BWU3642
	Active distributor ASI	depth: 19 mm	2	–	–	out of AUX	–	1 x M12 cable socket, angled, 5 poles	1 x ASI, 1 x AUX	1 AB Slave	BWU3564
	Active distributor ASI	depth: 19 mm	–	4 x electronic	–	–	out of AUX	1 x round cable/ connecting wires	1 x ASI, 1 x AUX	1 AB Slave	BW3300
	Active distributor ASI	depth: 19 mm	–	4 x electronic	–	–	out of AUX	1 x round cable/ connecting wires	1 x ASI, 1 x AUX	1 AB Slave	BWU3487
	Active distributor ASI	depth: 19 mm	–	4 x electronic	–	–	out of AUX	1 x M12 cable socket, straight, 5 poles	1 x ASI, 1 x AUX	1 AB Slave	BWU4087
	Active distributor ASI	depth: 19 mm	4	–	–	out of AUX	–	8 x push in terminals	1 x ASI, 1 x AUX	1 AB Slave	BW3349
	Active distributor ASI	depth: 19 mm	3	1 x electronic	–	out of AUX	out of AUX	8 x push in terminals	1 x ASI, 1 x AUX	1 AB Slave	BWU3414
	Active distributor ASI	depth: 19 mm	–	4 x electronic	–	–	out of AUX	8 x push in terminals	1 x ASI, 1 x AUX	1 AB Slave	BWU3342



ASi Slaves/IO-Link Master: Active Distributors, IP67										
Figure	Type	Number of IO-Link Ports	IO-Link Port Class A	IO-Link Port Class B	Sensor supply (IO-Link supply and input/output supply)	Actuator supply (for IO-Link ports class B)	Connection	ASi connection	ASi address	Article No.
	Active distributor ASi-5	2	1	1	out of AUX	out of AUX	2 x M12 cable sockets, straight, 5 poles	ASi profile cable	1 ASi-5 Slave	BWU4077
	Active distributor ASi-5	1	–	1	out of AUX	out of AUX	1 x M12 cable sockets, straight, 5 poles	ASi profile cable	1 ASi-5 Slave	BWU4088



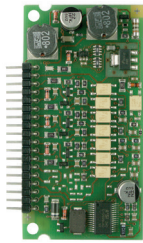
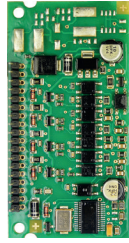
AS-Interface Modules/Slaves

Circuit Board Modules

Circuit board modules enable sensor and actuator OEMs the possibility of making their modules ASi capable with the help of a fully engineered and certified ASi slave board which can be simply and easily integrated into the respective device. Here Bihl+Wiedemann offers a wide range of PCB modules which are available with various connection options in a potted or un-potted version. On request Bihl+Wiedemann can also offer cost-effective modified versions or new developments based on a kit system.



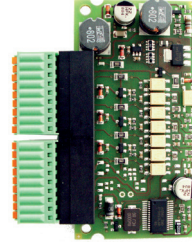
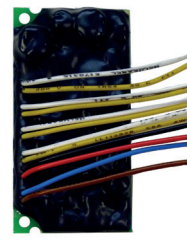
screw terminals

wiring pins, angled
(pins 180° to PCB)

solder lugs



sockets



plug-in spring-Typee/
screw terminals

connecting wires




Circuit Board Modules: Product Overview

- Special versions on request

I/O Modules: Circuit Board Modules ASi, PCB Solutions											
Figure	Circuit board dimensions	Inputs digital	Outputs digital, EDM	Connection	Coating	LED status display	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi connection	ASi address	Article No.
	Circuit board 29,7 mm x 36,5 mm	1	1 x electronic	wiring pin, straight	no	no	out of ASi	out of ASi	wiring pin, straight	1 AB Slave	BWR1566
	Circuit board 29,7 mm x 36,5 mm	2	2 x electronic	solder lugs	no	no	out of ASi	out of ASi	solder lugs	1 AB Slave	BWR1421
	Circuit board 29,7 mm x 36,5 mm	2	2 x electronic	wiring pins, straight	no	no	out of ASi	out of ASi	wiring pin, straight	1 AB Slave	BWR3189
	Circuit board 29,7 mm x 36,5 mm	2 (inputs mirrored)	2 x electronic	screw terminals only to ASi pins	no	no	out of ASi	out of ASi	screw terminals	1 AB Slave	BWR1957
	Circuit board 29,7 mm x 36,5 mm	2	2 x electronic	screw terminals	no	no	out of ASi	out of ASi	screw terminals	1 AB Slave Profile: S-7.A.7.E	BWR2782
	Circuit board 29,7 mm x 36,5 mm	2	2 x electronic	screw terminals	no	no	out of ASi	out of ASi	screw terminals	1 AB Slave	BWR1443
	Circuit board 29,7 mm x 36,5 mm	2	2 x electronic	screw terminals	yes	no	out of ASi	out of ASi	screw terminals	1 AB Slave	BWR2393
	Circuit board 73 mm x 37,5 mm	4	3 x electronic	solder lugs	no	no	out of ASi	out of ASi	solder lugs	1 AB Slave	BWR1408
	Circuit board 73 mm x 37,5 mm	4	3 x electronic	solder lugs	no	yes	out of ASi	out of AUX	solder lugs	1 AB Slave	BWR1682
	Circuit board 73 mm x 37,5 mm	4	3 x electronic	plug-in spring-type terminals	no	no	out of ASi	out of ASi	plug-in spring-type terminals	1 AB Slave	BWR2229
	Circuit board 73 mm x 37,5 mm	4	3 x electronic	screw terminals	no	no	out of ASi	out of ASi	screw terminals	1 AB Slave	BWR1387
	Circuit board 73 mm x 37,5 mm	4	3 x electronic	wiring pin	no	no	out of ASi	out of ASi	wiring pin, angled	1 AB Slave	BWR1386
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	solder lugs	no	no	out of ASi	out of ASi	solder lugs	1 Single Slave	BWR2052
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	solder lugs	no	yes	out of ASi	out of ASi	solder lugs	1 Single Slave	BWR1468
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	solder lugs	no	yes	out of ASi	out of AUX	solder lugs	1 AB Slave	BWR2442
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	sockets	no	no	out of ASi	out of ASi	sockets	1 AB Slave	BWR3116
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	connecting wires, 200 mm	yes, thick coated	yes	out of ASi	out of ASi	connecting wires, 200 mm	1 Single Slave	BWR2597

AS-Interface Modules/Slaves





I/O Modules: Circuit Board Modules ASI, PCB Solutions												
Figure	Circuit board dimensions	Inputs digital	Outputs digital, EDM	Connection	Coating	LED status display	Input voltage (sensor supply)	Output voltage (actuator supply)	Asi connection	Asi address	Article No.	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	connecting wires, 200 mm	yes, thick coated	yes	out of ASI	out of ASI	connecting wires, 200 mm	1 AB Slave	BWR2571	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	wiring pin, angled	no	no	out of ASI	out of ASI	wiring pin, angled	1 Single Slave	BWR1218	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	wiring pin, angled	no	yes	out of ASI	out of AUX	wiring pin, angled	1 Single Slave	BWR2591	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	wiring pins, angled	yes	yes	out of AUX	out of AUX	wiring pin, angled	1 AB Slave	BWR3215	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	wiring pin, straight	yes	yes	out of AUX	out of AUX	wiring pin, straight	1 AB Slave	BWR3214	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	wiring pin, straight	yes, thick coated	yes	out of AUX	out of AUX	wiring pin, straight	1 AB Slave	BWR3213	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	plug-in spring-type terminals	no	no	out of ASI	out of ASI	plug-in spring-type terminals	1 AB Slave	BWR1889	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	screw terminals	no	no	out of ASI	out of ASI	screw terminals	1 Single Slave	BWR1219	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	screw terminals	no	no	out of AUX	out of AUX	screw terminals	1 Single Slave	BWR1389	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	screw terminals	no	yes	out of ASI	out of ASI	screw terminals	1 Single Slave	BWR1470	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	screw terminals	yes, thick coated	yes	out of ASI	out of ASI	screw terminals	1 AB Slave	BWR3190	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	screw terminals	no	yes	out of ASI	out of AUX	screw terminals	1 Single Slave	BWR1628	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	screw terminals	yes	yes	out of ASI	out of ASI	screw terminals	1 Single Slave	BWR1789	
	Circuit board 73 mm x 37,5 mm	4	4 x electronic	screw terminals	yes, thick coated	yes	out of AUX	out of AUX	screw terminals	1 AB Slave	BWR2803	
	Circuit board 73 mm x 37,5 mm	4	–	–	connecting wires, 500 mm	yes, thick coated	yes	out of ASI	–	connecting wires, 200 mm	1 AB Slave	BWR2842
	Circuit board 73 mm x 37,5 mm	8	–	–	connecting wires, 200 mm	yes, thick coated	no	out of ASI	–	connecting wires, 200 mm	2 AB Slaves	BWR2774
	Circuit board 73 mm x 37,5 mm	8	–	–	wiring pin, angled	no	no	out of ASI	–	wiring pin, angled	2 AB Slaves	BWR1351
	Circuit board 73 mm x 37,5 mm	8	–	–	screw terminals	no	no	out of ASI	–	screw terminals	2 AB Slaves	BWR1352
	Circuit board 73 mm x 37,5 mm	–	–	6 x electronic	screw terminals	no	no	–	out of ASI	screw terminals	2 AB Slaves	BWR1627


AS-Interface Modules/Slaves








AS-Interface Modules/Slaves

I/O Modules: Circuit Board Modules ASi, PCB Solutions											
Figure	Circuit board dimensions	Inputs digital	Outputs digital, EDM	Connection	Coating	LED status display	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi connection	ASi address	Article No.
	circuit board 43 mm x 30 mm	2	2 x electronic	connecting wires, 200 mm	yes	yes	out of ASi	out of ASi	connecting wires, 200 mm	1 AB Slave	BWR3068
	circuit board 43 mm x 30 mm	2	2 x electronic	connecting wires, 100 mm	yes	yes	out of ASi	out of ASi	connecting wires, 200 mm	1 AB Slave	BWR2574
	circuit board 43 mm x 30 mm	2	2 x electronic	connecting wires, 100 mm + contact pins	yes	yes	out of ASi	out of ASi	connecting wires, 200 mm	1 AB Slave	BWR2522
	circuit board 104 mm x 41 mm	8	8 x electronic	wiring pin, angled	no	yes	out of ASi	out of ASi	wiring pin, angled	2 AB Slaves	BW1899
	circuit board 93 mm x 51 mm	16	16 x electronic	wiring pin, angled	no	yes	out of ASi	out of ASi	wiring pin, angled	4 AB Slaves	BW1901
	circuit board 73 mm x 39,5 mm	4	4 x electronic	plug-in spring-type terminals	no	yes	out of ASi	out of ASi	plug-in spring-type terminals	1 AB Slave	BWR3195

E/A Analog Modules: Circuit Board Modules ASi, PCB Solutions										
Figure	Type	Inputs analog	PCB connection	Coating	LED status display	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi connection	ASi address	Article No.
	Circuit board 73 mm x 37,5 mm	2 x 4 ... 20 mA	screw terminals	no	yes	out of ASi	–	screw terminals	1 Single Slave	BWR3192
	Circuit board 73 mm x 37,5 mm	2 x 0 ... 10 V	wiring pins, angled	no	yes	out of ASi	–	wiring pin, angled	1 Single Slave	BWR2035

Safety I/O Module: Circuit Board Modules ASi, PCB Solutions										
Figure	Type	Inputs Safety, SIL 3, Cat. 4	Inputs digital	Outputs digital	Outputs Safety, SIL 3, cat. 4	Safety signal inputs	Connection	Coating	ASi address	Article No.
	Circuit board 43 mm x 30 mm	1 x 2-channels	–	2 x electronic	–	floating contacts	connecting wires, 200 mm	yes, thick coated	1 Single Slave	BWR3067
	Circuit board 43 mm x 30 mm	1 x 2-channels	–	2 x electronic	–	floating contacts	connecting wires, 100 mm	yes, thick coated	1 Single Slave	BWR2426
	Circuit board 43 mm x 30 mm	1 x 2-channels	–	2 x electronic	–	floating contacts	connecting wires, 100 mm + Contact pins	yes, thick coated	1 Single Slave	BWR2521
	Circuit board 73 mm x 37,5 mm	1 x 2-channels	–	2 x electronic	–	floating contacts	plug-in screw terminals	no	1 Single Slave	BWR1896
	Circuit board 73 mm x 37,5 mm	1 x 2-channels	–	2 x electronic	–	floating contacts	screw terminals	no	1 Single Slave	BWR1751
	Circuit board 85 mm x 80 mm	–	2	2 x electronic	1 release circuit; 1 x fast electronic safe output	–	screw terminals	yes, thick coated	1 Single Slave + 2 AB Slaves	BW2914

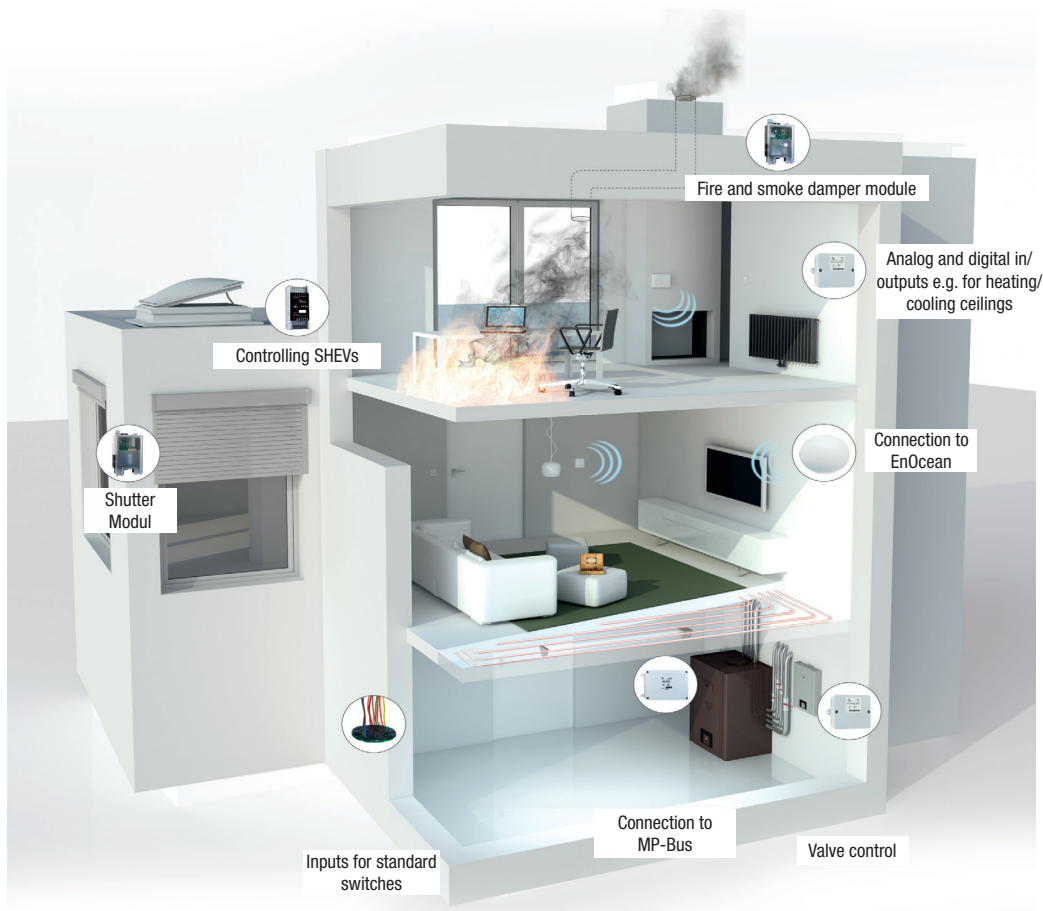


AS-Interface Modules/Slaves

Building Automation

The benefits of AS-Interface – such as the simple, cost-saving installation and high degree of flexibility – have now established themselves in building automation. Numerous companies are using the AS-Interface system to control fire and smoke dampers, shutter drives and heating and cooling systems with analog output modules, for some examples. Damper drives with flow regulators can be connected to the controller through the MP-Bus gateway. It is also possible to process EnOcean signals from wireless pushbuttons and sensors over ASI. During your planning and application implementation phases we can be at your side and are willing to assist with application-specific solutions.

