AMKASYN
Servo inverter KE/KW and KU
Binary Inputs / Outputs

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Part-No.: 201248

Notes on this document

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Actual version: 2009/23

Firmware Version	Hardware Version	Letter symbol

What has changed:

Version	Change	Letter symbol
2009/23	Pin assignment, pin 23, 24. 25	Bls

Reservation: We reserve the right to modify the content of the documentation as well as to the delivery options for the product.

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- Type plate data for each unit
- Software version
- Device configuration and application
- Type of fault/problem and suspected cause
- Diagnostic messages (error messages)

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Content

1 Option Card KU-EA2 / KW-EA2 Binary Inputs / Outputs **4**

1.1 Activation I/O option card 5

1.2 X61 Pin assignment (25 pole, female D-SUB connector) 5

1.3 Front view and component mounting diagram on controller card KU-EA2 / KW-EA2 6

2 Your opinion is important! **7**

1 Option Card KU-EA2 / KW-EA2 Binary Inputs / Outputs

NOTICE

Electronic components could be destroyed through static discharge!

Therefore touching of the electrical connections on the card (e.g. option card, controller cards) must be avoided.

Steps to prevent:

Before handling the electronic component discharge yourself by touching PE.

The option card “Binary I/O EA2” can be installed on KU compact inverters (option KU-EA2) and KW compact inverters (option KW-EA2).

The KU/KW inverter must be equipped with a controller card from KU-/KW-R02 upwards!

The option card is installed:

On KU: KU-EA2 (Order no.O684) on controller card in option slot 1

On KW: KW-EA2 (Order no. O664) on controller card in option slot 1 or option slot 2

The card has 12 binary inputs (nominal voltage +24V) and 8 binary outputs (+24V, 100 mA) which are optically isolated. The signal levels correspond to VDI 2880.

The minimum width of the input / output signals is depending on the present KW / KW-PLC system and user software.

The I/O supply voltage +24V must be provided by the customer.

The outputs are short-circuit-proof.

The maximum output current of of the open emitter outputs is 100 mA each with a simultaneity factor of 1.

Through LED ER any short-circuit is displayed in the outputs and an error message is generated. After clearing the short-circuit condition the error message must be cancelled through „Error Reset“.

Drive functions can be assigned to binary inputs and outputs by parameters setting.

(See documentation “Parameters ” chapter „Binary Inputs“ and chapter “Binary Outputs)”

Inputs setting and outputs evaluation must be carried out by the higher ranking controller.

Associated with option card „Programmable Controller PLC“ the inputs and outputs can be used freely as PLC I / O.

The inputs and outputs are connected at D-SUB socket X61. A D-SUB connector shell with lateral cable outlet must be used.

Connection through shielded cable. The cable shield has to be grounded single-ended at the module through the metallized D-SUB shell.

Contact tubes 23, 24 and 25 in socket X61 provide the external +24V_{ext} supply.

To ensure, that the D-SUB connectors can’t be swapped, two of these tubes can be used for connector polarization. For this purpose polarization pins are inserted into the contact tubes at the selected pin locations and then the associated pins have to be omitted in the mating connector.

1.1 Activation I/O option card

The installed I/O Option Card EA2 must be activated.

Depending on the slot and the input / output ports the parameters must be entered to the parameter list like the following table.

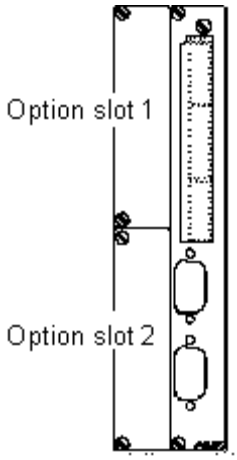
Example:

KW-EA2 installed in slot 2, all 12 inputs and all 8 outputs should be activated.

ID32873 = 48 (Input port 1 (E1...E8))

ID32968 = 49 (Input port 2 (E9...E12))

ID32846 = 560 (Output port 1 (A1...A8))



picture name: KEKW_Optionskarte

Option slot 1	
Input	Output
ID32873 Input port 1 (E1...E8) Code 40	ID32846 Output port 1 (A1...A8) Code 552
ID32968 Input port 2 (E9...E12) Code 41	
Option slot 2	
Input	Output
ID32873 Input port 1 (E1...E8) Code 48	ID32846 Output port 1 (A1...A8) Code 560
ID32968 Input port 2 (E9...E12) Code 49	

