



Module for small size DC motor control with braking circuit and built-in feedback.

The driving signal can be of four types:

- 1) potentiometer signal with only one rotation direction
- 2) potentiometer signal with 2 rotation directions
- 3) 0-10Vdc analog signal with only one rotation direction
- 4) +/- 10Vdc analogue signal with 2 rotation directions.

The motor speed proportionally follows the applied signal value.

The module is equipped with a torque control system that allows a good operation stability even if there is a variable load.

The feedback signal can be provided by armature or external tachometer.

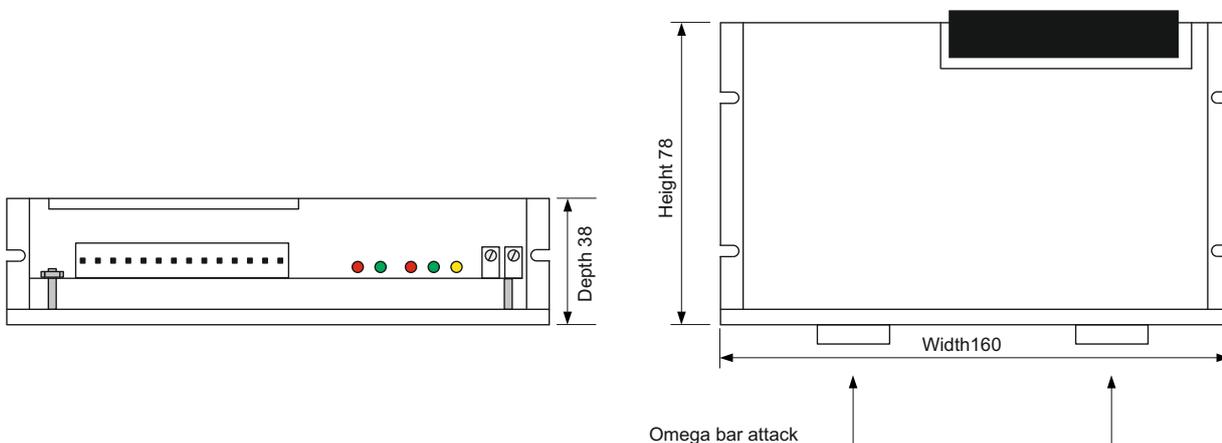
The electronic base is mounted on a robust aluminum profile for vertical or horizontal applications. DIN rail mounting is also available on request.

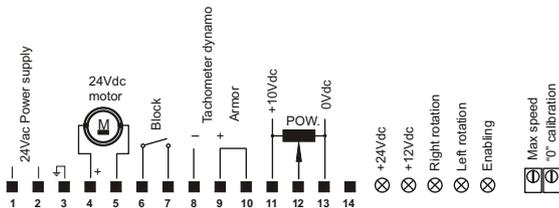
IMPORTANT: it is recommended to pay close attention when connecting the terminal blocks observing to
 1. carry out any operation only with the system switched off, therefore in the voltage absence;
 2. do not invert the connections between the terminals. Otherwise the module will be irreparably damaged.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

Technical features

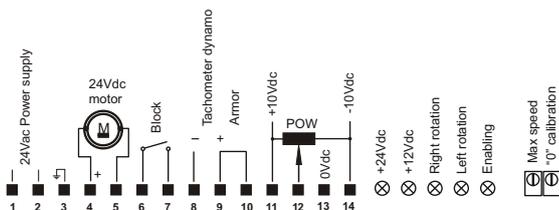
Power supply	24Vac/dc +/- 5%
Absorption	Max 6A
Analog input	0-10Vdc or +/- 10Vdc
Potentiometer input	10K Ω
Output	0 - +/-24Vdc
Operation conditions	0.. +55°C / 20..90% R.U. without condensation
Storage conditions	-25.. +80°C / 20..90% R.U. without condensation
Mounting	On panel or DIN bar (on request)
Container	On aluminum profile
Protection degree	IP20

Dimensions

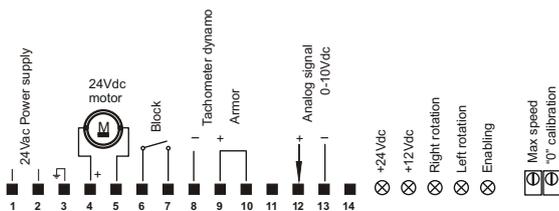


Connection schemes
Motor with only one rotation direction speed is regulated by potentiometer


