

Instructions for Brake Connection

1. Identifying the Type of Power Supply: Direct or Separate

To determine the type, check for the presence of an auxiliary floating terminal block (type MAMMUT with 2 or 3 terminals) inside the motor terminal box.

NOT PRESENT: The brake is directly powered (it automatically draws power from the motor terminal block). For more information, refer to sections 3 and 5.

PRESENT: The brake requires a separate power supply. For connection details, refer to sections 4 and 6.

2. Identifying the Brake Power Supply Type: AC or DC

The brake can be equipped with either an alternating current (AC) or direct current (DC) coil. If it is AC, it has 3 to 6 wires; if it is DC, it has 2 wires. In the case of a DC brake, the direct current supply is provided by a rectifier integrated into the motor terminal box, which converts the AC supply voltage into DC for the brake coil.

3. Brake power supply in AC – DIRECT

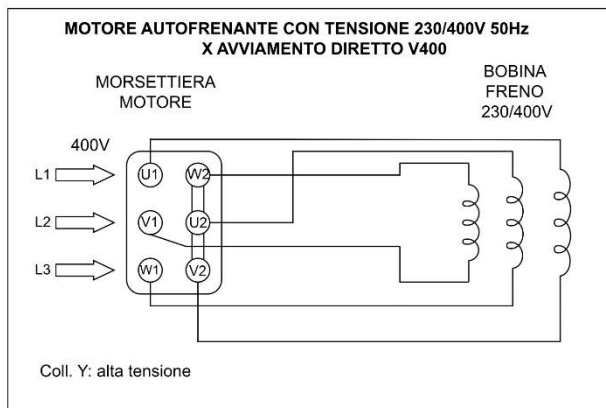


FIGURE N°1

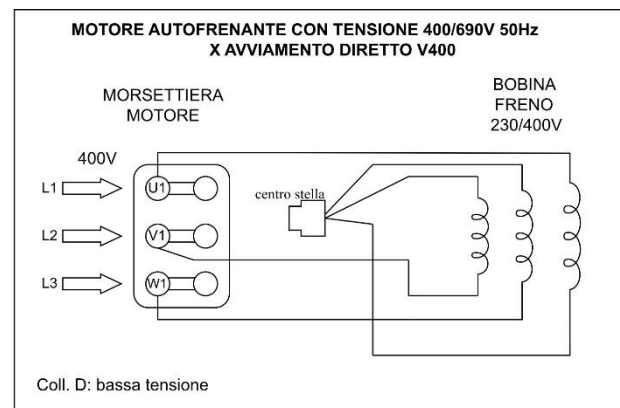


FIGURE N°2

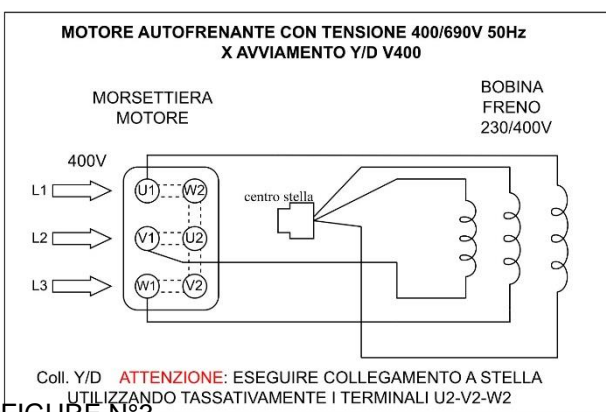


FIGURE N°3

In the case of direct-on-line (D.O.L.) starting, power the motor as shown in figure 1 if the motor has a voltage rating of V230/400 (star connection); power the motor as shown in figure 2 if the motor has a voltage rating of V400/690 (delta connection). **The brake power supply wiring has already been carried out at the factory.** When the AC brake is powered directly from the motor terminal box (fig. 1 and 2), **the operator does not need to perform any action on the brake.**



In the case of star/delta (Y/D) starting, for motors with a voltage rating of V400/690, power the motor as shown in figure 3. Perform the Y/D connections in the external electrical panel, making sure to identify and use the correct terminals as indicated in the diagram in figure 3.

