E82ZBC
00408683
06/99

Communication module
Keypad and accessories

These instructions
- include the most important technical data.
- describe the installation, the handling of the keypad and keypad accessories.
- is valid only
  - for *Keypad* labelled E82ZBC or E82ZBB,
  - for *hand-held terminals* labelled E82ZBH,
  - for *mounting kits (door)* labelled E82ZBHT,
  - for *connection cables* labelled E82ZWLxxx,
  - together with the Operating Instructions of the corresponding controller.

Description
The keypad enables the communication with Lenze controllers via a keypad.

Scope of application
The keypad can be used with controllers as from the nameplate labelling:
- 8200 frequency inverters
  - E82xxxxxxxBxxxXXVx1x

Required accessories
Connection cable (for hand-held terminal and door installation only)

Function
- Parameterization
- Control (e.g. inhibit and enable)
- Display operating data
- Enter setpoints
- Transfer parameter sets to other controllers

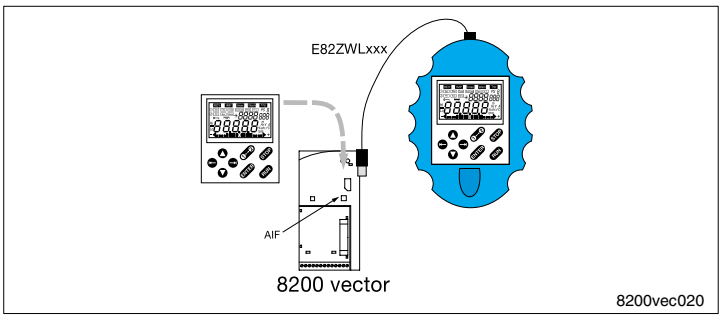
General data and operating conditions of the keypad

Insulation voltage to ground/PE	50 V AC
Enclosure	IP55
Ambient temperature	during operation: -10 ... +60 °C Transport: -25 ... +70 °C Storage: -25 ... +60 °C
Climatic conditions	Class 3K3 acc. to EN 50178 (without condensation, medium relative humidity 85 %)
Dimensions (L x W x H)	75 mm x 62 mm x 23 mm

Installation

The 8200 motec maintains its degree of protection even if the connection cable is inserted and the sealing plug is removed.
The keypad can be connected or disconnected and parameterized during operation.
The rear side of the keypad is bolted to the hand-held terminal (remove rubber coating).
Use the kit E82ZBHT (cut-out 45.3 x 45.3 mm) to mount the keypad e.g. to a control cabinet panel.

8200 vector



With hand-held terminal

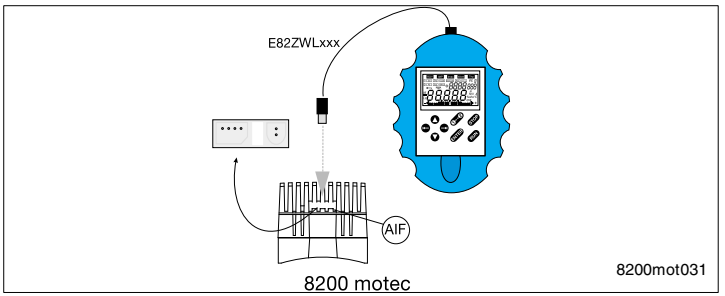
1. Plug keypad into the hand-held terminal and bolt (for E82ZBC only).
2. Connect hand-held terminal to the AIF interface using the connection cable.

Without hand-held terminal

1. Plug keypad to the AIF interface.

The keypad is ready when the mains voltage is applied.

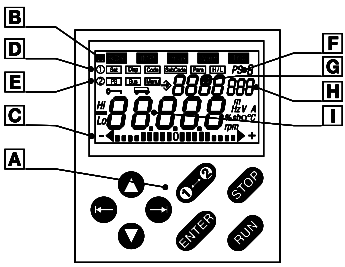
8200 motec



1. Plug keypad into the hand-held terminal and bolt (for E82ZBC only).
2. Remove sealing plug at the heatsink of the motec.
3. Connect hand-held terminal to the AIF interface using the connection cable.

