

ENERGY SAVING REGULATOR FOR 3 CONDITIONERS 2 FREE COOLING FANS



OM-BOX

FOR: *controlling the temperature of a room
by 3 CONDITIONERS
and 2 free cooling fans*

OM-BOX installs quickly on a wall, it does not require a specific electrical panel, the box is arranged to the installation of cable glands.

OM-BOX is a PCD (Programmable Control Device) with flash-EPROM for firmware reprogrammed basis on site, it represents the integration of the typical characteristics of programmable controllers and those in the PLC.

OM-BOX is equipped with analog inputs, digital inputs digital relay outputs, serial interface and operator panel.

The specific application permits adjustment and the optimum control of two different types of rooms:

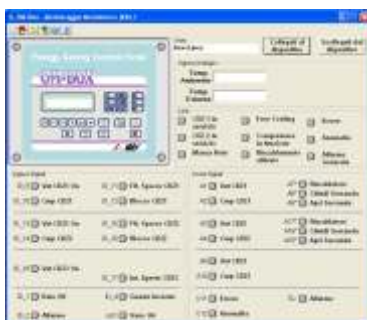
- one with 2 electromechanical monoblock conditioners with damper an external air intake for free-cooling and one split conditioner.
- the other with 3 split air conditioners and 2 free cooling fans by outer air.

The regulation of environmental conditions finalized to **energy saving**, it is preferably carried out with external air (Free Cooling)

The management lets you set the air conditioner in two levels: service and reserve, with diagnostics malfunctions and the periodic rotation to ensure the equal wear.

Operator panel

- 1) The 4x20 backlit LCD display allows to display the operating status system, alarm signaling and programming the operating parameters.
- 2) The keyboard is used to navigate in the display and for programming.
- 3) The 6 leds provide a quick representation of the state of operation plant.
- 4) The 3 alarm leds indicate the error status, abnormalities and the system block.



- OM02 utility:** is a program for P.C. with O.S. Windows XP, 2000, which is connected via serial OM-BOX and allows you to:
- to monitor the operation status, to acquire values and set points etc..
 - to copy (upload) data from OM-BOX in a file P.C.
 - to download data file from P.C. to OM-BOX.

ELECTRICAL WIRING



AVAILABLE I/O

Ambient/outdoor temperature
 CDZ states
 FC states
 Inverter state
 Power state
 Fire alarm state
 CDZ command
 FC command
 Remote alarms

ELECTRICAL AND MECHANICAL CHARACTERISTICS

OM-BOX is made of container wall mounting and provides the following hardware features:

Operator panel: LCD display with 4x20 alphanumeric characters, 9 leds, 13 function keys, buzzer.

CPU: 16-bit real time clock with lithium battery 8Kram, 38Kram data, 256K flash EPROM operating system multitask.

Serial interface: RS-232 with MODBUS protocol ASCII / RTU suitable for centralization point-to-point or (with external converter) multipoint

Analog Inputs: A/D Converter suitable to acquire 2 Pt100 3-wire, range -40°C to 100°C, resolution 0.2°C +/- 1 digit.

Digital inputs: 17 opto-isolated without bond polarity, including 1 for Vaux internal monitor , 4 with separate common range 32 ÷ 70 Vdc 12mA absorption.

Power supply: 32 to 70 Vdc with low psophometrically noise remaining within the limits prescribed for phone systems powered by central battery.

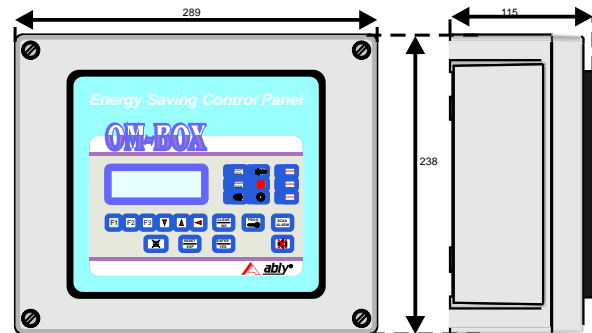
SPDT relay outputs: 2 on board with a capacity of 1A at 100Vdc, 24Vac, 11 with capacity from 5A to 230Vac (load resistive) 2 with a capacity of 10A at 48Vdc for direct drive fans.

Operating range: 0°C to 60°C (storage -20°C to 85°C)

Connections: isolating terminals suitable for wire up to 1.5 mm².

Protection: IP54

Mounting: wall mounting in ABS dim.: 289x238 mm p 115



ORDER CODES

Code	Description
802500G0	OM-BOX: Energy saving free cooling controller for control of and 2 fans 3 air conditioners, power supply 48 Vdc
41SRR000	PT100 probe for the room temperature cable Lg. 1m
41000050	PT100 sensor to acquire external temperature built in sealed box
410000T0	Differential pressure switch on-off 0.2mB ÷ 3.0mB
410000V0	Differential pressure switch on-off 0.5mB ÷ 5.0mB
TUTLOMBX	Programming kit for PC OM-BOX OS Win Xp complete with cable and USB RS232 converter
8COL0001	Simulation Box for 2 PT100 probes

OM-BOX_REV_A_ENG



Aby s.r.l. 40050 Funo di Argelato (Bologna) ITALY
 Via de' Giudei 41/43
 Tel: +39 (051) 860064; Fax: +39 (051) 860074

e-mail: aby@aby.it
 web: <http://www.aby.it>

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