


## 10. TECHNICAL SPECIFICATIONS

“Group A” is defined in the following specifications as the grouping of the following outputs: valve, pump, compressor, heater.

|   |   |
|---|---|
| Power supply  | 24 Vac, range -15% ~ +10%; 50/60 Hz<br>Maximum current output: 3 W  |
| 12-pin connector  | Fuse to be fitted in series with the power supply of the $\mu$ C2: 315 mA   |
| Relays  | Max current 2 A for each relay output, extendable to 3 A for one output<br>Max current at 250 Vac:<br>EN60730: Resistive: 3 A, Inductive: 2 A $\cos(\phi)=0.4$ 60000 cycles<br>UL: Resistive 3 A, 1 FLA, 6 LRA $\cos(\phi)=0.4$ 30000 cycles<br>For further information, refer to the characteristic shown in Fig. 9.a<br>Minimum interval between switching cycles (each relay): 12 s (the manufacturer of the unit that the device is built into must ensure the correct configuration to respond to this specification)<br>Type of micro-switching of the relay: 1 C<br>Insulation between relays in group A: functional<br>Insulation between relays in group A and the very low voltage parts: reinforced<br>Insulation between relays in group A and the signal relay: primary<br>Insulation between the signal relay and the very low voltage parts: reinforced<br>Insulation between relays and the front panel: reinforced |
| Digital inputs ID1 to ID5, IDB4                         | Electrical standard: voltage-free contact<br>Closing current to ground: 5 mA<br>Maximum closing resistance: 50 W  |
| Analogue inputs   | B1, B2, B3: CAREL NTC temperature probes (10 kW at 25 °C)<br>The response time depends on the component used, typical value 90 s<br>B4: CAREL 0 to 5 V or free contact ratiometric pressure probes  |
| Fan output  | Control signal for CAREL MCHRTF****, CONVONOFF* and CONV0/10A* modules<br>Modulation of impulse position (set amplitude) or modulation of the duty-cycle. Refer to the user manual for the configuration of the parameters<br>Loadless voltage: 5V $\pm$ 10%<br>Short-circuit current: 30 mA<br>Minimum output load: 1 kW   |
| Front panel index of protection                         | IP55  |
| Storage conditions                                      | -10T70°C -- humidity 80% r.H., non-condensing   |
| Operating conditions                                    | -10T50°C - humidity <90% r.H., non-condensing   |
| Degree of pollution                                     | normal  |
| Cat. of resist. to heat and fire                        | D (UL94 V0)   |
| PTI of the insulating materials                         | $\geq$ 250 V  |
| Class and structure of the software                     | A   |
| Period of electrical stress across the insulating parts | long  |

Tab. 10.a

 **Note:** All the relays must have the commons (C1/2, C3/4) connected together, as shown in Fig. 1.

### Electrical specifications of the relay contacts

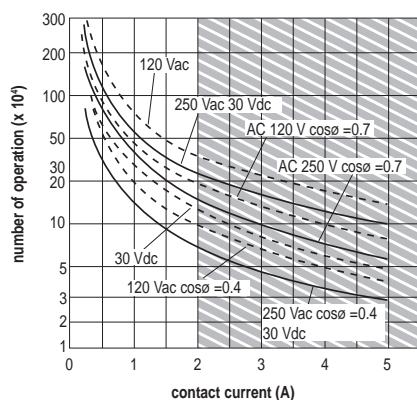


Fig. 8.a

### 10.1 Functional specifications

|                               |  |
|-------------------------------|--|
| Resolution of analogue inputs | Temperature probes: range -40T80°C, 0.1 °C   |
| Temperature measurement error | Range -20T20 °C, $\pm$ 0.5 °C (excluding probe)<br>Range -40T80 °C, $\pm$ 1.5 °C (excluding probe)   |
| Pressure measurement error    | The voltage % error in the input range of 0.5 to 4.5 Vdc is $\pm$ 2% (excluding probe). The error in the converted value may vary according to the setting of the parameters /9, /10, /11, /12 (see user manual) |

Tab. 10.b