

Active Distributor ASi-5/IO-Link Master, IP67, M12



Active Distributor ASi-5/IO-Link Master with 1 or 2 Ports, IP67, M12

New standard ASi-5

up to 2 IO-Link masters in one housing

IO-Link port class A and IO-Link port class B in one housing

Power supply of IO-Link ports out of AUX

Periphery connection via M12 cable sockets, straight, 5 poles



(figure similar)



Figure	Number of IO-Link ports	IO-Link port class A ⁽¹⁾	IO-Link port class B ⁽²⁾	Sensor supply (IO-Link supply and input/output voltage) ⁽³⁾	Actuator supply (for ports class B) ⁽⁴⁾	Connection ⁽⁵⁾	ASi address ⁽⁶⁾	Article No.
	2	1	1	out of AUX	out of AUX	2 x M12 cable sockets, straight, 5 poles	1 ASi-5 address	BWU4077
	1	-	1	out of AUX	out of AUX	1 x M12 cable socket, straight, 5 poles	1 ASi-5 address	BWU4088

- (1) **Port class A (M12):** Pin 4 configurable (IO-Link/DI/DO), additional digital input at pin 2. Compatible with 3 pol IO-Link devices (M8).
- (2) **Port class B (M12):** Pin 4 configurable (IO-Link/DI/DO), additional power supply (galvanically isolated) for IO-Link devices at pins 2 and 5. Compatible with 3 pol IO-Link devices (M8).
- (3) **Sensor supply (IO-Link supply and input/output supply)**
IO-Link and additional inputs/outputs are supplied by ASi or by AUX (auxiliary 24 V power). If supplied by ASi, inputs can neither be connected to earth nor to external potential.
- (4) **Actuator supply (for ports class B)**
Connection via M12: For ports class B the supply of actuators is provided by an additional (galvanically isolated) power supply by AUX (auxiliary 24 V power).
Connection via clamps: If connected IO-Link nodes with port class B need a higher current consumption, additionally they can be supplied directly via the power supply.
- (5) **Connection:** further connection options are available on request.

M12 cable socket, angled	M12 cable socket, straight	M8 cable socket, straight	round cable / connecting wires	Push in terminals
PUR line: oil resistant				

- (6) **ASi address**
AB address (max. 62 AB addresses/ASi network), 2 AB addresses (max. 31 modules with 2 AB addresses), single addresses (max. 31 single addresses/ASi network), 1 ASi-5 address (max. 62 ASi-5 addresses/ASi network), mixed use allowed.
For modules with 2 nodes, the 2nd node is switched off as long as the 1st node is addressed "0".
Upon request, nodes are available with specific ASi address profiles.

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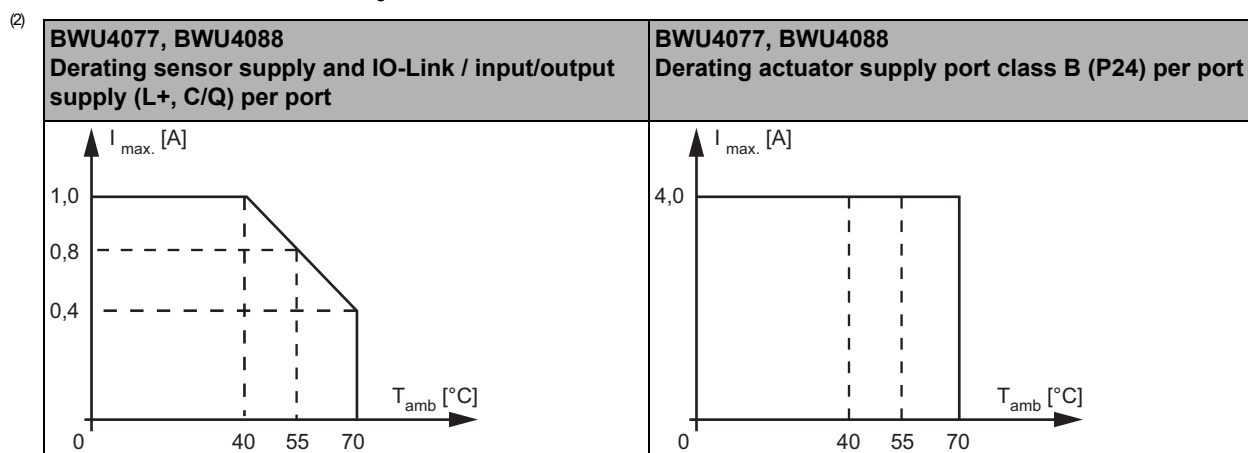


