

ASi-5 Digital I/O Modules, IP67, M12



New standard ASi-5


ASi-5 – Great data bandwidth, short cycle times

Compatible with ASi modules of all ASi generations

8 Outputs



(figure similar)

Figure	Inputs digital	Outputs digital	M12 connection ⁽¹⁾	Input voltage (sensor supply) ⁽²⁾	Output voltage (actuator supply) ⁽³⁾	ASi connection ⁽⁴⁾	ASi address ⁽⁵⁾	Max. output current	Art. no.
	–	8 x electronic	single	–	out of AUX	ASi profile cable	1 ASi-5 address	O1 ... O6: 1 A O7 ... O8: 2 A	BWU3894

(1) **M12 wiring:**

Single wiring: 1 input or output per connection.

Y wiring: 2 inputs or outputs per connection.

Mixed wiring: 1 input and 1 output per connection.

(2) **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.

(3) **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

(4) **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).

(5) **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) ASi-5 address (max. 62 ASi-5 addresses/ASi network), mixed use allowed (upon request, ASi nodes are available with specific ASi address profiles).

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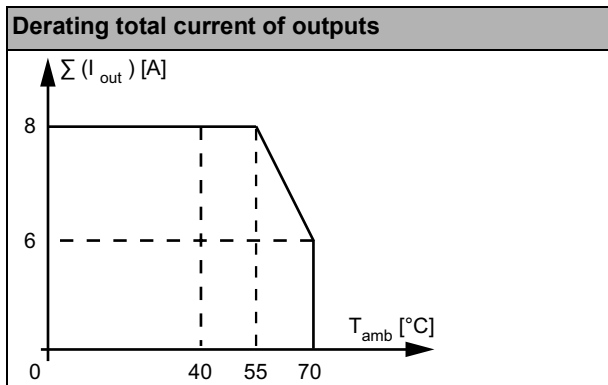
Article No.		BWU3894
General data		
Device type		output
Connection		
ASi/AUX connection		profile cable and piercing
Periphery connection		M12, single wiring
Length of connector cable		unlimited ⁽¹⁾
ASi		
Address		1 ASi-5 address
As of ASi specification		ASi-5
Operating voltage		30 V (18 ... 31.6 V)
Max. current consumption		70 mA
Max. current consumption without sensor/ actuator supply		70 mA
AUX		
Operating voltage		24 V (18 ... 30 V)
Max. current consumption		8 A
Output		
Number		8
Power supply		out of AUX
Output		short-circuit and overload protected according to EN 61131-2
Max. output current	up to +40 °C	O1 ... O6: 1 A per output, O7 ... O8: 2 A per output, $\Sigma(\text{Out})$ 8 A ⁽²⁾
	at +55 °C	
	at +60 °C	O1 ... O6: 1 A per output, O7 ... O8: 2 A per output, $\Sigma(\text{Out})$ 6 A ⁽²⁾
Display		
LED ASi (green)		on: ASi voltage on 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: node online
LED AUX (green)		on: 24 V _{DC} AUX off: no 24 V _{DC} AUX
LEDs O1 ... On (yellow)		yellow: state of outputs O1 ... O8
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 ... +55 °C (up to max. +70 °C) ⁽⁵⁾
Storage temperature		-25 °C ... +85 °C
Housing		plastic, for screw mounting
Pollution degree		2
Protection category		IP67
Tolerable loading referring to humidity		according to EN 61131-2
Max. tolerable shock load		30g, 11 ms, acc. EN 61131-2
Max. tolerable vibration stress		5 ... 8 Hz 50 mm _{pp} /8 ... 500 Hz 6g, acc. EN 61131-2
Insulation voltage		≥ 500 V
Weight		200 g
Dimensions (W / H / D) in mm		60 / 151 / 31

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(1) Loop resistance $\leq 150 \Omega$

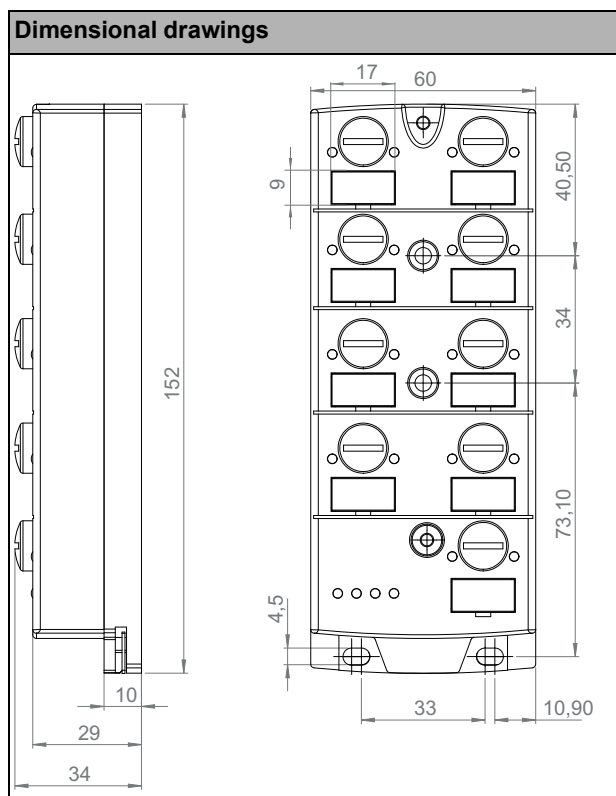
(2)



