

MANDÍK®

MANUAL FOR CONTROLLING MANDÍK AIR-HANDLING UNITS WITH WALL-MOUNTED CONTROL CP-M-B



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1 Introduction

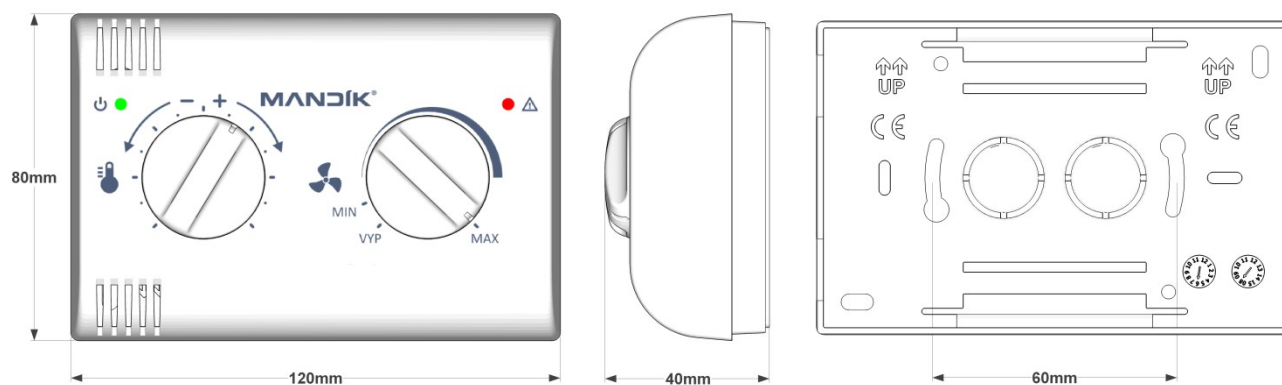
CP-M-B is a wall-mounted controller for Mandík air-conditioning units with the following parameters:

- Remote control of a Mandík air-conditioning unit
- For use with controllers Climatix POL6xx and POL4xx
- 1 rotary knob for setting the desired room temperature
- 1 rotary knob for switching on the air conditioner and setting the fan speed
- 1 LED for displaying modes
- 1 LED for displaying faults
- Power supply of 24 V ss.
- Mounting on KU68 installation box
- Valid from the software version of controller KJVVS103625.01

2 Technical Data

Parameter	Value	Unit
Power supply voltage	14 – 24	V DC
Maximum consumption	0.4	W
Power supply for LEDs	14 - 24	V DC
Input load capacity	min 100	kΩ
Conductor cross-section	0.6 to 0.8	mm ²
Recommended cable	J-Y(ST)Y 4x2x0.8	
Operating humidity	0 - 90 %	RH
Operating temperature	0 to +50	°C
Storage temperature	-20 to +60	°C
Protection	IP20	
Dimensions	120x80x40	mm