AS-Interface Modules/Slaves










Building Automation: Product Overview

- BACnet
- PROFINET
- PROFIBUS
- Modbus RTU
- EtherNet/IP + Modbus TCP

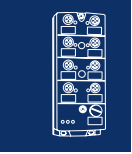


AS-Interface Modules/Slaves

ASi Gateways in Stainless Steel							
Figure	Type	Model	Fieldbus interface	Number of ASi networks, number of ASi Master	Recognition of duplicate ASi addresses	ASi fault detector	Article No.
	BACnet/IP ASi	Gateway	BACnet/IP	2 ASi networks, 2 ASi Masters	yes	yes	BWU3356
	RS 485 Modbus ASi	Gateway	Modbus/RTU; RS 485	2 ASi networks, 2 ASi Masters	yes	yes	BWU1642
	RS 485 Modbus ASi	Gateway	Modbus/RTU; RS 485	1 ASi network, 1 ASi Master	yes	yes	BWU1641
	PROFINET ASi	Gateway	PROFINET	2 ASi networks, 2 ASi Masters	yes	yes	BWU2239
	EtherNet/IP + Modbus TCP ASi	Gateway	EtherNet/IP + ModbusTCP, OPC UA	2 ASi networks, 2 ASi Masters	yes	yes	BWU3735
	EtherNet/IP + Modbus TCP ASi	Gateway	EtherNet/IP + ModbusTCP, OPC UA	1 ASi network, 1 ASi Master	yes	yes	BWU3734
	PROFIBUS ASi	Gateway	PROFIBUS	2 ASi networks, 2 ASi Masters	yes	yes	BWU2545
	PROFIBUS ASi	Gateway	PROFIBUS	1 ASi network, 1 ASi Master	yes	yes	BWU2544

Power Supplies					
Figure	Power supply	Operating voltage	Output current	Protection rating	Article No.
	ASi power supply	115 V AC / 230 V AC, power supply with range switch	8 A	IP20	BW1997
	ASi power supply	90 V AC ... 265 V AC, wide range supply	4 A	IP20	BW1649
	ASi power supply	115 V AC ... 250 V AC	1,8 A	IP20	BW2255

- provided as a kit in rugged plastic housing, pre-wired for easy and fast installation
- pre-installed user software, no further configuration needed
- centralized control of damper drives and detection of damper positions
- plain text display and spontaneous diagnostics directly via device display and function LEDs
- automated testing of damper function via different test modes





AS-Interface Modules/Slaves








Fire damper "Stand alone" control unit							
Figure	Type	Model	Protection rating	Number of fire dampers	Number of building ventilation system releases	Controlling ventilation, fire, smoke dampers	Article No.
	Fire damper "Stand alone" control unit	BACnet, 2 ASi networks, max. 120 fire dampers	IP65	120	2, extensible	Requirements for Germany and EC	BW3545
	Fire damper "Stand alone" control unit	PROFINET, 1 ASi network, max. 60 fire dampers	IP65	60	1, extensible	Requirements for Germany and EC	BW3547
	Control program for fire damper "Stand alone" control unit	Software	–	120	2, extensible	–	BW3550

- Controlling ventilation, fire, smoke dampers
- Requirements for Germany and EC
- Requirements for Switzerland (IG-BSK)
- 24V/230V relay
- EN 6206 SIL2

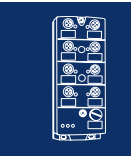
Fire/smoke dampers									
Figure	Type	Model	Protection rating	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi address	Article No.
	Ventilation damper module	Ventilation, fire, smoke dampers	IP54	4	2 x electronic	out of ASi	out of ASi	1 Single Slave	BW2482
	Ventilation damper module	Ventilation, fire, smoke dampers	IP54	4	2 x electronic	out of ASi	out of ASi	1 Single Slave	BW2028
	Ventilation damper module	Ventilation, fire, smoke dampers	IP54	3	2 x electronic	out of AUX	out of AUX	1 AB Slave	BW2029
	Ventilation damper module	Ventilation, fire, smoke dampers (Switzerland)	IP54	3	2 x electronic	out of ASi	out of ASi	1 AB Slave	BW2080
	Ventilation damper module, Safety	Ventilation, fire, smoke dampers	IP54	4	2 x electronic	out of ASi	out of ASi	1 Single Slave	BW3005
	ventilation damper module	ventilation, fire, smoke dampers (230 V relay)	IP54	4	4 x relay	out of ASi	–	1 AB Slave	BW3009
	ventilation damper module	ventilation, fire, smoke dampers (230 V relay)	IP54	4 + 2 x fusible link	2 x relay	out of ASi	–	1 AB Slave	BW3010
	Ventilation damper module	ventilation, fire, smoke dampers (230 V relay)	IP54	4	2 x relay	out of ASi	–	1 AB Slave	BW3011

Fire/smoke dampers									
Figure	Type	Model	Protection rating	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi address	Article No.
	ventilation damper module	ventilation, fire, smoke dampers	IP54	4	–	out of ASi	–	1 AB Slave	BW2480
	I/O for manual call points	I/O modules	IP54	4	4 x electronic	out of AUX	out of AUX	1 AB Slave	BW3412

- Shutter modules
- Heating/air conditioning
- EnOcean
- MP Bus

Heating, Ventilating and Air Conditioning & Building Automation in General											
Figure	Type	Model	Protection rating	Inputs digital	Outputs digital	Inputs analog	Outputs analog	Input voltage (sensor supply)	Output voltage (actuator supply)	Controlling heating/air conditioning	Article No.
	Shutter Module	Controlling 230 V shutters	IP54	8	4 x Relay	–	–	out of ASi	–	–	BW2114
	shutter module	controlling 230 V shutters	IP40	8	4 x Relay	–	–	out of ASi	–	–	BW3944
	I/O for VAV boxes	I/O modules	IP54	–	–	1 x 0 ... 10 V	1x 0 ... 10 V	selectable, out of ASi or out of AUX, Default out of ASi	selectable, out of ASi or out of AUX, default out of ASi	–	BW2701
	Heating/air conditioning (24 V AC/ DC)	Heating/air conditioning, 0 ... 10 V, (Climate control ceilings)	IP54	–	2 x electronic	–	2 x 0 ... 10 V	out of ASi	selectable, out of ASi or out of AUX (AC/DC), default out of ASi	Controlling heating and climate control ceilings	BW2536
	Heating/air conditioning (24 V AC/ DC)	Heating/air conditioning, 0 ... 10 V, (Climate control ceilings)	IP54	2	–	2 x 0 ... 10 V	–	selectable, out of ASi or out of AUX (AC/DC), default out of ASi	–	Recording of analog values	BW2537
	Heating/air conditioning (Valves)	Heating/air conditioning (Valves)	IP54	–	4 x electronic	–	–	–	out of AUX	Controlling valves and heating valves	BW2138
	PCB building automation	I/O Module	–	4	3 x electronic	–	–	out of AUX	out of AUX	–	BW2128
	Connection to EnOcean	Connection to EnOcean	IP40	31 x 4	EnOcean	8 x 6	EnOcean	out of ASi	–	–	BW2375
	Connection to EnOcean	Connection to EnOcean	IP40	31 x 4	EnOcean	8 x 6	EnOcean	out of ASi	–	–	BW2473
	EnOcean surface-mounted box	Connection to EnOcean	IP40	31 x 4	EnOcean	8 x 6	EnOcean	out of ASi	–	–	BW2580





AS-Interface Modules/Slaves

Heating, Ventilating and Air Conditioning & Building Automation in General											
Figure	Type	Model	Protection rating	Inputs digital	Outputs digital	Inputs analog	Outputs analog	Input voltage (sensor supply)	Output voltage (actuator supply)	Controlling heating/air conditioning	Article No.
	connection to MP-Bus	Connection to MPbus	IP54	–	–	–	–	out of ASi	out of AUX	–	BW2406
	IP65, 3 x PG	I/O modules	IP65	–	–	2 x 4 ... 20 mA	–	selectable, out of ASi or out of AUX, Default out of ASi	–	–	BWU1232
	IP65, 3 x PG	I/O modules	IP65	–	–	2 x 0 ... 10 V	–	selectable, out of ASi or out of AUX, Default out of ASi	–	–	BWU1233
	IP65, 3 x PG	I/O modules	IP65	–	–	–	2 x 0 ... 20 mA	–	selectable, out of ASi or out of AUX, default out of ASi	–	BWU1234
	IP65, 3 x PG	I/O modules	IP65	–	–	–	2 x 0 ... 10 V	–	selectable, out of ASi or out of AUX, default out of ASi	–	BWU1235
	IP65, 8 x PG	I/O modules	IP65	–	–	4 x Pt100	–	out of ASi	–	–	BWU1254
	IP65, 8 x PG	I/O modules	IP65	–	–	4 x Pt1000	–	out of ASi	–	–	BWU1509
	IP20, 25 mm x 105 mm, 6 x COMBICON	I/O modules	IP20	–	–	4 x electronic	–	out of ASi	–	–	BWU1933
	IP20, 25 mm x 105 mm, 6 x COMBICON	I/O modules	IP20	–	–	4 x electronic	–	out of ASi	–	–	BWU2243
	PCB, flush-mounted module, coated	E/A Module	IP00, thick coated	4	4 x electronic	–	–	out of ASi	out of ASi	–	BW3779
	PCB, flush-mounted module, coated	I/O Module	–	4	–	–	–	out of ASi	–	–	BW2388

Active Distributors ASi, IP67/IP20										
Figure	Type	Housing	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	Connection	Profile cable connection	ASi address	Article No.
	Active distributor ASi	depth: 35 mm	4	4 x electronic	out of ASi	out of AUX	2 x round cables/ connecting wires	1 x ASi, 1 x AUX	1 AB Slave	BWU3317
	Active distributor ASi	depth: 35 mm	4	4 x electronic	out of ASi	out of ASi	2 x round cables/ connecting wires	1 x ASi	1 AB Slave	BW3326
	Active distributor ASi	depth: 19 mm	–	4 x electronic	–	out of AUX	1 x round cable/ connecting wires	1 x ASi, 1 x AUX	1 AB Slave	BW3300
	Active distributor ASi	depth: 19 mm	4	–	out of AUX	–	8 x push in terminals	1 x ASi, 1 x AUX	1 AB Slave	BW3349
	Active distributor ASi	depth: 19 mm	3	1 x electronic	out of AUX	out of AUX	8 x push in terminals	1 x ASi, 1 x AUX	1 AB Slave	BWU3414
	Active distributor ASi	depth: 19 mm	–	4 x electronic	–	out of AUX	8 x push in terminals	1 x ASi, 1 x AUX	1 AB Slave	BWU3342

- Robust, Stainless Steel in IP20
- Cost efficient solution in IP20, 22,5 mm

I/O Modules for installation in control cabinets/ decentralized control cabinets, IP20									
Figure	Type	Model	Protection rating	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi address	Article No.
	Stainless Steel in IP20, depth: 45 mm	I/O Module	IP20	4	4 x relay	out of ASi	–	1 Single Slave	BWU1926
	Stainless Steel in IP20, depth: 45 mm	I/O Module	IP20	4	3 x relay	out of ASi	–	1 AB Slave	BW1808
	Stainless Steel in IP20, depth: 45 mm	I/O Module	IP20	4	4 x electronic	out of AUX	out of AUX	1 AB Slave	BW1907
	Stainless Steel in IP20, depth: 45 mm	I/O Module	IP20	4	4 x electronic	out of AUX	out of AUX	1 Single Slave	BWU2565
	Stainless Steel in IP20, depth: 45 mm	I/O Module	IP20	8	–	out of AUX	–	2 AB Slaves	BWU2077
	Stainless Steel in IP20, depth: 45 mm	I/O Module	IP20	–	8 x electronic	–	out of AUX	2 AB Slaves	BWU2078
	Stainless Steel in IP20, depth: 90 mm	I/O Module	IP20	4	4 x relay	out of ASi	–	1 Single Slave	BW2555
	Stainless Steel in IP20, depth: 90 mm	I/O Module	IP20	8	–	out of AUX	–	2 AB Slaves	BWU2556
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, ASi-5	I/O Module	IP20	16	–	out of AUX	–	1 ASi-5 Slave	BWU3874
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, ASi-5	I/O Module	IP20	8	–	out of AUX	out of AUX	1 ASi-5 Slave	BWU3872
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, ASi-5	I/O Module	IP20	8	8 x electronic	out of AUX	–	1 ASi-5 Slave	BWU3873
	IP20, 22,5 mm x 92 mm, 4 x COMBICON	I/O Module	IP20	4	4x electronic	out of AUX	out of AUX	1AB Slave	BWU3842
	IP20, 22,5 mm x 92 mm, 4 x COMBICON	I/O Module	IP20	4	4 x electronic	out of AUX	out of AUX	1 AB Slave	BWU3559
	IP20, 22,5mm x 114mm, 4 x COMBICON	I/O Module	IP20	4	–	out of AUX	–	1 AB Slave	BWU2723
	IP20, 22,5mm x 114mm, 4 x COMBICON	I/O Module	IP20	4	4 x electronic	out of AUX	out of AUX	1 AB Slave	BWU1938

AS-Interface Modules/Slaves





AS-Interface Modules/Slaves

I/O Modules for installation in control cabinets/ decentralized control cabinets, IP20									
Figure	Type	Model	Protection rating	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi address	Article No.
	IP20, 22,5mm x 114mm, 4 x COMBICON	I/O Module	IP20	4	4 x electronic	out of AUX	out of AUX	1 Single Slave	BWU2759
	IP20, 22,5mm x 114mm, 4 x COMBICON	I/O Module	IP20	8	–	out of AUX	–	2 AB Slaves	BWU2721
	IP20, 22,5 mm x 114 mm, 6 x COMBICON	I/O Module	IP20	4	4 x relay	out of ASi	–	1 AB Slave	BWU3549
	IP20, 22,5mm x 114mm, 6 x COMBICON	I/O Module	IP20	8	8 x electronic	out of AUX	out of AUX	2 AB Slaves	BWU2490
	IP20, 22,5mm x 114mm, 6 x COMBICON	I/O Module	IP20	8	8 x electronic	out of AUX	out of AUX	2 Single Slaves	BWU2800

I/O Modules for installation on ceiling, walls and floor, IP54									
Figure	Type	Model	Protection rating	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi address	Article No.
	I/O in surface-mounted box	I/O modules	IP54	4	3 x electronic	out of AUX	out of AUX	1 AB Slave	BW2139
	I/O in surface-mounted box	I/O modules	IP54	4	4 x electronic	out of AUX	out of AUX	1 AB Slave	BW2137
	I/O in surface-mounted box	I/O modules	IP54	4	4 x electronic	out of AUX	out of AUX	1 Single Slave	BW2175
	I/O in surface-mounted box	I/O modules	IP54	4	–	out of AUX	out of AUX	1 Single Slave	BW2466



Passive Distributors ASi, IP67									
Figure	Type	Housing	Protection rating	Flat design, installation in cable duct possible	Connection	Round cable	Profile cable connection	Article No.	
	Passive distributor ASi	depth: 19 mm	IP67	yes, depth: 19 mm	1 x round cable/ connecting wires	0,25 m	2 x ASi	BW3186	
	Passive distributor ASi	depth: 19 mm	IP67	yes, depth: 19 mm	1 x round cable/ connecting wires	5 m	2 x ASi	BW3524	
	Passive distributor ASi	depth: 19 mm	IP67	yes, depth: 19 mm	profile cable branch	no	2 x ASi	BWU3157	
	Passive distributor ASi	depth: 19 mm	IP67	yes, depth: 19 mm	profile cable branch	no	2 x ASi	BWU1975	




Specialties/Function Modules



Special requirements usually demand special modules. Bihl+Wiedemann has the right product for your solution, such as ASi/ ASi couplers, or counter modules. Of course we can also provide custom solutions for your application. We recommend going over your requirements directly with one of our product specialists.



Specialties/Function Modules: Product Overview

ASi Counter Modules			
Figure	Module	Description	Article No.
	ASi-5 Counter Module	4 x 2-channel input or 4 x 1-channel input	BWU3875
	ASi-5 Counter Module	Simple parametrization 4 x 2-channel input	BW4042

ASi/ASi Coupler			
Figure	Module	Description	Article No.
	ASi/ASi Coupler	Connection of 2 ASi networks via a configurable number of 4I/4O slaves	BWU3486
	ASi/ASi Coupler	Connection of 2 ASi networks via 2 internal 4I/4O slaves	BWU1187
	ASi/ASi Coupler	Connection of 2 ASi networks via 2 internal 4I/4O slaves	BWU1280

Circuit Board Modules ASi, PCB Solutions			
Figure	Module	Description	Article No.
	Circuit Board Module ASi 8I/8O	ASi PCB Module, 104 mm x 41 mm, 8 digital inputs, 8 digital outputs, input voltage/sensor supply out of ASi, output voltage/actuator supply out of ASi, periphery connection via wiring pins, angled, LED, ASi connection via wiring pins, angled, 2 AB slave	BW1899
	Circuit Board Module ASi 16I/16O	ASi PCB Module, 93 mm x 51 mm, 16 digital inputs, 16 digital outputs, input voltage/sensor supply out of ASi, output voltage/actuator supply out of ASi, periphery connection via wiring pins, angled, LED, ASi connection via wiring pins, angled, 4 AB slaves	BW1901





Switches/Buttons

Bihl+Wiedemann offers a range of control and signal devices based on innovative enclosures. The basic line is available from stock. It is also possible, on request, to equip a one or two device enclosure with any of the common control and signal devices (lights, buttons, illuminated buttons, key switches, select switches, E-Stop, etc.). The control and signal devices are designed for extruded rail mount (40mm), but can also be individually attached using a mounting clip. The ASi connection is made conveniently using an M12 connection. For safety applications we also offer a safe ASi E-STOP switch module.

AS-Interface Modules/Slaves



Switches/Buttons: Product Overview

Switches/Buttons			
Figure	Name	Description	Article No.
	Safety E-STOP Button Module ASi	Lighted (red/green), with 2 holes for screw mounting	BW2773
	Safety E-STOP Button Module ASi	Lighted (red/green), M12, with retaining clip	BW2529
	Safety E-STOP Button Module ASi	Lighted (red/green), M12, with magnet	BW2709
	Safety E-STOP Button Module ASi	Unlighted, M12, with retaining clip	BW2585
	ASi Light Button Module	2 buttons each 2-colored lighted (red/green), M12, with 2 holes for screw mounting	BW3159
	ASi Light Button Module	2 buttons each 2-colored lighted (red/green), M12, with retaining clip	BW2528
	ASi Light Button Module	2 buttons each 2-colored lighted (red/green), M12, with magnet	BW2708
	ASi Light Button Module	2 buttons each 2-colored lighted (white/blue), with 2 holes for screw mounting	BW3474
	ASi Light Button Module	ASi Light Button Module, lighted (white/blue), screw mounting	BW3478
	E-STOP Button	With plug-in-shoe connection	BW2527

Drive Solutions

The internationally standardized AS-Interface (ASi) wiring system has become well established in the material handling industry. Countless companies are benefiting from the easy installation, high flexibility and low costs of ASi.

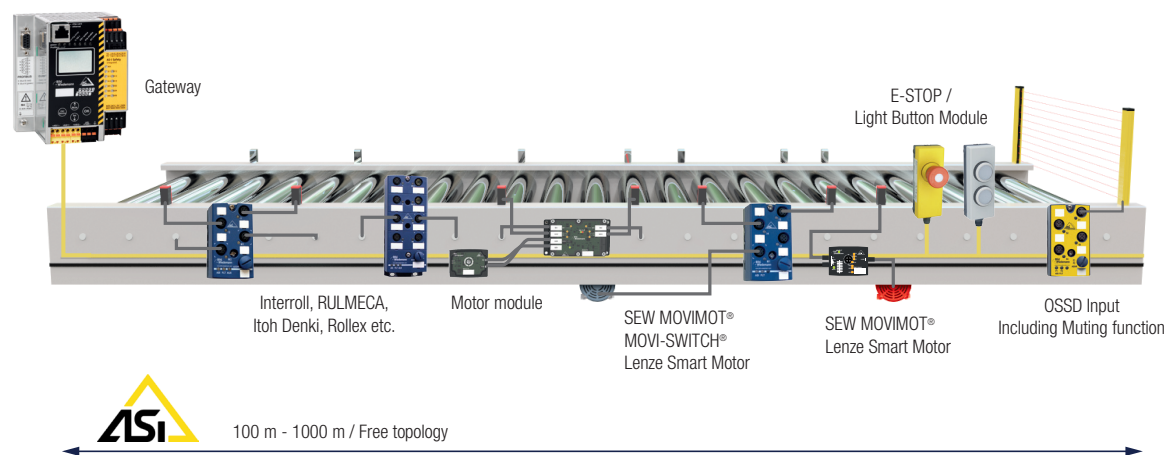
Controlling DC motors directly

The ASi motor modules by Bihl+Wiedemann can offer you the right drive solution. For example, 24 V motor rollers can be controlled directly via ASi. No additional control unit is required. With the simple integration of the Bihl+Wiedemann motor module, into the motor control system, the user will be able to save valuable time and money when commissioning and/or servicing a system.

