SEW EURODRIVE

Addendum to the Operating Instructions

MB-LC Keypad for MOVIFIT® basic

Edition 12/2011

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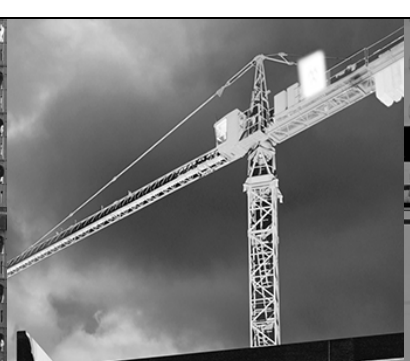

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1 General Information

1.1 Structure of the safety notes

1.1.1 Meaning of the signal words

The following table shows the grading and meaning of the signal words for safety notes, notes on potential risks of damage to property, and other notes.

Signal word	Meaning	Consequences if disregarded
⚠ **DANGER**	Imminent danger	Severe or fatal injuries
⚠ **WARNING**	Possible dangerous situation	Severe or fatal injuries
⚠ **CAUTION**	Possible dangerous situation	Minor injuries
NOTICE	Possible damage to property	Damage to the drive system or its environment
INFORMATION	Useful information or tip: Simplifies the handling of the drive system.	

1.1.2 Structure of the section-related safety notes

Section-related safety notes do not apply to a specific action, but to several actions pertaining to one subject. The used symbols indicate either a general or a specific hazard.

This is the formal structure of a section-related safety note:

⚠ SIGNAL WORD

Type and source of danger.

Possible consequence(s) if disregarded.

- Measure(s) to prevent the danger.

1.1.3 Structure of the embedded safety notes

Embedded safety notes are directly integrated in the instructions just before the description of the dangerous action.

This is the formal structure of an embedded safety note:

- ⚠ **SIGNAL WORD** Nature and source of hazard.

  Possible consequence(s) if disregarded.

  – Measure(s) to prevent the danger.

1.2 Rights to claim under limited warranty

A requirement of fault-free operation and fulfillment of any rights to claim under limited warranty is that you adhere to the information in the documentation. Read the documentation before you start working with the unit!

1.3 Exclusion of liability

You must comply with the information contained in this documentation to ensure safe operation and to achieve the specified product characteristics and performance features. SEW-EURODRIVE assumes no liability for injury to persons or damage to equipment or property resulting from non-observance of these operating instructions. In such cases, any liability for defects is excluded.

1.4 Copyright

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1.5 Product names and trademarks

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1.6 Other applicable documentation

- This supplementary information does not replace the detailed operating instructions.
- Startup only by trained personnel observing the relevant accident prevention regulations and the following document:
  - "MOVIFIT® basic" operating instructions

2 Electrical Installation

2.1 Connecting the MB-LC keypad

MOVIFIT® basic units are equipped with an X50 diagnostic interface (RJ11 socket).

The diagnostics interface is located in the connection block of the control unit.

You must remove the screw plug before plugging in the connector into the diagnostic interface.

⚠ **DANGER** Danger of burns due to hot surfaces of the MOVIFIT® basic unit.

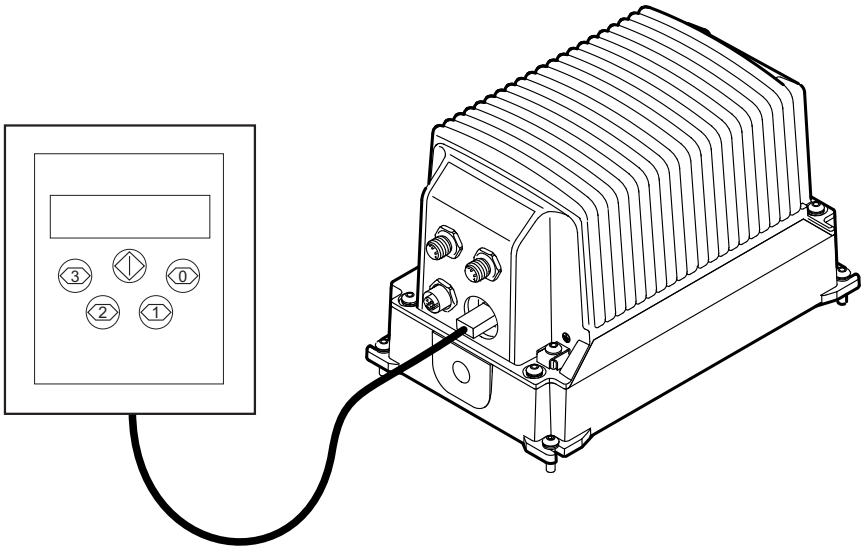
Severe injuries.

