170Vdc / 5A motor drive

The MT5 board is a two-quadrant drive suitable for driving DC servomotors, up to a 850VA power. The converter works in armature feedback incorporated in the card itself and by a torque control that allows excellent operation stability when the load changes. Remarkable advantage is the possibility of connecting the board directly to the 230Vac power supply network without using a transformer. All piloting inputs, both digital and analog, are perfectly opto-isolated ensuring immunity to connected devices. The driving signal can come from a potentiometer, powered by the board itself, or from a 0-10Vdc analogue signal. The motor speed proportionally follows the applied signal value. The converter also integrates short-circuit protection, overcurrent protection and thermal protection with visual block signaling and with a output relay activation. The converter is mounted on a robust aluminum profile for vertical or horizontal applications. DIN rail mounting is also available on request.

IMPORTANT: *it is recommended to pay close attention when connecting the terminal blocks observing to*
1. carry out any operation only with the system switched off, therefore in the voltage absence;
2. do not invert the connections between the terminals. Otherwise the module will be irreparably damaged.
Please note that the manufacturer is not responsible for the guarantee in case of damages due to incorrect connections.

Technical features

Power supply	min 205Vac - max 250Vac
Absorption	Max 4.9A continuous, 5A for 1 second, up to 20A for 200ms
Analog input	0-10Vdc optoisolated
Potentiometer input	5 - 10 KΩ
Output	0 - 170Vdc
Operation conditions	0.. +70°C / 20..90% R.U. without condensation
Storage conditions	-25.. +80°C / 20..90% R.U. without condensation
Mounting	On panel or DIN bar (on request)
Container	On aluminum profile
Protection degree	IP20

Dimensions

170Vdc / 5A motor drive
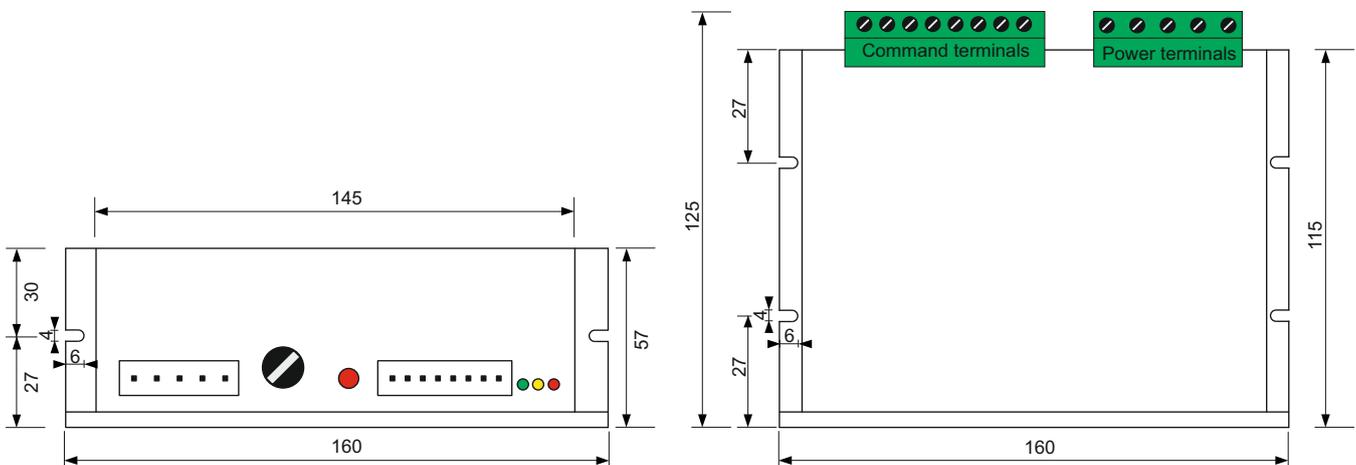
Connection schemes

