AS-i Adapter Module for Speed Monitor

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

Passive T-distributor

(figure similar)

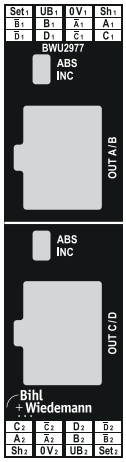
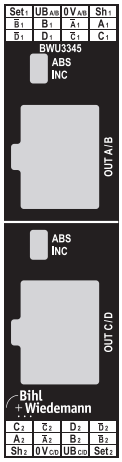
The adapters are designed for attachment between frequency inverter and feedback cable. All pins are wired 1:1.

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	

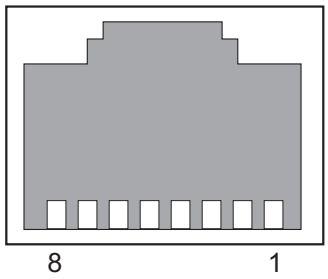
Signal name (encoder)	Description
Ub	power supply, encoder, positive pole
GND	power supply, encoder, negative pole
CLK, $\overline{CLK}$	clock connection (absolute encoder)
DATA, $\overline{DATA}$	data connection (absolute encoder)
sin, $\overline{sin}$; cos, $\overline{cos}$; A, $\overline{A}$; B, $\overline{B}$	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, $\overline{A_1}$; A_2, $\overline{A_2}$	encoder signal A		A_1, $\overline{A_1}$; A_2, $\overline{A_2}$	encoder signal A
	B_1, $\overline{B_1}$; B_2, $\overline{B_2}$	encoder signal B		B_1, $\overline{B_1}$; B_2, $\overline{B_2}$	encoder signal B
	C_1, $\overline{C_1}$; C_2, $\overline{C_2}$	encoder signal C		C_1, $\overline{C_1}$; C_2, $\overline{C_2}$	encoder signal C
	D_1, $\overline{D_1}$; D_2, $\overline{D_2}$	encoder signal D		D_1, $\overline{D_1}$; D_2, $\overline{D_2}$	encoder signal D
	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 = $\overline{A}$	5 = $\overline{C}$	5 = $\overline{A}$	5 = $\overline{C}$
6 = $\overline{B}$ (SW = 1)	6 = $\overline{D}$ (SW =1)	6 = $\overline{B}$ (SW = 1)	6 = $\overline{D}$ (SW =1)
7 = B (SW = 0)	7 = D (SW = 0)	7 = B (SW = 0)	7 = D (SW = 0)
8 = $\overline{B}$ (SW = 0)	8 = $\overline{D}$ (SW = 0)	8 = $\overline{B}$ (SW = 0)	8 = $\overline{D}$ (SW = 0)



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	$\overline{DATA}$		$\overline{A}$	$\overline{C}$	$\overline{A}$	$\overline{C}$	
6	$\overline{CLK}$		$\overline{B}$	$\overline{D}$	$\overline{B}$	$\overline{D}$	
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	$\overline{sin}$	$\overline{B}$		$\overline{B}$	$\overline{D}$	$\overline{B}$	$\overline{D}$	
6	–	–		–	–	–	–	
7	cos	A		A	C	A	C	
8	$\overline{cos}$	$\overline{A}$		$\overline{A}$	$\overline{C}$	$\overline{A}$	$\overline{C}$	