AMKASYN
Servo inverter KE/KW and KU
Control panel KU-BF1

Version: 2007/45
Part no.: 26774

Translation of the "Original Beschreibung"

About this documentation

Name: PDF_026895_KUKW_Option_BF1_en

What has changed:

Version	Change	Subject	Letter symbol
2004/36			
2007/45	revision	complete document	LeS

Content

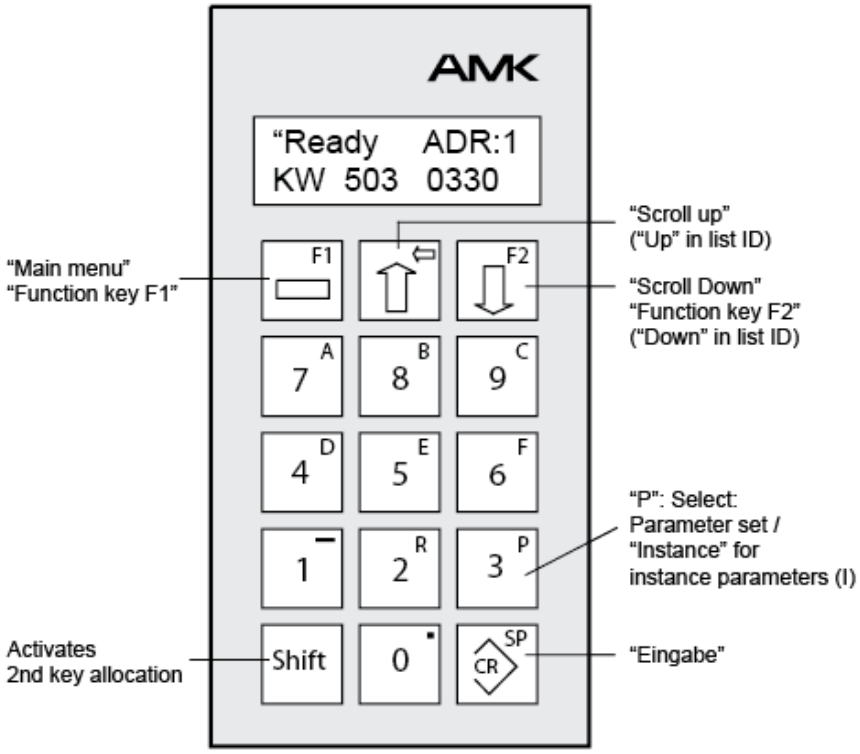
1 KU-BF1 control panel for controller cards from KU-/KW-R02