The keypad is ready when the mains voltage is applied.

Display / Functions



A	Function keys	
B	Status displays	
C	Bargraph display	
D	Function bar 1	
E	Function bar 2	
F	Parameter set to be changed	Modification possible, if display flashing
G	Code number	
H	Subcode number	
I	Parameter value with unit	

A	**Function keys**	
	RUN	Enable controller (X3/28 must be applied to HIGH level)
	STOP	Inhibit controller
	①↔②	Change function bar 1↔ function bar 2
	⇨⇦	To the right/left in the active function bar
	▲▼	Incrase/decrease value. Scroll: Keep key pressed
	ENTER	Save parameters if⇨ flashing. Confirmation by *StorE* in the display.
B	**Status displays**	
	RDY	Ready
	IMP	Pulse inhibit (power outputs inhibited)
	Imax	Set current limit exceeded (C0022 (motor mode) or C0023 (generator mode))
	Warn	Warning active
	Trip	Fault active
C	**Bargraph display**	
		Value set under C0004 in %. (Default setting: unit load capacity C0056). Display range: - 180 % ... + 180 % (each bar = 20 %)
D	**Function bar 1**	
	Set	Setpoint input via▼▲ (Not possible with active password protection (display = *"LOC"*)
	Disp	display function: (active after every mains connection) Display memory unit 1 of the user menu (C0517/1) and active parameter set
	Code	Select codes (display G)
	SubCode	Select subcodes (display H)
	Para	Change parameter of a (sub)code (display I)
	H / L	Display values with more than five digits
		H: High values (Display *"HI"*)
		L: Low values (Display *"LO"*)
E	**Function bar 2**	
	PS	Parameter set 1 ... Select parameter set 4 for change (Display e.g. PS *2* (F). The parameter sets can only be activated using digital signals (configuration using C007 or C0410).)
	Bus	Select controller on the system bus (CAN) (remote parameterization) (The selected controller (1 ... 63) can be parameterized from the momentary drive. 🚗 = function active)
	Menu	Select menu. The user menu is active after every mains connection. If necessary, change to *ALL*. (*uSEr*: Code list in the user menu (C0517). *ALL*: List of all codes. *FunCt*: Specific codes only for the function modules INTERBUS, PROFIBUS-DP and LECOM-B.)

User menu

After every mains switching, you have access to the user menu with the ten most important drive parameters to commission a standard application with linear V/f characteristic. For the complete code list please refer to the operating instructions of the controller.

The first code of the user menu (C0517/1) is displayed after mains connection or using [Disp].

C0050	**Output frequency**
-480.00 {Hz} 480.00	

C0034	**Setpoint input standard I/O (X3/8)**
-0-	0 ... 5 V / 0 ... 10 V / 0 ... 20 mA
-1-	4 ... 20 mA
-2-	-10 V ... +10 V
-3-	4 ... 20 mA with protection against open circuit (TRIP Sd5, if I < 4 mA)

C0034	**Setpoint input application I/O**
C0034/1 (Subcode 1 of C0034) :	**X3/1U, X3/1I**
C0034/2 (Subcode 2 of C0034) :	**X3/2U, X3/2I**
-0-	0 ... 5 V / 0 ... 10 V
-1-	-10 V ... +10 V
-2-	0 ... 20 mA
-3-	4 ... 20 mA
-4-	4 ... 20 mA with protection against open circuit (TRIP Sd5 when I < 4 mA)