3 Dimensions

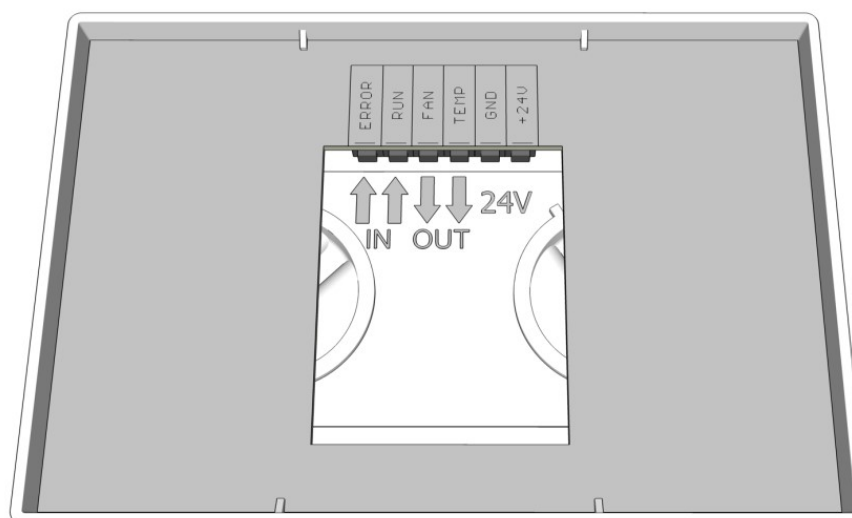


4 Electrical Wiring

<i>Connection of terminals</i>	Terminal	Description	Type	Meaning
	1	ERROR	Input	Power supply for fault signalling LED +24 V ss.
	2	RUN	Input	Power supply for run signalling LED +24 V ss.
	3	FAN	Output	Fan switching on and required speed 0-10 V
	4	TEMP	Output	Desired temperature correction 0-10 V
	5	+24V	Power supply	Power supply +24 V ss.
	6	GND	Power supply	Common ground

Note The **CP-M-B** series wall-mounted control can only be powered from a DC power supply. The power supply must meet the requirements given in chapter '2 Technical data'.

Terminal side



5 Installation

Installation The **CP-M-B** series wall-mounted control is designed for installation in indoor, dry environments. It should be placed about 1.5 m above the floor at a place with good natural air circulation. The unit is suitable for mounting on most commercially available wiring boxes or directly on a wall.

When mounting the unit, the mounting plate must be fixed first. When the electrical contacts are connected, the top panel is hung on the mounting plate and clicked in place.

Opening the cover On the underside of the front cover there are two rectangular holes for a small flat-blade screwdriver. Insert a screwdriver into each hole to release the inner latches and to lift the front cover and then to take it off easily. Both the covers are plastic.

Installation The unit may only be opened by a qualified electrician.

principles Electrical installation must be performed in accordance with the relevant regulations and standards.

Connected cables must meet the insulation requirements of the mains voltage.

Note **Caution! The unit is not protected against accidental connection to ~ 230 V.**

6 Configuration of Climatix Controller

Configuration of Climatix controller The Climatix controller must be correctly configured for Mandík air-conditioning unit to operate correctly with a wall-mounted control. Configuration is performed at the factory based on customer requirements and an electrical diagram that is part of the documentation supplied with a specific order. General configuration steps are as follows:

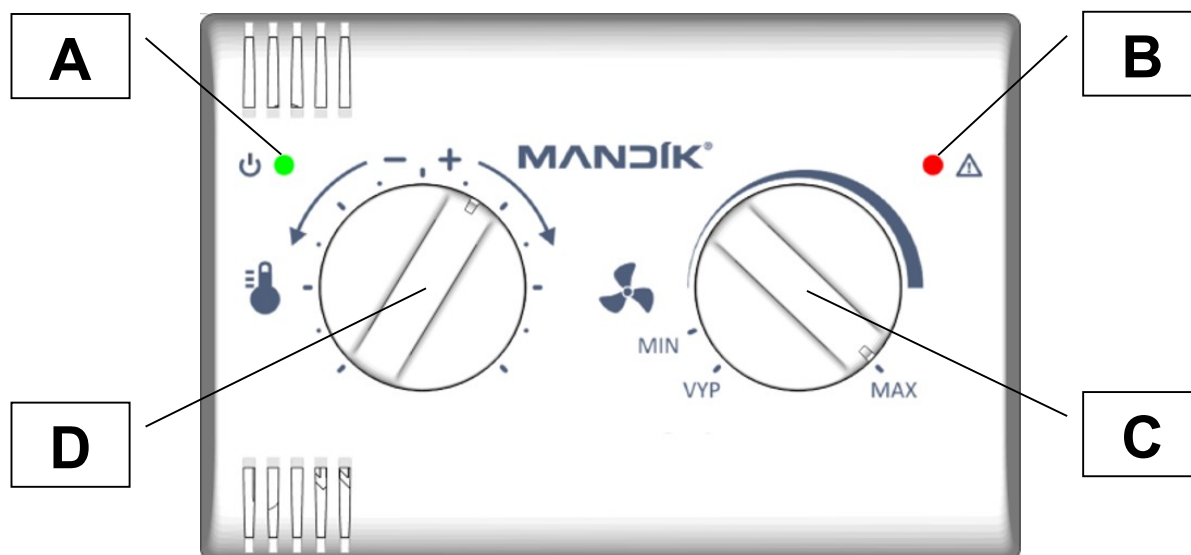
- Selection, setting and assignment of an input for monitoring the desired temperature.
- Selection, setting and assignment of an input for monitoring the desired speed.
- Selection and assignment of an output for signalling unit operation.
- Selection and assignment of an output for signalling unit fault.
- Setting the temperature change range.
- Setting the desired speed change range.
- Selection of **Comfort** or **Attenuation** mode when the unit is on.
- Selection of **Off** or **Tempering** mode when the unit is off.