1.1 Control panel (option)

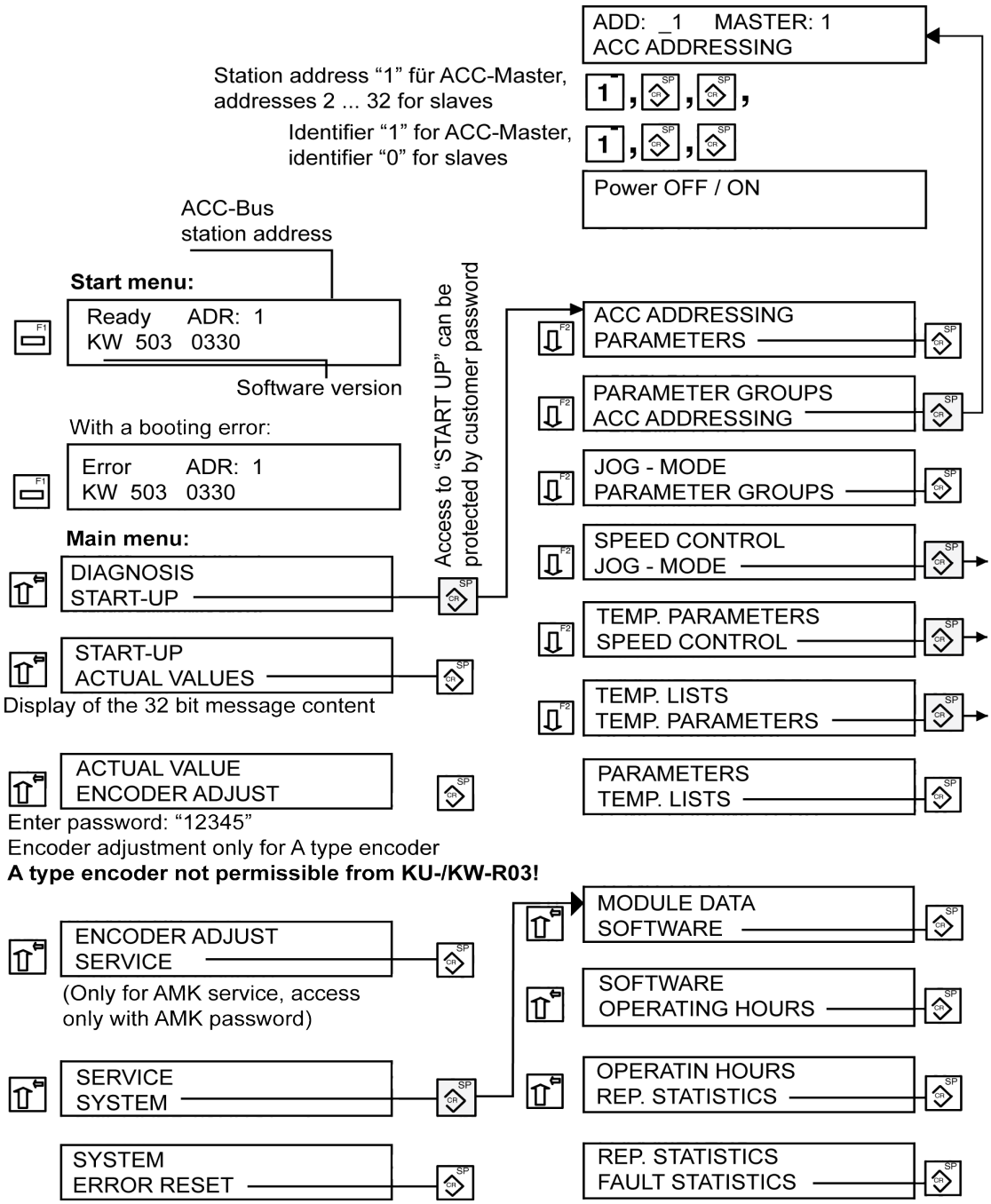
The KU-BF1 control panel is designed as a service unit and a commissioning unit.
At the KU-/KW controller card (from version …-R02) the control panel is connected through the serial interface X135.
The following items can be used:

- Setting of the ACC BUS address on the KW module
- Selection of KE / KW /Instance
- Parameters entry
- Speed setpoint entry (e.g. JOG speed)
- Status and diagnostic messages display
- Display of selected setpoint values / actual values
- System data display

1.2 KU-BF1 front view



1.3 Control panel KU-BF1 menu structure



The required menu item must be scrolled to the bottom display line using the "Scroll keys" F2 / F2 The "Enter" key SP then activates this menu item.

With each actuation of key F1 a 1-step return in the menu is accomplished.

A double click to key F1 leads to a return to the main menu.

The entering is accepted either by the "Enter" key or the "Scroll" keys.

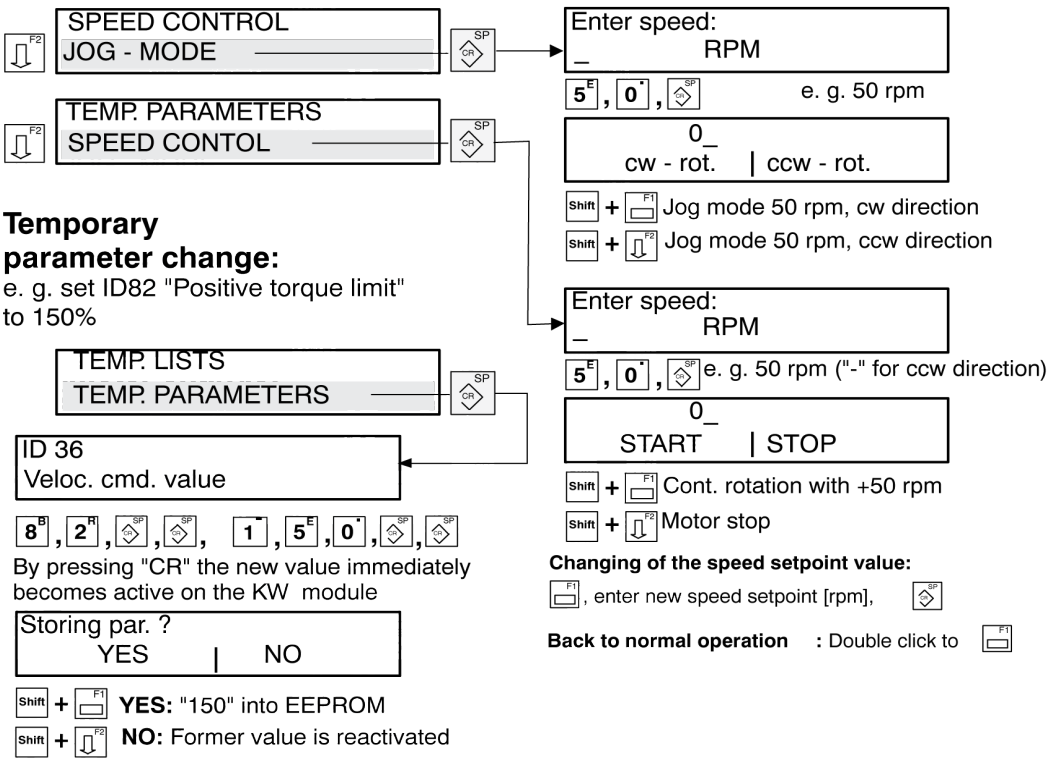
Error messages during data entry must be acknowledged by the "Enter" key SP .

