

Device for the operation and maintenance of Compax3

Operator control module BDM



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1. Functions of the operator control module (BDM)

- Device for the operation and maintenance of Compax3
- Mobile or stationary handling: can remain on the unit for display and diagnostic purposes, or can be plugged into any unit.
- Can be plugged in while in operation
- Supply via Compax3
- Display with 2 times 16 places.
- Menu-driven operation using 4 keys.
- Displays and changing of values.
- Designing function.
- Display of Compax3 messages.
- Duplication of device properties to another Compax3 with identical hardware.
- Multilingual clear text displays

2. General

When plugging it onto the Compax3, the BDM is initialized by the Compax3 and is then ready for operation. The top menu level is displayed. Selection of one of the menus is made with the arrow keys. The selection is confirmed with the Enter key; the second menu level in the selected menu becomes active.

Menus can be left and entries can be discontinued with the ESCAPE key.

Due to the different device features and functions for the various Compax3 technology functions, different menu contents exist for each technology function.

Corresponding menu texts are loaded into the Compax3 by the C3 ServoManager when configuring the Compax3, so that the Compax3 device can initialize the BDM. Those texts are written into the BDM during initialization.

3. Display of values

On activating the menu, the most recent value is displayed.
The display values are read in the Compax3 cyclically.

4. Changing Compax3 objects

On activating the menu, the most recently entered value is displayed.
After selecting the object which is to be changed with Enter, this object is read and displayed in Compax3. The individual decimal digits can now be changed with the arrow keys. Enter moves the cursor to the next higher decimal digit.
The value is taken over and written to the Compax3 when repeated pressing of the Enter key has moved the cursor beyond the most significant digit present.
The cursor can be brought to the next lower decimal digit with the ESCAPE key.
On reaching the lowest decimal digit, the entry procedure is discontinued and the changes are rejected.

After an object has been changed it must be set valid in the Compax3 and saved if necessary. This is described in the chapter "functions".

5. Copy function

On activating the menu, the most recently set menu option is displayed.
With the copy function data can be written from a Compax3 whose setup has already been completed to a device which has not yet been initialized, in order to duplicate device settings in this way.

With menu item "read data" the BDM can read the relevant object contents and, if available, an IEC program. After successful reading these data are stored permanently in the BDM.

Note on the IEC program:

BDM copies the compiled program. Therefore the C3 ServoManager does not recognize the program. Program sizes of up to 3000 instructions can be copied.

The menu item "write data" can be used to write read data into other devices.

Prerequisite:

The devices must be identical: the Compax3 device variant and the device power must correspond.

6. Copy process interruption

Interrupt = Disconnect BDM or switch off 24V DC supply.

If the copy procedure is interrupted when reading data, no valid data are present in the BDM.

On interruption of the copy sequence while writing data, the Compax3 no longer contains any valid objects, contents and menu texts.

This means that the BDM can no longer be initialized with this Compax3.

In this case the BDM reverts to the stored menu texts, in order to make operator control possible. When plugging-on the BDM the message "Internal menu data" is displayed. The contents of these texts then correspond to the most recently loaded Compax3.

The interrupted copy procedure can be repeated therewith.

7. Functions

On activation of the menu the most recently set function is displayed.

Triggering the functions in Compax3.

A function which has been selected with the arrow keys is activated with the Enter key.

Termination is possible with ESCAPE.

Available functions

Function	Description
Quit	Clear Error
OBJ valid (VP)	After changing one or several values: Set valid so that they become active
OBJ save	After changing one or several values: Save in flash memory if they are to be still available after switch off.

8. Display of Compax3 Messages

Device status information on the Compax3 is displayed on the BDM. For this purpose the BDM reads a status in the Compax3 cyclically. If this indicates an error with not equal to 0, the BDM displays this error with error number (format = hexadecimal) and as clear text.

The error can be acknowledged with the Enter key or with the QUIT (acknowledge) function. Compax3 returns to the error-free state, if the error cause has been remedied. The motor is energized with current.

Press the ESCAPE key to exit from error display. Any desired menu options can be called. The error is displayed again only when an action in a submenu, e.g. triggering of a function or display / changing of a value, has been completed.

9. BDM error messages

No.	Error message	Description	Cause	Measure
1	Not Ready	BDM is trying to read menu texts from Compax3 but is not receiving any reply.	The chosen cycle time of the PLC is too short	Increase the cycle time, switch the Copmpax3 on again
2	Power Fail	When plugging-on the BDM	Contacting when plugging on	plug on again
3	CRC error	Transmission error	Strong external disturbance	Acknowledge and activate the menu options again
4	Data not valid	No valid Compax3 data	Copy function: Attempt to write date before data have been read from a Compax3	Copy function: Execute data read
5	Motor energized (0xFF46)	Device data – duplication could not be effected	Different device types of source device and target device.	Duplication can only take place with the aid of the Compax3 ServoManager
6	Device type – error (0xFF47)		Different value code of source device and target device.	
7	Ratings – error (0xFF48)		Motor of the target devices is still energized	

10. Operation

