

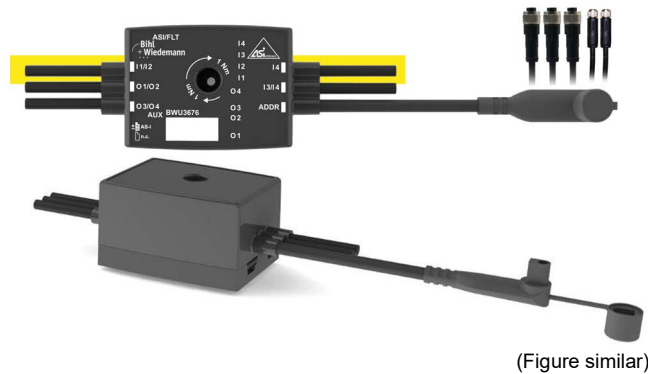
1 x connector for profile cable

Periphery connection via
 3 x M12 cable sockets, straight, 5 poles +
 2 x M8 snap-in cable sockets, straight, 4 poles

ASi connection via profile cable and
 piercing technology

AUX connection via M12 cable socket

1 x connection for ASi addressing device



(Figure similar)



Figure	Type	Inputs digital	Outputs digital	Input voltage (sensor supply) ⁽¹⁾	Output voltage (actuator supply) ⁽²⁾	ASi connection ⁽³⁾	Connection ⁽⁴⁾	ASi address ⁽⁵⁾	Art. no.
	IP54, depth 35 mm	4	4 x electronic	out of AUX	out of AUX	ASi profile cable	3 x M12 cable sockets, straight, 5 poles + 2 x M8 snap-in cable sockets, straight, 4 poles + 1 x ASi addressing cable socket	1 AB address	BWU3676

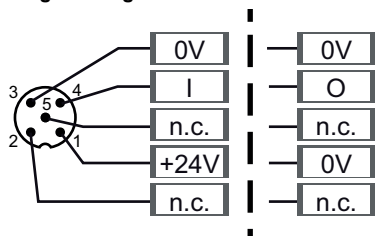
- (1) **Input voltage (sensor supply):** inputs are supplied by ASi or by AUX (auxiliary 24 V power). If supplied by ASi, inputs shall not be connected to earth or to external potential.
- (2) **Output voltage (actuator supply):** outputs are supplied by ASi or by AUX (auxiliary 24 V power). If supplied by ASi, outputs shall not be connected to earth or to external potential
- (3) **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).
- (4) **Connection:** further connection options are available on request.
- (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), ASi-5 address (max. 62 ASi-5 addresses/ASi network), mixed use allowed. Upon request, ASi-3 nodes are available with specific ASi node profiles. For modules with two ASi-3 nodes the 2nd ASi-3 node is turned off as long as the 1st ASi-3 node is addressed to address "0".

Article No.		BWU3676
General data		
Device type	input/output	
Connection		
ASi/AUX connection	ASi: profile cable and piercing AUX: M12 cable socket, straight, 5 poles	
Periphery connection	3 x M12 cable sockets, straight, 5 poles + 2 x M8 snap-in cable sockets, straight, 4 poles + 1 x ASi addressing cable socket	
M12 wiring ⁽¹⁾	-	
Round cable	I1/I2: 0,1 m I3/I4: 0,3 m O1/O2: 0,2 m O3/O4: 0,3 m ASi addressing cable socket: 0,05 m max. allowed tensile strain 10 N	
ASi		
Profile	S-7.A.7 (ID1=7 fixed)	
Address	1 AB address	
Required Master profile	≥M4	
As of ASi specification	3.0	
Operating voltage	30 V _{DC} (18 ... 31.6 V)	
Max. current consumption	40 mA	
Max. current consumption without sensor/ actuator supply	40 mA	
AUX		
Operating voltage	24 V _{DC} (18 ... 30 V)	
Max. current consumption	3 A	
Input		
Number	4	
Power supply	out of AUX	
Power supply of attached sensors	up to +45 °C	1 A, $\sum (In/Out) \leq 3 \text{ A}^{(2)}$
	at +55 °C	1 A, $\sum (In/Out) \leq 2 \text{ A}^{(2)}$
	at +60 °C	1 A, $\sum (In/Out) \leq 1,5 \text{ A}^{(2)}$
Switching threshold	U < 5 V (low) U > 15 V (high)	
Output		
Number	4	
Power supply	out of AUX	
Max. output current	up to +45 °C	1 A per output, $\sum (In/Out) \leq 3 \text{ A}^{(2)}$
	at +55 °C	1 A per output, $\sum (In/Out) \leq 2 \text{ A}^{(2)}$
	at +60 °C	1 A per output, $\sum (In/Out) \leq 1,5 \text{ A}^{(2)}$
Display		
LED ASi/FLT (red/green)	green: ASi voltage on, online red: ASi voltage on, but offline yellow/red flashing: address 0 red/green flashing: peripheral fault ⁽³⁾ off: no ASi voltage	
LED AUX (green)	on: 24 V _{DC} AUX off: no 24 V _{DC} AUX	
LEDs I1 ... In (yellow)	state of inputs I1 ... I4	
LED O1 ... On (yellow)	state of outputs O1 ... O4	

