

Solutions for air conditioning units



μAC

the complete controller for
precision air
conditioning
systems

CAREL
Technology & Evolution

The controller for precision air conditioning systems

μAC

μAC is a controller for precision air-conditioning systems management, with the flexibility to control both direct expansion units (with 1 or 2 compressors), chilled water (CW) units (with one 3-point valve) and electric heating (with 1 or 2 stages) or low pressure hot water (LPHW) heating (with one 3-point valve). With the temperature taken care of the μAC offers complete humidity control with the option of ON/OFF or proportional control of the humidifier (with CDA or Humicontrol) and various dehumidification configurations. The μAC is also ideal for telecom "Shelters" with fresh air damper and condenser fan management.

Main functions:

- Control of the temperature and humidity in the supply air
- Energy savings through free-cooling (Shelters) or compensation
- Dehumidification control
- Supply-air fan: speed controlled
- Complete alarm management, including a log file
- Automatic rotation of up to "6" units
- Possible serial connection to a supervisory system

Controlled devices:

- 1 or 2 compressors or 3-point valve for CW cooling
- 1 or 2 heaters or 3-point valve for LPHW heating
- Main fan: with ON/OFF or proportional control
- Humidifier with ON/OFF or proportional control
- Dehumidification with ON/OFF control
- Alarm device

Options:

- Serial board RS485
- Clock card for time management and alarm log file
- Programming key

Programming:

All the parameters can be configured by the keypad on the front or by a hardware key and/or a serial line.

Technical specifications

Power supply: 24Vac ±15% 50/60 Hz

Power consumption: 200 mA

Analog inputs: 3 for Carel NTC probes
1 0÷1Vdc / 4÷20 mA input

Digital inputs: 10 non-optically insulated inputs, reference G0 at 24Vac
Analog outputs: 1 output 0÷10Vdc non-optically insulated, reference GND
1 PWM output for Carel controls

Digital outputs: 5 x 24Vac, 1 A optically-insulated triac outputs
2 relay outputs with max. res. current of 6A at 250Vac in AC1

Options:

- RS485 optically-insulated serial board MAC2SER000
- clock board and 8 KB EEPROM MAC2CLK000
- programming key MAC2KEY000

Operating range: temperature probes -30÷70°C - humidity probe 0÷100 % rH

Accuracy of measurement: ±0,5°C (temp. probe) ±0,5 rH (humidity probe)

Resolution: 0.1°C, 0.1%rH

Front panel index of protection: IP55

Mounting: panel mounting

Connections: Molex™ Mini-Fit™ series connectors

Operating temperature: -10T54 (-10÷54°C)

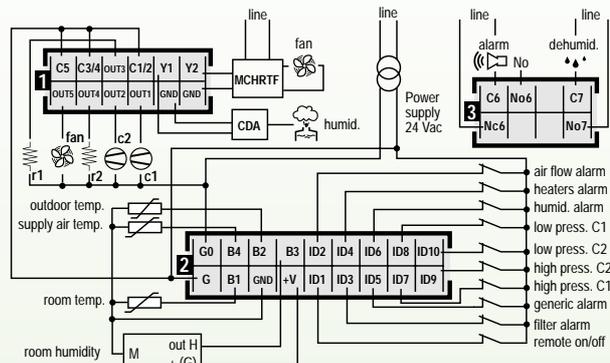
Storage temperature: -10T70 (-10÷70°C)

PTI of the insulating materials: 250V

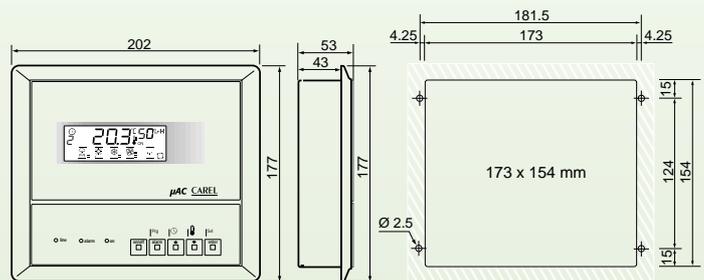
Category of resistance to heat and fire: Category D (UL94-V0 self-extinguishing)



Connection diagram for direct expansion versions



Dimensions and drilling template



LCD display (non-backlit)