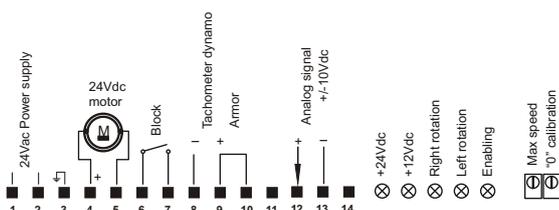
Motor connection with only 1 rotation direction with potentiometer speed adjustment. Connect the 10K potentiometer between 11-12-13 terminals. If the potentiometer is on zero position, you have the idle motor (factory calibration) or the value adjusted with the trimmer («0» calibration). With the potentiometer set to 10K you have the maximum motor rotation speed +24Vdc (factory calibration) or the value adjusted with the trimmer (Max speed). With intermediate potentiometer values the motor speed will be proportional. Connect armature feedback terminal 9 and 10, if there is no feedback from the Tachymetric dynamo, otherwise the motor will not work. If connected, terminals 6 and 7 allow motor instantaneous blocking even if the potentiometer analogue input is present. The +24Vdc and +12Vdc LEDs indicate that the device is powered; if the «Right rotation» red LED is on, it indicates that the motor is running with right rotation; if the «Left rotation» green led is on, it indicates that the motor is running with left rotation. If the «Enable» LED is on, it indicates that the motor is enabled (terminal 6-7 not connected); if it's off, it indicates that the motor is blocked (terminal 6-7 connected).

Engine with 2 rotation directions speed is regulated by potentiometer


Motor connection with 2 rotation directions with potentiometer speed adjustment. Connect the 10K potentiometer between 11-12-14 terminals. If the potentiometer is on zero position, you have the left maximum motor rotation speed -24Vdc (factory calibration) or the value adjusted with the trimmer (Max speed). With the potentiometer set to 10K you have the right maximum motor rotation speed +24Vdc (factory calibration) or the value adjusted with the trimmer (Max speed). With the potentiometer set to 5K (potentiometer in the center) you have the idle motor (factory calibration) or the value adjusted with the trimmer («0» calibration). With intermediate potentiometer values the motor speed will be proportional. Connect armature feedback terminal 9 and 10, if there is no feedback from the Tachymetric dynamo, otherwise the motor will not work. If connected, terminals 6 and 7 allow motor instantaneous blocking even if the analogue input of the potentiometer is present. The +24Vdc and +12Vdc LEDs indicate that the device is powered; if the «Right rotation» red LED is on, it indicates that the motor is running with right rotation; if the «Left rotation» green led is on, it indicates that the motor is running with left rotation. If the «Enable» LED is on, it indicates that the motor is enabled (terminal 6-7 not connected); if it's off, it indicates that the motor is blocked (terminal 6-7 connected).

Motor with only one rotation direction speed is regulated by 0-10Vdc analog


Motor connection with only one rotation direction with 0-10Vdc analogue speed adjustment. Connect the 0-10Vdc analog signal to 12-13 terminals. If the analog signal is 0Vdc you have the idle motor (factory calibration) or the value adjusted with the trimmer («0» calibration). If the analog signal is +10Vdc you have the maximum motor rotation speed +24Vdc (factory calibration) or the value adjusted with the trimmer (Max speed). With intermediate analog signal values the motor speed will be proportional. Connect armature feedback terminals 9 and 10, if there is no feedback from the Tachymetric dynamo, otherwise the motor will not work. If connected, terminals 6 and 7 allow motor instantaneous blocking even if the potentiometer analogue input is present. The +24Vdc and +12Vdc LEDs indicate that the device is powered; if the «Right rotation» red LED is on, it indicates that the motor is running with right rotation; if the «Left rotation» green led is on, it indicates that the motor is running with left rotation. If the «Enable» LED is on, it indicates that the motor is enabled (terminal 6-7 not connected); if it's off, it indicates that the motor is blocked (terminal 6-7 connected).

Engine with 2 rotation directions speed is regulated by +/-10Vdc analog


Motor connection with 2 rotation directions with analogue speed +/- 10Vdc. Connect the analog signal to 12-13 terminals. If the analog signal is 0Vdc you have the idle motor (factory calibration) or the value adjusted with the trimmer («0» calibration). If the analog signal is -10Vdc you have the left maximum motor rotation speed -24Vdc (factory calibration) or the value adjusted with the trimmer (Max speed). If the analog signal is +10Vdc you have the right maximum motor rotation speed +24Vdc (factory calibration) or the value adjusted with the trimmer (Max speed). With intermediate analog signal values the motor speed will be proportional. Connect armature feedback terminal 9 and 10, if there is no feedback from the Tachymetric dynamo, otherwise the motor will not work. If connected, terminals 6 and 7 allow motor instantaneous blocking even if the potentiometer analogue input is present. The +24Vdc and +12Vdc LEDs indicate that the device is powered; if the «Right rotation» red LED is on, it indicates that the motor is running with right rotation; if the «Left rotation» green led is on, it indicates that the motor is running with left rotation. If the «Enable» LED is on, it indicates that the motor is enabled (terminal 6-7 not connected); if it's off, it indicates that the motor is blocked (terminal 6-7 connected).