Decentralized control of AC motors

There is also the option of controlling frequency inverters or frequency inverter motors from a decentralized location. This allows and gives the user an alternative to legacy system design by allowing implementation of new simpler system structures.

The following example shows how the ASi modules can be used in real applications.



Drive Solutions with AS-Interface






Drive Solutions: Product Overview



- SEW MOVIMOT®
- SEW MOVI-SWITCH®
- Separate mounting
- Simple maintenance




AS-Interface Modules/Slaves

SEW-EURODRIVE										
Figure	Type	Protection rating	Drive	Number of Drives	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi address	Article No.
	active distributor ASi motor module	IP67	SEW MOVIMOT	1	3	–	out of AUX	out of AUX	1 AB Slave	BWU3605
	Active distributor ASi motor module	IP67	SEW MOVIMOT	1	4	–	out of ASi and out of AUX	out of AUX	1 Single Slave	BWU3781
	Active distributor ASi motor module	IP67	SEW MOVIMOT	1	3	–	out of ASi and out of AUX	out of AUX	1 AB Slave	BWU3782
	cable duct motor module	IP54	SEW MOVIMOT	1	2	–	out of ASi	–	1 Single Slave	BWU3406
	IP67, 4 x M12	IP67	SEW MOVIMOT	1	2	–	out of ASi	–	1 Single Slave	BWU2912
	IP67, 4 x M12	IP67	SEW MOVIMOT	1	2	–	out of AUX	–	1 Single Slave	BWU2956
	IP67, 4 x M12	IP67	SEW MOVI-SWITCH 1E	1	4	–	out of ASi	out of ASi	1 Single Slave	BWU2437
	IP67, 4 x M12	IP67	SEW MOVI-SWITCH 1E	1	4	–	out of AUX	out of AUX	1 Single Slave	BWU2957
	IP67, 4 x M12	IP67	SEW MOVI-SWITCH 1E	2	4	2 x electronic	out of AUX	out of AUX	1 AB Slave	BWU2767
	IP67, 4 x M12	IP67	SEW MOVI-SWITCH 2S, moteur Lenze Smart	2	4	4 x electronic	out of AUX	out of AUX	1 AB Slave	BWU3032

- Connections for up to 2 Lenze Smart Motors
- Connections for up to 3 sensors
- Control of up to 5 speeds
- Simple connection of motors via M12 connectors
- Separate mounting
- Simple maintenance

Lenze Smart Motor										
Figure	Type	Protection rating	Drive	Number of Drives	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	ASi address	Article No.
	Active distributor ASI motor module	IP67	Lenze Smart Motor	1	4	3 x electronic	out of AUX	out of AUX	1 AB Slave	BWU3436
	Active distributor ASI motor module	IP67	Lenze Smart Motor	1	4	3 x electronic	out of AUX	out of AUX	1 AB Slave	BWU3783
	Active distributor ASI motor module	IP67	Lenze Smart Motor	1	4	3 x electronic	out of ASi	out of ASi	1 AB Slave	BWU3640
	Active distributor ASI motor module	IP67	Lenze Smart Motor	1	4	3 x electronic	out of ASi	out of ASi	1 AB Slave	BWU3784
	Active distributor ASI motor module	IP67	Lenze Smart Motor	1	4	3 x electronic	out of ASi	out of ASi	1 AB Slave	BWU3628
	IP67, 4 x M12	IP67	Lenze Smart Motor	2	4	3 x electronic	out of AUX	out of AUX	1 AB Slave	BWU3115
	IP67, 4 x M12	IP67	Lenze Smart Motor	2	4	3 x electronic	out of AUX	out of AUX	1 AB Slave	BWU3181
	IP67, 4 x M12	IP67	Lenze Smart Motor	1	4	3 x electronic	out of ASi	out of ASi	1 AB Slave	BWU3886
	IP67, 4 x M12	IP67	SEW MOVI-SWITCH 2S, Lenze Smart Motor	2	4	4 x electronic	out of AUX	out of AUX	1 AB Slave	BWU3032

- Itoh Denki (PM500ME/XE/XP, PM605ME/XE/XP)
- Interroll (EC200, EC300, EC310)
- RULMECA (RDR BL-2)
- Rollex (Type 840)

24 V Motorized Rollers										
Figure	Type	Drive	Number of Drives	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	Connection	ASi address	Article No.
	Cable duct motor module	Itoh Denki (PM500ME/XE/XP, PM605ME/XE/XP)	2	4	–	out of ASi	out of AUX	2 x M8 cable sockets, straight, 5 poles + 2 x M8 cable sockets, straight, 4 poles	1 AB Slave	BW3278
	Cable duct motor module	Itoh Denki (PM500ME/XE/XP, PM605ME/XE/XP)	2	4	–	out of ASi	out of AUX	2 x M8 cable sockets, straight, 5 poles + 2 x M8 cable sockets, straight, 4 poles	1 AB Slave	BW3567



AS-Interface Modules/Slaves

24 V Motorized Rollers										
Figure	Type	Drive	Number of Drives	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	Connection	ASi address	Article No.
	Cable duct motor module	Itoh Denki (PM500ME/XE/XP, PM605ME/XE/XP)	2	4	–	out of ASi	out of AUX	2 x M8 snap-in cable sockets, straight, 5 poles + 2 x M12 cable sockets, straight, 5 poles	1 AB Slave	BW3679
	Cable duct motor module	Interroll (EC310), RULMECA (RDR BL-2)	2	4	–	out of ASi	out of AUX	2 x M8 cable sockets, straight, 5 poles + 2 x M12 cable sockets, straight, 5 poles	1 AB Slave	BW3409
	Cable duct motor module	Interroll (EC310), RULMECA (RDR BL-2)	2	4	–	out of ASi	out of AUX	2 x M8 cable sockets, straight, 5 poles + 2 x M8 cable sockets, straight, 4 poles	1 AB Slave	BW3290
	Cable duct motor module	Interroll (EC310), RULMECA (RDR BL-2)	2	4	–	out of ASi	out of AUX	2 x M8 snap-in cable sockets, straight, 5 poles + 2 x M12 cable sockets, straight, 5 poles	1 AB Slave	BW3813
	Cable duct motor module, IP54	Itoh Denki (PM500ME/XE/XP, PM605ME/XE/XP)	2	2	–	out of AUX	out of AUX	3 x M8 cable sockets, straight, 5 poles + 2 x M8 cable sockets, straight, 4 poles	–	BW3452
	IP67, 4 x M12, ASi-5	Interroll (EC5000 AI, 20 W/35W/50W)	2	4	–	out of ASi	out of AUX (48 V)	4 x M12 sockets, 5 poles	1 ASi-5 slave	BWU4212
	IP67, 4 x M12	Itoh Denki (PM500ME/XE/XP, PM605ME/XE/XP)	2	2	–	out of ASi	out of AUX	4 x M12 sockets, 5 poles	1 AB Slave	BWU2715
	IP67, 4 x M12	Itoh Denki (PM500ME/XE/XP, PM605ME/XE/XP)	2	2	–	out of ASi	out of AUX	4 x M12 sockets, 5 poles	1 AB Slave	BWU3804
	IP67, 4 x M12	Interroll (EC310), RULMECA (RDR BL-2)	2	4	–	out of ASi	out of AUX	4 x M12 sockets, 5 poles	1 AB Slave	BWU2765
	IP67, 4 x M12	Interroll (EC310), RULMECA (RDR BL-2)	2	4	–	out of ASi	out of AUX	4 x M12 sockets, 5 poles	1 AB Slave	BWU2575
	IP67, 4 x M12	Interroll (EC310), RULMECA (RDR BL-2)	2	4	–	out of AUX	out of AUX	4 x M12 sockets, 5 poles	1 AB Slave	BWU2958
	IP67, 4 x M12	Interroll (EC200, EC300), Rollex (type 840)	2	4	–	out of ASi	out of AUX	4 x M12 sockets, 5 poles	1 AB Slave	BWU2398

AS-Interface Modules/Slaves

24 V Motorized Rollers										
Figure	Type	Drive	Number of Drives	Inputs digital	Outputs digital	Input voltage (sensor supply)	Output voltage (actuator supply)	Connection	ASi address	Article No.
	IP67, 8 x M12	Interroll (EC310), RULMECA (RDR BL-2), Itoh Denki (PM500ME/XE/XP, PM605ME/XE/XP)	2	4	–	out of ASi	out of AUX	6 x M12 sockets, 5 poles	1 Single Slave + 1 AB Slave	BWU2766
	IP67, 8 x M12	Interroll (EC310), RULMECA (RDR BL-2), Itoh Denki (PM500ME/XE/XP, PM605ME/XE/XP)	2	4	–	out of ASi	out of AUX	6 x M12 sockets, 5 poles	1 Single Slave + 1 AB Slave	BWU2478
	IP67, 8 x M12	Interroll (EC310), RULMECA (RDR BL-2), Itoh Denki (PM500ME/XE/XP, PM605ME/XE/XP)	2	4	–	out of AUX	out of AUX	6 x M12 sockets, 5 poles	1 Single Slave + 1 AB Slave	BWU2959
	IP67, 8 x M12	24 V DC motors	2	2	–	out of AUX	out of AUX	4 x M12 sockets, 5 poles	1 AB Slave	BWU3501
	IP67, 8 x M12	24 V DC motors	1	4	2 x electronic	out of ASi	out of AUX	4 x M12 sockets, 5 poles	1 Single Slave	BWU3551



AS-Interface Modules/Slaves

Safety Components



Safety Monitor

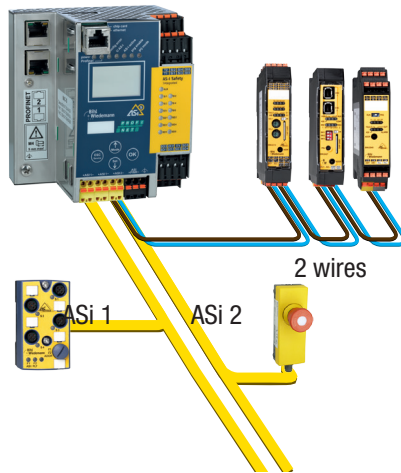
The Safety Monitor enables safe transmission and processing of safety relevant data from safety inputs and safe shut-off of safety outputs remotely over ASi where the potential hazardous motion occurs; with the ability to be PLe compliant.

Bihl+Wiedemann offers the Safety Monitor for ASi Safety at Work as a stand-alone device that will give the user the ability to turn a standard ASi system into an ASi safety system. For new system designs we can provide our safety gateway with an integrated Safety Monitor and interface that can be used in the most common system design to a very large system design. A common ASi safety system design could be constructed of one or two ASi circuits while an even larger system could utilize way more than two ASi circuits. The larger systems that could utilize up to 1922 safety I/O would still be able to implement our safety gateways with the use of our "Safe Link over Ethernet". The Safe Link technology allows one to connect multiple gateways safely over Ethernet/Profinet.

For small applications with three or more safe signals you should consider our Safety Basic Monitor. The Safety Basic Monitor is a compact safety controller without a gateway that is a configurable unit. The module allows for universal expansion and is also ideal as a head station for special safety applications.






Safety Components





Safety Monitor: Product Overview

- Safety controllers, compact safety controller, programmable safety components


Safety Basis Monitors										
Figure	Type	Inputs Safety, SIL 3, Cat. 4	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Fieldbus interface	1 power supply, 1 gateway for 2 ASI networks, inexpensive power supplies	Diagnostic and configuration interface	Article No.
	Safety Basis Monitor	3 x 2 channels, input 3 optional for speed monitor (up to 4 kHz)	max. 31 x 2 channels, max. 1891 in max. configuration	2 release circuits; 2 x electronic safe outputs	max. 8, max. 991 in max. configuration	Safe Link	Signaling contacts	yes, max. 0,5 A/ASI network, max. 8 A with ASI power supply	Ethernet diagnostic	BWU2852
	Safety Basis Monitor	4 x 2 channels, inputs 3+4 optional for speed monitor (up to 4 kHz)	max. 31 x 2 channels	2 release circuits; 2 x electronic safe outputs	max. 8	–	Signaling contacts	yes, max. 0,5 A/ASI network, max. 8 A with ASI power supply	USB	BWU2700
	Safety Basis Monitor	4 x 2 channels, inputs 3+4, compatible as replacement with consortial monitor	max. 31 x 2 channels	2 release circuits; 2 x electronic safe outputs	max. 8	–	ASi monitors	no, max. 8 A/ASI network	USB	BWU2567
	Starter Kits	4 x 2 channels, inputs 3+4 optional for speed monitor (up to 4 kHz)	max. 31 x 2 channels	2 release circuits; 2 x electronic safe outputs	max. 8	–	Signaling contacts	yes, max. 0,5 A/ASI network, max. 8 A with ASI power supply	USB	BWU2512

- Safety diagnostics in real-time
- Cost-optimized solution for medium-size and large applications

Safety, PROFIBUS										
Figure	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Article No.	
	PROFIsafe, PROFIBUS	max. 31 x 2 channels	6 release circuits; 6 x electronic safe outputs	max. 31	PROFIsafe (F-CPU) + ASIMON program	1 ASI network, 1 ASI Master	yes, max. 4 A/ASI network	Ethernet diagnostic	BWU2819	
	Safety PROFIBUS	max. 62 x 2-channels, max. 1922 configuration	6 release circuits; 6 x fast electronic safe outputs	max. 32, max. 992 configuration	Safe Link	2 ASI networks, 2 ASI Master	yes, max. 4 A/ASI network	Ethernet diagnostic	BWU2822	
	Safety PROFIBUS	max. 31 x 2-channels, max. 1891 configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 configuration	Safe Link	1 ASI network, 1 ASI Master	yes, max. 4 A/ASI network	Ethernet diagnostic	BWU2793	





Safety Components




Safety, PROFIBUS									
Figure	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Article No.
	Starter Kits	max. 62 x 2-channels, max. 1922 configuration	4 release circuits; 2 x relay, 2 x electronic safe outputs	max. 32, max. 992 configuration	Safe Link	2 ASi networks, 2 ASi Masters	yes, max. 4 A/ ASi network	Ethernet diagnostic	BW2695

- Safety diagnostics in real-time
- Cost-optimized solution for medium-size and large applications





Safety Components

Safety, PROFINET									
Figure	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Article No.
	PROFIsafe, PROFINET, ASI-5 / ASI-3	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 64, max. 1984 configuration	PROFIsafe (F-CPU) + ASIMON program + Safe Link	1 ASi networks, 1 ASi-5/ASI-3 masters	yes, max. 4 A/ ASi network	Ethernet fieldbus + Ethernet diagnostic	BWU3862
	PROFIsafe, PROFINET, ASI-5 / ASI-3	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 64, max. 1984 configuration	Safe Link	2 ASi networks, 2 ASi-5/ASI-3 masters	yes, max. 4 A/ ASi network	Ethernet fieldbus + Ethernet diagnostic	BWU4000
	PROFIsafe, PROFINET, ASI-5 / ASI-3	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 64, max. 1984 configuration	PROFIsafe (F-CPU) + ASIMON program + Safe Link	2 ASi networks, 2 ASi-5/ASI-3 masters	yes, max. 4 A/ ASi network	Ethernet fieldbus + Ethernet diagnostic	BWU3674
	Safety, PROFINET ASI-5/ ASI-3	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 31, max. 991 configuration	Safe Link	1 ASi networks, 1 ASi-5/ASI-3 masters	yes, max. 4 A/ ASi network	Ethernet fieldbus + Ethernet diagnostic	BWU3863
	Safety, PROFINET ASI-5/ ASI-3	max. 31 x 2 channels, max. 1891 in max. configuration	–	max. 64, max. 1984 configuration	Safe Link	1 ASi network, 1 ASi-5/ASI-3 Master	yes, max. 4 A/ ASi network	Ethernet fieldbus + Ethernet diagnostic	BWU3998
	PROFIsafe, PROFINET	max. 62 x 2 channels	–	max. 16	PROFIsafe (F-CPU) + ASIMON program	2 ASi networks, 2 ASi Masters	yes, max. 4 A/ ASi network	Ethernet fieldbus + Ethernet diagnostic	BWU2805

- Safety diagnostics in real-time
- Cost-optimized solution for medium-size and large applications


Safety, Sercos									
Figure	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Article No.
	Safety, Sercos, ASI-5/ASI-3	max. 62 x 2 channels, max. 1922 configuration	6 release circuits; 6 x electronic safe outputs	max. 64, max. 1984 configuration	safe Schneider drives via Sercos + Safe Link	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet diagnostic	BWU3861
	Safety, Sercos, ASI-5/ASI-3	max. 62 x 2 channels, max. 1922 configuration	6 release circuits; 6 x electronic safe outputs	max. 64, max. 1984 configuration	CIP Safety via Sercos + Safe Link	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet diagnostic	BWU3860
	Safety, Sercos, ASI-5/ASI-3	max. 62 x 2 channels, max. 1922 configuration	–	max. 64, max. 1984 configuration	CIP Safety via Sercos + Safe Link	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet diagnostic	BWU3845

- Safety diagnostics in real-time
- Cost-optimized solution for medium-size and large applications




Safety, EtherNet/IP + ModbusTCP									
Figure	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Article No.
	Safety, EtherNet/IP + Modbus TCP, ASI-5 / ASI-3	max. 62 x 2-channels, max. 1922 configuration	6 release circuits; 6 x fast electronic safe outputs	max. 64, max. 1984 configuration	CIP Safety via EtherNet/IP + Safe Link	2 ASI networks, 2 ASI-5 / ASI-3 Masters	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	BWU3857
	Safety, EtherNet/IP + Modbus TCP, ASI-5 / ASI-3	max. 62 x 2-channels, max. 1922 configuration	6 release circuits; 6 x fast electronic safe outputs	max. 64, max. 1984 configuration	Safe Link	2 ASI networks, 2 ASI-5 / ASI-3 Masters	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	BWU3825
	Safety, EtherNet/IP + ModbusTCP	max. 62 x 2-channels, max. 1922 configuration	6 release circuits; 6 x electronic safe outputs	max. 32, max. 992 configuration	Safe Link	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	BWU3543
	Safety, EtherNET/IP+ Modbus TCP	max. 62 x 2-channels, max. 1922 configuration	6 Release circuits; 6 x electronic safe outputs	max. 32, max. 992 configuration	Safe Link	2 ASI networks, 2 ASI Masters	no, max. 8 A/ ASI network, redundant supply	Ethernet fieldbus + Ethernet diagnostic	BWU3544
	Safety EtherNET/IP+ Modbus TCP	max. 31 x 2-channels, max. 1891 configuration	6 Release circuits; 6 x electronic safe outputs	max. 31, max. 991 configuration	Safe Link	1 ASI Network, 1 ASI Master	yes, max. 4 A/ ASI network	Ethernet fieldbus + Ethernet diagnostic	BWU3542
	Safety EtherNET/IP+ Modbus TCP	max. 62 x 2-channels, max. 1922 configuration	6 Release circuits; 6 x electronic safe outputs	max. 32, max. 992 configuration	Safe Link	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ASI network	Ethernet fieldbus + Ethernet diagnostic	BWU3693







