

2 x 2 connectors for profile cable

2 color LEDs per output,
state (yellow), overload (red) (optional)



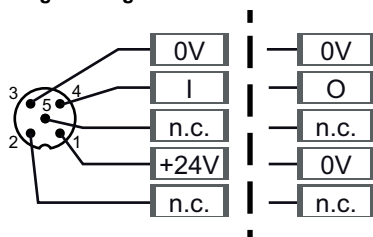
(Figure similar)

Figure	Type	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.
	IP67, 4 x M12	4	2 x electronic, special ASi bit assignment	Y	out of ASi	out of AUX	ASi profile cable	1 AB address	1 A	BWU3449

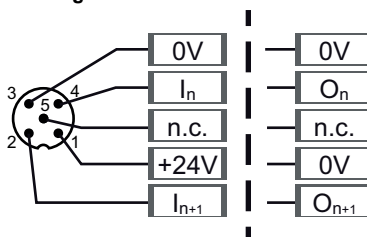
Replacement, ASi Version 2.0: single address (digital) are also working with the first generation ASi masters.

(1) **M12 wiring:** either as a single-wiring, Y-wiring or mixed-wiring.

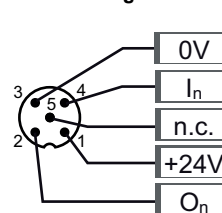
Single-wiring



Y-wiring



Mixed-wiring



(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

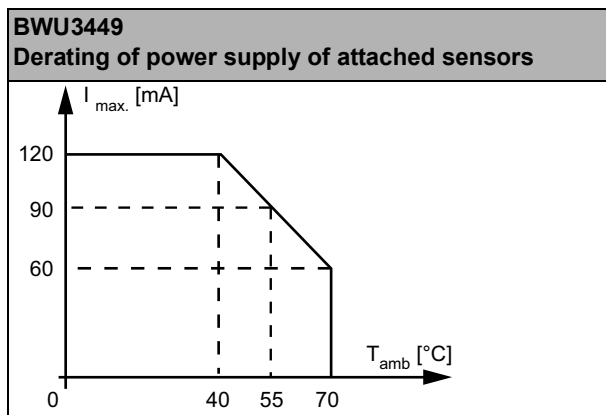
(4) **ASi connection:** the connection to ASi as well to AUX (auxiliary 24 V power) is made via yellow resp. black ASi profile cable with piercing technology or via M12 socket (in IP20 via clamps).

(5) **ASi address:** AB addresses (max. 62 AB addresses/ASi network), 2 AB addresses (max. 31 modules with 2 AB addresses), Single addresses (max. 31 Single addresses/ASi network), mixed use allowed.

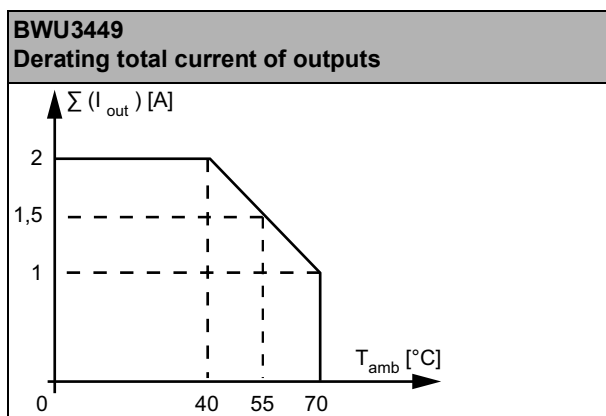
Article No.		BWU3449
General data		
Device type		input / output
Connection		
ASi/AUX Connection		profile cable and piercing
Periphery connection		M12, Y wiring
ASi		
Profile		S-7.A.7 (ID1=F fixed)
Address		1 AB address
Required Master profile		≥M4
As of ASi specification		3.0
Operating voltage		30 V (18 ... 31.6 V)
Max. current consumption		165 mA
Max. current consumption without sensor/ actuator supply		45 mA
AUX		
Operating voltage		24 V (18 ... 30 V)
Max. current consumption		2 A
Input		
Number		2
Power supply		out of ASi
Power supply of attached sensors	up to +40 °C	120 mA ⁽¹⁾
	at +55 °C	90 mA ⁽¹⁾
	at +70 °C	60 mA ⁽¹⁾
Switching threshold		U < 5 V (low) U > 15 V (high)
Output		
Number		2
Power supply		out of AUX
Max. output current	up to +40 °C	1 A per output, Σ (Out) 2 A ⁽²⁾
	at +55 °C	1 A per output, Σ (Out) 1,5 A ⁽²⁾
	at +70 °C	1 A per output, Σ (Out) 1 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: node address 0 or node offline flashing: peripheral fault ⁽³⁾ off: node online
LED AUX (green)		on: 24 V _{DC} AUX off: no 24 V _{DC} AUX
LEDs I1, I2 (yellow)		state of inputs I1 ... I2
LEDs O1, O2 (yellow/red)		yellow: state of outputs O1, O2 red: overload