- Wait for the MOVIFIT® drive to cool down sufficiently before touching it.

Use the cable enclosed with the keypad to connect the keypad to the MOVIFIT® basic unit.

Scope of delivery:

Type	Part number	Scope of delivery
MB-LC	2 820 126 4	– MB-LC keypad – Cable with RJ45 – RJ11 plug connectors



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3 Operation

3.1 Description of the MB-LC keypad

3.1.1 Function

You can use the MB-LC keypad to operate MOVIFIT® basic units (inverter and motor starter) in manual mode. In addition to that, the keypad displays important information about the state of the drive.

3.1.2 Features

- Illuminated display
- Keypad with 5 keys
- Connection cables

3.1.3 Key assignment

The following figure shows the key assignment of the MB-LC keypad:

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Key Activation/deactivation of **manual mode** with the MB-LC keypad

Key Setting/resetting of **bit DO0** of the MOVIFIT® basic drive

Key Setting/resetting of **bit DO1** of the MOVIFIT® basic drive

Key Setting/resetting of **bit DO2** of the MOVIFIT® basic drive

Key Setting/resetting of **bit DO3** of the MOVIFIT® basic drive

INFORMATION

For a description of the functions the drive performs based on the control bit settings, refer to chapter "MOVIFIT® basic – manual mode (page 8).

3.2 Operating displays of MB-LC keypad

The MB-LC keypad has the following operating displays:

SCAN The MB-LC performs an initialization.

StoP MOVIFIT® basic is ready for normal operation.

The power section of MOVIFIT® basic is switched off.

This message is displayed when the drive is at a standstill and no error is pending.

run The MOVIFIT® basic drive has been enabled by the higher-level controller (drive running)

Lt-C The MOVIFIT® basic drive is in LT control mode (parameter *P1-12* ≠ "0", only for MOVIFIT® basic inverters).

Controlling the drive is only possible via the LT-BG keypad or the LT Shell.

bUSY The MOVIFIT® basic drive is inhibited for control via the MB-LC keypad.

Reasons:

- The MOVIFIT® basic drive has been enabled by the higher-level controller (drive running)
- Parameter *P1-12* ≠ "0".

L-0000 Manual mode has been activated via the key.

The MB-LC keypad controls the MOVIFIT® basic drive via control bits DO3 – DO0.

The digits show the status ("0" or "1") of the current control bits (DO3 CCW, DO0 CW)

triP An error has occurred.

3.3 Manual operation with MB-LC keypad

3.3.1 Activating manual mode

The manual mode can only be activated if:

- the drive has not been enabled by the higher-level controller
- and parameter *P1-12* = "0".

To activate manual mode, press the for at least 2.5 s. The display then shows "L-0000".

3.3.2 MOVIFIT® basic manual mode

In manual mode, you control the drive by setting/resetting control bits DO3 – DO0 via the – keys.

The display show the current status of control bits DO3 – DO0.

MOVIFIT® basic inverter

The following table shows control bits and the functions of the drive.

Control bit				Function
DO3	DO2	DO1	DO0	MOVIFIT® basic inverter
X	X	0	0	Stop
X	X	0	1	Enable CW
X	X	1	0	Enable CCW
X	X	1	1	Stop/reset
0	0	X	X	Setpoint speed = n1
0	1	X	X	Setpoint speed = n2
1	0	X	X	Setpoint speed = n3
1	1	X	X	Setpoint speed = n4

MOVIFIT® basic motor starter

The following table shows control bits and the functions of the drive.