Safety, DeviceNet									
Figure	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Article No.
	Safety, DeviceNet	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	Ethernet diagnostic	BWU2972

- Safety diagnostics in real-time
- Cost-optimized solution for medium-size and large applications


Safety, EtherCAT									
Figure	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Article No.
	Safety, EtherCAT, ASI-5/ ASI-3	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 64, max. 1984 in max. configuration	FSoE + Safe Link	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet Diagnose	BWU3858
	Safety, EtherCAT, ASI-5/ ASI-3	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 64, max. 1984 in max. configuration	Safe Link	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	Ethernet diagnostic	BWU3991
	Safety EtherCAT	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 32, max. 992 in max. configuration	Safe Link	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet diagnostic	BWU2944
	Safety, EtherCAT	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 32, max. 992 in max. configuration	FSoE + Safe Link	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	Ethernet diagnostic	BWU3509
	Safety, EtherCAT	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 31, max. 991 in max. configuration	Safe Link	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	Ethernet diagnostic	BWU2797

- Safety diagnostics in real-time
- Cost-optimized solution for medium-size and large applications

Safety, POWERLINK									
Figure	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASI networks, number of ASI Masters	1 power supply, 1 Gateway for 2 ASI networks, inexpensive power supply	Diagnostic and configuration interface	Article No.
	Safety, POWERLINK	max. 62 x 2 channels, max. 1922 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 32, max. 992 in configuration	Safe Link	2 ASI networks, 2 ASI Masters	yes, max. 4 A/ ASI network	Ethernet diagnostic	BWU3176
	Safety, POWERLINK	max. 31 x 2 channels, max. 1891 in max. configuration	6 release circuits; 6 x electronic safe outputs	max. 31, max. 991 in configuration	Safe Link	1 ASI network, 1 ASI Master	yes, max. 4 A/ ASI network	Ethernet diagnostic	BWU3177

Safety, CANopen									
Figure	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Article No.
	Safety CANopen	max. 31 x 2-channels, max. 1891 configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 configuration	Safe Link	1 ASi network, 1 ASi Master	yes, max. 4 A/ASi network	Ethernet diagnostic	BWU2804

- Safety diagnostics in real-time
- Cost-optimized solution for medium-size and large applications

Safety, CC-Link									
Figure	Type	Inputs safety, expandable to	Outputs Safety, SIL 3, cat. 4	Safety outputs, independent according to SIL 3, expandable to	Safety communication	Number of ASi networks, number of ASi Masters	1 power supply, 1 Gateway for 2 ASi networks, inexpensive power supply	Diagnostic and configuration interface	Article No.
	Safety CC-Link	max. 31 x 2-channels, max. 1891 configuration	6 release circuits; 6 x fast electronic safe outputs	max. 31, max. 991 configuration	Safe Link	1 ASi network, 1 ASi Master	yes, max. 4 A/ASi network	Ethernet diagnostic	BWU2833



Safety I/O Modules

Bihl+Wiedemann offers the right module for accessing any safety input signal. Both control cabinet modules (IP20) and field modules (IP67) are available. From a single safety input or output to multiple safety I/O modules we offer the right ASi slave for your requirements. Many of our modules also include available outputs for standard signals.



Safety Components



Safety I/O Modules: Product Overview



- All Safety I/O Modules: SIL 3, Cat. 4, PLe
- Compact form factor
- Safety inputs and standard outputs in one module

Safety I/O Modules: Input Modules									
Figure	Type	Housing	Inputs Safety, SIL 3, Cat. 4	Outputs digital	Safety signal inputs	Output voltage (actuator supply)	ASi connection	ASi address	Article No..
	IP20, 22,5 mm x 50 mm, 3 x COMBICON, Safety	3 x COMBICON	1 x 2-channels	2 x electronic	floating Contacts	out of AUX	Clamps	1 Single Slave	BWU1939
	IP20, 22,5 mm x 50 mm, 3 x COMBICON, Safety	3 x COMBICON	1 x 2-channels	2 x electronic	floating Contacts	out of ASi	Clamps	1 Single Slave	BWU2724
	IP20, 22,5 mm x 50 mm, 3 x COMBICON, Safety	3 x COMBICON	1 x 2-channels; SIL 2, Kat. 3	2 x electronic	Safety mats with 1,2 kΩ oder 8,2 kΩ monitoring resistor	out of AUX	Clamps	1 Single Slave	BWU2661
	IP20, 22,5 mm x 50 mm, 3 x COMBICON, Safety	3 x COMBICON	1 x 2-channels	2 x electronic	OSSD	out of AUX	Clamps	1 Single Slave	BWU2577
	IP20, 22,5 mm x 114mm, 4 x COMBICON, Safety	4 x COMBICON	1 x 2-channels	2 x electronic	floating Contacts	out of AUX	Clamps	1 Single Slaves	BWU3013
	IP20, 22,5 mm x 114mm, 4 x COMBICON, Safety	4 x COMBICON	2 x 2-channels	4 x electronic	floating Contacts	out of AUX	Clamps	2 Single Slave	BWU2707
	IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety	4 x COMBICON	2 x 2-channels	–	1 x floating contacts + antivalent OSSD	–	Clamps	2 Single Slave	BWU3671
	IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety	4 x COMBICON	2 x 2-channels	–	1 x floating contacts + OSSD	–	Clamps	2 Single Slave	BWU3696
	IP20, 22,5 mm x 114mm, 6 x COMBICON, Safety	6 x COMBICON	1 x 2-channels	–	4 ... 20 mA / 0 ... 10 V / Pt100	–	Clamps	Depending on Number of Safety I/Os	BWU2692
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, Safety	6 x COMBICON	1 x 2 channels	–	thermocouples	–	Clamps	Depending on number of Safety I/Os	BWU3271



Safety Components



- All Safety I/O Modules: SIL 3, Cat. 4, PLe
- Compact form factor
- Safety inputs and Safety outputs in one module

Safety I/O Modules: Input/Output Modules						
Figure	Type	Inputs Safety, SIL 3, Cat. 4	Outputs Safety, SIL 3, Kat. 4	Safety signal inputs	ASi address	Article No..
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, Safety	8 x 2-channels	1 release circuits; 1 x electronic safe output	floating Contacts, optoelectronic protective devices	Depending on number of Safety I/Os	BWU3428
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, Safety	4 x 2-channels	2 release circuits; 2 x electronic safe output	floating Contacts, optoelectronic protective devices	Depending on number of Safety I/Os	BWU3427




- All Safety I/O Modules: SIL 3, Cat. 4, PLe
- Compact form factor
- Standard inputs and Safety outputs in one module






Safety I/O Modules: Output Modules							
Figure	Type	Inputs Safety, SIL 3, Cat. 4	Inputs digital, EDM	Outputs digital	Outputs Safety, SIL 3, Cat. 4	ASi address	Article No..
	IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety	1 x 2-channels	1 EDM	–	1 release circuits; 2 x Relay	2 Single Slaves + 1 AB Slave	BWU2236
	IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety	–	1 EDM + 3 Standard	–	1 release circuits; 2 x fast electronic safe outputs, increased availability	1 Single Slave + 2 AB Slaves	BWU3398
	IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety	–	1 EDM + 3 Standard	–	1 release circuits; 2 x fast electronic safe outputs	1 Single Slave + 2 AB Slaves	BWU2173
	IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety	–	1 EDM	–	1 release circuits; 2 x fast electronic safe outputs, max. 3 A, increased availability	1 Single Slave + 2 AB Slaves	BWU3869
	IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety	–	1 EDM	–	1 release circuits; 2 x relay	1 Single Slave + 1 AB Slave	BWU2045
	IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety	–	–	1 EDM	1 contact expander, 1 x electronic safe outputs 20 A	–	BW3016
	IP20, 22,5 mm x 114 mm, 4 x COMBICON, Safety	–	–	1 EDM	1 contact expander, 1 x electronic safe output 10 A	–	BW3281
	IP20, 22,5 mm x 114 mm, 6 x COMBICON, Safety	–	8	–	1-8 release circuits; 8 x fast electronic safe outputs	Depending on number of release circuits	BWU2836
	circuit board 85 mm x 80 mm	–	–	2 x electronic	1 release circuits; 1 x fast electronic safe outputs	1 Single Slave + 2 AB Slaves	BWU2914
	IP67, 8 x M12, Safety	2 x 2-channels	2-6, depending on configuration	–	4 release circuits; 4 x fast electronic safe outputs	Depending on number of release circuits	BW3064

- Safety inputs SIL 3 Cat.4 and standard outputs in one module
- Bicolor LEDs per output, state (yellow), overload (red)

Safety I/O Modules: Input Modules (M12)									
Figure	Type	Inputs Safety, SIL 3, Cat. 4	Outputs digital,	Outputs Safety, SIL 3, cat. 4	Safety signal inputs	ASi connection	ASi address	Special function	Article No.
	IP67, 4 x M12, Safety	2 x 2-channels	–	–	floating Contacts	ASi profile cable	2 Single Slaves	–	BWU2631
	IP67, 4 x M12, Safety	1 x 2-channels	2 x electronic	–	floating Contacts	ASi profile cable	1 Single Slave	–	BWU2284
	IP67, 4 x M12, Safety	1 x 2-channels	2 x electronic	–	floating Contacts	ASi using M12	1 Single Slave	–	BWU2369
	IP67, 4 x M12, Safety	1 x 2-channels	2 x electronic	–	optoelectronic protective devices	ASi profile cable	1 Single Slave	–	BWU2270
	IP67, 4 x M12, Safety	1 x 2-channels	2 x electronic	–	optoelectronic protective devices	ASi profile cable	1 Single Slave	Reset output for optoelectronic protective devices	BWU2689
	IP67, 4 x M12, Safety	1 x 2-channels	2 x electronic	–	optoelectronic protective devices	ASi using M12	1 Single Slave	–	BWU2370
	IP67, 4 x M12, Safety	1 x 2-channels	2 x electronic	–	optoelectronic protective devices	ASi using M12	1 Single Slave	–	BWU2960
	IP67, 4 x M12, Safety	1 x 2-channels	2 x electronic	–	complementary switch	ASi profile cable	1 Single Slave	–	BWU2814
	IP67, 8 x M12, Safety	6-8 x 2 channels; depending on configuration	–	up to 2 release circuits; up to 2 x electronic safe outputs; depending on configuration	floating contacts, OSSDs, complementary switch	ASi using profile cable	depending on configuration	–	BW3489
	IP67, 8 x M12, Safety	6-8 x 2 channels; depending on configuration	–	up to 2 release circuits; up to 2 x electronic safe outputs; depending on configuration	floating contacts, OSSDs, complementary switch	ASi using M12	depending on configuration	–	BW3499
	IP67, 8 x M12, Safety	6-8 x 2 channels; depending on configuration	–	up to 2 release circuits; up to 2 x electronic safe outputs; depending on configuration	floating contacts, OSSDs, complementary switch	ASi using profile cable	depending on configuration	–	BW3490
	IP67, 8 x M12, Safety	2 x 2 channels	–	4 release circuits; 4 x electronic safe outputs	floating contacts, optoelectronic protective devices	ASi profile cable	depending on number of release circuits	–	BW3064



Safety I/O Modules: Active Distributors ASi Safety, IP67										
Figure	Type	Inputs Safety, SIL 3, Cat. 4	Inputs digital	Outputs digital	Safety signal inputs	Input voltage (sensor supply)	Output voltage (actuator supply)	Connection	ASi address	Article No.
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	floating contacts	out of ASi	out of AUX	2 x round cables/connecting wires	1 Single Slave	BWU3425
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	floating contacts	out of ASi	out of AUX	1 x M12 cable sockets, straight, 8 poles	1 Single Slave	BWU3750
	Active distributor ASi Safety	1 x 2 channels	–	2 x electronic	optoelectronic protective devices	out of AUX	out of AUX	1 x M12 cable sockets, straight, 8 poles + 1 x M12 cable sockets, straight, 5 poles	1 Single Slave	BWU3718
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	floating contacts	out of ASi	out of ASi	2 x round cables/connecting wires	1 Single Slave	BWU3249
	Active distributor ASi Safety	1 x 2 channels	–	–	floating contacts	out of ASi	–	2 x round cables/connecting wires	1 Single Slave	BWU3600
	Active distributor ASi Safety	1 x 2 channels	–	2 x electronic	optoelectronic protective devices	out of AUX	out of AUX	1 x M12 cable sockets, straight, 8 poles	1 Single Slave	BWU3719
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	floating contacts	out of ASi	out of ASi	1 x round cable/connecting wires	1 Single Slave	BWU3599
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	floating contacts	out of ASi	out of ASi	1 x round cable/connecting wires	1 Single Slave	BWU3248
	Active distributor ASi Safety	1 x 2 channels	–	–	floating contacts	out of ASi	–	1 x round cable/connecting wires	1 Single Slave	BWU3373
	Active distributor ASi Safety	1 x 2 channels	–	–	floating contacts	out of ASi	–	1 x M8 cable socket, straight, 4 poles	1 Single Slave	BWU3553
	Active distributor ASi Safety	1 x 2 channels	–	–	floating contacts	out of ASi	–	1 x M12 cable socket, angled, 5 poles	1 Single Slave	BWU3413
	Active distributor ASi Safety	1 x 2 channels	–	–	floating contacts	out of ASi	–	1 x M12 cable socket, straight, 5 poles	1 Single Slave	BWU3626
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	optoelectronic protective devices	out of AUX	out of AUX	1 x M12 cable socket, angled, 5 poles	1 Single Slave	BW3299
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	optoelectronic protective devices	out of AUX	out of AUX	1 x M12 cable socket, straight, 5 poles	1 Single Slave	BWU3627
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	optoelectronic protective devices	out of AUX	out of AUX	1 x M12 cable socket, straight, 5 poles	1 Single Slave	BWU3376
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	optoelectronic protective devices	out of AUX	out of AUX	1 x M12 cable socket, straight, 8 poles		BWU3721
	Active distributor ASi Safety	1 x 2 channels	1	1 x electronic	optoelectronic protective devices	out of AUX	out of AUX	1 x M12 cable socket, straight, 8 poles	1 Single Slave	BWU3488
	Active distributor ASi Safety	1 x 2-kanalig	1	1 x electronic	optoelectronic protective devices	out of AUX	out of AUX	1 x M12 cable socket, straight, 8 poles	1 Single Slave	BWU3565
	Active distributor ASi Safety	1 x 2-kanalig	1	1 x electronic	optoelectronic protective devices	out of AUX	out of AUX	1 x M12 cable socket, straight, 8 poles	1 Single Slave	BWU3635

Safety I/O Modules: Active Distributors ASI Safety, IP67										
Figure	Type	Inputs Safety, SIL 3, Cat. 4	Inputs digital	Outputs digital	Safety signal inputs	Input voltage (sensor supply)	Output voltage (actuator supply)	Connection	ASI address	Article No.
	Active distributor ASI	–	4	4 x electronic	–	out of ASI	out of AUX	8 x M12 cable socket, straight, 5 polig + 1 x Addressing cable socket	1 AB slave	BWU3675
	Active distributor ASI	–	4	4 x electronic	–	out of AUX	out of AUX	3 x M12 cable sockets, straight, 5 poles + 2 x M8 snap-in cable sockets, straight, 4 poles + 1 x ASI addressing cable socket		BWU3676
	Active distributor ASI	–	4	2 x electronic	–	out of ASI	out of ASI	6 x M8 cable sockets, straight, 4 poles	1 AB slave	BWU3577
	Active distributor ASI	–	4	4 x electronic	–	out of ASI	out of AUX	4 x M8 cable sockets, straight, 4 poles	1 AB Slave	BWU3555
	Active distributor ASI	–	2	2 x electronic	–	out of ASI	out of ASI	2 x M12 cable sockets, straight, 5 poles + 2 x M8 cable sockets, straight, 3 poles	1 AB Slave	BWU3695
	Active distributor ASI	–	4	–	–	out of ASI	–	4 x M12 cable sockets, straight, 5 poles	1 AB Slave	BWU3633
	Active distributor ASI	–	4	–	–	out of ASI	–	4 x M12 cable sockets, straight, 5 poles	1 AB Slave	BWU3632
	Active distributor ASI	–	4	–	–	out of ASI	–	3 x round cables/connecting wires + 1 x M12 cable sockets, straight, 5 poles	1 AB Slave	BWU3608
	Active distributor ASI	–	4	4 x electronic	–	out of ASI	out of AUX	2 x round cables/connecting wires	1 AB Slave	BWU3317
	Active distributor ASI	–	4	4 x electronic	–	out of ASI	out of AUX	2 x M12 cable sockets, straight, 5 poles	1 AB Slave	BW3507
	Active distributor ASI	–	4	4 x electronic	–	out of ASI	out of ASI	2 x round cables/connecting wires	1 AB Slave	BW3326
	Active distributor ASI	–	4	–	–	out of ASI	–	2 x round cables/connecting wires	1 AB Slave	BWU3374
	Active distributor ASI	–	1	4 x electronic	–	out of ASI	out of ASI	1 x M12 cable sockets, straight, 5 poles + 1 x M12 cable socket, straight, 5 poles	1 AB Slave	BWU3534
	Active distributor ASI	–	4	4 x electronic	–	out of ASI	out of ASI	1 x round cables/connecting wires	1 AB Slave	BWU3606
	Active distributor ASI	–	4	4 x electronic	–	out of ASI	out of ASI	1 x round cables/connecting wires	1 AB Slave	BW3500
	Active distributor ASI	–	4	4 x electronic	–	out of AUX	out of AUX	1 x M12 cable sockets, straight, 8 poles	1 AB Slave	BW3377
	Active distributor ASI	–	2	2 x electronic	–	out of AUX	out of AUX	1 x round cables/connecting wires	1 AB Slave	BWU3607
	Active distributor ASI	–	4	3 x electronic	–	out of ASI	out of ASI	1 x M12 cable sockets, straight, 8 poles	1 AB Slave	BWU3639






