AMK

AMKASYN

VARIABLE SPEED DRIVES

AMKASYN

Digital inverters in modular construction

Additional card for central module AZ
Pulse encoder card AZ-IG1

Important advice:

Touching of the electrical connections on the plug-in card must be avoided, otherwise electronic components could be destroyed through static discharge.

Take plug-in card directly out of packing and insert into the option slot in the AZ module without using force. Then secure with screw below the card grip.

5197.2E Part-No.: 25767

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Pulse encoder card AZ-IG1

The option card AZ-IG1 is plugged into one of the free slots of the AZ module (slot 1...4). It is secured in the front panel by the captive screw below the card grip.

The AZ-IG1 card code is „01“. This code must be entered into ID 32882 „Slot assignment“ assigned to the selected slot.

The AZ-IG1 card is equipped with 4 separate square-wave pulse inputs.
The inputs are designed as differential inputs, signal level in compliance in the RS422.

The signal source (square-wave pulses) must be designed with differential outputs according to RS422.

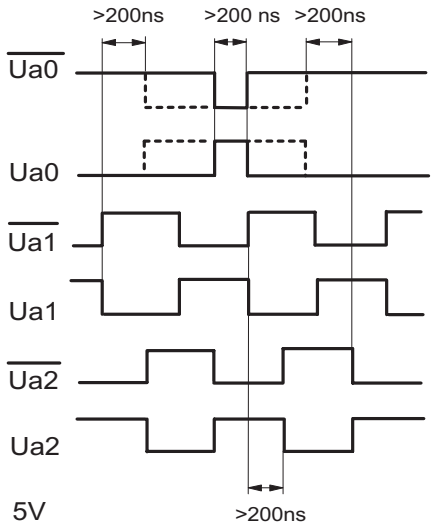
The input impedance is 180Ω (max. input current ≤ 20 mA).

Open input circuit is displayed through LED 1...4 (channel 1...4), an error message is generated. After eliminating of the cause of trouble the error message must be cancelled though „Error Reset“.

Connection via two 25 pole D-SUB female connectors X78/X79. The mating connectors are interlocked by 2 screws with UNC4-40 thread. A D-SUB shell with lateral cable outlet is required.

Shielded cables must be used. The cable shield has to be grounded one-sided at the AZ module through the metallized D-SUB shell.

It is determined by system parameters (ID 32883...ID 32886 „Configuration of AZ-IG1 option card“, slot1...slot4) in which form the square-wave input signal is evaluated:

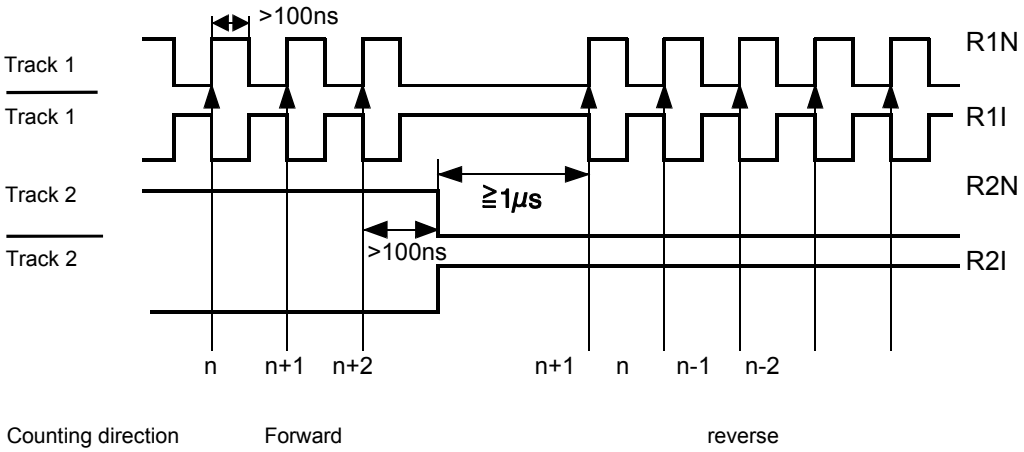


X34

O1I	Reference pulse inverted
O1N	Reference pulse
R1I	Track 1 inverted
R1N	Track 1
R2I	Track 2 inverted
R2N	Track 2
5P	Supply +5V (max.250mA)
GND	Reference potential GND

