

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	Type	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⁾	ASi connection ⁽⁵⁾	Connection ⁽⁶⁾	ASi address ⁽⁷⁾	Article No.
	IP67, 35 mm deep, ASi-5	2	1	1	out of AUX	out of AUX	ASi profile cable	2 x M12 cable sockets, straight, 5 poles	1 ASi-5 address	BWU4077
	IP67, 35 mm deep, ASi-5	1	-	1	out of AUX	out of AUX	ASi profile cable	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) **ASi connection**
The connection to ASi as well to AUX (auxiliary 24 V power) is made via yellow or black ASi profile cable with piercing technology or via M12 socket (in IP20 via clamps).
- (6) **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				

- (7) **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.

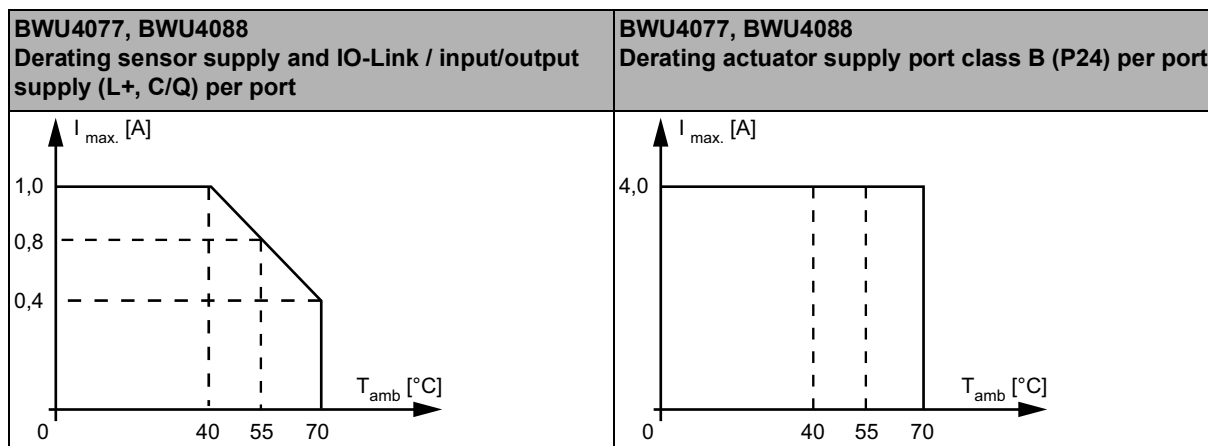
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Article No.	BWU4077		BWU4088
Connection			
ASi/AUX connection	profile cable and piercing		
Periphery connection	2 x M12 cable sockets, straight, 5 poles	1 x M12 cable socket, straight, 5 poles	
Round cable	1,0 m		
	max. allowed tensile strain 10 N		
ASi			
Address	1 ASi-5 address		
Operating voltage	30 V (18 ... 31.6 V)		
Required master profile	M5		
Since ASi specification	5		
Process data width	2 ... 32 bytes	4 ... 32 bytes	
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	
Configurable I/O's			
Number	1 port class A + 1 port class B	1 port class B	
IO-Link data rate	COM1 / COM2 / COM3		
IO-Link data width	0 ... 32 bytes		
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, $\Sigma(L+, C/Q, P24)$ 6 A ⁽¹⁾	500 mA per port, $\Sigma(L+, C/Q, P24)$ 5 A ⁽¹⁾
	at +55 °C	400 mA per port, $\Sigma(L+, C/Q, P24)$ 5,6 A ⁽¹⁾	400 mA per port, $\Sigma(L+, C/Q, P24)$ 4,8 A ⁽¹⁾
	at +70 °C	200 mA per port, $\Sigma(L+, C/Q, P24)$ 4,8 A ⁽¹⁾	200 mA per port, $\Sigma(L+, C/Q, P24)$ 4,4 A ⁽¹⁾
IO-Link / input/output current (C/Q)	up to +40 °C	500 mA per port, $\Sigma(L+, C/Q, P24)$ 6 A ⁽¹⁾	500 mA per port, $\Sigma(L+, C/Q, P24)$ 5 A ⁽¹⁾
	at +55 °C	400 mA per port, $\Sigma(L+, C/Q, P24)$ 5,6 A ⁽¹⁾	400 mA per port, $\Sigma(L+, C/Q, P24)$ 4,8 A ⁽¹⁾
	at +70 °C	200 mA per port, $\Sigma(L+, C/Q, P24)$ 4,8 A ⁽¹⁾	200 mA per port, $\Sigma(L+, C/Q, P24)$ 4,4 A ⁽¹⁾
Max. actuator supply for port class B (P24)	up to +40 °C	4 A per port, $\Sigma(L+, C/Q, P24)$ 6 A ⁽¹⁾	4 A per port, $\Sigma(L+, C/Q, P24)$ 5 A ⁽¹⁾
	at +55 °C	4 A per port, $\Sigma(L+, C/Q, P24)$ 5,6 A ⁽¹⁾	4 A per port, $\Sigma(L+, C/Q, P24)$ 4,8 A ⁽¹⁾
	at +70 °C	4 A per port, $\Sigma(L+, C/Q, P24)$ 4,8 A ⁽¹⁾	4 A per port, $\Sigma(L+, C/Q, P24)$ 4,4 A ⁽¹⁾
Display			
LED ASi (green)	on: ASi voltage on flashing: AS-i voltage on, but peripheral fault ⁽²⁾ or address 0 off: no ASi voltage		
LED FLT/FAULT (red)	on: ASi address 0 or node offline flashing: peripheral fault ⁽²⁾ off: node online		
LED AUX (red/green)	green: AUX voltage OK red: AUX voltage < 18 V		
LEDs C/Q1 ... C/Qn (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	state of IO-Link ports 1: green: IO-Link communication OK yellow: switching signal at input or output at pin4 red: IO-Link communication error	
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	
Can be used in passively safe paths up to SIL3/PLe	yes ⁽³⁾	
Operating altitude	max. 2000 m	
Ambient temperature	-30 °C ... +70 °C ⁽¹⁾⁽⁴⁾	
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)



(2) See table "Peripheral fault indication"

(3) The module is suitable for use in passively safe paths because an exclusion of errors can be assumed for the connection of the two potentials, ASi and AUX.

(4) 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	actuator supply, out of external voltage, positive pole
N24	actuator supply, out of external voltage, negative pole
Ix	digital input x
L+	IO-Link sensor supply out of external voltage, positive pole
L-	IO-Link sensor supply, out of external voltage, negative pole
C/Qx	connection x, optionally for IO-Link communication, input or output

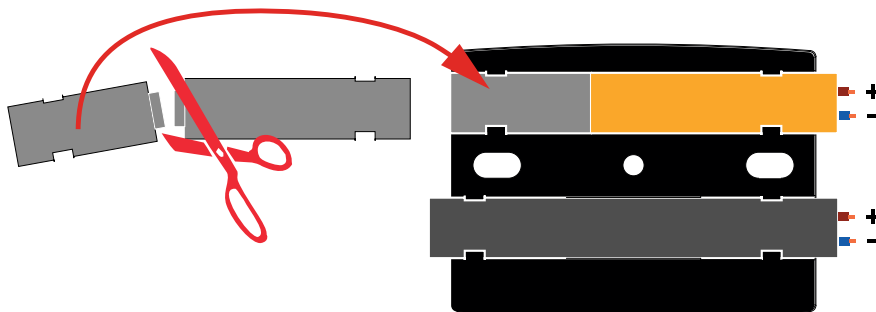
Connections: M12 cable sockets, straight, 5 poles

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

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. BW4708)