Safety Components

Safety I/O Modules: Active Distributors ASI Safety, IP67										
Figure	Type	Inputs Safety, SIL 3, Cat. 4	Inputs digital	Outputs digital	Safety signal inputs	Input voltage (sensor supply)	Output voltage (actuator supply)	Connection	ASI address	Article No.
	Active distributor ASI	–	4	–	–	out of AUX	–	2 x M12 cable sockets, straight, 5 poles	1 AB Slave	BWU3498
	Active distributor ASI	–	–	2 x electronic	–	out of AUX	out of AUX	1 x round cable/ connecting wires + 1 x M12 cable sockets, straight, 5 poles	1 AB Slave	BWU3628
	Active distributor ASI	–	2	2 x electronic	–	out of AUX	out of AUX	2 x M12 cable sockets, straight, 5 poles	1 AB Slave	BWU3497
	Active distributor ASI	–	2	2 x electronic	–	out of AUX	out of AUX	2 x round cables/ connecting wires	1 AB Slave	BWU3602
	Active distributor ASI	–	2	1 x electronic	–	out of AUX	out of AUX	2 x M12 cable sockets, angled, 5 poles	1 AB Slave	BW3250
	Active distributor ASI	–	2	2 x electronic	–	out of ASI	out of ASI	1 x M12 cable socket, straight, 8 poles	1 AB Slave	BWU3400
	Active distributor ASI	–	2	2 x electronic	–	out of AUX	out of AUX	2 x M12 cable sockets, straight, 5 poles	1 AB Slave	BWU3642
	Active distributor ASI	–	2	–	–	out of AUX	–	1 x M12 cable socket, angled, 5 poles	1 AB Slave	BWU3564
	Active distributor ASI	–	–	4 x electronic	–	–	out of AUX	1 x round cable/ connecting wires	1 AB Slave	BW3300
	Active distributor ASI	–	–	4 x electronic	–	–	out of AUX	1 x round cable/ connecting wires	1 AB Slave	BWU3487
	Active distributor ASI	–	–	4 x electronic	–	–	out of AUX	2 x M12 cable sockets, straight, 5 poles	1 AB Slave	BWU4087
	Active distributor ASI	–	4	–	–	out of AUX	–	8 x push in terminals	1 AB Slave	BW3349
	Active distributor ASI	–	3	1 x electronic	–	out of AUX	out of AUX	8 x push in terminals	1 AB Slave	BWU3414
	Active distributor ASI	–	–	4 x electronic	–	–	out of AUX	8 x push in terminals	1 AB Slave	BWU3342

Safety Components

■ Special versions on request

Safety I/O Modules: Circuit Board Modules ASI, PCB Solutions									
Figure	Type	Inputs Safety, SIL 3, Cat. 4	Inputs digital, EDM	Outputs digital	Safety signal inputs	ASi connection	Coating	ASi address	Article No.
	circuit board 43 mm x 30 mm	1 x 2-channels	–	2 x electronic	floating Contacts	connecting wires, 200 mm	yes	1 Single Slave	BW3067
	circuit board 43 mm x 30 mm	1 x 2-channels	–	2 x electronic	floating Contacts	connecting wires, 100 mm	yes	1 Single Slave	BW2426
	circuit board 43 mm x 30 mm	1 x 2-channels	–	2 x electronic	floating Contacts	connecting wires, 100 mm	yes	1 Single Slave	BW2521
	circuit board 73 mm x 37,5 mm	1 x 2-channels	–	2 x electronic	floating Contacts	plug-in screw terminals	no	1 Single Slave	BW1896
	circuit board 73 mm x 37,5 mm	1 x 2-channels	–	2 x electronic	floating Contacts	screw terminals	no	1 Single Slave	BW1751
	circuit board 85 mm x 80 mm	–	2	2 x electronic	–	screw terminals	yes	1 Single Slave + 2 AB Slaves	BW2914



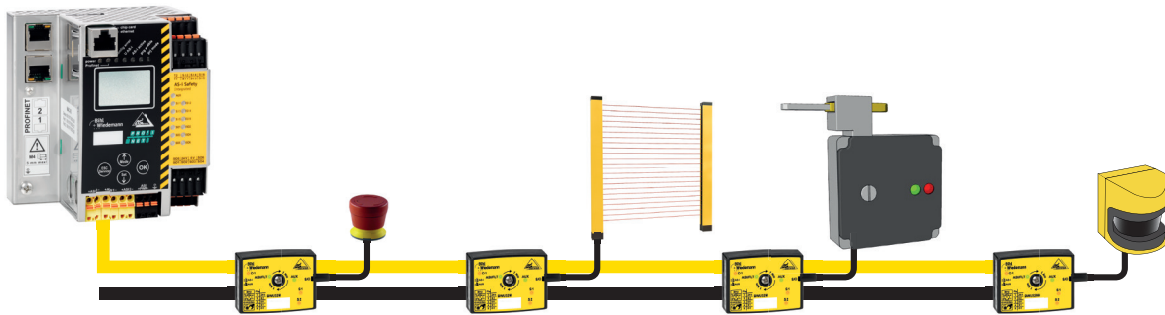
Safety Components

Active Distributors ASi Safety



Active distributors ASi Safety from Bihl+Wiedemann allow you to make any safety sensor, safety push-button or switch AS-Interface capable. Even modules without their own ASi terminal can be easily integrated into an existing ASi network using these active distributors ASi Safety. Other features include individually configurable connection options using M8 or M12 connectors, flying leads or push-in terminals to conform to the customer's application, as well as a compact form factor, making them ideal for use in cable ducts.



Safety Components



Active distributors ASi Safety from Bihl+Wiedemann allow you to make any safety sensor, safety push-button or switch AS-Interface capable.

Active Distributors ASi Safety: Input modules										
Figure	Type	Inputs Safety, SIL 3, Cat. 4	Inputs digital	Outputs digital	Safety signal inputs	Input voltage (sensor supply)	Output voltage (actuator supply)	Connection	ASi address	Article No.
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	floating contacts	out of ASi	out of AUX	1 x round cable/ connecting wires	1 Single Slave	BWU3425
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	floating contacts	out of ASi	out of AUX	1 x M12 cable socket, straight, 8 poles	1 Single Slave	BWU3750
	Active distributor ASi Safety	1 x 2 channels	–	2 x electronic	OSSDs	out of AUX	out of AUX	1 x M12 cable socket, straight, 8 poles + 1 x M12 cable socket, straight, 5 poles	1 Single Slave	BWU3718
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	floating contacts	out of ASi	out of ASi	2 x round cables/ connecting wires	1 Single Slave	BWU3249
	Active distributor ASi Safety	1 x 2 channels	–	–	floating contacts	out of ASi	–	2 x round cables/ connecting wires	1 Single Slave	BWU3600
	Active distributor ASi Safety	1 x 2 channels	–	2 x electronic	floating contacts	out of ASi	–	1 x M12 cable socket, straight, 8 poles	1 Single Slave	BWU3719
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	floating contacts	out of ASi	out of ASi	1 x round cable/ connecting wires	1 Single Slave	BWU3599
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	floating contacts	out of ASi	out of ASi	1 x round cable/ connecting wires	1 Single Slave	BWU3248
	Active distributor ASi Safety	1 x 2 channels	–	–	floating contacts	out of ASi	–	1 x round cable/ connecting wires	1 Single Slave	BWU3373
	Active distributor ASi Safety	1 x 2 channels	–	–	floating contacts	out of ASi	–	1 x M8 cable socket, straight, 4 poles	1 Single Slave	BWU3553
	Active distributor ASi Safety	1 x 2 channels	–	–	floating contacts	out of ASi	–	1 x M12 cable socket, angled, 5 poles	1 Single Slave	BWU3413
	Active distributor ASi Safety	1 x 2 channels	–	–	floating contacts	out of ASi	–	1 x M12 cable socket, straight, 5 poles	1 Single Slave	BWU3626
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	OSSDs	out of AUX	out of AUX	1 x M12 cable socket, straight, 5 poles	1 Single Slave	BWU3627
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	OSSDs	out of AUX	out of AUX	1 x M12 cable socket, angled, 5 poles	1 Single Slave	BWU3299
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	OSSDs	out of AUX	out of AUX	1 x M12 cable socket, straight, 5 poles	1 Single Slave	BWU3376
	Active distributor ASi Safety	1 x 2 channels	–	1 x electronic	OSSDs	out of AUX	out of AUX	1 x M12 cable socket, straight, 8 poles	1 Single Slave	BWU3721
	Active distributor ASi Safety	1 x 2 channels	1	1 x electronic	OSSDs	out of AUX	out of AUX	1 x M12 cable socket, straight, 8 poles	1 Single Slave	BWU3488
	Active distributor ASi Safety	1 x 2 channels	1	1 x electronic	OSSDs	out of AUX	out of AUX	1 x M12 cable socket, straight, 8 poles	1 Single Slave	BWU3565
Active distributor ASi Safety	1 x 2 channels	1	1 x electronic	OSSDs	out of AUX	out of AUX	1 x M12 cable socket, straight, 8 poles	1 Single Slave	BWU3635	





Safe Contact Expander

We have contact expanders available for turning the wear-free electronic outputs into potential-free relay contacts. They are only 22,5 mm wide and fit inside either one or two 4-channel relays with additional EDM contact.



Safety Components

Safe Contact Expander: Product Overview

Safe Contact Expander			
Figure	Name	Description	Article No.
	Safe Electronic Output 20 A	Safe contact expansion module 20 A, IP20, 22,5 mm	BW3016
	Safe Electronic Output 10 A	Safe contact expansion module 10 A, IP20, 22,5 mm	BW3281
	Safe Contact Expansion Module, IP20, 22,5 mm	2 independent channels, 4 contact sets per channel	BW2539
	Safe Contact Expansion Module, IP20, 22,5 mm	1 independent channel, 4 contact sets per channel	BW2548





E-STOP

Bihl+Wiedemann offers a range of control and signal devices based on innovative enclosures. The basic line is available from stock. It is also possible, on request, to equip a one or two device enclosure with any of the common control and signal devices (lights, buttons, illuminated buttons, key switches, select switches, E-Stop, etc.).

The control and signal devices are designed for extruded rail mount (40mm), but can also be individually attached using a mounting clip. The ASI connection is made conveniently using an M12 connection. For safety applications we also offer a safe ASI E-STOP switch module.



E-STOP: Product Overview

E-STOP			
Figure	Name	Description	Article No.
	Safety E-STOP Button Module ASI	Lighted (red/green), with 2 holes for screw mounting	BW2773
	Safety E-STOP Button Module ASI	Lighted (red/green), M12, with retaining clip	BW2529
	Safety E-STOP Button Module ASI	Lighted (red/green), M12, with magnet	BW2709
	Safety E-STOP Button Module ASI	Unlighted, M12, with retaining clip	BW2585
	ASI Light Button Module	2 buttons each 2-colored lighted (red/green), M12, with 2 holes for screw mounting	BW3159
	ASI Light Button Module	2 buttons each 2-colored lighted (red/green), M12, with retaining clip	BW2528
	ASI Light Button Module	2 buttons each 2-colored lighted (red/green), M12, with magnet	BW2708
	ASI Light Button Module	2 buttons each 2-colored lighted (white/blue), with 2 holes for screw mounting	BW3474
	ASI Light Button Module	ASI Light Button Module, lighted (white/blue), screw mounting	BW3478
	E-STOP Button	With plug-in-shoe connection	BW2527

Speed Monitors

Bihl+Wiedemann offers speed monitors as an effective method to safely process signals from sensors and encoders.

Each speed monitor can be incorporated into the control feedback circuit using adapters and cables already available, without affecting the actual control process.

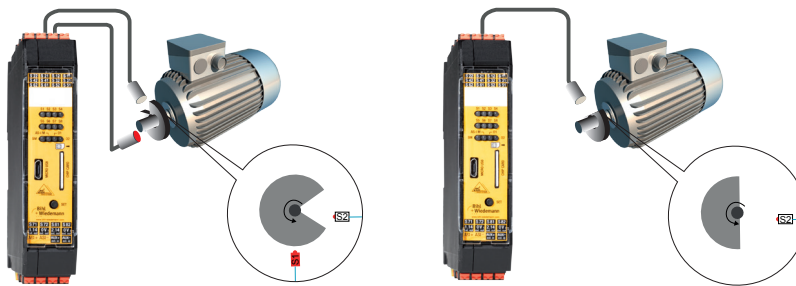


Safety Components



Safe speed monitors for sensors: Safety Basic Monitors

- Autonomous compact safety controller
- 4 x 2 channel safe inputs or standard inputs and status outputs
- Speed monitor on the local inputs
 - 2 axis 2-channel (SIL2, PLd)
 - 4 axis 1-channel (SIL1, PLc)
- Standstill monitor on the local inputs
 - 4 axis 2-channel (SIL2, PLd)
- 2 safe electronic outputs
- USB or Ethernet interface for configuration
- Detailed diagnostics and shut-off history via software or control
- Chip card for easy device replacement



Speed monitoring with 2 sensors,
monitor max. 2 axis

Speed monitoring with 1 sensor,
monitor max. 4 axis



Speed monitoring in the
Gateway



Safe speed monitors for encoders

- Monitor up to 2 axis, up to SIL 3, PLe
- For sine/cosine, SSI, TTL or HTL-Encoder
- Detailed diagnostics and shut-off history via software
- Chip card for easy device exchange
- 22,5 mm width

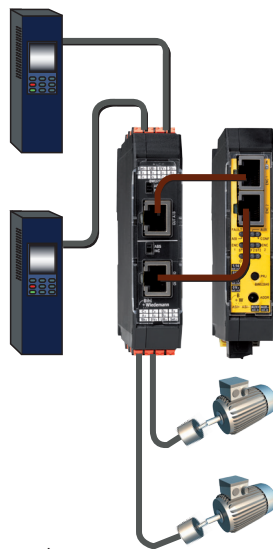
Devices with local safe outputs

- 2 safe electronic outputs
- Support of all safety functions acc. EN 61800-5-2
- Any number of safety functions can be implemented
 - Possibility to configure several functions or same function with different parameters for each axis
 - Max. 128 devices configurable

Safety Components






Encoder signal between encoder and converter is tapped.





Encoder is connected directly to the Speed Monitor.

Speed Monitors: Product Overview

- Safe monitoring of speed and position
- Monitoring up to 2 axes, up to SIL3, PLe
- For sine/cosine, SSI, TTL or HTL-Encoder
- Detailed diagnostics and shut-off history via software
- Chip card for easy device exchange
- 22,5 mm width

Speed Monitors for Encoder									
Figure	Type	Protection rating	Safe Monitoring	Encoder signal/ Sensor signal	Number of monitored axes	Outputs Safety, SIL 3, cat. 4	Encoder/ Sensor connection	ASi address	Article No.
	Speed Monitor Modular	IP20	speed + position	sine/cosine, TTL, SSI	up to 2 independent axes	2 release circuits; 2 x electronic safe outputs	RJ45	1 Single Slave + 1 AB Slave	BWU2849
	Speed Monitor Modular	IP20	speed	sine/cosine, SSI	up to 2 independent axes	–	Mini IO	1 Single Slave + 1 AB Slave	BWU2427
	Speed Monitor Modular	IP20	speed	HTL or sensors/initiators (24V)	up to 2 independent axes	–	Mini IO	1 Single Slave + 1 AB Slave	BWU2595

- Safe monitoring of speed
- Monitoring up to 2 axes, up to SIL3, PLe
- For standard 24 V sensors/initiators
- Detailed diagnostics and shut-off history via software
- Chip card for easy device exchange
- 22,5 mm width

Speed Monitors for Sensors/Initiators										
Figure	Type	Protection rating	Safe Monitoring	Encoder signal/ Sensor signal	Number of monitored axes	Inputs Safety, SIL 3, Cat. 4	Outputs Safety, SIL 3, cat. 4	Encoder/ Sensor connection	Diagnostic and configuration interface	Article No.
	Safety Basis Monitor	IP20	speed	sensors/initiators (24V)	up to 2 independent axes	3 x 2 channels, input 3 optional for speed monitor (up to 4 kHz)	2 release circuits; 2 x electronic safe outputs	clamps	Ethernet diagnostic + Modbus TCP diagnostic	BWU2852
	Safety Basis Monitor	IP20	speed	sensors/initiators (24V)	up to 4 independent axes	4 x 2 channels, inputs 3+4 optional for speed monitor (up to 4 kHz)	2 release circuits; 2 x electronic safe outputs	clamps	USB	BWU2700



- Motors with integrated Speed Monitor and safe fieldbus connection easily controlled using Safety Gateways from Bihl+Wiedemann
- Safety control and monitor safety drives with CIP Safety over Sercos

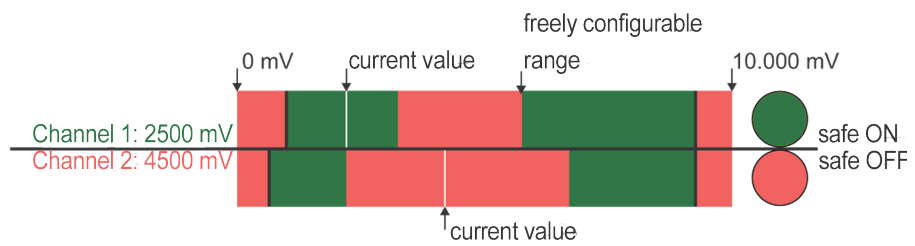


Safety Components

Adapter and Connecting Cable for Speed Monitors			
Figure	Name	Description	Article No.
	Adapter for connecting 2 encoders	Adapter for connecting two rotary encoders to speed monitor and control	BW2977
	Adapter for connecting 2 encoders	Adapter for connecting two rotary encoders to speed monitor and control Separate power supply for encoders	BWU3345
	Adapter for Speed Monitor, 15-pole	D-Sub 15-pole, AMP Mini-I/O connector for e.g. B+R Acopos EnDat ® Interface, 1,5 m	BW2740
	Adapter for Speed Monitor, 15-pole	D-Sub 15-pole, AMP Mini-I/O connector for e.g. B+R Acopos EnDat ® Interface, 2,5 m	BW3112
	Adapter for Speed Monitor, 13-pole	D-Sub 13-pole, AMP Mini-I/O connector for e.g. B+R Acopos Hiperface® Interface, 2,5 m	BW3113
	Adapter for Speed Monitor, 13-pole	D-Sub 13-pole, AMP Mini-I/O connector for e.g. B+R Acopos Hiperface® Interface, 1,5 m	BW3046
	Adapter for Speed Monitor, 15-pole	Sub-D cable adapter 15 poles with 2,5 m connector cable, soldered, for speed monitors with RJ45 connections	BW3308
	D-Sub cable adapter for Speed Monitor, 15 poles	D-Sub cable adapter 15 poles with 2,5 m connector cable, soldered, for speed monitors with RJ45 connections, for Rexroth drives.	BW3901
	D-Sub cable adapter for Speed Monitor, 15 poles	D-Sub cable adapter 15 poles with 2,5 m connector cable, soldered, for speed monitors with RJ45 connections, for Rockwell KINETIX6000.	BW3424
	D-Sub cable adapter for Speed Monitor, 9 poles	D-Sub cable adapter 9 poles with 2,5 m connector cable, soldered, for speed monitors with RJ45 connections, for Jetter motors.	BW3511
	Connecting cable for Speed Monitor	RJ45 on RJ45, cable length 1,0 m ±5%	BW2991
	Connecting cable for Speed Monitor	RJ45 on RJ45, cable length 0,1 m	BW3346
	Connecting cable for Speed Monitor	RJ45 on AMP Mini-IO connector, cable length 1,0 m ±5%	BW2993
	Connecting cable for Speed Monitor	Connector-ferrule, length 1,5 m	BW2476
	Connecting cable for Speed Monitor	Connector-ferrule, length 5 m	BW2477

Safety Analog Modules

The ASi Safety Input Module for analog inputs, monitors two analog signals with 4 ... 20 mA, 0 ... 10 V or Pt100 or thermocouple. The module provides a safe signal if the current input value is within the defined and adjustable safety range. The two inputs can be analyzed as one safe 2-channel input (up to SIL 3).





