AMKASYN
Servo inverter AN/AZ/AW
Option Card AZ-IG2
Pulse encoder

Version: 2000/11
Part No.: 27812

AMK

Table of contents

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.

1 Pulse encoder card AZ-IG2

The option card AZ-IG2 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-IG2 card code is „01“. This code must be entered into ID 32882 „Slot assignment“ assigned to the selected slot.

The AZ-IG2 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).

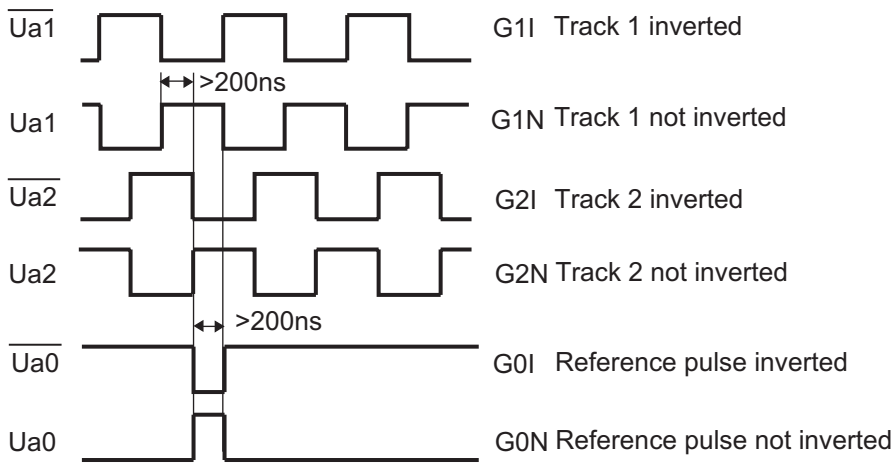
Open input circuit is displayed through LED 1...4 (channel 1...4), an error message is generated. After eliminating of the cause of trouble the error message must be cancelled though „Error Reset“.

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.

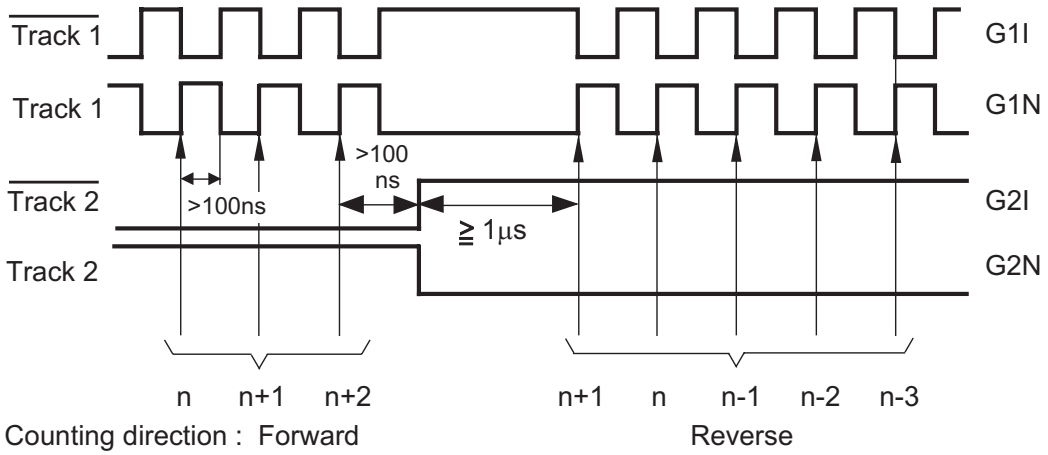
It is determined by system parameters (ID 32883...ID 32886 „Configuration of AZ-IG2 option card“, slot1...slot4) in which form the square-wave input signal is evaluated:

