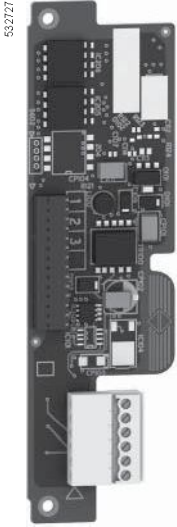


Presentation



VW3 A3 401

Encoder interface cards are used for application safety, irrespective of the control type:

- b Overspeed detection
- b Load slipping detection

Three types of card are available depending on the encoder technology:

- b RS 422 compatible differential outputs
- b Open collector outputs (NPN)
- b Push-pull outputs

The card is inserted into a dedicated slot.

Characteristics

Encoder interface cards with RS 422 compatible differential outputs

Type of card		VW3 A3 401	
Power supply (supplied by the card)	Voltage	5 V c (min. 5 V, max. 5.5 V)	
	Maximum current	200 mA	
		Short-circuit and overload protection	
Maximum cable length		50 m	
Maximum operating frequency		300 kHz	
Input signals		A, \bar{A} , B, \bar{B}	
	Impedance	440 Ω	
Number of pulses/encoder revolution		5000 maximum The maximum high-speed frequency should not exceed 300 kHz.	
Encoder consumption		100 mA at 4.5 V	200 mA at 4.5 V
Minimum cross-section recommended for the conductors (1)	For a maximum cable length of 25 m	0.2 mm ² (AWG 24)	0.5 mm ² (AWG 20)
	For a maximum cable length of 50 m	0.5 mm ² (AWG 20)	0.75 mm ² (AWG 18)
Type of encoder		XCC 1pppppppX, R, RN (2)	XCC 1pppppppX (2)

(1) Shielded cable containing 3 twisted pairs at intervals of between 20 and 50 mm. Connect the shielding to earth at both ends.

Minimum recommended conductor cross-section for a minimum encoder voltage in order to limit line voltage drops.

(2) To obtain the complete encoder reference, please refer to the "Global Detection - Electronic and Electromechanical Sensors" catalogue or visit our website "www.schneider-electric.com".

Characteristics (continued)							
Encoder interface card with open collector outputs							
Type of card		VW3 A3 403		VW3 A3 404			
Power supply (supplied by the card)	Voltage	12 V C (min. 12 V, max. 13 V)		15 V C (min. 15 V, max. 16 V)			
	Maximum current	175 mA					
Short-circuit and overload protection							
Maximum cable length		500 m					
Maximum operating frequency		300 kHz					
Input signals		A, A, B, B / AB / A					
Impedance		1 kΩ					
Number of pulses/encoder revolution		5000 maximum The maximum high-speed frequency should not exceed 300 kHz					
Encoder consumption		100 mA at 10 V	175 mA at 10 V	100 mA at 10 V	175 mA at 10 V		
Minimum cross-section recommended for the conductors (1)	For a maximum cable length of 100 m	0.2 mm ² (AWG 24)	0.5 mm ² (AWG 20)	0.2 mm ² (AWG 24)			
	For a maximum cable length of 200 m	0.5 mm ² (AWG 20)	0.75 mm ² (AWG 18)	0.2 mm ² (AWG 24)			
	For a maximum cable length of 500 m	1 mm ² (AWG 17)	1.5 mm ² (AWG 15)	0.5 mm ² (AWG 20)			
Encoder interface card with push-pull outputs							
Type of card		VW3 A3 405		VW3 A3 406		VW3 A3 407	
Power supply (supplied by the card)	Voltage	12 V C (min. 12 V, max. 13 V)		15 V C (min. 15 V, max. 16 V)		24 V C (min. 20 V, max. 30 V)	
	Maximum current	175 mA				100 mA	
Short-circuit and overload protection							
Maximum cable length		500 m					
Maximum operating frequency		300 kHz					
Input signals		A, A, B, B / AB / A					
Impedance		1 kΩ				1.6 kΩ	
State 0		If < 1.5 V					
State 1		If > 7.7 V and < 13 V		If > 7.7 V and < 16 V		If > 11.5 V and < 25 V	
Number of pulses/encoder revolution		5000 maximum The maximum high-speed frequency should not exceed 300 kHz					
Encoder consumption		100 mA at 10 V	175 mA at 10 V	100 mA at 10 V	175 mA at 10 V	100 mA at 14 V	
Minimum cross-section recommended for the conductors (1)	For a maximum cable length of 100 m	0.2 mm ² (AWG 24)	0.5 mm ² (AWG 20)	0.2 mm ² (AWG 24)			
	For a maximum cable length of 200 m	0.5 mm ² (AWG 20)	0.75 mm ² (AWG 18)	0.2 mm ² (AWG 24)			
	For a maximum cable length of 500 m	1 mm ² (AWG 17)	1.5 mm ² (AWG 15)	0.5 mm ² (AWG 20)		0.2 mm ² (AWG 24)	
Type of encoder		XCC 1ppppppY, K, KN (2)					

References			
Encoder interface cards (3)			
Description	Voltage V	Reference	Weight kg
Encoder interface cards with RS 422 compatible differential outputs	5	VW3 A3 401	0.200
Encoder interface cards with open collector outputs	12	VW3 A3 403	0.200
	15	VW3 A3 404	0.200
Encoder interface cards with push-pull outputs	12	VW3 A3 405	0.200
	15	VW3 A3 406	0.200
	24	VW3 A3 407	0.200

- (1) Shielded cable containing 3 twisted pairs at intervals of between 20 and 50 mm. Connect the shielding to earth at both ends.
Minimum recommended conductor cross-section for a minimum encoder voltage in order to limit line voltage drops.
- (2) To obtain the complete encoder reference, please refer to the "Global Detection - Electronic and Electromechanical Sensors" catalogue or visit our website "www.schneider-electric.com".
- (3) The Altivar 61 drive cannot support more than one encoder interface card. Consult the summary tables of possible drive, option and accessory combinations on pages 60674/2 to 60674/11.