Article No.	BWU3449
Environment	
Applied standards	EN 61000-2 EN 61000-3 EN 61131-2 EN 60529
It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe	no ⁽⁴⁾
Operating altitude	max. 2000 m
Ambient temperature	-30 °C ... +55 °C ⁽¹⁾ ⁽²⁾ ⁽⁵⁾ (up to max. +70 °C)
Storage temperature	-30 °C ... +85 °C
Housing	plastic, for screw mounting
Protection category	IP67
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	100 g
Dimensions (W / H / D) in mm	45 / 80 / 42

(1)



(2)



(3) See table "Peripheral fault indication"

(4) The module is not suitable for use in paths with a passively safe-switched AUX cable, since an exclusion of errors cannot be assumed for the connection of the two ASi and AUX potentials.

If the module is supplied from an unswitched AUX cable, this has no influence on the safety consideration for the paths with passively safe-switched AUX cable. In an ASi circuit, paths supplied from a passively safe-switched AUX cable and paths supplied from unswitched AUX potential can be used together.

(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
BWU3449	•	•	•

Programming	ASi bit assignment			
	D0	D1	D2	D3
	input			
BWU3449	I1	I2	–	–
	output			
BWU3449	–	–	O3	O4

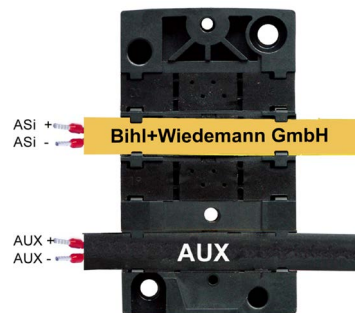
Programming	Parameter bits			
	P0	P1	P2	P3
BWU3449	0= off / 1= on (Watchdog)	0= on / 1= off (data input filter 128µs)	0= on / 1= off (synchronous I/O mode)	not used

Pin assignment

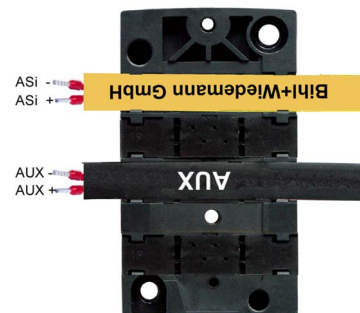
Signal name	Explanation
Ix	digital input x
Ox	digital output x
24V _{ext out}	power supply, out of external voltage, positive pole (AUX, actuator supply)
0V _{ext out}	power supply, out of external voltage, negative pole (AUX, actuator supply)
24V _{out of ASi}	power supply, out of ASi, positive pole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

Connections							
Article no.	M12 connection	Marking	Pin1	Pin2	Pin3	Pin4	Pin5
BWU3449	X1	I1	24 V _{out of ASi}	I2	0 V _{out of ASi}	I1	n.c.
	X2	O3	24 V _{ext out}	O4	0 V _{ext out}	O3	n.c.
	X3	I2	24 V _{out of ASi}	n.c.	0 V _{out of ASi}	I2	n.c.
	X4	O4	24 V _{ext out}	n.c.	0 V _{ext out}	O4	n.c.
	ADDR (dummy plug)	connection for ASi-3 addressing device					

Mounting according to cable direction

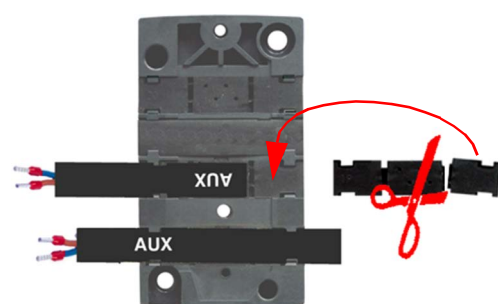
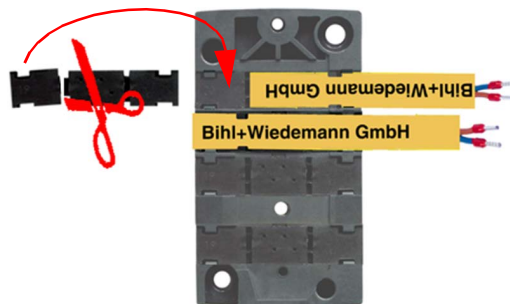
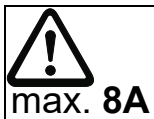


ordinary



turned

Line termination with sealing profiles / as junction



Accessories:

- ASi substructure module (CNOMO) for 8 channel module in 60 mm housing (art. no. BW2351)
- Protection caps for unused M12 sockets (art. no. BW2368)
- Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4708)