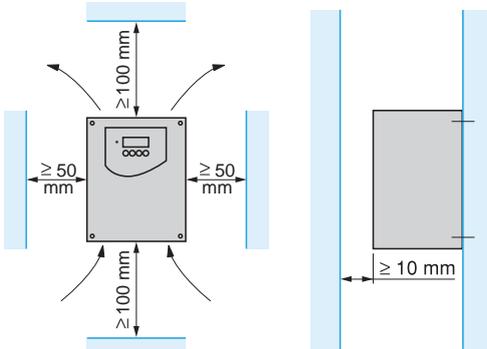


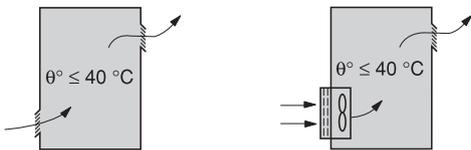
Mounting recommendations



- Install the Altistart vertically, at $\pm 10^\circ$.
- Do not place the Altistart close to or above heating elements.
- Leave sufficient free space to ensure that the air required for cooling purposes can circulate from the bottom to the top of the unit.

Caution: The IP 00 version of the Altistart 48 must be fitted with a protective bar to protect personnel against electrical contact. Protective covers are available for the ATS 48C14● to ATS 48C32●. They should be ordered separately.

Mounting in a metal wall-fixing or floor-standing enclosure with degree of protection IP 23 or IP 54



- Observe the mounting recommendations above.
- To ensure proper air circulation in the starter:
 - Fit ventilation grilles
 - Ensure that there is sufficient ventilation. If there is not, install forced ventilation with a filter. The openings and/or fans must provide a flow rate at least equal to that of the starter fans (see the table below)
- Use special filters with IP 54 protection.

Fan flow rate depending on the starter rating

ATS 48 starter	Flow rate m ³ /hour
ATS48 D32● and D38●	14
ATS48 D47●	28
ATS48 D62● to C11●	86
ATS48 C14● and C17●	138
ATS48 C21● to C32●	280
ATS48 C41● to C66●	600
ATS48 C29● to M12●	1200

Metal wall-fixing or floor-standing enclosure with IP 54 degree of protection
 For non-ventilated Altistart units (ATS 48D17● and 48D22●), install a fan ≤ 50 mm below the starter to circulate the air inside the enclosure in order to avoid hot spots.

Calculating the size of the enclosure

Maximum thermal resistance R_{th} (°C/W)

$$R_{th} = \frac{\theta - \theta_e}{P}$$

θ = maximum temperature inside enclosure in °C
 θ_e = maximum external temperature in °C
 P = total power dissipated in the enclosure in W

The starter/motor combinations on pages 60522/2 and 60522/3 can only be used in ambient temperatures $\leq 40^\circ\text{C}$.

For temperatures between 40°C and 60°C , derate the maximum permanent current of the starter by 2% for every degree above 40°C .

Power dissipated by the starter: see pages 60522/2 and 60522/3.

If the starts are infrequent, it is advisable to bypass the Altistart at the end of starting in order to reduce heat dissipation.

The power dissipated will then be between 15 and 30 W.

Add the power dissipated by the other equipment components.

Effective exchange surface area of enclosure S (m²)

(sides + top + front panel if wall-mounted)

$$S = \frac{K}{R_{th}}$$

K is the thermal resistance per m² of casing

For ACM type metal enclosures: K = 0.12 with internal fan, K = 0.15 without fan

Caution: Do not use insulated enclosures as they have a poor level of conductivity.