Safety Analog Modules: Product Overview

- 2 safe inputs
- Monitors 2 analog signals of 4...20 mA, 0...10 V or Pt100
- Possible to safely compare 4...20 mA, 0...10 V or Pt100 signals
- Each analog signal can be separately configured if needed
- Achieves applications up to SIL3/Cat4/PLe
- Protection category IP20, can be used remotely in the local control cabinet



Safety Components

Safety Analog Modules			
Figure	Name	Description	Article No..
	ASI Safety Analog Input Module, IP20	ASI Safety Analog Input Module in IP20, 22,5 mm x 114 mm, with 6 x COMBICON connections, 1 x 2 channels safe input (SIL 3, cat. 4) for analog values 4 ... 20 mA/0 ... 10 V/Pt100, input voltage/sensor supply out of AUX, periphery connection via clamps, without limitation of connector cable length (loop resistance 150Ω), ASI connection via clamps, ASI addresses depending on configuration	BWU2692
	ASI Safety Analog Input Module, IP20	ASI Safety Thermocouple Module in IP20, 22,5 mm x 114 mm, with 6 x COMBICON connections, 1 x 2 channels safe input (SIL 3, cat. 4) for thermocouples, input voltage/sensor supply out of ASI, periphery connection via clamps, without limitation of connector cable length (loop resistance 150Ω), ASI connection via clamps, ASI addresses depending on configuration	BWU3271

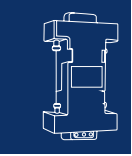


Bus Couplers/Master Simulators



Bus Couplers/Master Simulators




At Bihl+Wiedemann our extensive history and deep knowledge of ASI gateways and bus couplers has given us the ability to create a variety of “special solutions” for various coupling requirements. Our Master simulators not only make it possible to test the gateway functionality of our ASI Masters, you can also test associated slaves without having to write code for complicated controller programs. For example our PROFIBUS Master simulator can be used to work with any PROFIBUS slaves using any desired .gsd file and even carry out automated checking using Windows .dll files, whether the data are cyclic or acyclic. Many of our customers are manufacturers of PROFIBUS slaves and greatly appreciate the simplicity and universality of our Master simulators.




Bus Couplers/Master Simulators



Bus Couplers/Master Simulators: Product Overview

Master Simulators			
Figure	Name	Description	Article No.
	PROFINET Master Simulator Plus	Monitoring software for PROFINET slaves, support for PROFI-safe modules, log function for I/O data and acyclic data exchange. Single-User-License.	BW3057
	PROFINET Master Simulator Plus	Monitoring software for PROFINET slaves. Single-User-License.	BW3035
	PROFINET Master Simulator Plus DLL Kit	Set of monitoring software for PROFINET slaves and program library DLL. Support for PROFI-safe modules, log function for I/O data and acyclic data exchange, program library DLL. Single-User-License.	BW3649
	PROFIBUS Master Simulator	Monitoring software for PROFIBUS DP slaves, PROFIBUS-UART, DP V0	BW1131
	PROFIBUS Master Simulator	Monitoring software for PROFIBUS DP slaves, PROFIBUS-UART, DP V0 and DP V1	BW1257

Bus Couplers			
Figure	Name	Description	Article No.
	Interface Converter	USB - RS 232 interface converter	BW2274



Software



Software

A great deal of our ASi expertise is applied in providing the user with the best possible configuration tools for ASi Masters and Safety Monitors. The PC-based ASi Control Tools360 visibly organizes all important tests and configuration options for your ASi network. ASIMON360 is the configuration software for ASi Safety at Work. With this software you can easily design ASi configurations directly on the computer with multi-window interfaces.

The software for diagnostics, service and approval measurements is very intuitive and it allows PC-assisted measurements using existing hardware (Bihl+Wiedemann ASi Master and connection cable). It assists the machine/systems builder in performing approval measurement and advanced troubleshooting. It also assists the end user in executing preventive maintenance as well as a fast and independent fault elimination. From some of the software, analytical data can be retrieved and sent to our technical support to help in providing fast and reliable assistance regarding possible issues.

Control III allows you to turn an ASi Master into a mini-PLC. Software programs developed in C enable data preprocessing directly in the Gateway. In many applications the Gateway can also be used as a stand-alone device, completely omitting the need for a PLC. Our Ethernet-based devices also come with a web server enabling PC-remote diagnostics and maintenance without installing any software.

Bihl+Wiedemann Suite: Safety Software for Configuration, Diagnosis and Programming


This software is used for configuring and commissioning a Safety Monitor via a Computer.


Through an easy to use interface you're able to configure the Safety Monitor in conjunction with safe ASi slaves that can include: emergency stop buttons, safety switches for doors or safety light barriers. A Safety Monitor in conjunction with safe ASi slaves within an ASi system can virtually be used in any application.

Depending on the application needs, settings of the local inputs and outputs can be made. Furthermore the commissioning and documentation of your safety-related application is supported by software.




Software: Product Overview

Monitoring Software							
Figure	Type	PROFIsafe	Log function of I/O data	Sending of acyclic data	DLL	Installation options	Article No.
	PROFINET Master Simulator	yes	yes	yes	no	single-user license or floating license	BW3057
	PROFINET Master Simulator	no	no	no	no	single-user license or floating license	BW3035
	PROFINET Master Simulator	yes	yes	yes	yes	single-user license	BW3649

Software for Gateways and Safety Components								
Figure	Type	Diagnostic Software	ASIMON360	ASIMON360 Simulation	ASi Control Tools360	Cable	Installation options	Article No.
	Bihl+Wiedemann Safety Suite	yes	yes	yes	yes (integrated)	no	single-user license or floating license	BW2916
	Bihl+Wiedemann Safety Suite	yes	yes, service version only	yes	yes (integrated)	no	single-user license or floating license	BW3065
	Bihl+Wiedemann Safety Suite	yes	no	no	yes	no	single-user license or floating license	BW2902

- Activation of the control functionality

Programming Software			
Figure	Type	Programming in C (mini PLC)	Article No.
	Programming software	yes (programming environment incl.)	BW2582

Accessories



Power Supplies

ASi Power Supplies

ASi networks are the standard technology for applications with up to 62 participants and a length of up to 100 m (configuration A1). The benefits are low costs, simple installation and a reliable operation.

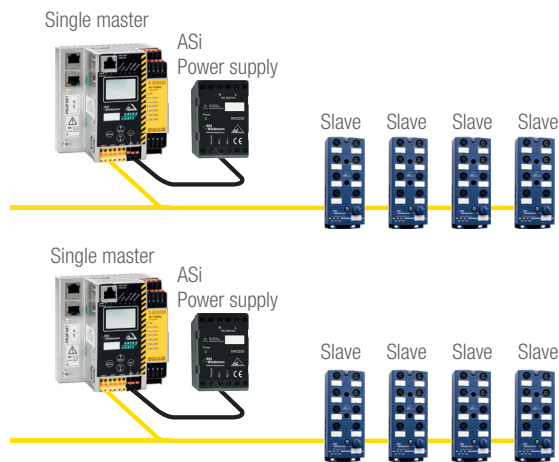
For the single network configuration, Bihl+Wiedemann offers different master gateways including some useful application functions, as well as a power supply (4 A) and a variety of slaves.



Config. A1: The standard: Single network, often with coupling to a higher-level network, e.g. to PROFIBUS

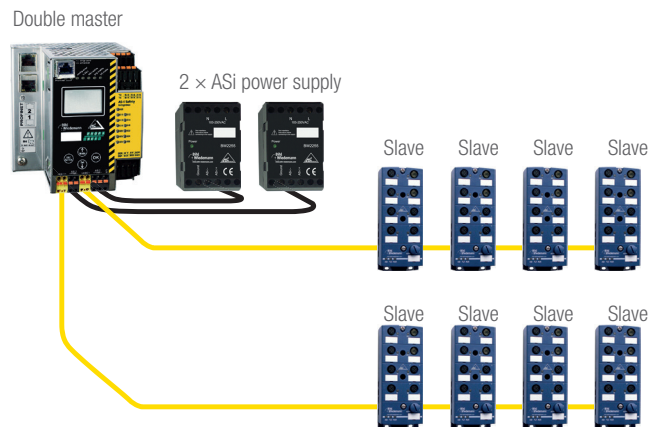
If more than 62 slaves, cables longer than 100 m, more flexibility, or more flexibility in the network is needed, the previous answer to these cases was “duplicate all”.

The standard ASi single network with up to 62 slaves and 100 m in length used to be the biggest unit (configuration A2). The rest was a matter of multiplying.



Config. A2: Multiple network, here as a simple conventional solution using multiplication of single networks

There are several alternatives. A first step to more intelligent solutions is to install a double master, which is more cost effective than two single masters and saves one connection with a higher system (configuration A3). Thus the (cost) threshold to use multiple networks is lowered. Not only the number of slaves can require a second network, but also the higher rate of flexibility in designing a plant may make them appear desirable.



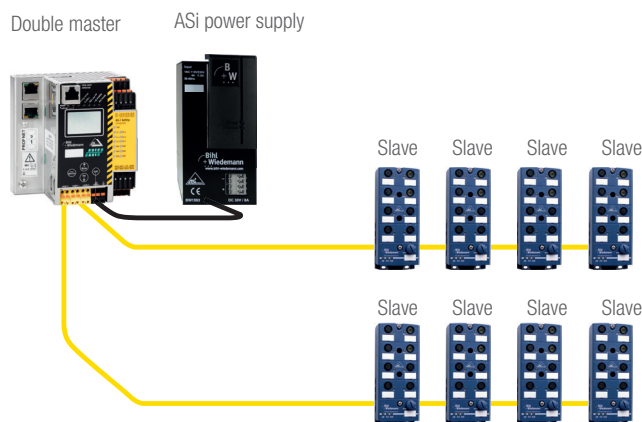
Config. A3: Two networks are handled by a double master.

1 power supply, 1 Gateway for 2 ASi networks

As a second step Bihl+Wiedemann also offer dual masters that require only one power supply (Configuration A4).

The dual master handles two ASi networks using just one 30 V power supply. This is possible because the data decoupling which “normally” takes place in the ASi power supply is already implemented in a dual master.

This saves the user investment costs, installation effort and expenses and valuable control cabinet space. Spatial separation between the power supply and ASi network becomes possible.






Config. A4: Second step: Use of a dual master in the
“1 power supply, 1 Gateway for 2 ASi networks” version



Power Supplies: Product Overview

- ASi Power Supply
- 30 V Power Supply
- ASi Power Supply Decoupling Unit
- Power Decoupling Unit

Power Supplies					
Figure	Name	Description	Output current	Protection rating	Article No.
	ASi power supply	90 V AC ... 265 V AC, wide range supply	4 A	IP20	BW1649
	ASi power supply	115 V AC ... 250 V AC	1,8 A	IP20	BW2255
	ASi power supply	115 V AC / 230 V AC, power supply with range switch	8 A	IP20	BW1997
	ASi power supply	195 V AC ... 500 V AC, wide range supply	8 A	IP20	BW2276
	ASi power supply	24 V DC to 30 V DC ASi output voltage	2 A	IP20	BW1760
	30 V power supply	115 V AC / 230 V AC, power supply with range switch	8 A	IP20	BW1593
	30 V power supply	3 phases power supply	4 A	IP20	BW1927
	30 V power supply	3 phases power supply	8 A	IP20	BW1676
	ASi power supply decoupling unit	–	4 A	IP20	BWU1943
	ASi power supply decoupling unit	–	4 A	IP65	BWU1477
	Power decoupling unit	–	1,2 A	IP20	BWU2387



Circuit Extension

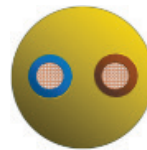
Cable routing in the ASi Network

ASi profile cable and ASi round cable

Wiring of the ASi network should always be done using the specified ASi cables.



ASi Profile cable



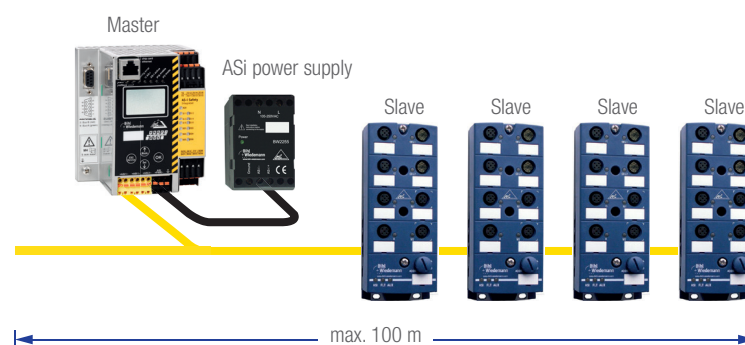
ASi round cable

Various splitters are available for branching the ASi flat or ASi round cable:

- ASi passive distributor
- via substructure module with cover

Segment length

A segment length of max. 100 m is possible without the need for further measures. All stub cables and branches must be included when calculating the segment length.

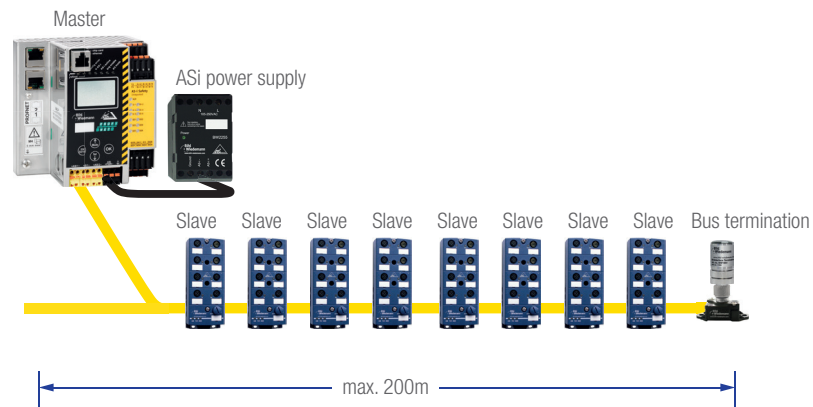


ASi bus termination

If 100 m are not sufficient for the length of a segment there are various ways to extend the segment length.

A bus termination (BWU1644) can be used to increase the segment length to max. 200 m. The bus termination must be connected at the point furthest away from the master.

This results in the following topology:



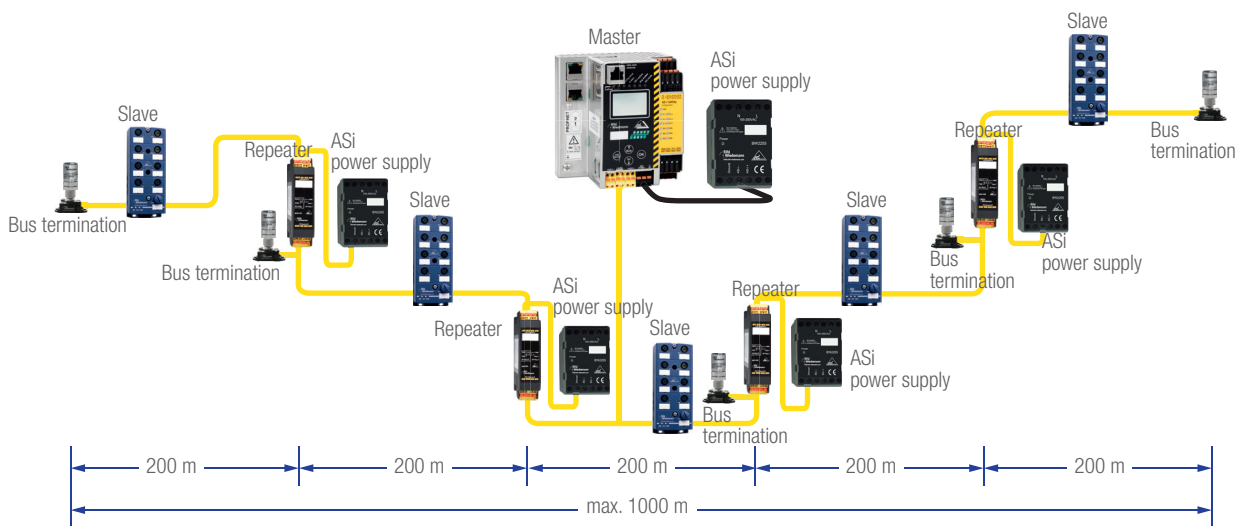
Repeaters

Another way to extend the range of the ASi network is to use repeaters.

The repeater boosts the ASi signal and galvanically isolates the segments; at the same time the ASi network can be split up for high current requirements.

Splitting and galvanically isolating ASi networks using repeaters also helps meet tighter EMC requirements.

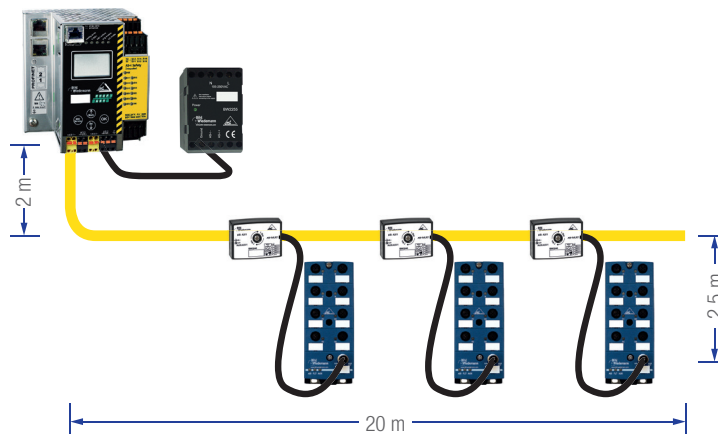
In the maximum configuration a topography could look as follows:



ASi auf M12

It is also possible to send ASi through M12 terminals and a standard actuator cable.

The rule of thumb is that all cable lengths running through M12 terminals should be added as double the segment length. It is recommended that the main load of the ASi network be routed using the specified flat cable and that only stub cables be routed through M12 terminals to the actuator or sensor.