Article No.		BWU4077		BWU4088	
Connection					
ASi/AUX connection		profile cable and piercing			
Periphery connection		2 x M12 cable sockets, straight, 5 poles		1 x M12 cable socket, straight, 5 poles	
Round cable		1,0 m			
		max. allowed tensile strain 10 N			
ASi					
Address		1 ASi-5 address			
Operating voltage		30 V (18 ... 31.6 V)			
Required master profile		M5			
Since ASi specification		5			
ASi process data width		8 byte ⁽¹⁾		4 byte ⁽¹⁾	
Max. current consumption		35 mA			
Max. current consumption without sensor/actuator supply		35 mA			
AUX					
Voltage		24 V (18 ... 30 V)			
Max. current consumption		6 A		5 A	
IO-Link					
Number		1 port class A + 1 port class B		1 port class B	
		2 x C/Q (IO-Link communication or configurable as digital input or digital output) + 1 x digital inputs		1 x C/Q (IO-Link communication or configurable as digital input or digital output)	
IO-Link data rate		COM1 / COM2 / COM3			
IO-Link data width		per port: up to 32 byte process data + 1 byte PQI			
IO-Link revision		1.1			
Switching threshold		U<5 V (low) U>15 V (high)			
Power supply		out of AUX			
Power supply of attached sensors (L+)	up to +40 °C	500 mA per port, Σ(L+, C/Q, P24) 6 A ⁽²⁾		500 mA per port, Σ(L+, C/Q, P24) 5 A ⁽²⁾	
	at +55 °C	400 mA per port, Σ(L+, C/Q, P24) 5,6 A ⁽²⁾		400 mA per port, Σ(L+, C/Q, P24) 4,8 A ⁽²⁾	
	at +70 °C	200 mA per port, Σ(L+, C/Q, P24) 4,8 A ⁽²⁾		200 mA per port, Σ(L+, C/Q, P24) 4,4 A ⁽²⁾	
IO-Link / input/output current (C/Q)	up to +40 °C	500 mA per port, Σ(L+, C/Q, P24) 6 A ⁽²⁾		500 mA per port, Σ(L+, C/Q, P24) 5 A ⁽²⁾	
	at +55 °C	400 mA per port, Σ(L+, C/Q, P24) 5,6 A ⁽²⁾		400 mA per port, Σ(L+, C/Q, P24) 4,8 A ⁽²⁾	
	at +70 °C	200 mA per port, Σ(L+, C/Q, P24) 4,8 A ⁽²⁾		200 mA per port, Σ(L+, C/Q, P24) 4,4 A ⁽²⁾	
Max. actuator supply for port class B (P24)	up to +40 °C	4 A per port, Σ(L+, C/Q, P24) 6 A ⁽²⁾		4 A per port, Σ(L+, C/Q, P24) 5 A ⁽²⁾	
	at +55 °C	4 A per port, Σ(L+, C/Q, P24) 5,6 A ⁽²⁾		4 A per port, Σ(L+, C/Q, P24) 4,8 A ⁽²⁾	
	at +70 °C	4 A per port, Σ(L+, C/Q, P24) 4,8 A ⁽²⁾		4 A per port, Σ(L+, C/Q, P24) 4,4 A ⁽²⁾	
Display					
LED ASi (green)		on: ASi voltage OK flashing: ASi voltage on, but peripheral fault ⁽³⁾ or address 0 off: no ASi voltage			
LED FLT/FAULT (red)		on: ASi address 0 or ASi node offline flashing: peripheral fault ⁽³⁾ off: ASi node online			
LED AUX (red/green)		green: AUX voltage OK red: AUX voltage < 18 V			
LEDs C/Q1 ... C/Qx (red/green)		state of IO-Link ports 1, 2: green: IO-Link communication OK yellow: switching signal at input or output at pin4 red: IO-Link communication error or short-circuit		state of IO-Link port 1: green: IO-Link communication OK yellow: switching signal at input or output at pin4 red: IO-Link communication error or short-circuit	
LEDs I1 (yellow)		state of input I1		-	

