

ASi Adapter Module for Speed Monitor



Adapter module for the connection of 2 encoders to speed monitor and control

Passive T-distributor



(figure similar)

The adapters are designed for attachment between frequency inverter and feedback cable. All pins are wired 1:1.

The connection for speed monitoring is done via RJ45 connectors.

Article no.	BWU2977	BWU3345
Connection		
Encoder and control	6 x fourfold COMBICON connector	
Speed monitor	2 x RJ45 connector	
Input		
Number	2 x encoder	
Input type	HTL, SinCos, TTL, SSI, BiSS	
Power Supply for encoders	internally bridged	separate for each encoder
Environment		
Applied standards	EN 61000-6-2 EN 61000-6-3 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 category	IP20	
Dimensions (W / H / D) in mm	22,5 / 99,6 / 114	

Wiring rules

Push-in terminals	
General	
Nominal cross section	2,5 mm ²
Conductor cross section	
Conductor cross section solid	0,2 ... 2,5 mm ²
Conductor cross section flexible	0,2 ... 2,5 mm ²
Conductor cross section flexible, with ferrule	without plastic sleeve: 0,2 ... 2,5 mm ² with plastic sleeve: 0,25 ... 2,5 mm ²
2 conductors with same cross section, stranded, with TWIN ferrules	without plastic sleeve: 0,5 ... 1,5 mm ²
AWG	24 ... 14
Stripped insulation length	10 mm

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Signal name (encoder)	Description
Ub	power supply, encoder, positive pole
GND	power supply, encoder, negative pole
CLK, CLK	clock connection (absolute encoder)
DATA, DATA	data connection (absolute encoder)
sin ₁ , sin; cos, cos; A, A; B, B	signal connection (incremental encoder)

Connections:					
BWU2977	Name	Description	BWU3345	Name	Description
	Sh ₁ , Sh ₂ (Shield)	shield		Sh ₁ , Sh ₂ (Shield)	shield
	0 V ₁ , 0 V ₂	power supply for encoders (internally bridged)		Ub _{A/B} , 0 V _{A/B}	power supply encoder A/B
	Ub ₁ , Ub ₂			Ub _{C/D} , 0 V _{C/D}	power supply encoder C/D
	Set ₁ , Set ₂	set signal (internally bridged)		Set ₁ , Set ₂	set signal (internally bridged)
	A ₁ , A ₂	encoder signal A (internally bridged)		A ₁ , A ₂	encoder signal A (internally bridged)
	\bar{A}_1 , \bar{A}_2	encoder inverted signal A (internally bridged)		\bar{A}_1 , \bar{A}_2	encoder inverted signal A (internally bridged)
	B ₁ , B ₂	encoder signal B (internally bridged)		B ₁ , B ₂	encoder signal B (internally bridged)
	\bar{B}_1 , \bar{B}_2	encoder inverted signal B (internally bridged)		\bar{B}_1 , \bar{B}_2	encoder inverted signal B (internally bridged)
	C ₁ , C ₂	encoder signal C (internally bridged)		C ₁ , C ₂	encoder signal C (internally bridged)
	\bar{C}_1 , \bar{C}_2	encoder inverted signal C (internally bridged)		\bar{C}_1 , \bar{C}_2	encoder inverted signal C (internally bridged)
	D ₁ , D ₂	encoder signal D (internally bridged)		D ₁ , D ₂	encoder signal D (internally bridged)
	\bar{D}_1 , \bar{D}_2	encoder inverted signal D (internally bridged)		\bar{D}_1 , \bar{D}_2	encoder inverted signal D (internally bridged)
	Out A/B	speed monitor signal A + B		Out A/B	speed monitor signal A + B
	Out C/D	speed monitor signal C + D		Out C/D	speed monitor signal C + D


RJ45 socket			
BWU2977		BWU3345	
Out A/B	Out C/D	Out A/B	Out C/D
1 = Ub	1 = Ub	1 = Ub _{A/B}	1 = Ub _{C/D}
2 = 0V	2 = 0V	2 = 0V _{A/B}	2 = 0V _{C/D}
3 = B (SW = 1)	3 = D (SW = 1)	3 = B (SW = 1)	3 = D (SW = 1)
4 = A	4 = C	4 = A	4 = C
5 = \bar{A}	5 = \bar{C}	5 = \bar{A}	5 = \bar{C}
6 = \bar{B} (SW = 1)	6 = \bar{D} (SW = 1)	6 = \bar{B} (SW = 1)	6 = \bar{D} (SW = 1)
7 = B (SW = 0)	7 = D (SW = 0)	7 = B (SW = 0)	7 = D (SW = 0)
8 = \bar{B} (SW = 0)	8 = \bar{D} (SW = 0)	8 = \bar{B} (SW = 0)	8 = \bar{D} (SW = 0)

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switch (SW)		
BWU2977, BWU3345		
SW=1		absolute value
SW=0		incremental value

Connection assignment for absolute encoders for example SSI:

Pin	SSI	BWU2977		BWU3345		switch position (SW)
		Out A/B	Out C/D	Out A/B	Out C/D	
1	Ub _{in}	Ub	Ub	Ub _{A/B}	Ub _{C/D}	SW=1 (absolute value) 
2	GND _{in}	0V	0V	0V _{A/B}	0V _{C/D}	
3	CLK	B	D	B	D	
4	DATA	A	C	A	C	
5	$\overline{\text{DATA}}$	$\overline{\text{A}}$	$\overline{\text{C}}$	$\overline{\text{A}}$	$\overline{\text{C}}$	
6	$\overline{\text{CLK}}$	$\overline{\text{B}}$	$\overline{\text{D}}$	$\overline{\text{B}}$	$\overline{\text{D}}$	
7	-	-	-	-	-	
8	-	-	-	-	-	

Connection assignment for incremental encoders for example sin/cos or TTL:

Pin	sin/cos	TTL	BWU2977		BWU3345		switch position (SW)
			Out A/B	Out C/D	Out A/B	Out C/D	
1	Ub _{in}	Ub _{in}	Ub	Ub	Ub _{A/B}	Ub _{C/D}	SW=0 (incremental value) 
2	GND _{in}	GND _{in}	0V	0V	0V _{A/B}	0V _{C/D}	
3	-	-	-	-	-	-	
4	sin	B	B	D	B	D	
5	$\overline{\text{sin}}$	$\overline{\text{B}}$	$\overline{\text{B}}$	$\overline{\text{D}}$	$\overline{\text{B}}$	$\overline{\text{D}}$	
6	-	-	-	-	-	-	
7	cos	A	A	C	A	C	
8	$\overline{\text{cos}}$	$\overline{\text{A}}$	$\overline{\text{A}}$	$\overline{\text{C}}$	$\overline{\text{A}}$	$\overline{\text{C}}$	



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