Note Prior configuring the Climatix controller, it is necessary to familiarize yourself with the manual 'Measurement and control system for MANDÍK air-conditioning units - Detailed instructions and control'.

7 Operation of Wall-Mounted Control

The wall-mounted control allows:

- Switching on/off and controlling the fan speed.
- Correction of the desired temperature.
- Air-conditioning unit status indication.



Legend

Position	Meaning
A	Green LED for mode indication.
B	Red LED for fault signalling.
C	Rotary knob for switching on fans and setting their speed.
D	Rotary knob for correcting the desired temperature.

Switching on and speed control

The rotation knob for controlling the fan speed on the control (position C) has two functions:

- Switching the air-conditioning unit on/off.
- Controlling fan speed.

Position	Meaning
OFF	The air-conditioning unit is off. It switches on when the knob is at least in the MIN position.
MIN	The air-conditioning unit starts on and the fans start to run at the minimum speed. The minimum speed values are set separately for each fan in the menu on the controller display Components ⇌ Fans ⇌ Inlet ⇌ Attenuation and Components ⇌ Fans ⇌ Outlet ⇌ Attenuation .
MAX	The fans are running at maximum speed. The maximum speed values are set separately for each fan in the menu on the controller display Components ⇌ Fans ⇌ Inlet ⇌ Comfort and Components ⇌ Fans ⇌ Outlet ⇌ Comfort .
MIN-MAX	The fan speed changes continuously according to the rotary knob position from MIN to MAX .

Desired temperature correction The desired temperature correction value can be changed using the rotary knob on the control - position **D**. The rotary knob corrects the desired temperature from the nominal temperature. The nominal temperature is set for each **Comfort** or **Attenuation** mode in menu **Components** ⇨ **Temperature Control**. The minimum and maximum correction is set in menu **Input/Output Assignment** ⇨ **External Switches** ⇨ **Desired Temperature Min Max**. The standard setting for **Min** and **Max** is 5 °C.

Unit status The status of the air-conditioning unit is indicated by the **Run** (position A) and **Fault** (position B) LEDs.

Run LED	Status	Meaning
	OFF	The unit is switched off.
	Flashing with a period of 1 sec.	The unit is in the Start auxiliary mode, which is preparing the unit to start the fans.
	ON	The unit is started by the fan speed control knob position and the Start auxiliary mode has ended.
	Flashing with a period of 3 sec.	The unit has started automatically based on the assessed need for frost protection or room ventilation and the Start auxiliary mode has ended. When the conditions that caused the unit to start up are met, the unit switches itself off. This status only occurs if the speed control knob is in the OFF position and the Climatix controller is preset to the Tempering mode.

Fault LED	Status	Meaning
	OFF	No fault has occurred.
	Flashing	Indicates that a new fault has occurred.
	ON	Indicates a fault that persists after acknowledgment by the operator.

Note The LED functions described above are standard ones and can be customized according to client requirements.

8 Maintenance

The unit requires no regular inspection or maintenance.

Cleaning Depending on how the unit is used, dust must be removed from the unit's internal electronics from time to time. The unit is cleaned with a dry painting brush or soft brush or vacuum cleaner when it is off and disassembled.

Note The specified maintenance may only be performed by the manufacturer or an authorized service organization!

9 Waste Disposal

Disposal of electronics The disposal of the unit is governed by regulations on the management of electrical waste. The device must not be disposed of with normal household waste. It must be handed over at designated facilities and recycled.

MANDÍK, a.s.
Dobříšská 550
26724 Hostomice
Czech Republic
Tel.: +420 311 706 706
E-Mail: mandik@mandik.cz
www.mandik.com

The producer reserves the right for innovations of the product. For actual product information see
www.mandik.com