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Article No.	BWU4077	BWU4088
Environment		
Applied standards	EN 61000-6-2 EN 61000-6-3 EN 61131-2 EN 60529	
It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe	yes ⁽⁴⁾	
Operating altitude	max. 2000 m	
Ambient temperature	-30 °C ... +70 °C ^{(2) (5)}	
Storage temperature	-25 °C ... +85 °C	
Housing	plastic, for screw mounting, suitable for cable ducts (≥35 mm installation depth)	
Pollution degree	2	
Protection category	IP67	
Maximum tolerable shock and vibration stress	≤15g, T≤11 ms 10 ... 55 Hz, 0,5 mm amplitude	
Insulation voltage	≥500 V	
Weight	100 g	
Dimensions (W / H / D) in mm	60 / 45 / 35	

(1) The ASi-5 process data bandwidth depends on the ASi-5 profile. Further selectable profiles can be found in the hardware catalog of the Bihl+Wiedemann Suite or in the configuration manual.



(3) See table "Peripheral fault indication"

(4) The module is suitable for use in paths with a passively safe-switched AUX cable, since an exclusion of errors can be assumed for the connection of the two ASi and AUX potentials.

(5) Down to -25 °C with flexibly mounted cable, -30 °C only with fixed mounted cable.

UL-specifications (UL 61010-1 and UL 61010-2-201)	
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External protection	An isolated source with a secondary open circuit voltage of ≤30 V _{DC} with a 3 A maximum over current protection. Over current protection is not required when a class 2 source is employed.
In general	UL mark does not provide UL certification for any functional safety rating or aspects of the above devices.

Article no.	Peripheral fault indication			
	Overload sensor supply	Output short circuited	AUX voltage missing	IO-Link error/event
BWU4077	•	•	•	•
BWU4088	•	•	•	•

Programming

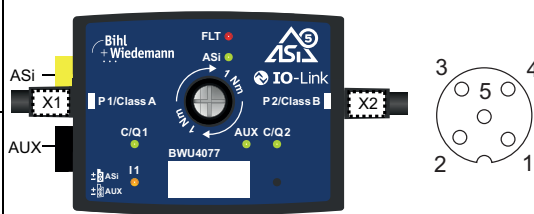
- ASi-5 bit assignment: default 2 byte per port, configurable via ASi-5.

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Pin assignment

Signal name	Explanation
P24 _{ext.out}	actuator supply, out of external voltage, positive pole
N24 _{ext.out}	actuator supply, out of external voltage, negative pole
I _x	digital input x
L ⁺ _{ext.out}	IO-Link sensor supply out of external voltage, positive pole
L ⁻ _{ext.out}	IO-Link sensor supply, out of external voltage, negative pole
C/Q _x _{ext.out}	connection x, optionally for IO-Link communication, input or output

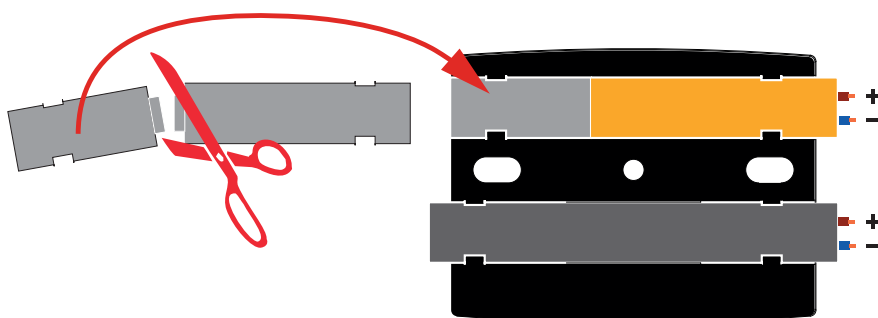
Connections: M12 cable sockets, straight, 5 poles

Article no.	M12 connection	Function	Pin1 (BN)	Pin2 (WH)	Pin3 (BU)	Pin4 (BK)	Pin5 (GY)	
BWU4077	X1	IO-Link port class A	L ⁺ _{1 ext.} .out	I1	L ⁻ _{1 ext.} .out	C/Q1 ext.out	n.c.	
	X2	IO-Link port class B	L ⁺ _{2 ext.} .out	P24 _{ext.} .out	L ⁻ _{2 ext.} .out	C/Q2 ext.out	N24 ext.out	
BWU4088	X1	IO-Link port Class B	L ⁺ _{1 ext.} .out	P24 _{ext.} .out	L ⁻ _{1 ext.} .out	C/Q1 ext.out	N24 ext.out	

Line termination with sealing profile



max. IP54



Accessories:

- Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4925)