C0007	**Configuration digital inputs**			
	E4	E3	E2	E1
-0-	CW/CCW	DCB	JOG2/3	JOG1/3
-1-	CW/CCW	PAR	JOG2/3	JOG1/3
-2-	CW/CCW	QSP	JOG2/3	JOG1/3
-3-	CW/CCW	PAR	DCB	JOG1/3
-4-	CW/CCW	QSP	PAR	JOG1/3
-5-	CW/CCW	DCB	TRIP-Set	JOG1/3
-6-	CW/CCW	PAR	TRIP-Set	JOG1/3
-7-	CW/CCW	PAR	DCB	TRIP-Set
-8-	CW/CCW	QSP	PAR	TRIP-Set
-9-	CW/CCW	QSP	TRIP Set	JOG1/3
-10-	CW/CCW	TRIP Set	UP	DOWN
-11-	CW/CCW	DCB	UP	DOWN
-12-	CW/CCW	PAR	UP	DOWN
-13-	CW/CCW	QSP	UP	DOWN
-14-	CCW/QSP	CW/QSP	DCB	JOG1/3
-15-	CCW/QSP	CW/QSP	PAR	JOG1/3
-16-	CCW/QSP	CW/QSP	JOG2/3	JOG1/3
-17- ... -51-	enhanced settings (see operating instructions)			

- CW = clockwise rotation, CCW = counter-clockwise rotation, DCB = DC injection braking, PAR = change-over (PAR1 ⇔ PAR2) PAR1 = LOW; PAR2 = HIGH (The corresponding terminal must be assigned to the function "PAR" in PAR1 and in PAR2)
- JOG1/3, JOG2/3 = selection of fixed setpoints (JOG1: JOG1/3 = HIGH, JOG2/3 = LOW, JOG2: JOG1/3 = LOW, JOG2/3 = HIGH, JOG3: JOG1/3 = HIGH, JOG2/3 = HIGH)
- QSP = Quick stop, TRIP Set = external fault, UP/DOWN = motor pot functions

User menu

C0010 **0.00**		**minimum output frequency** 480.00	**Operation with Lenze geared motors, setting range 1 : 6** →C0010: 14.5 Hz →C0011: 87.0 Hz
C0011 7.50	{ **50.00 Hz** }	**maximum output frequency** 480.00	
C0012 0.00	{ **5.00 s** }	**Acceleration time main setpoint** 1300.00	Reference: Frequency change 0 Hz ... C0011
C0013 0.00	{ **5.00 s** }	**Deceleration time main setpoint** 1300.00	Reference: Frequency change C0011 ... 0 Hz
C0015 7.50	{ **50.00 Hz** }	**V/f rated frequency** 960.00	Setting is valid for all permitted mains voltages
C0016 0.00	{ **depending on the controller**}	**U_{min} boost** 40.0	
C0002 see chapter 'Parameter set transfer'			

Change entries in the user menu

Action		Key	Result	Note
1.	Change to the menu "ALL"	❶→❷	❷	Change to function bar 2
2.		←→	Menu	
3.		▼▲	ALL	Select menu "ALL" (list of all codes)
4.		❶→❷	❶	Confirm selection, change to function bar 1
5.	Select user menu	→	Code	
6.		▲	0517	Code for user menu
7.	Select memory unit	←→	SubCode 001	Code saved under C0517/1 is displayed (default setting: output frequency C0050)
8.		▲	001 ... 010	Select subcode
9.	Change entry	→	Para	
10.		▼▲	XXXXX	Enter code number The sytem does not check whether the code number exists! "0" must be entered to delete the entry.
11.		ENTER	StOrE	Confirm entry and restart "loop" at step 7. to change other memory units

Edit parameters

Change and save parameters
The user menu is active after every mains switching.
Change to the menu *ALL* to call all codes.
If you should make a mistake during parameterization, load the default setting under C0002 and start again.

