

## ASi Motor Module for Lenze Smart Motor, 1M/3I

2 x connectors for profile cable



(figure similar)

Figure	Type	Drive <sup>(1)</sup>	Number of drives	Inputs digital	Outputs digital	Input voltage (sensor supply) <sup>(2)</sup>	Output voltage (actuator supply) <sup>(3)</sup>	ASi connection <sup>(4)</sup>	Connection <sup>(5)</sup>	ASi address <sup>(6)</sup>	Art. no.
	IP67, depth 35 mm	Lenze Smart Motor	1	3	–	out of AUX	out of AUX	ASi profile cable	4 x M12 cable sockets, straight, 5 poles	1 AB address	<b>BWU3436</b>
	IP67, depth 35 mm	Lenze Smart Motor	1	3	–	out of AUX	out of AUX	ASi profile cable	4 x M12 cable sockets, straight, 5 poles	1 AB address	<b>BWU3787</b>
	IP67, depth 35 mm	Lenze Smart Motor	1	3	–	out of AUX	out of AUX	ASi profile cable	4 x M12 cable sockets, angled, 5 poles	1 AB address	<b>BWU3783</b>
	IP67, depth 35 mm	Lenze Smart Motor	1	3	–	out of ASi	out of ASi	ASi profile cable	1 x M12 cable socket, straight, 8 poles + 2 x cable sockets, straight, 5 poles	1 AB address	<b>BWU3640</b>
	IP67, depth 35 mm	Lenze Smart Motor	1	3	–	out of ASi	out of ASi	ASi profile cable	1 x M12 cable socket, straight, 8 poles + 2 x cable sockets, straight, 5 poles	1 AB address	<b>BWU3784</b>

- (1) **Drive:**  
**Lenze Smart Motor:** Motor module to control Lenze Smart motors and to control additional sensors.
- (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) **Connection:** further connection options are available on request.

M12 cable socket, angled	M12 cable socket, straight	M8 cable socket, straight	round cable / connecting wires	Profile cable branch
PUR line, oil resistant				

- (6) **ASi address:** 1 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), mixed use allowed.  
For modules with two ASi nodes the second ASi node is turned off as long as the first ASi node is addressed to address "0".  
Upon request, ASi nodes are available with specific ASi address profiles.

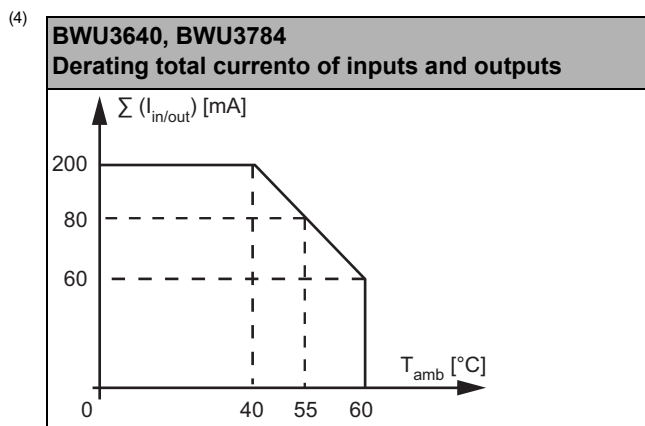
Article No.	BWU3436	BWU3787	BWU3783	BWU3640	BWU3784
<b>Connection</b>					
ASi/AUX connection	profile cable and piercing technology				
Periphery connection	4 x M12 cable sockets, straight, 5 poles		4 x M12 cable sockets, angled, 5 poles	Motor: 1 x M12 cable socket, straight, 8 poles sensors: 2 x M12 cable sockets, straight, 5 poles	
Length of connector cable	1 m	2 m	I2/I3, I4: 2,5 m X1, X2: 1,5 m	2 m	X2, I2: 2 m I3/I4: 0,3 m
	max. allowed tensile strain 10 N				
<b>ASi</b>					
Profile	S-7.A.E				
Adresse	1 AB address				
Required Master profile	≥M4				
As of ASi specification	3.0				
Operating voltage	30 V (18 ... 31.6 V)				
Max. current consumption	35 mA			245 mA	
Max. current consumption without sensor/ actuator supply	35 mA			45 mA	
<b>AUX</b>					
Operating voltage	24 V (18 ... 30 V)			-	
Max. current consumption	max. 2,5 A			-	
<b>Input</b>					
Number	3 (I2 ... I4)				
Power supply	out of AUX			out of ASi	
Sensor supply	short-circuit and overload protected according to EN 61131-2				
Power supply of attached sensors	up to +40 °C	max. 1 A		200 mA, $\sum (I_n/Motor) \leq 200 \text{ mA}^{(4)}$	
	at +55 °C			80 mA, $\sum (I_n/Motor) \leq 80 \text{ mA}^{(4)}$	
	at +60 °C			60 mA, $\sum (I_n/Motor) \leq 60 \text{ mA}^{(4)}$	
Switching threshold	U < 5 V (low) U > 15 V (high)				
<b>Drive</b>					
Number	1 (I1, O1 ... O3)				
Power supply	out of AUX			out of ASi	
Output	short-circuit and overload protected according to EN 61131-2				
Max. output current	up to +40 °C	500 mA		200 mA, $\sum (I_n/Motor) \leq 200 \text{ mA}^{(4)}$	
	at +55 °C			80 mA, $\sum (I_n/Motor) \leq 80 \text{ mA}^{(4)}$	
	at +60 °C			60 mA, $\sum (I_n/Motor) \leq 60 \text{ mA}^{(4)}$	
<b>Display</b>					
LED ASi/FLT (red/green)	green: ASi voltage on, ASi ode online green/red: ASi voltage on, but ASi node offline green flashing/red: address 0 red/green flashing: peripheral fault <sup>(1)</sup> off: no ASi voltage				
LED AUX (green)	on: 24 V <sub>DC</sub> AUX off: no 24 V <sub>DC</sub> AUX			-	
LED I1 ... In (yellow)	state of inputs I1 ... I4				
LED O1 ... On (yellow)	state of outputs O1 ... O3				

