

2 x 2 connectors for profile cable

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



(Figure similar)



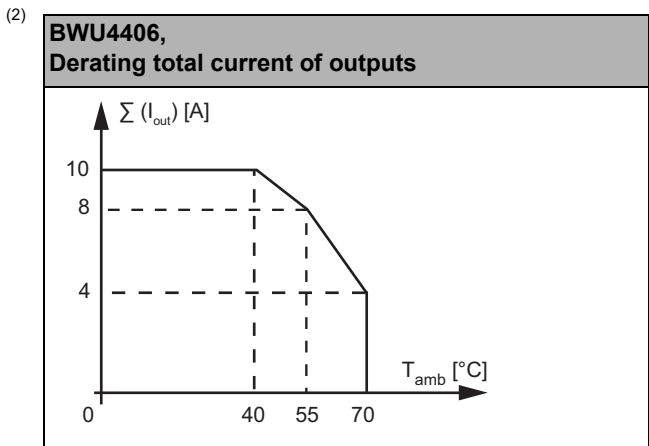
Figure	Inputs digital	Outputs digital	M12 connection ⁽¹⁾	Input voltage (sensor supply) ⁽²⁾	Output voltage (actuator supply) ⁽³⁾	ASi connection ⁽⁴⁾	ASi address ⁽⁵⁾	Max. output current	Art. no.
	–	8 x electronic	Y	–	out of AUX, 2A per output	ASi profile cable	2 AB addresses	2 A per output	BWU4406

- (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 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. For modules with two ASi nodes the 2nd ASi node is turned off as long as the 1st ASi node is addressed to address "0". Upon request, ASi nodes are available with specific ASi node profiles.

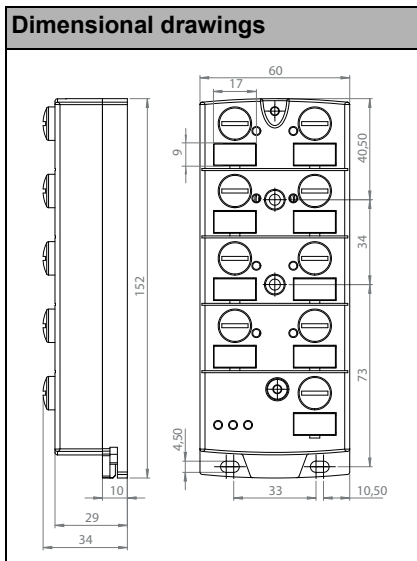
Article No.	BWU4406
General data	
Device type	output
Connection	
ASi/AUX Connection	profile cable and piercing technology
Periphery connection	M12, Y-wiring
Length of connector cable	unlimited ⁽¹⁾
ASi	
Profile	Node 1: S-7.A.7 (ID1=7 fixed) Node 2: S-7.A.7 (ID1=6 default)
Address	2 AB addresses
Required Master profile	≥M4
As of ASi specification	3
Operating voltage	30 V (18 ... 31.6 V)
Max. current consumption	60 mA
Max. current consumption without sensor/ actuator supply	60 mA
AUX	
Operating voltage	24 V (18 ... 30 V)
Max. current consumption	10 A

Article No.		BWU4406
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	2 A per output Σ (Out) 10 A ⁽²⁾
	at +55 °C	1,75 A per output Σ (Out) 8 A ⁽²⁾
	at +70 °C	1 A per output Σ (Out) 4 A ⁽²⁾
Display		
LED ASi/FLT 1 (red/green)		green: online red: offline yellow/red flashing: address 0
LED ASi/FLT 2 (red/green)		green: online red: offline yellow/red flashing: address 0 red/green flashing: peripheral fault ⁽³⁾ red flashing: ASi node 2 is turned off, because ASi node 1 is offline
LED AUX (green)		on: 24 V _{DC} AUX off: no 24 V _{DC} AUX
LEDs O1 ... On (yellow /red)		yellow: state of outputs O1 ... O8 red: overload
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) ⁽²⁾ ⁽⁵⁾
Storage temperature		-30 °C ... +85 °C
Housing		plastic, for screw mounting
Pollution degree		2
Protection category		IP67 ⁽⁶⁾
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

⁽¹⁾ Loop resistance ≤150 Ω



- (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) Maximum ambient operating temperature +55 °C according UL certificate for the use in the USA and Canada.
- (6) Protection category IP67 can only be achieved if all open connections are sealed with suitable end caps fulfilling the same protection category.



UL-specifications (UL508)	
BWU4406	
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
BWU4406	-	•	•

Programming	ASi bit assignment			
Bit	D3	D2	D1	D0
	output			
BWU4406	ASi node 1: O4	ASi node 1: O3	ASi node 1: O2	ASi node 1: O1
	ASi node 2: O8	ASi node 2: O7	ASi node 2: O6	ASi node 2: O5

Programming	Parameter bits			
Bit	P3	P2	P1	P0
BWU4406	not used	0= on / 1= off (synchronous I/O mode)	0= off / 1= on (peripheral fault, if AUX missing)	0= off / 1= on (Watchdog)

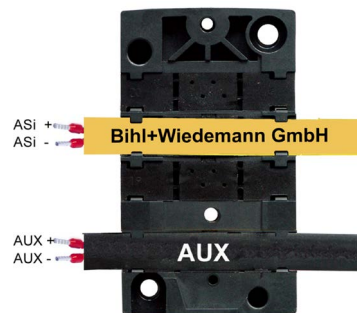
Pin assignment

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

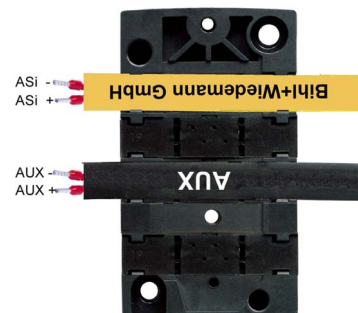
Connections

Article no.	M12 connection	Marking	Pin1	Pin2	Pin3	Pin4	Pin5	
BWU4406	X1	O1	0 V _{ext out}	O2	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}	O4	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}	O6	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}	O8	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-3 addressing plug						

Mounting according to cable direction

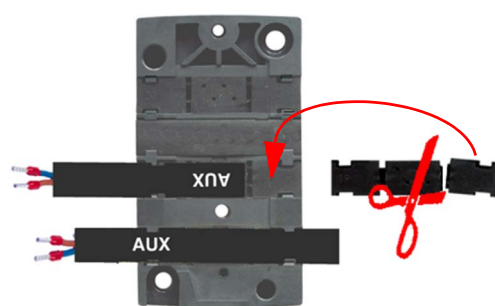
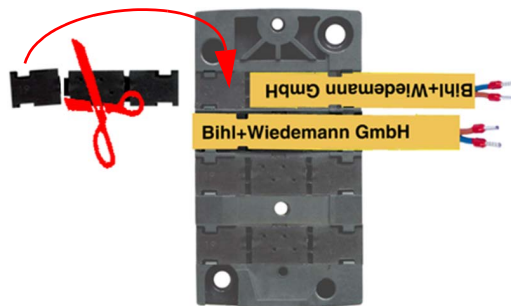
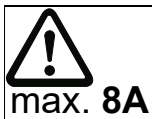


ordinary



turned

Line termination with sealing profiles / as junction



Accessories:

- ASi substructure module (CNOMO) for 8 channel module in 60 mm housing (art. no. BWU2351)
- 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)