Following is a calculation example when using M12 branches:

Length with flat cable: $20 \text{ m} + 2 \text{ m} = 22 \text{ m}$

Length with M12: $5 \times 2,5 \text{ m} = 12,5 \text{ m}$, according to the rule of thumb
 $2 \times 12,5 \text{ m} = 25 \text{ m}$ is called for

This means the total length of the ASi network is:

$22 \text{ m} + 25 \text{ m} = 47 \text{ m}$

If for example 15 slaves are connected to the ASi cable, the segment is extended accordingly:



Flat cable: 22 m


M12: $15 \times 2,5 \text{ m} = 37,5 \text{ m}$, or according to the rule of thumb:
 $2 \times 37,5 \text{ m} = 75 \text{ m}$





The total length is then $22 \text{ m} + 75 \text{ m} = 97 \text{ m}$



Circuit Extension: Product Overview

ASi Bus Termination			
Figure	Name	Description	Article No.
	ASi Bus Termination	Default value of the ASi Tuner Doubling of ASi cable length	BWU1644
	Advanced Repeater with Bus Termination	Circuit extension by more than 200 m Passive bus termination connectable.	BWU2192

ASi Tuner			
Figure	Name	Description	Article No.
	ASi Diagnostic Tuner	With ASi slave address Trebling of ASi cable length	BWU1843
	ASi Tuner	Without ASi slave address Trebling of ASi cable length	BWU1648









ASi Repeater			
Figure	Name	Description	Article No.
	Advanced Repeater with Bus Termination	Circuit extension by more than 200 m Passive bus termination connectable.	BWU2192
	Advanced Repeater	Circuit extension by more than 100 m	BWU3651
	Advanced Repeater, IP65	Extends network an additional 100 m, protection category IP65	BWU1273
	ASi High Power Repeater	Higher transmission and reception levels to High Power Segment A	BWU2384

Diagnostics/Commissioning

The intuitively constructed software for diagnostics, service and release measurements enables PC-assisted measurement using the high-level measuring technology built into the Bihl+Wiedemann masters.

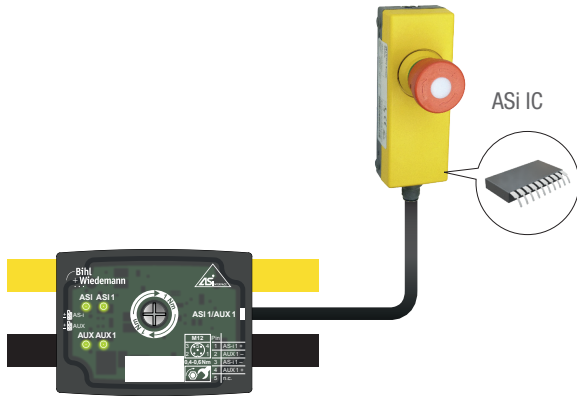
This specially developed software assists both machine and systems builders in release measurements and preventive troubleshooting as well as end users in preventive maintenance and assistance in performing speedy fault elimination. As an option the analysis data can also be sent to our technical support group where it can be used to help in assisting one with a fast and reliable solution in handling problems.

Diagnostics/Commissioning: Product Overview

Diagnostics/Commissioning			
Figure	Name	Description	Article No.
	ASi Analyser Innovation Step 2	Complementation of local ASi Master diagnostic	BWU1415
	ASi Address Programming Device	With plug-in recharger 230 V	BW1191
	ASi Address Programming Device	With plug-in recharger 115 V (Version North America)	BW1646
	Accessories for ASi Address Programming Device	Connecting cable (Module/programming device)	BW1802
	ASi addressing cable with COMBICON connector		BW2324
	ASi addressing cable with M12 connector	Connecting cable for handheld ASi address programming devices for the addressing of active distributors The scoop of delivery includes 2 x module substructures 60 mm x 45 mm.	BW3304
	ASi addressing cable with COMBICON connector	Connecting cable for ASi Master/Gateways for the addressing of active distributors The scoop of delivery includes 2 x module substructures 60 mm x 45 mm.	BW3305
	Addressing Plug	Packing unit: 5 pieces	BW3340
	ASi probe		BW1745

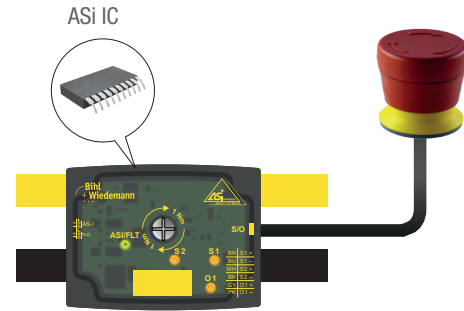
Passive and Active Distributors

ASi in the sensor



Passive distributors

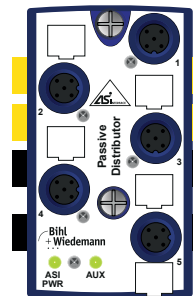
ASi in the distributor



Active distributors

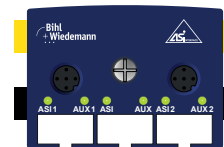
Passive distributor by Bihl+Wiedemann

- Gold-plated contacts
- Optionally with integrated fuse



With 5 × M12 sockets and LED display

- 2 × ASi profile cables
- 2 × AUX profile cables
- 5 × ASi/AUX to M12 sockets
- High protection rating IP67

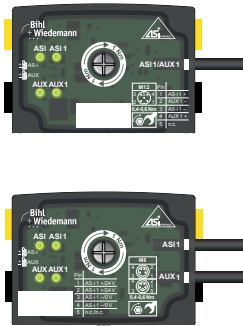


With 2 × M12 sockets and LED display

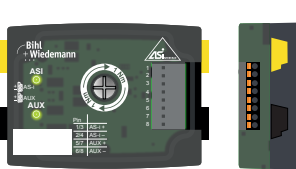
- Compact design
- 2 × profile cables for ASi and/or AUX connection to 2 x M12 sockets
- 6 × LED status display to indicate the state of the ASi/AUX power supply to the module and at the M12 connectors
- Optionally with 4 × 4 A replaceable fuses or with 4 × 1 A self-resetting fuse
- High protection rating IP67

Accessories

With round cable



- Extremely flat design (W × H × D: 60 × 45 × 19 mm), suitable for cable ducts
- 2 × profile cables for ASI and AUX connection to round cable
- Round cable with M12, M8 (angled or straight) or connecting wires
- High protection rating IP67
- Optionally with 2 × 1 A self-resetting fuses



With Push-In terminals

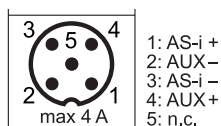
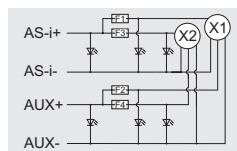
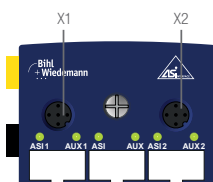
- Extremely flat design (W × H × D: 60 × 45 × 19 mm), suitable for cable ducts
- Push-In terminals up to a wire cross-section of 0,5 mm²/AWG20



As profile cable branch

- Extremely flat design (W × H × D: 60 × 45 × 19 mm), suitable for cable ducts
- 2 × connections for profile cable
- ASI profile cable max. 8 A
- AUX profile cable max. 16 A or max. 20 A

Optionally with integrated fuse







Cable protection against short circuits






- Optionally with integrated fuse, either with 4 × 4 A replaceable fuses or with 4 × 1 A self-resetting fuse
- Additional protection for connected devices
- Reliable protection against short circuits

Special assemblies on request







Passive Distributor: Product Overview

Passive Distributors									
Figure	Type	Housing	Flat design, montage in cable duct possible	Internal fuse	LED status display	Profile cable connection	Connection	Cable	Article No.
	Passive distributor ASI/AUX	depth: 35 mm	no	4 A, changeable	yes	1 x ASI, 1 x AUX	2 x M12 sockets, 5 poles	–	BWU3087
	Passive distributor ASI/AUX	depth: 35 mm	no	1 A, self-resetting	yes	1 x ASI, 1 x AUX	2 x M12 sockets, 5 poles	–	BWU3117
	Passive distributor ASI/AUX	depth: 35 mm	no	no	yes	1 x ASI, 1 x AUX	2 x M12 sockets, 5 poles	–	BWU3184
	Passive distributor ASI/AUX	depth: 35 mm	no	4 A, changeable	yes	1 x ASI, 1 x AUX	1 x M12 sockets, 5 poles	–	BWU3491
	Passive distributor ASI/AUX	depth: 35 mm	no	1 A, self-resetting	yes	1 x ASI, 1 x AUX	1 x M12 sockets, 5 poles	–	BWU3492
	Passive distributor ASI/AUX	depth: 35 mm	no	no	yes	1 x ASI, 1 x AUX	1 x M12 sockets, 5 poles	–	BWU3493
	Passive distributor ASI/AUX	depth: 19 mm	yes, depth: 19 mm	8 A, slow-blow fuse + 1 A, self-resetting	yes	1 x ASI, 1 x AUX	1 x M8 cable socket, straight, 5 poles + 1 x M8 cable socket, straight, 4 poles	0,20 m	BW3276
	Passive distributor ASI/AUX	depth: 19 mm	yes, depth: 19 mm	4 A slow-blow fuse + 1 A, self-resetting	yes	1 x ASI, 1 x AUX	1 x M8 Snap-In cable socket, straight, 4 poles	2 m	BW3681
	Passive distributor ASI/AUX	depth: 19 mm	yes, depth: 19 mm	8 A slow-blow fuse	yes	1 x ASI, 1 x AUX	1 x round cable/ connecting wires	1,3 m	BW3423
	Passive distributor ASI/AUX	depth: 19 mm	yes, depth: 19 mm	1 A, self-resetting	yes	1 x ASI, 1 x AUX	1 x M12 cable socket, angled, 5 poles	2 m	BW3246
	Passive distributor ASI/AUX	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASI, 1 x AUX	1 x M12 cable socket, straight, 5 poles;	1 m	BWU3403
	Passive distributor ASI/AUX	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASI, 1 x AUX	1 x M12 cable socket, angled, 5 poles	2 m	BWU3183
	Passive distributor ASI	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASI, 1 x AUX	1 x M12 cable socket, angled, 5 poles	1 m	BWU3408
	Passive distributor ASI	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASI, 1 x AUX	1 x M12 cable socket, straight, 5 poles	2 m	BW3911
	Passive distributor ASI	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASI, 1 x AUX	1 x M12 cable socket, straight, 5 poles	0,3 m	BW3778
	Passive distributor ASI	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASI, 1 x AUX	1 x M12 cable socket, straight, 5 poles	0,05 m	BW3805
	Passive distributor ASI/AUX	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASI, 1 x AUX	1 x round cable/ connecting wires	5 m	BW3315
	Passive distributor ASI/AUX	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASI, 1 x AUX	1 x round cable/ connecting wires	2 m	BW3314
	Passive distributor ASI/AUX	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASI, 1 x AUX	1 x round cable/ connecting wires	1,30 m	BW3512
	Passive distributor ASI	depth: 19 mm	yes, depth: 19 mm	no	no	2 x ASI	1 x M12 cable socket, angled, 5 poles	2 m	BWU3185
	Passive distributor ASI	depth: 19 mm	yes, depth: 19 mm	no	no	2 x ASI	1 x M12 cable socket, angled, 5 poles	2 m	BWU3247
	Passive distributor ASI	depth: 19 mm	yes, depth: 19 mm	no	no	2 x ASI	1 x round cable/ connecting wires	0,25 m	BW3186
Passive distributor ASI	depth: 19 mm	yes, depth: 19 mm	no	no	2 x ASI	1 x round cable/ connecting wires	5 m	BW3524	
Passive distributor ASI	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASI	1 x M12 cable socket, angled, 5 poles	1 m	BW3407	

Accessories

Passive Distributors									
Figure	Type	Housing	Flat design, montage in cable duct possible	Internal fuse	LED status display	Profile cable connection	Connection	Cable	Article No.
	Passive distributor ASi	depth: 19 mm	yes, depth: 19 mm	no	no	2 x ASi	profile cable branch	–	BWU3157
	Passive distributor ASi	depth: 30 mm	no	no	no	1 x ASi	1 x M12 socket, 5 poles	–	BWU1239
	Passive distributor ASi	depth: 28 mm	no	no	no	1 x ASi, 1 x AUX	1 x M12 socket, 5 poles	–	BW3803
	Passive distributor ASi/AUX	depth: 40 mm	no	no	no	1 x ASi, 1 x AUX	1 x M12 socket, 5 poles	–	BWU1976
	Passive distributor ASi/AUX	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASi	1 x M12 cable socket, angled, 5 poles	2 m	BW1977
	Passive distributor ASi	depth: 19 mm	yes, depth: 19 mm	no	no	1 x ASi, 1 x AUX	1 x M12 cable socket, angled, 5 poles	2 m	BW1974
	Passive distributor ASi	depth: 19 mm	yes, depth: 19 mm	no	no	2 x ASi	profile cable branch	–	BWU1975
	Passive distributor ASi/AUX	depth: 42 mm	no	no	yes	2 x ASi, 2 x AUX	5 x M12 sockets, 5 poles	–	BWU2820

- 16 A with 1,5 mm² wire section
- 20 A with 2,5 mm² wire section

Passive Distributor AUX, 16 A/20 A, IP67										
Figure	Type	Housing	Protection rating	Flat design, installation in cable duct possible	Internal fuse	LED status display	Profile cable connection	Connection	Round cable	Article No.
	Passive distributor AUX	depth: 19 mm	IP67	yes, depth: 19 mm	8 A slow-blow fuse	yes	1 x AUX	1 x M12 cable socket, straight, T-coded, 4 poles	1 m	BW3513
	Passive distributor AUX	depth: 19 mm	IP67	yes, depth: 19 mm	1 A, self-resetting	yes	2 x AUX	1 x M12 cable socket, straight, 5 poles	1,0 m	BW3766
	Passive distributor AUX	depth: 19 mm	IP67	yes, depth: 19 mm	1 A, self-resetting	yes	2 x AUX	1 x round cable/connecting wires	3 m	BW3381
	Passive distributor AUX	depth: 19 mm	IP67	yes, depth: 19 mm	4 A slow-blow fuse	yes	2 x AUX	2 x M8 cable socket, straight, 4 poles	1,5 m	BW3763
	Passive distributor AUX	depth: 19 mm	IP67	yes, depth: 19 mm	no	no	2 x AUX, 16 A/20 A	2 x round cables/connecting wires 2,5 mm ²	2 m	BWU3307
	Passive distributor AUX	depth: 19 mm	IP67	yes, depth: 19 mm	no	no	2 x AUX, 16 A/20 A	profile cable branch	no	BWU3306
	Passive distributor AUX	depth: 25 mm	IP67	yes, depth: 25 mm	no	no	2 x AUX	1 x M12 power cable plug, straight, T-coded, 4 poles	0,8 m	BWU3568
	Passive distributor AUX	depth: 29 mm	IP20	yes, depth: 19 mm	no	no	2 x AUX, 16 A/20 A	4 x spring type terminals	no	BW3348






Accessories






Cabling/Chip Cards





Cabling/Chip Cards: Product Overview





Cabling/Chip Cards			
Figure	Name	Description	Article No.
	USB connector cable for Safety Basic Monitor		BW2530
	Serial cable	For ASI Masters and ASI Monitors in stainless steel	BW1575
	ASI profile cable yellow	ASI profile cable for data and power transmission. Wire section 1,5 mm ²	BW1979
	ASI profile cable yellow	ASI profile cable for data and power transmission with very high flexibility. Wire section 1,5 mm ²	BW2756
	ASI profile cable black	ASI profile cable for additional auxiliary energy. Wire section 1,5 mm ²	BW1980
	ASI profile cable black	ASI profile cable for additional auxiliary energy with very high flexibility. Wire section 1,5 mm ²	BW2757
	ASI profile cable black	ASI profile cable for additional auxiliary power with very high flexibility. Wire section 2,5 mm ²	BW3169
	Round cable, yellow	Round cable, yellow, with 2 wires for data and power transmission, wire section 1.5 mm ²	BW3653
	Round cable, yellow	Round cable, yellow, with 4 wires for data and power transmission and for additional 24 V auxiliary power, wire section 1.5 mm ²	BW3654
	ASI end cap	Left-hand type	BW2779
	ASI end cap	Right-hand type	BW2780
	ASI ribbon cable seal	ASI ribbon cable seal for PG11 fittings	BW1945
	Sealing Profile IP67 (IDC plug)	Width: 60 mm Material: NBR, 60 Shore A Packing unit: 10 pieces	BW3282
	Sealing Profile IP67 (IDC plug)	Width: 45 mm Material: NBR, 60 Shore A Packing unit: 10 pieces	BW3283
	ASI Cable-Stripper	ASI Cable stripper for ASI cables with rubberized insulation.	BW1920
	ASI Micro-Wire-Stripper	ASI Micro-Wire-Stripper for ASI cables with an external insulation made out of TPE or PUR	BW1921
	Protection cap for not used M12 sockets	Packing unit: 50 pieces	BW2368
	Protection cap for ASI-5 addressing sockets, IP67, M12	Packing unit: 50 pieces	BW4056
	Memory plug cover	Packing unit: 1 piece	BW3155

Terminals			
Figure	Name	Description	Article No.
	Double Level Push-in Terminals for connecting ASI and AUX	For simple distribution of ASI and AUX without additional distributor terminals or TWIN wire end ferrules. The standard terminals can be replaced by double-level terminals. Packing unit 5 x double level push-in terminals, 4 poles, yellow + 5 x double level push-in terminals, 4 poles, gray	BW3420
	Double Level Push-in Terminals for connecting ASI	For simple distribution of ASI without additional distributor terminals or TWIN wire end ferrules. The standard terminals can be replaced by double-level terminals.	BW3665
	Push-in Terminals Kit for ASI Gateways	Push-in Terminals Kit for ASI Gateways in Stainless Steel resp. ASI Gateways with integrated Safety Monitor to connect ASI and AUX as a replacement for the terminal blocks of ASI Gateways	BW4043
	Push-in Terminals Kit for ASI Gateways	Push-in Terminals Kit for ASI Gateways in Stainless Steel resp. ASI Gateways with integrated Safety Monitor to connect ASI and AUX Packing unit 6 x push-in terminals, 2 poles, yellow + 2 x push-in terminals, 2 poles, black + 2 x push-in terminals, 3 poles, black	BW3906
	Push-in Terminals Kit for 1 Module	For retrofitting modules that came with screw terminals to the new push-in terminals. Packing unit 5 x push-in terminals, 4 poles, black + 1 x push-in terminals, 2 poles, yellow + 1 x push-in terminals, 2 poles, gray	BW3531
	Screw Terminals Kit for 1 module	For retrofitting modules with push-in terminals to the previous screw terminals. Packing unit 5 x screw terminals, 4 poles, black + 1 x screw terminals, 2 poles, yellow + 1 x screw terminals, 2 poles, gray	BW3532
	Wiring Aid Kit	Wiring Aid Kit, IP20, with 2 x double level push-in terminals, gray, 8 poles, prewired with 4 x wires 1,5 mm ² (BN, BU, RD, BK), cable length 90 mm	BWU4054