The second key assignment becomes effective if the Shift key and the corresponding key are pressed together.

Parameter entry :
Select menu item "PARAMETERS " / "PARAMETER GROUPS " via the"Scroll" keys.
Entering of the desired ID-No.,SP.
Each further operation of SP changes between "ID entry mode" and display of the "ID content". "ID entry mode" must be selected before data entering.
The new parameter settings are stored in the EEPROM. The value only becomes effective in the drive with RF OFF / ON or after the next system booting.

The **Main parameter set ("0")** or **Alternative parameter sets ("1", "2", "3")** can be selected with key "P" (Shift + 3 P).
The same key combination also is used to select the **Instance ("0", "1", "2")** , e. g. on sytems with different fieldbus cards for communication.

Speed setting via control panel:



1.3.1 Communication

For a multi axis drive system with modules interconnected via ACC - BUS :

First the MASTER and SLAVE addresses must be set via the panel individually for each module (see "ACC ADDRESSING").

If the panel then is connected to the ACC MASTER module the SLAVES also can be addressed through the panel.

For this menu item "PARAMETERS" must be selected,

then entry of Shift + 7 A , "x", "x", SP CR ("x", "x": ACC BUS station address).

All data entering now is addressed to this SLAVE module. .

Some of the **Communication parameters** are related to **INSTANCES**, i. e. within one parameter set they can have different values for each**INSTANCE** (e. g. different fieldbus cards).

Parameters related to instances are marked by **"I"** on the panel.

Call of an instance via Shift + 3 P keys, then enter instance number (0, 1, 2) and SP CR .

Now entry of the communication data for this instance.

1.3.2 Display of diagnostic messages

System in error status:

Error ADR: 1 KW 503 0330

F1 F2 SP CR for display of the error message e.g.

2351 KW 1 Warn. mot.overtmp

Further possibly existing diagnostic messages can be called up by the scroll keys F2 , .

F2 e.g.

2347 KW 2 Err. mot.overtmp

With message „System diagnosis“:
Make a note of the error and call additional information by,