(3) See table "Peripheral fault indication"

(4) BWU3894 from ID no. 18283; 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) Maximum ambient operating temperature +55 °C according UL certificate for the use in the USA and Canada



Article no.	Peripheral fault indication		
	Overload sensor supply	Output short circuited	AUX voltage missing
BWU3894	-	•	•

UL-specifications (UL508)	
BWU3894	
External protection	An isolated source with a secondary open circuit voltage of $\leq 30 V_{DC}$ 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.

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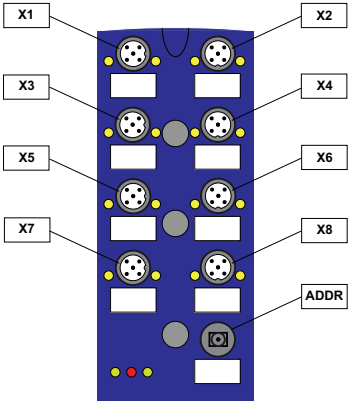
Programming: ASi bit assignment

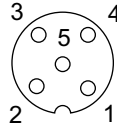
Article no.	Byte	Bit							
		D7	D6	D5	D4	D3	D2	D1	D0
		output							
BWU3894	0	O8	O7	O6	O5	O4	O3	O2	O1

Pin assignment

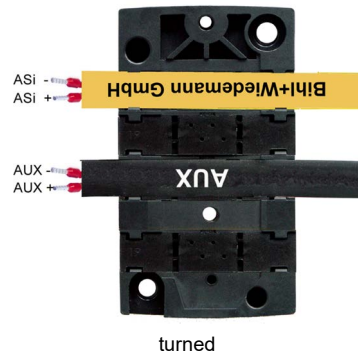
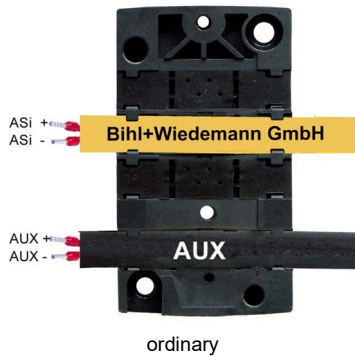
Signal name	Explanation
Ox	digital output x
24V _{ext out}	power supply, out of external voltage, positive pole (AUX, actuator supply)
0V _{ext out}	power supply, out of external voltage, negative pole (AUX, actuator supply)
ASi +, ASi -	connection to ASi bus
n.c. (not connected)	not connected

Connections							
Article no.	M12 connection	Marking	Pin1	Pin2	Pin3	Pin4	Pin5
BWU3894	X1	O1	0 V _{ext out}	n.c.	0 V _{ext out}	O1	n.c.
	X2	O2	0 V _{ext out}	n.c.	0 V _{ext out}	O2	n.c.
	X3	O3	0 V _{ext out}	n.c.	0 V _{ext out}	O3	n.c.
	X4	O4	0 V _{ext out}	n.c.	0 V _{ext out}	O4	n.c.
	X5	O5	0 V _{ext out}	n.c.	0 V _{ext out}	O5	n.c.
	X6	O6	0 V _{ext out}	n.c.	0 V _{ext out}	O6	n.c.
	X7	O7	0 V _{ext out}	n.c.	0 V _{ext out}	O7	n.c.
	X8	O8	0 V _{ext out}	n.c.	0 V _{ext out}	O8	n.c.
	ADDR (protection cap)	connection for ASi-5 addressing plug					





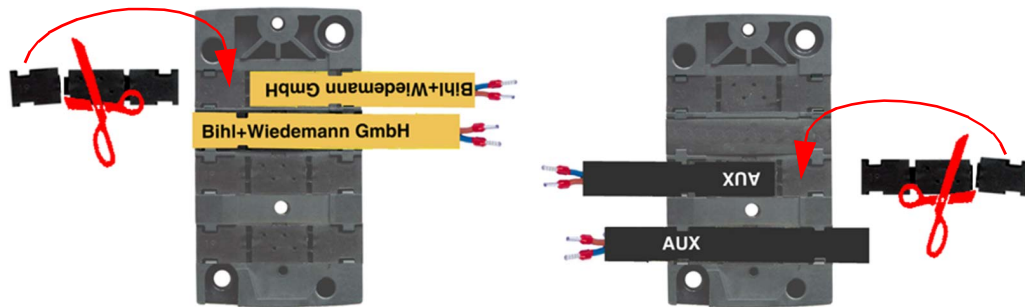
Mounting according to cable direction



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Line termination with sealing profiles / as junction



Accessories:

- ASi Substructure Module in IP67 (art. no. BWU2351)
- ASi Substructure Module in IP67 (art. no. BWU3516)
- Universal protection cap ASi-5/ASi-3 for M12 sockets, IP67 (art. no. BW4056)
- Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4925)



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