Digital Modules AS-i, IP67, M8

2 x 2 connectors for profile cable

space saving,
8 x M8 connections in one housing

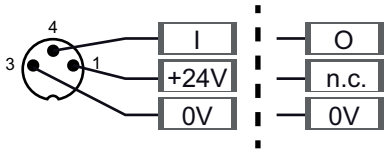
M8 sockets optionally with 3 poles or 5 poles

high protection category IP67

(Figure similar)

Figure	Type	Inputs digital	Outputs digital	M8 connection (1)	Input voltage (sensor supply) (2)	Output voltage (actuator supply) (3)	AS-i connection (4)	AS-i address (5)	Max. output current	Art. no.
	IP67, 8 x M8, 3 poles	8	–	Single	out of AS-i	–	AS-i profile cable	2 AB slaves	–	**BW3521**

(1) **M8 socket, 3 poles:** single wiring
Single wiring



(2) **Input voltage (sensor supply):** inputs are supplied by AS-i or by AUX (auxiliary 24 V power). If supplied by AS-i, inputs shall not be connected to earth or to external potential.

(3) **Output voltage (actuator supply):** outputs are supplied by AS-i or by AUX (auxiliary 24 V power). If supplied by AS-i, outputs shall not be connected to earth or to external potential

(4) **AS-i connection:** the connection to AS-i as well to AUX (auxiliary 24 V power) is made via yellow resp. black AS-i profile cable with piercing technology or via M12 socket (in IP20 via clamps).

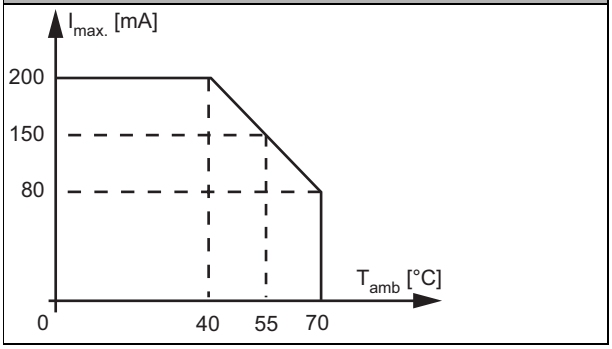
(5) **AS-i address:** 1 AB Slave (max. 62 AB Slaves/AS-i network), 2 AB Slaves (max. 31 modules with 2 AB Slaves), Single Slaves (max. 31 Single Slaves/AS-i network), mixed use allowed.
For modules with two slaves the second slave is turned off as long as the first slave is addressed to address "0".
Upon request, slaves are available with specific AS-i Slave profiles.

Article No.		BW3521
General data		
Device type		input
Connection		
AS-i/AUX connection		profile cable and piercing
Periphery connection		M8, 3 poles, single wiring
Length of connector cable		unlimited (1)
AS-i		
Profile		Slave 1: S-0.A.E (ID1=7 default), Slave 2: S-0.A.E (ID1=6 default)
Address		2 AB slaves
Required Master profile		≥M3
As of AS-i specification		2.1
Operating voltage		30 V (18 … 31.6 V)
Max. current consumption		270 mA
Max. current consumption without sensor/ actuator supply		70 mA
Input		
Number		8
Power supply		out of AS-i
Sensor supply		short-circuit and overload protected according to EN 61131-2
Power supply of attached sensors	up to +40	200 mA (2)
	at +55 °C	150 mA (2)
	at +70 °C	80 mA (2)
Switching threshold		U<5 V (low) U>15 V (high)
Display		
LED ASI/FLT (D1) (red/green)		green: slave online red: slave offline yellow/red flashing: address 0 red/green flashing: peripheral fault (3)
LED ASI/FLT D2 (red/green)		green: slave online red: slave offline yellow/red flashing: address 0 red/green flashing: peripheral fault (3) red flashing: slave 2 is switched off, because slave 1 is offline
LEDs I1 ... In (yellow)		state of inputs I1 ... I8
Environment		
Applied standards		EN 61000-6-2 EN 61000-6-3 EN 61131-2 EN 60529
Operating altitude		max. 2000 m
Ambient temperature		-30 °C … +55 °C (bis max. +70 ° C) (2)
Storage temperature		-25 °C … +85 °C
Housing		plastic, for DIN rail mounting
Pollution degree		2
Protection category		IP67 (4)
Tolerable loading referring to humidity		acc. EN 61131-2
Max. tolerable shock load		30*g*, 11 ms, acc. EN 61131-2
Max. tolerable vibration stress		5 ... 8 Hz 50 mm_{pp}/8 ... 500 Hz 6*g*, acc. EN 61131-2
Insulation voltage		≥500 V
Weight		100 g
Dimensions (W / H / D) in mm		45 / 80 / 36

(1) Loop resistance ≤150 Ω

(2)

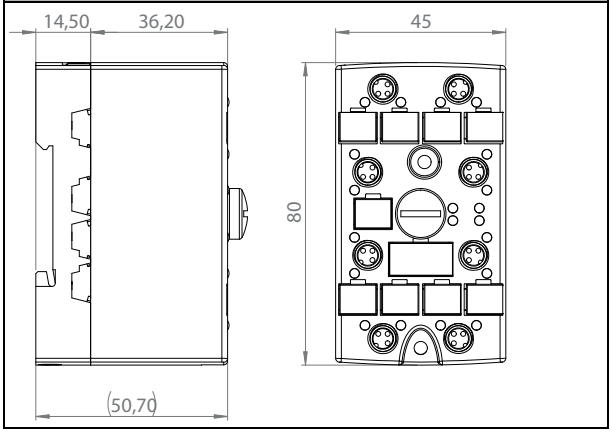
BW3521
Derating power supply of attached sensors



(3) **See table "Peripheral fault indication"**

(4) Protection category IP67 can only be achieved if all open connections are sealed with suitable end caps fulfilling the same protection category.

