

# e.direct DRIVE FOR DIRECT CURRENT MOTORS

With the e.direct drive for direct current motors, a 24VDC motor can be easily controlled and run. The electronic board is enclosed in a plastic housing designed for DIN rail mounting.

When activating the "CW" and "CCW" inputs, the motor starts running alternately clockwise and anticlockwise.

Two digital sensor inputs are provided to stop motor rotation upon activation.

The two stop signals are made available as outputs for possible connection to PLCs.

When activated, two digital sensor inputs are provided to stop motor rotation. The two stop signals are made available as outputs for possible connection to a PLC.

During acceleration and braking, the drive prevents mechanical stress on the motor and excessive energy regeneration.

Braking takes place dynamically, stopping the rotation immediately to avoid unwanted extra travel.

The rotation speed can be varied locally via the multi-turn trimmer installed on the board, or remotely, even continuously, via the analog input.

The board is equipped with 2 Hall sensor encoder inputs, NPN type and 5VDC power supply, which are fed back on two 24VDC encoder outputs, which adapt the signals coming from the Hall sensors to PLC inputs type OPEN DRAIN - PNP 24VDC.

The maximum current to be supplied to the motor can range between 1A, 2A, 3.5A and 5A via two DIP switch selectors.

When the board is not powered and the motor is stopped, the motor phases are short-circuited to increase braking torque.

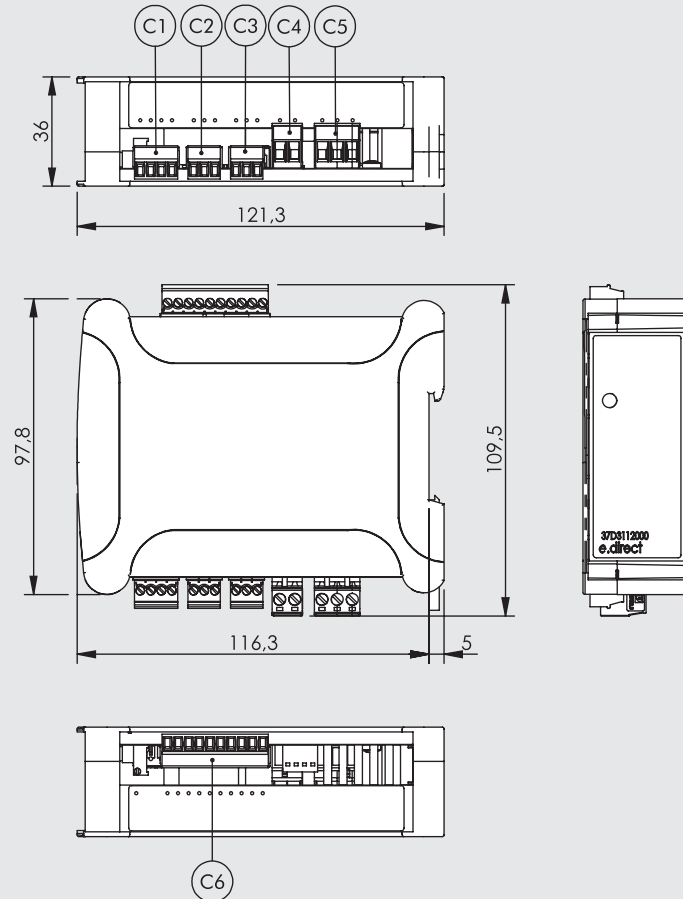


TECHNICAL DATA		
Code		<b>37D3112000</b>
Motor and auxiliary power supply	VDC	24 ±15%
Maximum power voltage	VDC	30
Wattage	W	150
Current	A	1, 2, 3.5, 5 (Dip-switch selectable)
Temperature range	°C	-20 to 40
Relative humidity (without condensation)	%	5 to 85
Dimensions	mm	110 x 121 x 36
Weight	g	160
Degree of protection		IP20
Digital inputs		- no. 2, type PNP 24VDC motor rotation control (CW/CCW); - no. 2, type OPEN DRAIN - PNP 24VDC limit switch (LS); - no. 2, type NPN 5VDC for encoder (Hall sensors).
Digital outputs		- no. 2, type 24VDC OPEN DRAIN - PNP suitable for PNP 24VDC PLC for limit switch (LS); - no. 2, 24VDC: adapting signals from Hall sensors to PLC inputs type OPEN DRAIN - PNP 24VDC.
Analogue inputs		- no. 1, 0-10VDC speed adjustment from PLC or potentiometer (31400 Ω input impedance); - Internal trimmer for manual speed adjustment (0-100%).
Protections		- Motor output overcurrent protection; - Phase-to-phase short-circuit protection on motor; - Microprocessor over-temperature protection (150°C).
Signals		- Overvoltage (Vsupply>30VDC) - Under-voltage (Vsupply<18VDC); - With fault diagnostic output (OPEN DRAIN - PNP); - Active output corresponds to one of the FAULT statuses.

**N.B.:** Predisporre nell'impianto un fusibile di tipo ritardato, esterno, di valore adeguato alla corrente impostata.

Per evitare i disturbi generati dall'azionamento è necessario posizionare un adeguato filtro di rete esterno sull'alimentazione.

## DIMENSIONS



Below is a list of Phoenix Contact codes for the board connectors.

Connector	Description	Code Phoenix Contact	Code Phoenix Contact BASIC LINE
C1	4-pin plug with screw connection, MC 1.5/4 - ST - 3.5	1840382	5441223
C2, C3	3-pin plug with screw connection, MC 1.5/3 - ST - 3.5	1840379	5441210
C4	2-pin plug with screw connection, MC 2.5/2 - ST - 5	1754449	5441171
C5	3-pin plug with screw connection, MC 2.5/3 - ST - 5	1754465	5448242
C6	10-pin plug with screw connection, MC 1.5/10 - ST - 3.5	1840447	5447560

## CONNECTION SCHEME