4. Brake power supply in AC – SEPARATE

In the case of a separate brake power supply, an auxiliary 3-terminal Mammot-type terminal block is present inside the motor terminal box, connected to the brake coils. Depending on the specified power supply, the coil wiring will be carried out at the factory as shown in figures 4 and 5, in accordance with the voltage and frequency specifications provided by the customer at the time of the motor order and indicated on the nameplate.

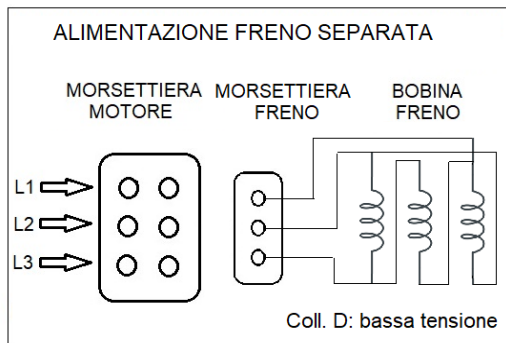


FIGURE N°4

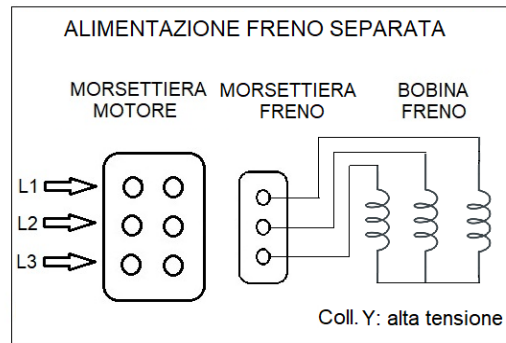


FIGURE N°5

5. Brake power supply in DC – DIRECT

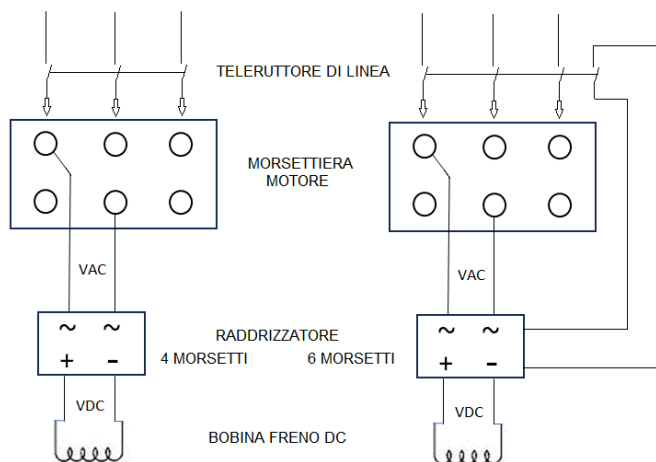
In the case of a self-braking motor with a DC brake, the motor will be equipped with a rectifier that converts the alternating voltage into half-wave direct voltage. Depending on the application requirements, 4-terminal rectifiers are supplied, either half-wave or full-wave; in the first case, braking will be quick, while in the second case it will be smoother.

For even faster braking (blocking the voltage regenerated by the motor), fast 6-terminal rectifiers can be supplied, equipped with a contact that, when closed, generates standard rapid braking, and when open, further reduces the braking time.

Even in the case of a DC brake, it is possible to have either direct or separate power supply.

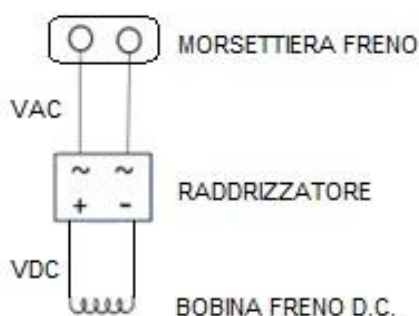
In the case of direct power supply, as with the AC brake, the brake wiring is carried out at the factory according to the following diagram, and the user only needs to supply power to the motor.

In the case of direct DC brake supply, if the motor has a voltage of V230/400, the brake will be rated at 103VDC. If the motor has a voltage of V400/690, it can only be powered at V400 (delta) with a brake voltage of 180VDC.



1. Brake power supply in DC – SEPARATE

In the case of a separate DC brake power supply, an auxiliary 2-terminal MAMMUT-type terminal block is present inside the motor terminal box, required for connecting the brake system power supply as indicated on the motor nameplate.



Also in the case of separate DC brake power supply, the motor can be connected either in star or delta configuration.