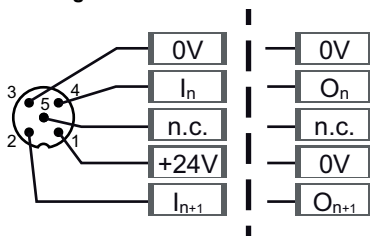
Article No.		BWU3676
Environment		
Applied standards		EN 61000-6-2 EN 61000-6-3 EN 61131-2 EN 60529
It can be used with a switched AUX cable, which is passively safe up to SIL3/PLe		yes ⁽⁴⁾
Operating altitude		max. 2000 m
Ambient temperature		-30 °C ... +60 °C ^{(2) (5)}
Storage temperature		-25 °C ... +85 °C
Housing		plastic, for screw mounting, suitable for cable ducts (≥35 mm installation depth)
Pollution degree		2
Protection category		IP54
Maximum tolerable shock and vibration stress		≤15g, T≤11 ms 10 ... 55 Hz, 0,5 mm amplitude
Insulation voltage ASi/AUX (internal)		2 kV RMS AC for 60s (performance test)
Insulation voltage (external)	any wire to all surfaces, except screws of M8 connectors	3 kV RMS AC for 60 s (performance test)
	any wire to screws of M8 connectors	1 kV RMS AC for 60 s (performance test)
External protection		UL - Class 2 source required
Weight		100 g
Dimensions (W / H / D) in mm		60 / 45 / 35

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

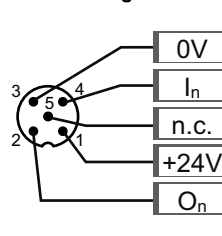
Single-wiring



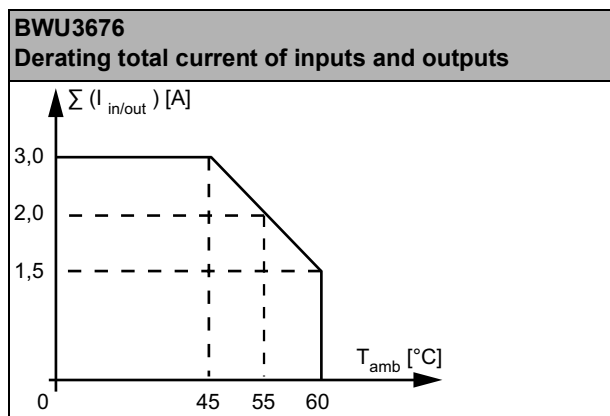
Y-wiring



Mixed-wiring



(2)



(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 (UL61010) BWU3676	
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.

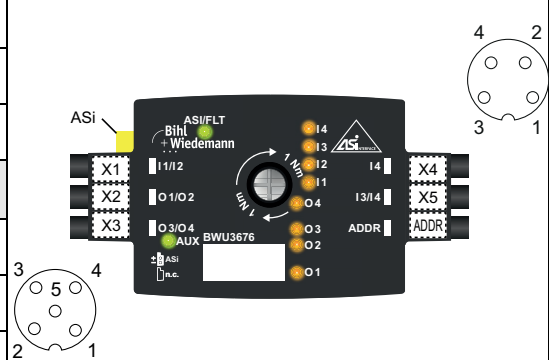
Article no.	Peripheral fault indication		
	Overload sensor supply	Output short circuited	AUX voltage missing
BWU3676	-	-	•

Programming	ASi bit assignment			
	D3	D2	D1	D0
	input			
BWU3676	I4	I3	I2	I1
	output			
BWU3676	O4	O3	O2	O1
	parameter bit			
	P3	P2	P1	P0
BWU3676	not used	0= on / 1= off (synchronous I/O mode)	0= off / 1= on (peripheral fault, if AUX missing)	0= off / 1= on (Watchdog)

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 ASi}	power supply, out of ASi, negative pole (sensor supply)
ASi +, ASi -	connection to ASi bus
n.c. (not connected)	not connected

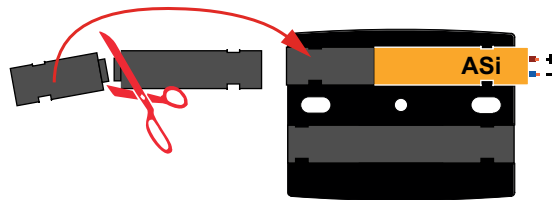
Connections:							
Article no.	M12 Connection	Cable length	Pin1	Pin2	Pin3	Pin4	Pin5
BWU3676	X1 (I1/I2)	0,1 m	24 V ext in	I2	0 V ext in	I1	n.c.
	X2 (O1/O2)	0,2 m	n.c.	O2 (RUN2)	n.c.	O1 (RUN1)	n.c.
	X3 (O3/O4)	0,3 m	n.c.	O4 (DIR2)	n.c.	O3 (DIR1)	n.c.
	M8 Connection		Pin1	Pin2	Pin3	Pin4	
	X4 (I4)	0,3 m	24 V ext out	n.c.	0 V ext out	I4	-
	X5 (I3/I4)	0,3 m	24 V ext out	I4	0 V ext out	I3	-
	ADDR	0,1 m	connection for ASi-3 addressing plug				



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)