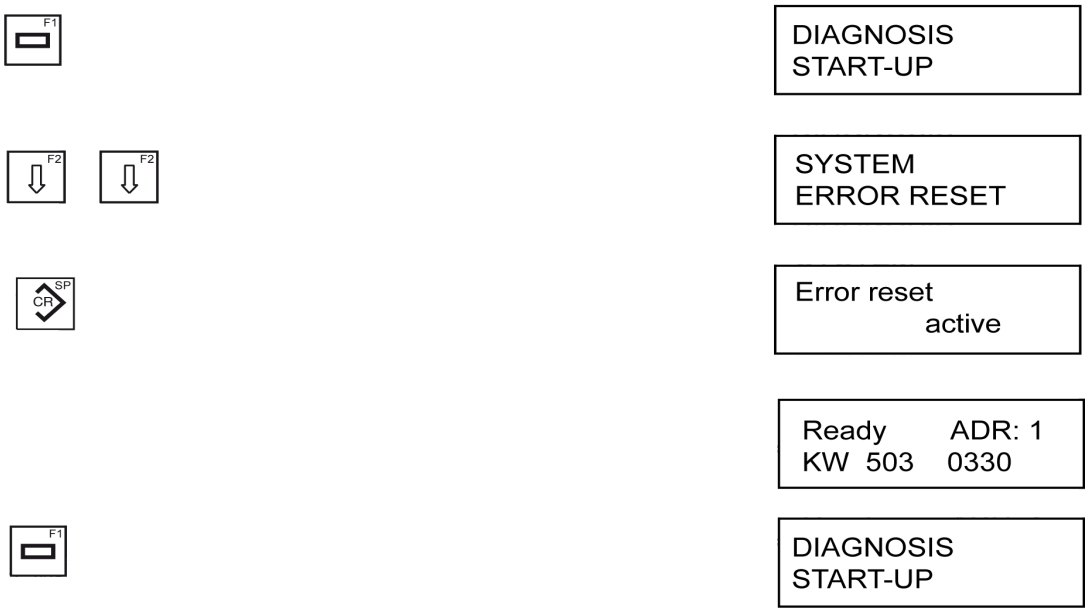
Shift + F2

C:	c M:	m T:	t
E:	e I:	i	

Please additionally note the complete content of this display and inform the AMK Service Tel.-No.: +49 7021 / 5005-191

1.3.3 Reset error

Clear fault cause



After a „System diagnosis“ message it can be necessary to switch off the power supply (24 VDC) completely and then after > 10s power on (24 VDC) again.

2 KU-BF1 control panel for KU with controller cards from KU--R01

2.1 KU-BF1 control panel

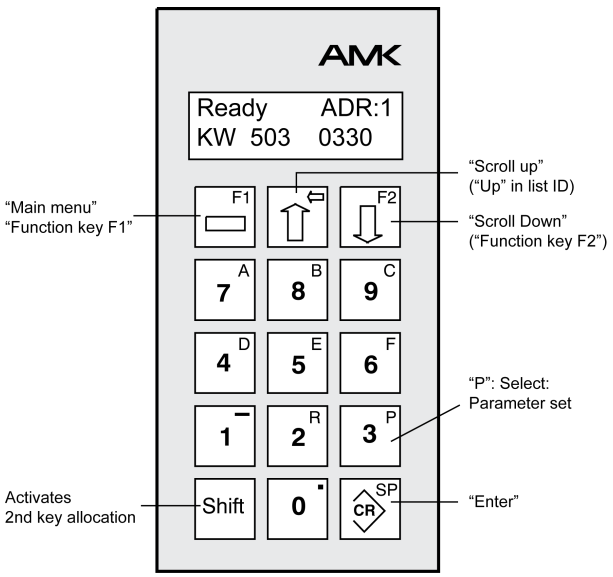
On the KU cover four pick-up holes are provided to snap in the KU-BF1 control panel through the 4 pins at the KU-BF1 back. Connection via the coiled cable at D-SUB socket X35 at the top of the KU housing.