2 square wave pulses in quadrature (offset 90°)
(Mode 0, Code " 0 " **) :**



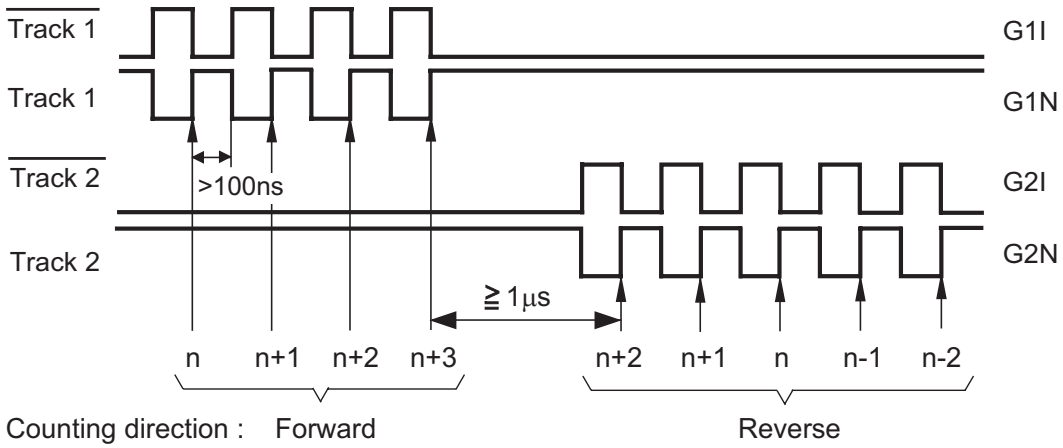
The maximum input frequency is 1 MHz, **from Rev. 1.05: 500kHz !**
The encoder signals are evaluated 4-fold by the AMKASYN system.

Counting pulses track 1 , direction signal track 2
(Mode 1, Code "1" **) :**



The maximum input frequency is 4 MHz, **from Rev. 1.05: 2 MHz !**
The input pulses are only single evaluated.

Forward pulses track 1, reverse pulses track 2
(Mode 2, Code "2" **) :**



The maximum input frequency is 4 MHz, **from Rev. 1.05: 2 MHz !**
The input pulses are only single evaluated.

1.1 Probe function

The „Probe function“ can be used on the AZ-IG2 option card from revision 1.03.
One probe input is provided per each square wave input channel on the AZ-IG2 (channel 1...4). The probe inputs are optically isolated. By the positive edge of the probe input the counter content internally is stored and latched. For further processing the drive system has access to this counter value via the „Probe function“.

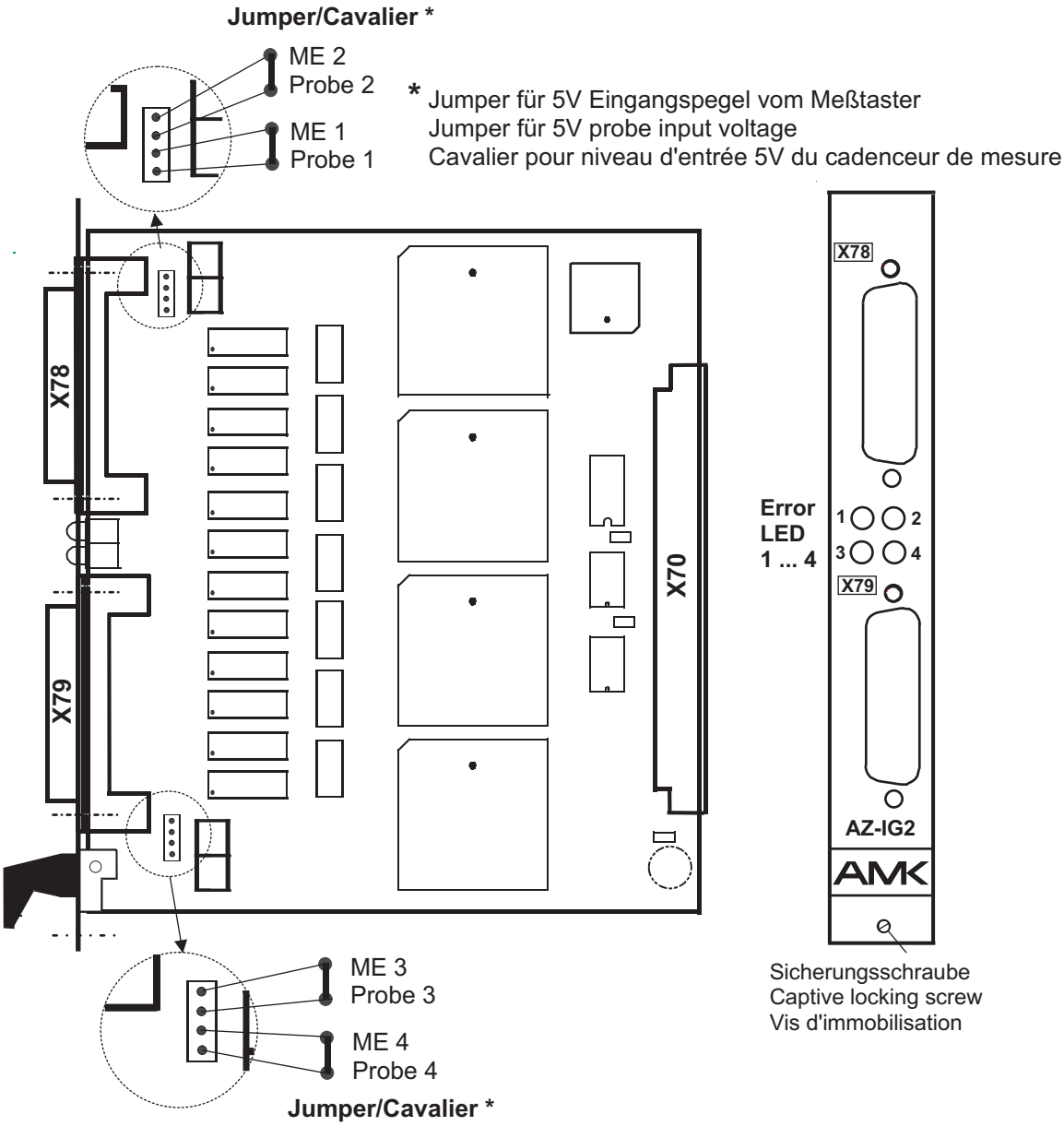
The probe trigger output voltage can be +24V or +5V. For a 5V trigger signal the jumpers on the AZ-IG2 board must be set (see component mounting drawing). A trigger signal width of at least 4µs is required. The internal signal delay is approx. 3.5µs.