Control bit			Function	
DO2	DO1	DO0	MOVIFIT® basic Reversing starter	MOVIFIT® basic dual motor starter
0	0	0	Stop	Stop
0	0	1	Enable CW	Enable signal for motor at terminal X9
0	1	0	Enable CCW	Enable signal for motor at terminal X8
0	1	1	Stop	Enable signal for both motors at X9 + X8
1	X	X	Reset	Reset

3.3.3 Deactivating manual operation

⚠ WARNING

Risk of crushing due to unexpected start of the drive. The signals of the higher-level controller become effective immediately after deactivating manual operation. The drive runs with the speed (status) that is specified by the higher-level controller.

Severe or fatal injuries.

- During deactivation, observe a sufficient safety distance to all parts driven by the motor.
- or, before deactivating manual operation, make sure that the drive is not enabled by the higher-level controller.

Press the key to deactivate manual mode.

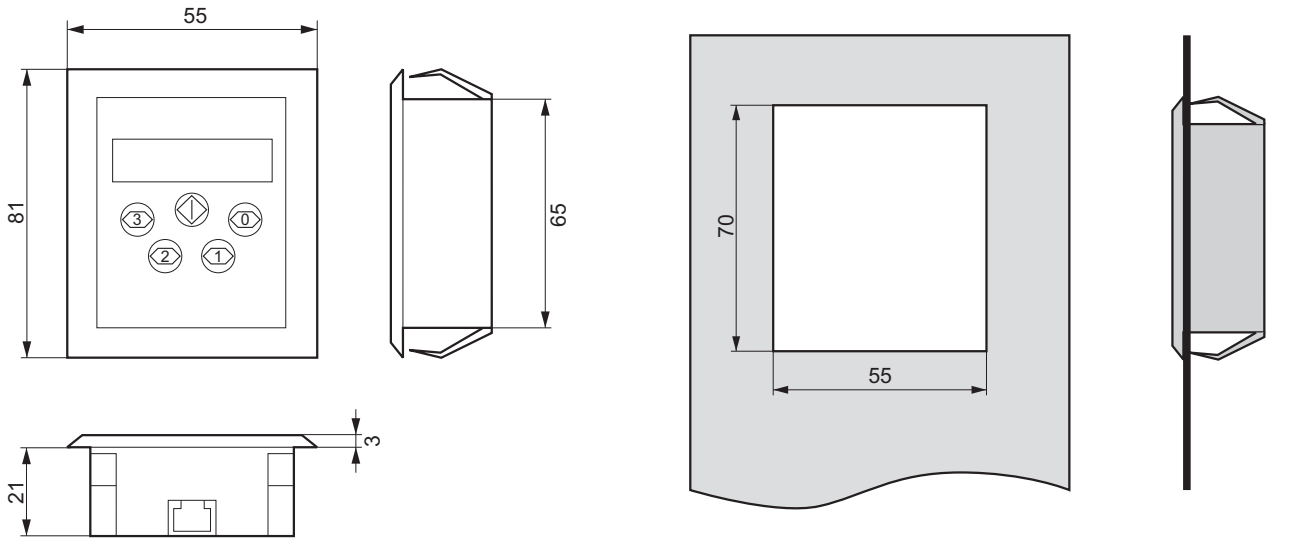
4 Technical Data

4.1 Operator panel

4.1.1 MB-LC

Type	MB-LC-00
Part number	2 820 126 4
Function	Keypad
Connection	with 1 m cable and RJ11 plug connector for connection to the X50 diagnostics interface
Degree of protection	IP54 (EN 60529) when installed in a control cabinet door IP20 (EN 60529) without mounting
Ambient temperature	0 – +50 °C
Storage temperature	0 – +60 °C

4.2 Dimension drawing of the MB-LC keypad



Recess
for control cabinet installation

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The keypad meets the requirements of IP54 when it is installed correctly.

SEW-EURODRIVE
Driving the world

SEW-EURODRIVE GmbH & Co KG
P.O. Box 3023
D-76642 Bruchsal/Germany
Phone +49 7251 75-0
Fax +49 7251 75-1970
sew@sew-eurodrive.com

→ **www.sew-eurodrive.com**