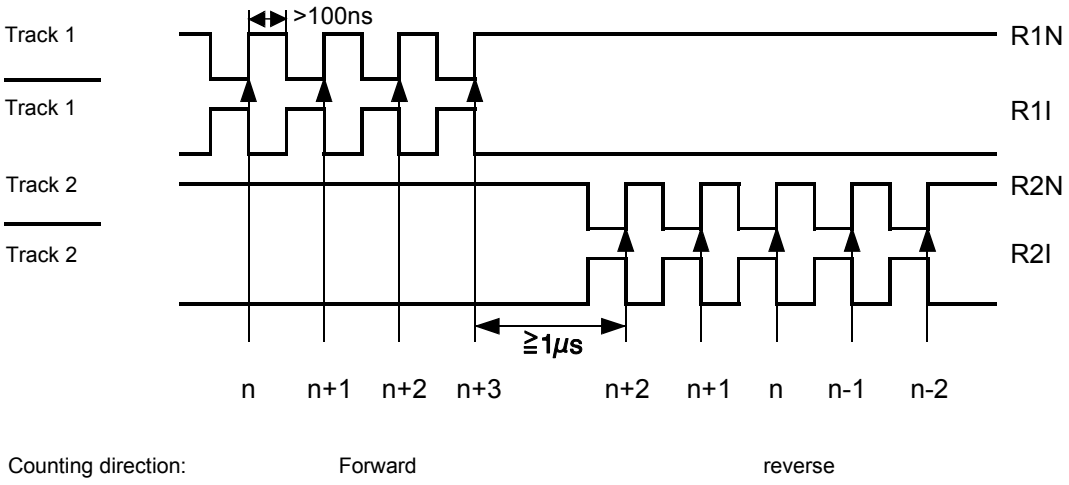
The maximum input frequency is 1 MHz.
The encoder signals are evaluated 4-fold by the AMKASYN system.

Counting pulses track 1, direction signal track 2 (Mode 1)



The maximum input frequency is 4 MHz.
The input pulses are only single evaluated.

Forward pulses track 1, reverse pulses track 2 (Mode 2)



The maximum input frequency is 4 MHz.
The input pulses are only single evaluated.

Pin assignment X78/X79 (25 pole D-SUB female connector)

Pin	X78 Signal	X79 Signal
1	GND	GND
2	G1N channel 2	G1N channel 4
3	G2N channel 2	G2N channel 4
4	G0N channel 2	G0N channel 4
5	K (for polarization)	
6	GND	GND
7	GND	GND
8	GND	GND
9	K (for polarization)	
10	G0N channel 1	G0N channel 3
11	G2N channel 1	G2N channel 3
12	G1N channel 1	G1N channel 3
13	GND	GND
14	GND	GND
15	G1I channel 2	G1I channel 4
16	G2I channel 2	G2I channel 4
17	G0I channel 2	G0I channel 4
18	K (for polarization)	
19	+ 5V (1) max. 250mA	+ 5V (3) max. 250mA
20	+ 5V (2) max. 250mA	+ 5V (4) max. 250mA
21	K (for polarization)	
22	G0I channel 1	G0I channel 3
23	G2I channel 1	G2I channel 3
24	G1I channel 1	G1I channel 3
25	K (for polarization)	

Connector polarization:

To ensure that the D-SUB connectors can't be swapped, the contact tubes marked with „K" can be used for connector polarization. For this purpose polarization pins are inserted into the contact tubes at the intended pin locations (K). The associated pins then have to be omitted in the mating connector:

Pin (K)		Connector	Slot
5	9	X78	1
5	18	X79	
5	21	X78	2
5	25	X79	
9	18	X78	3
9	21	X79	
9	25	X78	4
18	21	X79	

Component mounting drawing and front panel AZ-IG1