



Operating Manual

for

HXOC-003-000-02

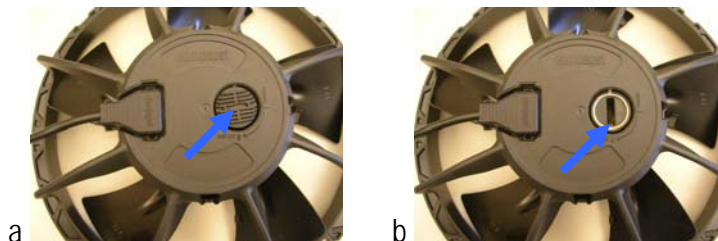


ESM PROGRAMMER: OPERATING MANUAL

This handheld programming device is designed for setting the two selectable operating speeds available on the ebm-papst M1G055-BD series of AC line operated Energy Saving Motors (ESM). It also works with any of the wide range of axial and centrifugal fans that are powered by the ESM. Some customized versions do exist - including those with reversible rotation - that are not currently programmable.

SETUP

- ***Never apply mains power to the motor or fan during programming.***
The motor or fan only needs to be connected to the programmer through the supplied harness.
- The handheld programmer is connected to the motor/fan by removing the circular plug on the back of the motor or fan housing (fan shown in photos a and b). A wide blade slotted screwdriver is needed to rotate the plug one-quarter turn counterclockwise. ***Note that the plug must be correctly re-installed after completing the programming to properly seal the motor/fan. Be careful not to over-torque the plug.***
- The custom black connector on the programming cable is slotted on one side (photo c) so it can only be inserted one way. Align this slot with the key in the opening revealed by the circular plug removal. Insert the connector carefully into the opening until full contact is made with the female connector on the printed circuit board. Do not tilt or apply excessive force to the connector during insertion.



- Plug the RJ45 connector into the mating slot in the top of the programmer (photo d).
- Power up the programmer by pressing the power button until the startup tone is heard (photo d).



- The unit will beep and the display will flash the following start-up message:

**ESM PROGRAMMER
POWER ON**

- The start-up message will be followed by the main menu with the following message:

CHANGE SPEED 1

The programmer is now ready for use!

MAIN MENU

The following options are available within the main menu:

- CHANGE SPEED 1
- CHANGE SPEED 2
- BACKLIGHT
- BATTERY
- VERSION



NAVIGATING MAIN MENU

Navigate to the desired MAIN MENU option by using the **UP/DOWN ARROW** buttons.

SELECTING OPTIONS WITHIN MAIN MENU

Select the desired MAIN MENU option by pressing the **SELECT** button between the up/down arrows.



OPTIONS

- **CHANGE SPEED 1**
 - Selecting this option using the **SELECT** button displays the currently programmed 2-wire fan speed (rotation speed in rpm with the brown lead not connected). This speed can then be reprogrammed in 100rpm increments by using the **RIGHT/LEFT ARROW** buttons to navigate to the desired speed setting. Once the desired speed is displayed, press the **SELECT** button to start the programming routine. The programming routine should take less than five seconds. *Please stay within the speed limits given in the product data sheet when selecting a new speed.*
 - If the programming routine is successful, the display will flash "Programming Complete". If a communication error is encountered an error message will be displayed. This is generally caused by a poor connection between the fan and programmer and the user should check these connections and try again.
 - *Before applying power to the motor/fan, disconnect the programming cable and replace the circular plug. Be careful not to over-torque the plug.*

- **CHANGE SPEED 2**
 - Selecting this option using the **SELECT** button displays the currently programmed 3-wire fan speed (rotation speed in rpm with the brown lead connected to L or N). The method for reprogramming this speed setting is the same as described under "CHANGE SPEED 1".



- **BACKLIGHT**
 - Press the **SELECT** button to turn the display backlighting on/off. The backlighting will remain on until turned off.

- **BATTERY**
 - Press the **SELECT** button to take a battery reading. A reading of 2.2V indicates the two 1.5V AA alkaline batteries need replacing. Higher values are acceptable (2.3-3.3V range).

- **VERSION**
 - Press the **SELECT** button to display the current software version.

PROGRAMMER RESET

Press the white button on the top of the unit to reset.

AUTO SHUT OFF

The device will shut itself off after three minutes to save battery life if a button is not pressed during that interval.

SOFTWARE UPGRADE

Should future software upgrades be necessary, a mini-USB connection is included on the device (cable not included) for this purpose. The software would be made available as a download to a personal computer which could then be uploaded to the programmer.

RJ45 CONNECTOR REMOVAL

The protective bumper makes it a bit difficult to remove the RJ45 connector from the programmer. Pulling the top edge of the protective bumper out away from the connector will make additional room available for a finger to reach in and depress the latch on the connector.

REMINDER

Please re-install the circular plug after the programming is complete to properly seal the motor/fan. Rotate the plug one-quarter turn clockwise until it locks in place. Be careful not to over-torque the plug.

REPLACEMENT PARTS

programming cable P/N 29005-4-1040

