AS-i 3.0 EtherCAT Gateways in Stainless Steel

Bihl+Wiedemann

EtherCAT to AS-i
1 / 2 AS-i 3.0 Master

Recognition of Duplicate AS-i addresses

AS-i Earth Fault Detector integrated

AS-i Noise Detector integrated

(figure similar)

Figure	Type	Art	Fieldbus interface [1]	Number of AS-i networks, number of AS-i Master [2]	1 power supply, 1 gateway for 2 AS-i networks, inexpensive power supplies [3]	Diagnostic and configuration interface [4]	Recognition of duplicate AS-i addresses [5]	AS-i fault detector [6]	Article no.
	EtherCAT AS-i	Gateway	EtherCAT	2 AS-i networks, 2 AS-i Masters	yes, max. 4 A/AS-i network	Ethernet diagnostic	yes	yes	**BWU2720**
	EtherCAT AS-i	Gateway	EtherCAT	2 AS-i networks, 2 AS-i Masters	no, max. 8 A/AS-i network, redundant supply	RS 232	yes	yes	**BWU2163**
	EtherCAT AS-i	Gateway	EtherCAT	1 AS-i Kreis, 1 AS-i Master	no, max. 8 A/AS-i network	RS 232	yes	yes	**BWU2162**

[1] **Fieldbus interface**
Communication interface between fieldbus and gateway: interfaces for standardized fieldbus systems in industrial automation.
PROFINET AS-i Gateway: interface for a PROFINET fieldbus

[2] **Number of AS-i networks, number of AS-i Master**
"Single Master": 1 AS-i network, 1 AS-i Master.
"Double Master": 2 AS-i networks, 2 AS-i Masters.

[3] **1 power supply, 1 gateway for 2 AS-i networks, inexpensive power supplies**
"yes, max. 4 A/AS-i network": Cost-effective power for 2 AS-i 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/AS-i network, redundant supply": 1 power supply per AS-i network. Gateway is powered in normal operation from one of the two AS-i power supplies. Should one AS-i power supply fail, switching to the other AS-i power supply allows all the diagnostics functions to be maintained and the unaffected AS-i network continues to operate.
"no, max. 8 A/AS-i network": 1 power supply per AS-i network.

[4] **Diagnostic and configuration interface**
"Ethernet fieldbus": Access to AS-i Master and Safety Monitor with Bihl+Wiedemann software by using the Ethernet fieldbus interface.

The latest version of the device description file of the gateway is available in the "Downloads" section of the respective device.

[5] **Recognition of duplicate AS-i addresses**
Detects whether the same address has been assigned to two AS-i slaves. Frequent error when using a handheld addressing device.

[6] **AS-i fault detector**
Checks the AS-i line for interference effects such as noise, external voltages, ...

AS-i 3.0 EtherCAT Gateways in Stainless Steel

Article no.	BWU2162 / BWU2163 / BW2720
Interface	
EtherCAT interface	according to IEEE 802.3 (RJ-45 connector)
Baud rates	100 MBaud
AS-i	
AS-i specification	3.0
AS-i cycle time	150µs * (number of slaves + 2)
Operating voltage	30 V_{DC} (20 ... 31,6 V)
Display	
LCD	displaying slave addresses and error messages
LED power (green)	power on
LED ser active (green)	EtherCAT-Network active
LED config error (red)	configuration error
LED U AS-i (green)	AS-i voltage OK
LED AS-i active (green)	AS-i normal operation active
LED prg enable (green)	automatic address programming enabled
LED prj mode (gelb)	master is in configuration mode
Environment	
Applied standards	EN 61 000-6-2 EN 61 000-6-4
Housing	the master is in configuration mode
Operating temperature	0°C … +55°C
Storage temperature	-25°C … +85°C
Pollution degree	2
Protection class IEC 60 529	IP20
Tolerable loading referring to humidity	according to EN 61131-2
Maximum tolerable shock and vibration stress	EN 61 131-2
Voltage of insulation	≥ 500V
Dimensions (W / H / D) in mm	85 / 120 / 83
Weight	500g

Art. no.	Operating current		
	Master power supply approx. 200mA out of AS-i circuit	**Master power supply, max. 200mA out of AS-i circuit 1 (approx. 70mA ... 200mA) max. 200mA out of AS-i circuit 2 (approx. 70mA ... 200mA)**	**Version "1 gateway, 1 power supply for 2 AS-i circuits", approx. 250mA (PELV supply)**
BWU2162	●	–	–
BWU2163	–	●	–
BWU2720	–	–	●

BW2163:
- **Redundant power supply out of AS-i:**
  all fundamental functions of the device remain available even in case of power failure in one of the two AS-i networks

BW2720
- **in version "1 gateway, 1 power supply for 2 AS-i circuits":**
  only 1 gateway + 1 AS-i power supply for 2 AS-i networks

Accessories:
- **Software "AS-i Control Tools" with serial cable for AS-i master in stainless steel (art. no. BW1602)**
- **Cross-Link cable (art. no. BW1304)**
- **Power supplies, e.g.: AS-i power supply, 4 A (art. no. BW1649), AS-i power supply, 8 A (art. no. BW1997)**
  (further power supply units can be found at _www.bihl-wiedemann.de/en/products/accessories/power-supplies_)

Bihl+Wiedemann GmbH · Floßwörthstr. 41 · D-68199 Mannheim · Phone: (+49) 621/33996-0 · Fax: (+49) 621/3392239 · eMail: mail@bihl-wiedemann.de

page 2 | Mannheim, 21.9.17 | We reserve the right to change any data | www.bihl-wiedemann.de