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

Pin	X78Signal	X79Signal
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	Probe input 2+	Probe input 4+
6	GND	GND
7	GND	GND
8	GND	GND
9	Probe input 1+	Probe input 3+
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	Probe input 2-	Probe input 4-
19	+ 5V (1) max. 250mA	+ 5V (3) max. 250mA
20	+ 5V (2) max. 250mA	+ 5V (4) max. 250mA
21	Probe input 1-	Probe input 3-
22	G0I channel 1	G0I channel 3
23	G2I channel 1	G2I channel 3
24	G1I channel 1	G1I channel 3
25	GND	GND

Probe input x+: +24V (+5V)
Probe input x-: 0V

1.2 Component mounting drawing and front panel AZ-IG2



2 Imprint

Title **PDK_027812_AZAW_Option_AZIG2_en**

Purpose **Hardwaredescription Option card AZ-IG2**

Part number **27812**

History

Publication date
2000/11

Reservation Modifications to the content of the documentation and the delivery options for the products are reserved.

Service Tel. no. **+49/(0)7021 / 5005-191, Fax -193**

Office hours:
Mon.-Fri. 7:30 - 16:30, on weekends and public holidays the phone number of the standby service personnel is available on the answering machine.

You can assist us in finding a fast and reliable solution for the malfunction by providing our service personnel with the following:

- Information located on the ID plate of the devices
- The software version
- The device setup and the application
- The type of malfunction, suspected cause of the failure
- The diagnostic messages (error codes)

Publisher AMK Arnold Müller Antriebs- und Steuerungstechnik GmbH & Co. KG
Gaußstraße 37 – 39, 73230 Kirchheim/Teck

Tel.: 07021/5005-0, Fax: 07021/5005-176
E-mail: info@amk-antriebe.de

Additional information www.amk-antriebe.de

AMK Arnold Müller GmbH & Co. KG
Antriebs- und Steuerungstechnik
Gaußstrasse 37 – 39
D-73230 Kirchheim/Teck
Telefon: +49 (0) 70 21 / 50 05-0
Telefax: +49 (0) 70 21 / 50 05-199
info@amk-antriebe.de
www.amk-antriebe.de