Adapter and Connecting Cable for Speed Monitors			
Figure	Name	Description	Article No.
	Adapter for connecting 2 encoders	Adapter for connecting two rotary encoders to speed monitor and control	BW2977
	Adapter for connecting 2 encoders	Adapter for connecting two rotary encoders to speed monitor and control Separate power supply for encoders	BWU3345
	D-Sub cable adapter for Speed Monitor, 15 poles	D-Sub 15-pole, AMP Mini-I/O connector for e.g. B+R Acopos EnDat ® Interface, 1,5 m	BW2740
	D-Sub cable adapter for Speed Monitor, 15 poles	D-Sub 15-pole, AMP Mini-I/O connector for e.g. B+R Acopos EnDat ® Interface, 2,5 m	BW3112
	D-Sub cable adapter for Speed Monitor, 13 poles	D-Sub 13-pole, AMP Mini-I/O connector for e.g. B+R Acopos Hiperface® Interface, 2,5 m	BW3113
	D-Sub cable adapter for Speed Monitor, 13 poles	D-Sub 13-pole, AMP Mini-I/O connector for e.g. B+R Acopos Hiperface® Interface, 1,5 m	BW3046
	D-Sub cable adapter for Speed Monitor, 15 poles	Sub-D cable adapter 15 poles with 2,5 m connector cable, soldered, for speed monitors with RJ45 connections	BW3308
	D-Sub cable adapter for Speed Monitor, 15 poles	D-Sub cable adapter 15 poles with 2,5 m connector cable, soldered, for speed monitors with RJ45 connections, for Rexroth drives.	BW3901
	D-Sub cable adapter for Speed Monitor, 15 poles	D-Sub cable adapter 15 poles with 2,5 m connector cable, soldered, for speed monitors with RJ45 connections, for Rockwell KINETIX6000.	BW3424
	D-Sub cable adapter for Speed Monitor, 15 poles	D-Sub cable adapter 15 poles with 2,5 m connector cable, soldered, for speed monitors with RJ45 connections, for LUST LSK servomotors.	BW3910
	D-Sub cable adapter for Speed Monitor, 9 poles	D-Sub cable adapter 9 poles with 2,5 m connector cable, soldered, for speed monitors with RJ45 connections, for Jetter motors.	BW3511

Adapter and Connecting Cable for Speed Monitors			
Figure	Name	Description	Article No.
	Connecting cable for Speed Monitor	RJ45 on RJ45, cable length 1,0 m ±5%	BW2991
	Connecting cable for Speed Monitor	RJ45 on RJ45, cable length 0,1 m	BW3346
	Connecting cable for Speed Monitor	RJ45 on AMP Mini-IO connector, cable length 1,0 m ±5%	BW2993
	Connecting cable for Speed Monitor	RJ45 on ferrules, length 1,5 m	BW3039
	Connecting cable for Speed Monitor	Connector-ferrule, length 1,5 m	BW2476
	Connecting cable for Speed Monitor	Connector-ferrule, length 5 m	BW2477

Connector Cable for Motor Modules			
Figure	Name	Description	Article No.
	Connection cable for ItohDenki Motor Rollers	Cable length 1,2 m	BW2500
	Connection cable for Interroll Motor Rollers	Cable length 2 m, snap-in	BW2755
	Connection cable for Interroll Motor Rollers	Cable length 1,2 m, snap-in	BW3030
	Connection cable for SEW frequency inverters	Cable length 5 m	BW2799
	Connection cable for SEW MOVIMOT AVT1	Cable length 2 m	BW4215

Chip Cards			
Figure	Name	Description	Article No.
	Chip card	memory capacity 32 kByte Packing unit: 10 pieces	BW2079
	Chip card	memory capacity 128 kByte Packing unit: 10 pieces	BW2222
	Chip card	memory capacity 512 kByte Packing unit: 10 Stck.	BW4055
	Memory Plug, memory capacity 128 kByte	Packing unit: 4 pieces	BW3241
	Copying station for chip cards for Bihl+Wiedemann devices	For duplication of chip cards for Bihl+Wiedemann devices	BW4046



Accessories

Substructure Modules

Substructure Modules: Product Overview



Substructure Modules for IP67 Modules			
Figure	Name	Description	Article No.
	ASi Substructure Module in IP67	For 4-channel module in 45 mm-housing	BW2349
	ASi Substructure Module in IP67	For 4-channel module in 45 mm-housing, centerline spacing CNOMO	BW2350
	ASi Substructure Module in IP67	For 8-channel module in 60 mm-housing, centerline spacing CNOMO	BW2351
	ASi Substructure Module in IP67	ASi Substructure Module in IP67 with connections for 2 x ASi and 2 x AUX profile cables, for 8-channel module in 60 mm-housing, centerline spacing CNOMO. Suitable for mounting on symmetrical DIN profile rail 35 mm.	BW3516
	ASi Substructure Module in IP67 for passive and active distributors	ASi Substructure Module in IP67 for passive and active distributors with connections for 1 x ASi and 1 x AUX profile cables. Suitable for wall-mounting. Packing unit: 2 pieces.	BW3672
	Sealing Profile IP67 (IDC plug)	Width: 60 mm Material: NBR, 60 Shore A Packing unit: 10 pieces	BW3282
	Sealing Profile IP67 (IDC plug)	Width: 45 mm Material: NBR, 60 Shore A Packing unit: 10 pieces	BW3283



Substructure Modules for IP65			
Figure	Name	Description	Article No.
	ASI Substructure Modules	To connect 2 ASI flat cables	BW1180
	ASI Substructure Modules	To connect 2 ASI flat cables with addressing socket	BW1438
	ASI Substructure Modules	To connect 1 ASI flat cable, 1 flat cable for additional supply with addressing jack	BW1439
	ASI Substructure Modules	To connect 1 ASI flat cable, 1 flat cable for additional supply	BW1181
	ASI Substructure Modules	To connect 2 ASI round cables	BW1182
	ASI Substructure Modules	To connect 1 ASI round cable, round cable for additional supply	BW1183
	ASI Substructure Modules	Lid for standard ASI substructure modules	BW1946





Accessories

Services



Services

Contract Development

In addition to a comprehensive line of products we offer customized automation technology hardware and software solutions – from the first concept to product development and series production, or for any of the intermediate phases.

Product Training

Our product specialists can work with you on-site and help develop your application solution utilizing our ASi components. Depending on your safety requirements, we can implement ASi safety solutions up to Safety Category 4/PLe in accordance with EN ISO 13 849-1.

Both theoretical and hands-on training classes for your employees are available upon request, as is participation in one of our numerous workshops at important trade fairs. If you lack the necessary space, we will be happy to organize a training class at our modern training facilities. Simply get in touch with one of our product specialists.

Commissioning

During your commissioning phase, our technical support group is happy

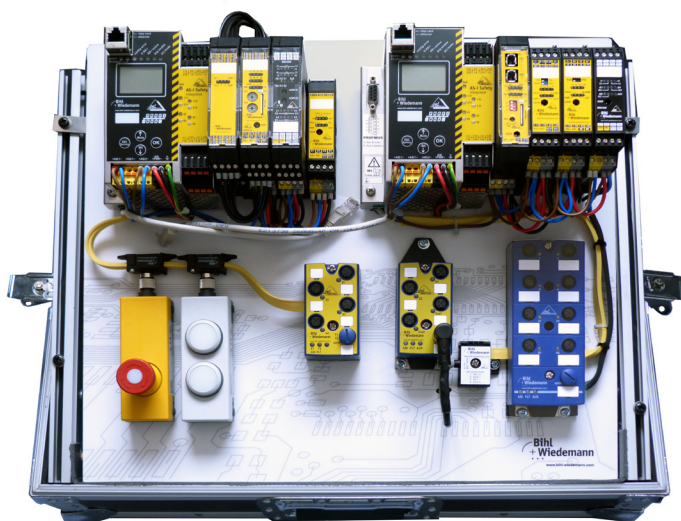


to assist you by phone or email with your commissioning phase. Should you need additional help not covered by these services, please contact one of our product specialists directly.

Training Materials

We provide all the necessary materials for our product training sessions either as hand-outs or online, thus making entry into the AS-Interface world straightforward and easy. Additionally, with the purchase of your ASi device, you not only receive a printed copy of the necessary documentation but also gain access to our documentation server. This provides access to all relevant documentation for the product in question.

Right from the start we will assist you with our compact Quick-Setup guides. On a single sheet, you will be able to easily follow all the important instructions on the relevant topics.



Sample case for product training

Glossary



Glossary

1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies

“yes, max. 4 A/ASi network”:

Cost-effective power for 2 ASi networks with 1 power supply (optionally supply of multiple Single Gateways by 1 power supply).

Operation with short cable lengths with standard 24 V power supply possible.

“no, max. 8 A/ASi network, redundant supply”:

1 ASi power supply per ASi network. Gateway is powered in normal operation from one of the two ASi power supplies.

Should one ASi power supply fail, switching to the other ASi power supply allows all the diagnostics functions to be maintained and the unaffected ASi network continues to operate.

“no, max. 8 A/ASi network”:

1 ASi power supply per ASi network.

ASIMON360

Software to configure safe hardware, to create a safety configuration and to put it into operation.

ASIMON360 Simulation

Software to test an existing ASIMON360 configuration on simulated hardware.

ASi Control Tools360

Software for addressing, configuring and implementing of non-safety hardware and for simple live diagnostics of planned and detected devices in the ASi network.

yes: ASi Control Tools360 software as stand alone version

yes (integrated): all functions of ASi Control Tools360 software are integrated directly into the ASIMON360.

Legacy Version: ASi Control Tools software (legacy version) as stand alone version.

The legacy version does not offer a hardware catalog! It is recommended to use the ASi Control Tools360 with hardware catalog (BW2902).

ASi address

AB Slave (max. 62 AB Slaves/ASi network), 2 AB Slaves (max. 31 modules with 2 AB Slaves), Single Slaves (max. 31 Single Slaves/ASi network), mixed use allowed.

For modules with two slaves the second slave is turned off as long as the first slave is addressed to address “0”. Upon request, slaves are available with specific ASi Slave profiles.



ASi connection

The connection to ASi as well to AUX (auxiliary 24 V power) is made via yellow resp. black ASi profile cable with piercing technology or via M12 socket (in IP20 via clamps).

ASi fault detector

Checks the ASi line for interference effects such as noise, external voltages, ...

Coating



coated



thick coated

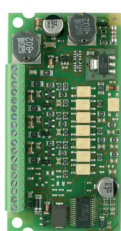
Coating protects components and circuit boards when touched.

Circuit board dimensions

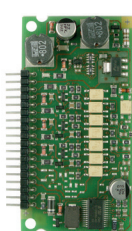
2 holes for assembly angles.

PCB Connection

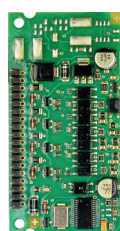
further connection options are available on request.



screw terminals



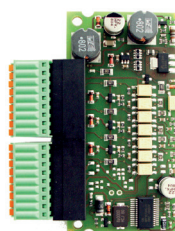
wiring pins



solder lugs



sockets

plug-in spring-type/
screw terminals

connecting wires

Connection

PUR line, oil and abrasion resistant, appropriate for conveyor chains. Further connection options are available on request.





M12 sockets



M12 cable socket, angled



M12 cable socket, straight



M8 cable socket, straight



round cable/connecting wires



2 x round cables/connecting wires 2,5 mm²



profile cable branch



push in terminals



spring type terminals 2,5 mm²

Diagnostic and configuration interface

“Ethernet fieldbus + Ethernet diagnostic”:

Access to ASi Master and Safety Monitor with Bihl+Wiedemann software by using the Ethernet diagnostic interface or Ethernet fieldbus interface.

“Ethernet fieldbus”

Access to ASi Master and Safety Monitor with Bihl+Wiedemann software by using the Ethernet fieldbus interface.

“USB”:

Access to ASi Master and Safety Monitor with Bihl+Wiedemann proprietary software by using the USB interface.

“Ethernet diagnostic”:

Access to ASi Master and Safety Monitor with Bihl+Wiedemann software by using the Ethernet diagnostic interface.

“Ethernet diagnostic + Modbus TCP diagnostic”:

Access to ASi Master and Safety Monitor with Bihl+Wiedemann software or via Modbus TCP by using the Ethernet diagnostic interface.

For a full-fledged Modbus TCP fieldbus interface use one of our Modbus TCP gateways in stainless steel or Modbus TCP gateways with integrated safety monitor.

“Ethernet fieldbus + RS 232”:

Access to ASi Master and Safety Monitor with Bihl+Wiedemann software by using the Ethernet fieldbus interface or by using an adapter cable via RS 232 interface.

“RS 232”:

Access to ASi Master and Safety Monitor with Bihl+Wiedemann software by using an adapter cable via RS 232 interface.



(GSD, GSDML, ... file for the Gateway is built into the web server)

Fieldbus interface

Communication interface between fieldbus and gateway:

interfaces for standardized fieldbus systems in industrial automation.

PROFIBUS ASi gateway: interface for an PROFIBUS fieldbus

PROFIBUS ASi Basic gateway: interface for an PROFIBUS fieldbus

PROFIBUS ASi IP65 gateway: interface for an PROFIBUS fieldbus

PROFINET ASi gateway: interface for an PROFINET fieldbus

EtherNet/IP+ Modbus/TCP ASi gateway: interface for an EtherNet/IP+ Modbus/TCP fieldbus

DeviceNet ASi gateway: interface for an DeviceNet fieldbus

ControlLogix ASi gateway: interface for the ControlLogix backplane

Compact-/MicroLogix ASi gateway: interface for the Compact-/MicroLogix backplane

EtherCat ASi gateway: interface for an EtherCat fieldbus

CC-Link ASi gateway: interface for an CC-Link fieldbus

CANopen ASi gateway: interface for an CANopen fieldbus

RS 485 Modbus ASi gateway: interface for an Modbus/RTU; RS 485 fieldbus

Flat design, installation in cable duct possible

Modules with a flat housing design and with cables which exit the sides make these ideal for installation in cable ducts, cable channels, cable troughs, cable rails or cable trays. Please note the respective housing depth for your particular installation.

Inputs digital, EDM

An externally connected relay (contactor) can be connected via a feedback loop to the Safety Monitor for monitoring purposes.

Input voltage (sensor supply)

inputs are supplied by ASi or by AUX (auxiliary 24 V power). If supplied by ASi, inputs shall not be connected to earth or to external potential.

IO-link

Port Class A

In this type Pin 2 is assigned with an additional digital input.

Port Class B

This type provides an additional power supply and is suitable for the connection of devices that have an increased power demand. In this case, pins 2 and 5 are used to provide the additional power supply.



Internal fuse

“4 A, changeable”:

The internal protection is realized via changeable 4 A fuses (slow-blow) for ASi and AUX. At each M12 connection ≤ 4 A are available.

“1 A, self-resetting”:

The internal protection is realized via self-resetting 1 A fuses for ASi and AUX. At each M12 connection ≤ 1 A are available.

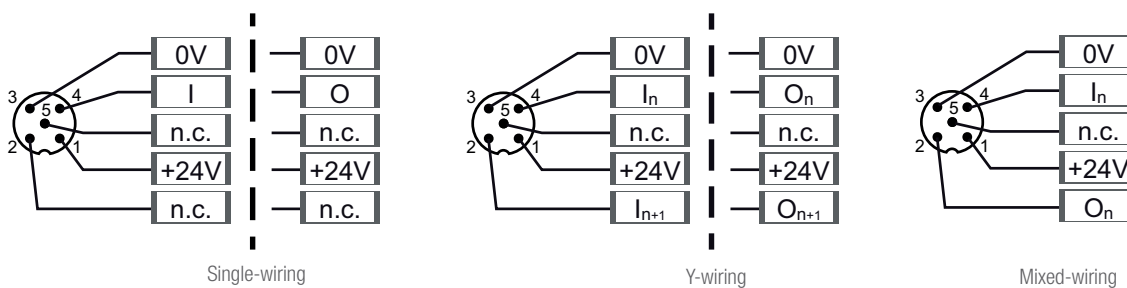
“8 A, slow-blow fuse + 1 A, self-resetting”:

The internal protection is realized via one 8 A slow-blow fuse for AUX and via one self-resetting 1 A fuse for ASi. At each M8 connection (AUX) ≤ 6 are available, at each M8 connection (ASi) ≤ 1 A are available.

LED status display

status of in- and outputs is indicated by LEDs. In addition to that, both ASi LEDs (PWR green and FAULT red) show as usual regarding the ASi Slaves- the status of the ASi Slaves. Uaux is indicated by a green LED.

M12 wiring



either as a single-wiring, Y-wiring or mixed-wiring.

Number of ASi networks, number of ASi Master

Standard devices

“Single Master”:

1 ASi network, 1 ASi Master.

“Double Master”:

2 ASi networks, 2 ASi Masters.

Safety devices

“Single Master”:

1 ASi network, 1 ASi Master.

“Double Master”:

2 ASi networks, 2 ASi Masters.

“Optional ASi Safety coupling circuit”:

2 ASi networks, 1 ASi Master.



Output voltage (actuator supply)

outputs are supplied by ASi or by AUX (auxiliary 24 V power). If supplied by ASi, outputs shall not be connected to earth or to external potential.

Programming in C

Using a C-program offers the possibility to run mini-PLC functions with a gateway.

Protection rating

“IP20”:

Protected against solid foreign bodies having a diameter of 12.5 mm or larger and against finger contact, not protected against water.

“IP40”:

Protected against solid foreign bodies having a diameter of 1.0 mm or larger, protected against access with a wire, no protection against water.

“IP54”:

Protection against dust in damaging amounts, complete protection against contact, protection against splashing water in any angle.

“IP65”:

Dust-tight, full protection against contact, protection against spray water (jet) from any angle.

“IP67”:

Dust-tight, full protection against contact, protection against temporary immersion.

Recognition of duplicate ASi addresses

Detects whether the same address has been assigned to two ASi slaves. Frequent error when using a handheld addressing device.

Round cable

Under normal conditions (no bus termination or repeater), the permissible total length of the ASi segment is max. 100 m. The calculation should take into consideration that the length of the connection cable (round cable) for each connected passive distributor must be doubled. In the case of the active distributors (ASi slaves) however only the one ASi profile cable is counted.



Notes



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