Action		Key	Result	Note
1.	Plug in keypad		Disp *XX.XX* Hz	The function Disp is active. The first code in the user menu is displayed (C0517/1, default setting: C0050 = output frequency).
2.	If necessary, change to the menu "ALL"	1→2	❷	Change to function bar 2
3.		←→	Menu	
4.		▼▲	*ALL*	Select menu "ALL" (list of all codes)
5.		1→2	❶	Confirm selection and change to function bar 1
6.	Inhibit controller	STOP	RDY IMP	Necessary only, if you change C0002, C0148, C0174 and/or C0469
7.	Set parameters	←→	Code	
8.		▼▲	*XXXX*	Select code
9.		→	SubCode *001*	For codes without subcodes: automatic jump to Para
10.		▼▲	*XXX*	Select subcode
11.		→	Para	
12.		▼▲	*XXXXX*	Set parameters
13.		ENTER	*STOrE*	Confirm entry, if → is flashing
		←		Confirm entry, if → is not flashing; ENTER is inactive

Change parameter set (PS)
You can use the keypad only to change over the parameter set, to modify parameters. To activate a parameter set (PS) for operation, you must use digital signals (configuration under C0410 or C0007)!
The function Disp displays the currently active PS.

Action		Key	Result	Note
1.	Select function	1→2	❷	Change to function bar 2
2.		←→	PS	
3.	Select PS	▼▲	*1 ... 4*	Select PS to be changed
4.		1→2	❶	Confirm selection and change to function bar 1
5.	Set parameters			Proceed as described in the table above

Parameter set transfer

The PS transfer also changes password-protected codes. For notes about password protection please refer to the operating instructions of the controller.

Code C0002	**PS transfer**	
-0-	Function performed	
PS of the controller		
-1- ... -4-	Default setting⇨ PAR1 ... 4	Overwrite selected PS of the controller with the default setting
-10-	Keypad ⇨ PAR1 / 2 / 3 / 4	Overwrite all PS of the controller with the keypad data
-11- ... -14-	Keypad ⇨ PAR1 ... 4	Overwrite individual PS of the controller with the keypad data
-20-	PAR1 / 2 / 3 / 4 ⇨ Keypad	Copy all PS of the controller to the keypad
PS of a function module on FIF(not for standard I/O or syste mbus (CAN))		
-31- ... -34-	Default setting⇨ FPAR1 ... 4	Overwrite selected PS of the function with the default setting
-40-	Keypad ⇨ FPAR1 / 2 / 3 / 4	Overwrite all PS of the function module with the keypad data
-41- ...-44-	Keypad ⇨ FPAR1 ... 4	Overwrite individual PS of the function module with the keypad data
-50-	FPAR1 / 2 / 3 / 4 ⇨ Keypad	Copy all PS of the function module to the keypad
PS controller + function module on FIF (not for standard I/O or systembus (CAN)) Operation with application I/O: Always transfer PS of the controller and application I/O jointly!		
-61- ... -64-	Default setting⇨ PAR1 ... 4 + FPAR1 ... 4	Overwrite individual PS with the default setting
-70-	Keypad ⇨ PAR1 / 2 / 3 / 4 + FPAR1 / 2 / 3 / 4	Overwrite all PS with the keypad data
-71- ... -74-	Keypad ⇨ PAR1 ...4 + FPAR1 ... 4	Overwrite individual PS with the keypad data
-80-	PAR1 / 2 / 3 / 4 + FPAR1 / 2 / 3 / 4 ⇨ Keypad	Copy all PS to the keypad

Please carry out the following steps prior to every PS modification:

Plug in keypad and inhibit controller with STOP or via terminal (X3/28 = LOW)

Load default setting

- Set selection code under C0002, confirm with ENTER

Transfer PS from controller to keypad

1. Set 20 or 50 or 80 under C0002, confirm with ENTER
2. If SAVE is not longer illuminated, all PS are transferred to the keypad.

TransferPS from keypad to controller

1. Set selection code under C0002, confirm with ENTER
2. If LOAd is no longer illuminated, the PS are transferred to the controller