

Standalone Speed Monitor

Speed Monitor

- for sine/cosine encoder
- for SSI encoder
- for TTL encoder
- for safe speed and position monitoring

for 2 independent axes

up to 2 fast electronic safe outputs



USB interface for configuration and diagnostic

Chip card



(figure similar)



Figure	Name	Description	Article no.
	Speed Monitor	For sine/cosine, SSI or TTL encoder <ul style="list-style-type: none"> • monitoring up to 2 independent axes • 2 x fast electronic safe outputs • USB interface for configuration and diagnostic • chip card 	BWU3269
	Speed Monitor	For sine/cosine or TTL encoder <ul style="list-style-type: none"> • monitoring 1 axis • 2 x fast electronic safe outputs • USB interface for configuration and diagnostic • chip card 	BWU3277

Article no.	BWU3269	BWU3277
Connection		
24V/AUX connection	1 x 4-fold COMBICON 1 x 4-fold Mini-COMBICON	
Encoder connection	2 x RJ45	1 x RJ45
Operating voltage		
Voltage	18 ... 31,6 V	
Max. current consumption	150 mA	
Max. continuous operating current	125 mA	
AUX		
Voltage	18 ... 30 V	
Max. current consumption	1,4 A	
Input		
Number	2 x encoder	1 x encoder
Input type	sine / cosine, SSI ⁽¹⁾ , TTL	
Power supply	external, max. 30 V	
Parameterization range for the speed limit	1 Hz ... 250 kHz	
Output		
Number	2 semiconductor outputs, max. contact load: 700 mA _{DC-13} at 24 V	
Power supply	out of AUX	
Test pulse	minimum interval between 2 pulses: 250 ms pulse length: max. 1 ms	

Article no.	BWU3269	BWU3277
Display		
LED PWR (green)	on: operating voltage present flashing: configuration not verified	
LED FAULT/FLT (red)	flashing: configuration not verified	
LED AUX (green)	24 V _{DC} AUX present	
LED CONF (yellow)	off: normal operation mode flashing: device red or yellow flashing/chip card is written on: configuration operation	
LED ST1, ST2 (yellow)	state of encoders 1 (ENC 1), 2 (ENC 2)	state of encoders 1 (ENC 1)
LED F1, F2 (yellow)	off: axes 1, 2 rotating flashing: encoder error on: axes 1, 2 stopped	off: axis 1 rotating flashing: encoder error on: axis 1 stopped
LED O1, O2 (yellow)	state of outputs O1, O2 flashing: overload cut-off	
Environment		
Applied standards	EN 62061 SIL 3 EN ISO 13849-1 PL _e EN 60529	
Operating altitude	max. 2000 m	
Ambient temperature	0 °C ... +55 °C	
Storage temperature	-25 °C ... +85 °C	
Housing	plastic, for DIN rail mounting	
Protection class	IP20	
Tolerable loading referring to humidity	acc. EN 61131-2	
Weight	160 g	
Dimensions (W / H / D in mm)	22,5 / 99,6 / 114	

(1) SSI encoders may only be used with speed monitors with 2 encoder connections as a second encoder is required as a reference for security applications.

Pin assignment

Signal name	Description
Ub	power supply, encoder, positive pole
GND	power supply, encoder, negative pole
CLK, $\overline{\text{CLK}}$	clock connection
DATA, $\overline{\text{DATA}}$	data connection
sin, $\overline{\text{sin}}$; cos, $\overline{\text{cos}}$; A, $\overline{\text{A}}$; B, $\overline{\text{B}}$	signal connection

UL-specifications (UL508) BWU3269, BWU3277	
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.	Pin	sin/cos	SSI	TTL	RJ45 connector, 8 pole
BWU3269 / BWU3277	1	Ub _{in}	Ub _{in}	Ub _{in}	
	2	GND _{in}	GND _{in}	GND _{in}	
	3	–	CLK	–	
	4	sin	DATA	B	
	5	sin̄	DATĀ	B̄	
	6	–	CLK̄	–	
	7	cos	–	A	
	8	cos̄	–	Ā	

Connection and switch assignment

Marked	Description
ENC 1, ENC 2	connection encoder
CHIP CARD	chip card
USB	interface for configuration and diagnostic
PRJ	projecting button
1.14 _{ext.out} , 0V _{1 ext.out}	semiconductor output 1
2.14 _{ext.out} , 0V _{2 ext.out}	semiconductor output 2
24V, 0V	connection operating voltage
AUX _{ext.in} , AUX _{ext.in}	connection external 24 V _{DC} power supply (AUX)

BWU3269	BWU3277	BWU3269 BWU3277
Front	Front	Bottom side

Accessories:

- USB connecting cable (art. no. BW2530)
- Connecting cable for Speed Monitor (art. no. BW2476, BW2477, BW2494, BW2991, BW2993)
- Adapter for connecting 2 encoders (art. no. BWU2977)
- Adapter for Speed Monitor (art. no. BW2497, BW2499, BW2740, BW3046)
- Encoder Simulator (art. no. BW2506)
- Chip card (art. no. BW2079, BW2222, BW2744)