Connector pin assignment X35

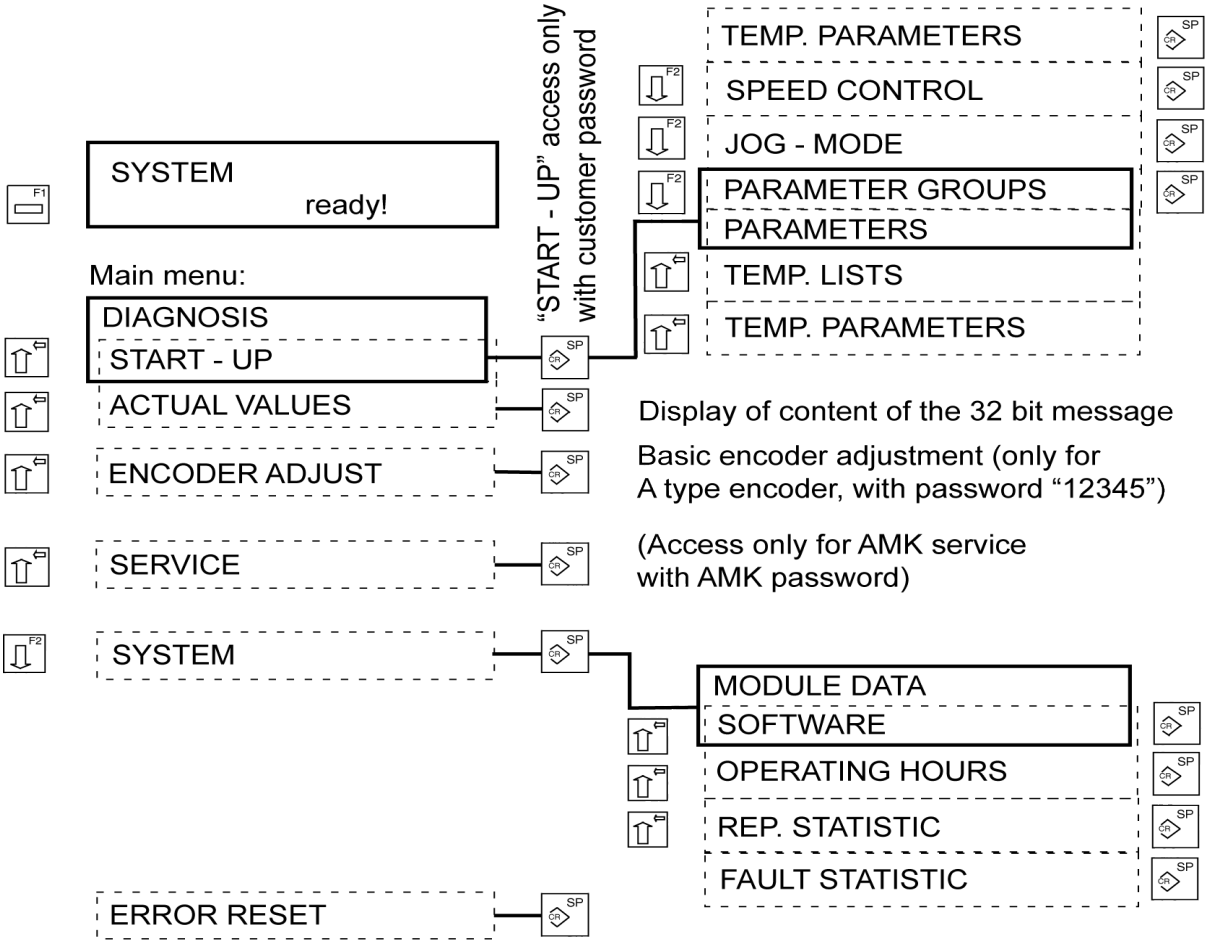
Pin	Code	Meaning
1	12P	+12V Supply
2	PC_RxD	Receive Data (RS232)
3	PC_TxD	Transmit Data (RS232)
4	nc	
5	GND	Signal Ground
6	12N	-12V Supply
7	nc	
8	SBF	Hardware identifier bit 0 = Control panel KU-BF1 nc = SBUS / not connected
9	5P	+ 5V Supply
Shell	SSS	Shield connected to metallized D-SUB shell.

Among other things the KU-BF1 control panel can be used for:

- Drive configuration and parameter setting
- Call for status and diagnosis messages
- Display of actual values
- Display of system data
- JOG speed control mode, continuous speed mode



2.2 KU-BF1 menu



The required menu item must be scrolled down to bottom display line using the "Scroll" keys / "Enter" key then activates the selected menu item.

Parameter input:
Only the ID-No. in the bottom display line can be modified. Each operation of changes between "ID entry mode" and "ID display mode".

With each actuation of key a 1-step return in the menu is accomplished.

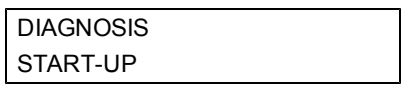
A double click to key (2 times within 0.3s) leads to a return to main menu.

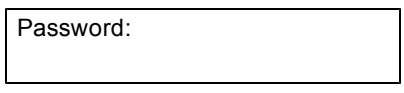
Entries are only accepted with the "Enter" key or the "Scroll up" key .

Main parameter set ("0"), or alternative parameter sets ("1", "2", "3") can be selected with key "P" (Shift + 3).

Error messages during data entry must be acknowledged by "Enter" key .

2.3 Parameter input





Menu item „START-UP“ (for parametrization and JOG / DIG. SPEED control) is only accessible after entry of the correct password. The password (number) is defined by the machine manufacturer. With „0“ in ID 32821 (password) access to „START-UP“ is free.