Article No.	BWU3436	BWU3787	BWU3783	BWU3640	BWU3784
<b>Environment</b>					
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	yes <sup>(2)</sup>			yes <sup>(5)</sup>	
Operating altitude	max. 2000 m				
Ambient temperature	-30 °C ... +60 °C <sup>(3)(4)</sup>				
Storage temperature	-25 °C ... +85 °C				
Housing	plastic, screw mounting, suitable for cable ducts (installation depth ≥35mm)				
Pollution Degree	2				
Protection category	IP67				
Tolerable loading referring to humidity	according to EN 61131-2				
Maximum tolerable shock and vibration stress	≤15g, T≤11 ms 10 ... 55 Hz, 0,5 mm amplitude				
Insulation voltage	≥500 V				
Weight	100 g				
Dimensions (W / H / D) in mm	60 / 45 / 35				

(1) see table "Peripheral fault indication"

(2) BWU3436 from Ident. No. 16965; 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.

(3) Down to -25 °C with flexibly mounted cable, -30 °C only with fixed mounted cable.



(5) The module is suitable for use in passively safe paths as it has no connection to an AUX potential.

<b>UL-specifications (UL61010)</b>	
<b>BWU3436, BWU3640, BWU3783, BWU3784, BWU3787</b>	
External protection	An isolated source with a secondary open circuit voltage of ≤30 V <sub>DC</sub> 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
BWU3436	-	-	•
BWU3640	•	-	-
BWU3783	-	-	•
BWU3784	•	-	-
BWU3787	-	-	•

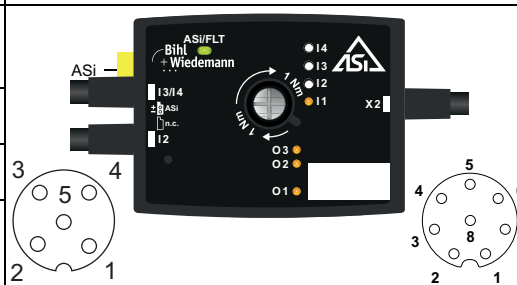
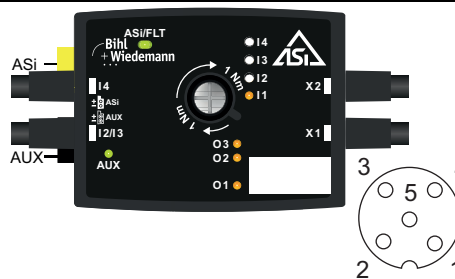
Programming	Parameter bit			
	D3	D2	D1	D0
	<b>Input</b>			
BWU3436, BWU3640, BWU3783, BWU3784, BWU3787	I4	I3	I2	I1 (Motor)
	<b>Output</b>			
BWU3436, BWU3640, BWU3783, BWU3784, BWU3787	–	O3 (Motor)	O2 (Motor)	O1 (Motor)
	<b>Parameter bit</b>			
	P3	P2	P1	P0
BWU3436, BWU3640, BWU3783, BWU3784, BWU3787	not used	0= on / 1= off (synchronous I/O mode)	0= on / 1= off (data input filter 128µs)	0= off / 1= on (Watchdog)

## Pin assignment

Signal name	Explanation
I <sub>x</sub>	digital input x
O <sub>x</sub>	digital output x
24V <sub>ext out</sub>	power supply, out of external voltage, positive pole (AUX, actuator supply)
0V <sub>ext out</sub>	power supply, out of external voltage, negative pole (AUX, actuator supply)
24V <sub>out of ASi</sub>	power supply, out of ASi, positive pole (sensor supply)
0V <sub>out of ASi</sub>	power supply, out of ASi, negative pole (sensor supply)
ASi +, ASi -	connection to ASi bus
n.c. (not connected)	not connected

## Connections

Article no.	Mark	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8
BWU3436, BWU3783, BWU3787	X1 (1)	n.c.	O2	0 V <sub>ext.out</sub>	O1	n.c.	–	–	–
	X2 (2)	24 V <sub>ext.out</sub>	O3	0 V <sub>ext.out</sub>	I1	n.c.	–	–	–
	I2/I3	24 V <sub>ext.out</sub>	I3	0 V <sub>ext.out</sub>	I2	n.c.	–	–	–
	I4	24 V <sub>ext.out</sub>	n.c.	0 V <sub>ext.out</sub>	I4	n.c.	–	–	–
BWU3640, BWU3784	X2 (3)	24 V out of ASi	I1	0 V out of ASi	O1	O2	O3	n.c.	0 V out of ASi
	I2	24 V out of ASi	n.c.	0 V out of ASi	I2	n.c.	–	–	–
	I3/I4	24 V out of ASi	I4	0 V out of ASi	I3	n.c.	–	–	–



(1) 4 pole connection to X1 of Lenze Smart Motor

(2) 4 pole connection to X2 of Lenze Smart Motor

(3) 8 pole connection to X2 of Lenze Smart Motor

## Accessories:

- Sealing profile IP67 (IDC plug), 60 mm (art. no. BW3282)
- Diagnostic Software (art. no. BW2902)
- ASi-5/ASi-3 Address Programming Device (art. no. BW4925)