1.2 X61 Pin assignment (25 pole, female D-SUB connector)

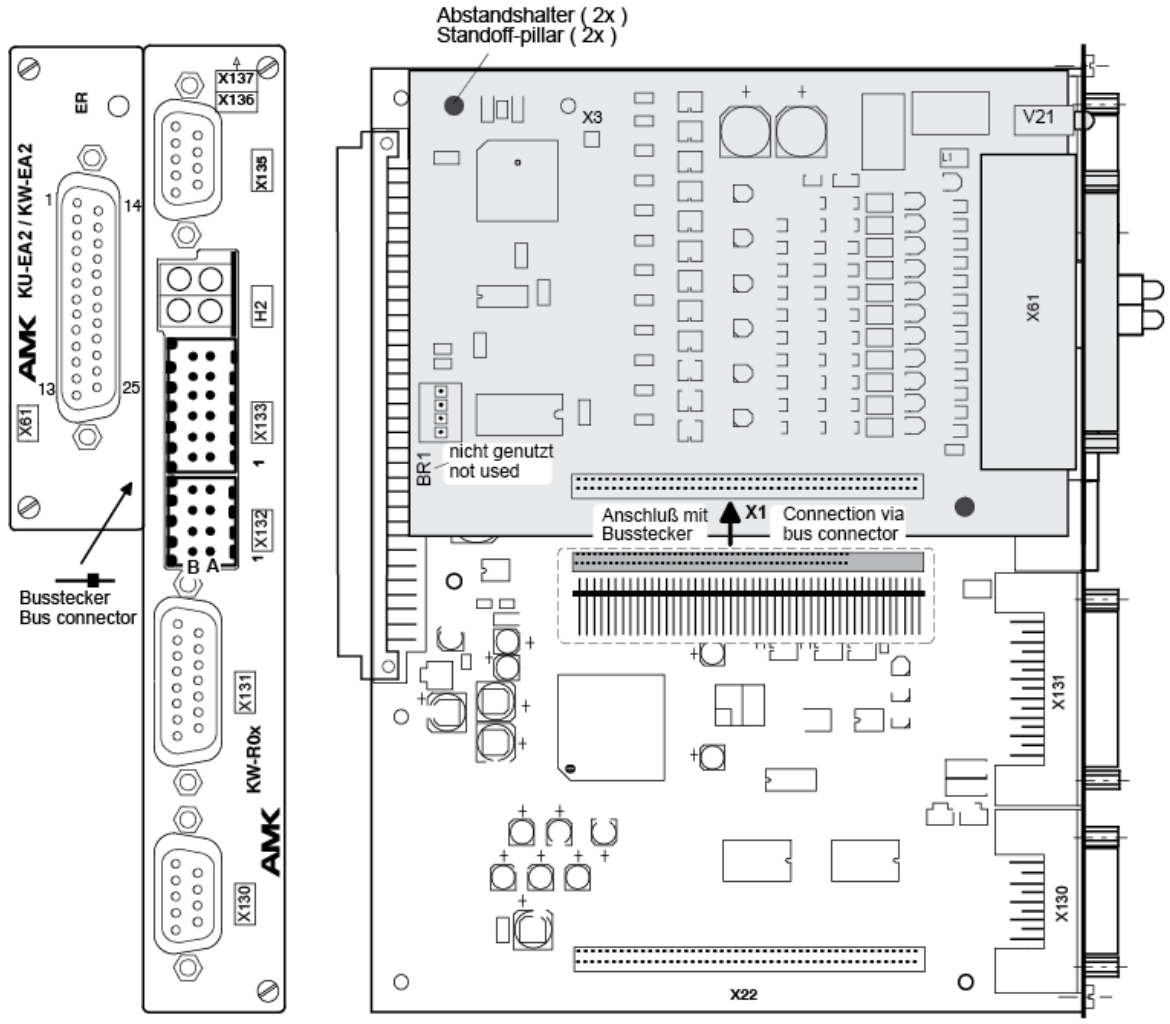
I / O addresses

Pin	**X61**	**Slot 1 Byte.Bit**	**Slot 2 Byte.Bit**
1	E1	E0.0	E8.0
2	E2	E0.1	E8.1
3	E3	E0.2	E8.2
4	E4	E0.3	E8.3
5	E5	E0.4	E8.4
6	E6	E0.5	E8.5
7	E7	E0.6	E8.6
8	E8	E0.7	E8.7
9	E9	E1.0	E9.0
10	E10	E1.1	E9.1
11	E11	E1.2	E9.2
12	E12	E1.3	E9.3
13	E-	reference potential E ($0V_{ext}$)	
14	A-	reference potential I A ($0V_{ext}$)	
15	A1	A0.0	A8.0
16	A2	A0.1	A8.1
17	A3	A0.2	A8.2
18	A4	A0.3	A8.3

Pin	X61	Slot 1 Byte.Bit	Slot 2 Byte.Bit
19	A5	A0.4	A8.4
20	A6	A0.5	A8.5
21	A7	A0.6	A8.6
22	A8	A0.7	A8.7
23	A+ *	+ 24V$_{ext}$ supply voltage	
24	A+ *		
25	A+ *		

*2 of these contact tubes can be used for connector polarization.
Through this or any other measure must be ensured, that the cable connectors can't be swapped.
The pins 23, 24, 25 are connected internal.

1.3 Front view and component mounting diagram on controller card KU-EA2 / KW-EA2



picture name: ZCH_kw_r02_ea2

The option card for KU and KW-systems differs in the outer dimensions of the front plate.

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