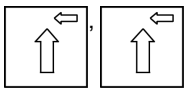
Dial in the password number and accept with „Enter“.

Enter

PARAMETERGROUPS
PARAMETERS

ID No. can be entered as follows

1. Direct entry after „  “, if ID No. is known
2. Via „PARAMETER GROUPS“ after  , 
   With  the required parameter group is selected. After  the display shows the first ID-No. of this group.
   Through scrolling  ,  the required parameter is selected.
3. As „TEMP. PARAMETERS“



TEMP. LISTS
TEMP. PARAMETERS

ID-No.	38	P0
Pos.veloc limit		

Through scrolling  ,  the required parameter is selected

Temporary parameter changes become effective directly in the drive!

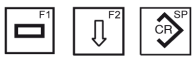
Normal parameter input is overwriting the value in the EEPROM. The new values become effective only after RF (Inverter On) OFF/ON (after changes of system parameters, power must be completely switched OFF and ON again).

After restart, main operation mode according to ID 32800 is active!

2.4 Call for diagnosis messages

System in error status:

Error	ADR: 1
KW 503	0330



for display of the error message e.g.

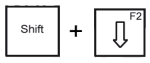
2351	KW 1
Warn. mot.overtmp	

Further possibly existing diagnostic messages can be called up by the scroll keys  ,  .

e.g.

2347	KW 2
Err. mot.overtmp	

With message „System diagnosis“:
Make a note of the error and call additional information by,



C:	c M:	m T:	t
E:	e I:	i	

Please additionally note the complete content of this display and inform the AMK Service
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2.5 Error reset

Eliminate cause of malfunction

Clear fault cause

F1	DIAGNOSIS START-UP
F2 F2	SYSTEM ERROR RESET
SP CR	Error reset active
	Ready ADR: 1 KW 503 0330
F1	DIAGNOSIS START-UP

After a „System diagnosis“ message it can be necessary to switch off the power supply (24 VDC) completely and then after > 10s power on (24 VDC) again.

2.6 Temporary parameter input:

Example: The speed controller proportional gain (ID 100) shall be reduced from „250“ to „200“.

	PARAMETER GROUPS PARAMETERS
⇧	PARAMETERS TEMP. LISTS
⇧	TEMP. LISTS TEMP. PARAMETERS
SP CR	ID-No.: 38 P0 Pos. veloc limit
1 0 0 SP CR	ID-No.: 100 P0 Veloc gain KP
SP CR	250 Veloc gain KP
2 R 0 0 SP CR	200 Veloc gain KP
SP CR	storing pa? YES / NO
Shift + F1 F1 "JA"	200 Veloc gain KP

Now the new parameter value is stored into the EEPROM.

F1

DIAGNOSIS START-UP

2.7 JOG speed control mode

Note: The normal cycle is interrupted and not effective!
The operator is responsible for movements without collisions!

F1 Double click

DIAGNOSIS START-UP

SP CR

PARAMETER GROUPS PARAMETERS

F2 F2

SPEED CONTROL JOG-MODE

SP CR

Enter speed - RPM

Enter required speed, e.g. 50 RPM.

E 5 , . 0 , SP CR

0 cw-rot ..... + ccw-rot

Shift + F1 : CW motor shaft rotation

Shift + F2 : CCW motor shaft rotation

After release of the keys, internally digital speed setpoint „0“ is output. The motor stops.

Change JOG speed

F1

Enter speed: - RPM

F1
Enter new speed setpoint value (see above).

A F1 double-click terminates „JOG speed control mode“. The previous selected operation mode becomes effective again.

2.8 Continuous speed control mode

Note: The normal cycle is interrupted and not effective! The operator is responsible for movements without collisions!

F1 Double click

DIAGNOSIS StART UP

SP CR

PARAMETER GROUPS PARAMETERS

F2 , F2 , F2

TEMP. PARAMETERS SPEED CONTROL

SP CR

Enter speed - RPM

Enter required speed (rotation direction is defined by the sign), e.g. -50 RPM

Shift 1 - 5 E 0 . , SP CR

0 START.... + STOP

Shift + F1 : Motor shaft ist rotating

Shift + F2 : Motor stops

Change speed setpoint value

F1

Enter speed: - RPM

Enter new speed setpoint value (see above).

A F1 double-click terminates „Continuous speed control mode“. The previous selected operation mode becomes effective again.

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2. Is the content structured well?

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