Dimensional drawings



Article no.	Peripheral fault indication		
	Overload sensor supply	Output short circuited	AUX voltage missing
BW3521	•	–	–

Programming	AS-i bit assignment			
Bit	**D0**	**D1**	**D2**	**D3**
	input			
BW3521	Slave 1: I1	Slave 1: I2	Slave 1: I3	Slave 1: I4
	Slave 2: I5	Slave 2: I6	Slave 2: I7	Slave 2: I8

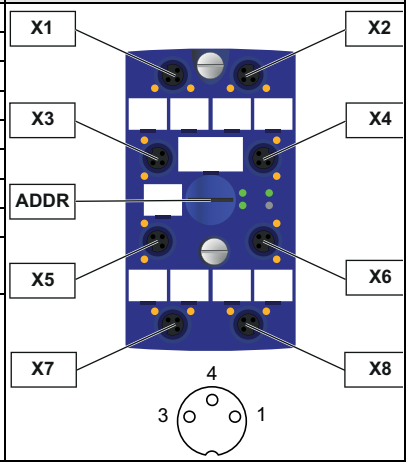
Programming	Parameter bit			
Bit	**P0**	**P1**	**P2**	**P3**
BW3521	0= off / 1= on (peripheral fault)	0= on / 1= off (data input filter 128µs)	0= on / 1= off (synchronous I/O mode)	not used

Pin assignment

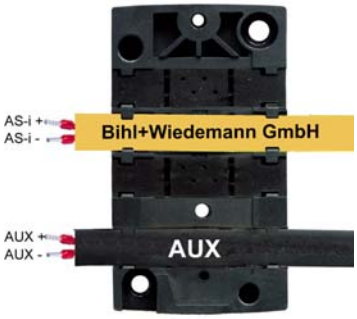
Signal name	Explanation
Ix	digital input x
$24V_{out\ of\ AS\text{-}i}$	power supply, out of AS-i, positive pole (sensor supply)
$0V_{out\ of\ AS\text{-}}$	power supply, out of AS-i, negative pole (sensor supply)
AS-i+, AS-i-	connection to AS-i bus
n.c. (not connected)	not connected

Connections

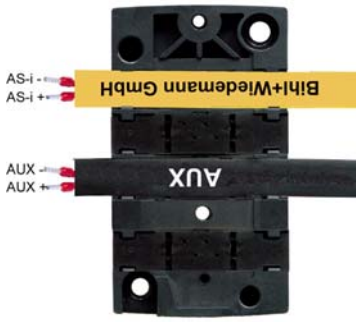
Article no.	M8 connection	Marking	Pin1	Pin2	Pin3	Pin4	Pin5
BW3521	**X1**	I1	24 $V_{out\ of\ AS\text{-}i}$	–	0 $V_{out\ of\ AS\text{-}i}$	I1	–
	X2	I2	24 $V_{out\ of\ AS\text{-}i}$	–	0 $V_{out\ of\ AS\text{-}i}$	I2	–
	X3	I3	24 $V_{out\ of\ AS\text{-}i}$	–	0 $V_{out\ of\ AS\text{-}i}$	I3	–
	X4	I4	24 $V_{out\ of\ AS\text{-}i}$	–	0 $V_{out\ of\ AS\text{-}i}$	I4	–
	X5	I5	24 $V_{out\ of\ AS\text{-}i}$	–	0 $V_{out\ of\ AS\text{-}i}$	I5	–
	X6	I6	24 $V_{out\ of\ AS\text{-}i}$	–	0 $V_{out\ of\ AS\text{-}i}$	I6	–
	X7	I7	24 $V_{out\ of\ AS\text{-}i}$	–	0 $V_{out\ of\ AS\text{-}i}$	I7	–
	X8	I8	24 $V_{out\ of\ AS\text{-}i}$	–	0 $V_{out\ of\ AS\text{-}i}$	I8	–
	ADDR (M12 dummy plug)	connection for AS-i addressing device					



Mounting according to cable direction

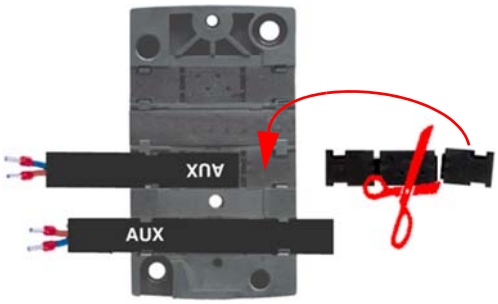


ordinary



turned

Line termination with sealing profiles / as junction



Accessories:

- **AS-i substructure module for 4 channel module in 45 mm housing (art. no. BWU2349)**
- **AS-i substructure module (CNOMO) for 4 channel module in 45 mm housing (art. no. BWU2350)**
- **Protection caps for unused M12 sockets (art. no. BW2368)**
- **Protection caps for unused M8 sockets (art. no. BW3818)**
- **Sealing profile IP67 (IDC plug), 45 mm (art. no. BW3283)**