***Motor with only one rotation direction
speed is regulated by potentiometer***
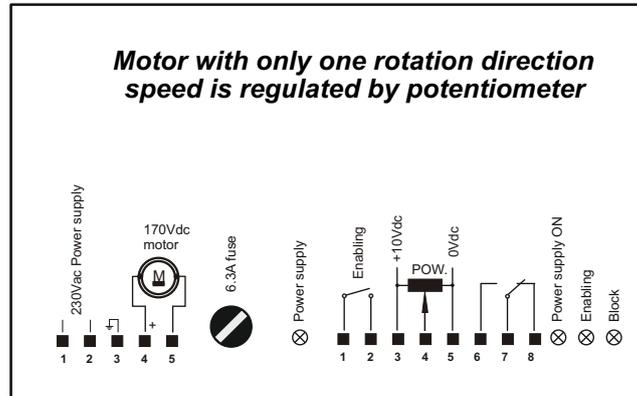
Motor connection with only 1 rotation direction with potentiometer speed adjustment
Connect the potentiometer between terminals 3-4-5. With cursor on terminal number 4. With potentiometer to 0 the motor is idle (factory setting), with potentiometer at maximum stroke there is the maximum motor rotation speed at + 170Vdc (factory setting). With intermediate potentiometer values the motor speed is proportional. Terminal 1 and 2, if connected, allows the motor to operate (enable); if this connection is not carried out, the motor remains idle even if the potentiometer analog input is present.
The "power supply" and "power supply ON" LEDs indicate that the instrument is powered while the yellow "enabling" LED, if on, indicates that the motor is enabled for movement (terminal 1-2 connected); if is off indicates that the motor is not enabled (terminal 1-2 not connected). The red "block" LED, if it is on steady, indicates that the motor is blocked due to exceeding the maximum current. If it is on flashing, it indicates that the motor is blocked due to maximum temperature exceeding (thermal protection). The relay contact at terminals 6-7-8 signals a board anomaly (DRIVE OK), with the motor running and the alarms not present the clean contact 6-7 is closed, while in case of blocked motor for any alarms (overheating or overcurrent) the clean contact 7-8 is closed.

***Motor with only one rotation direction
speed is regulated by 0-10V analog***
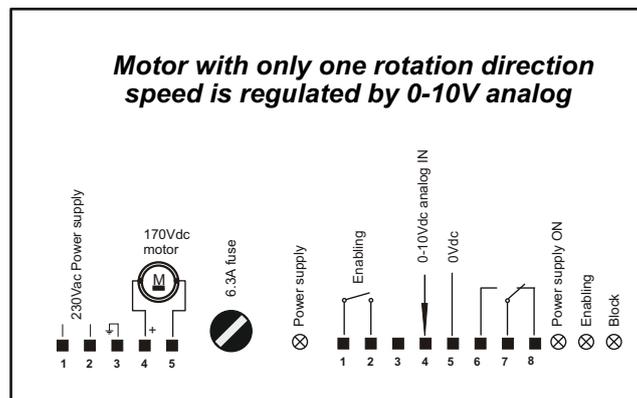
Motor connection with only 1 rotation direction with 0-10Vdc analogue speed adjustment
Connect the analogue between terminals 4-5 with 0Vdc reference on terminal 5. With analog signal at 0Vdc the motor is idle (factory setting), with analogue signal equal to 10Vdc there is the maximum motor rotation speed at + 170Vdc (factory setting). With analog signal intermediate values the motor speed is proportional. Terminal 1 and 2, if connected, allows the motor to operate (enable); if this connection is not carried out, the motor remains idle even if the potentiometer analog input is present.
The "power supply" and "power supply ON" LEDs indicate that the instrument is powered, the yellow "enabling" LED, if on, indicates motor enabled for movement (terminal 1-2 bridge) if is off indicates that the motor is not enabled (terminal 1-2 not bridged). The red "block" LED, if it is on steady, indicates that the motor is idle due to exceeding the maximum current. If it is on flashing, it indicates that the motor is blocked due to maximum temperature exceeding (thermal protection). The relay contact at terminals 6-7-8 signals a board anomaly (DRIVE OK), with the motor running and the alarms not present the clean contact 6-7 is closed, while in case of blocked motor for any alarms (overheating or overcurrent) the clean contact 7-8 is closed.