INSTRUCTION MANUAL
Code 287S.C/1Y(48Vdc)

Working principles
The code 287S.C/1Y board is a MOSFET unidirectional voltage switching regulator. Its main use is found in control of small DC motors or proportional electro-valves with a maximum working voltage of 48VDC.

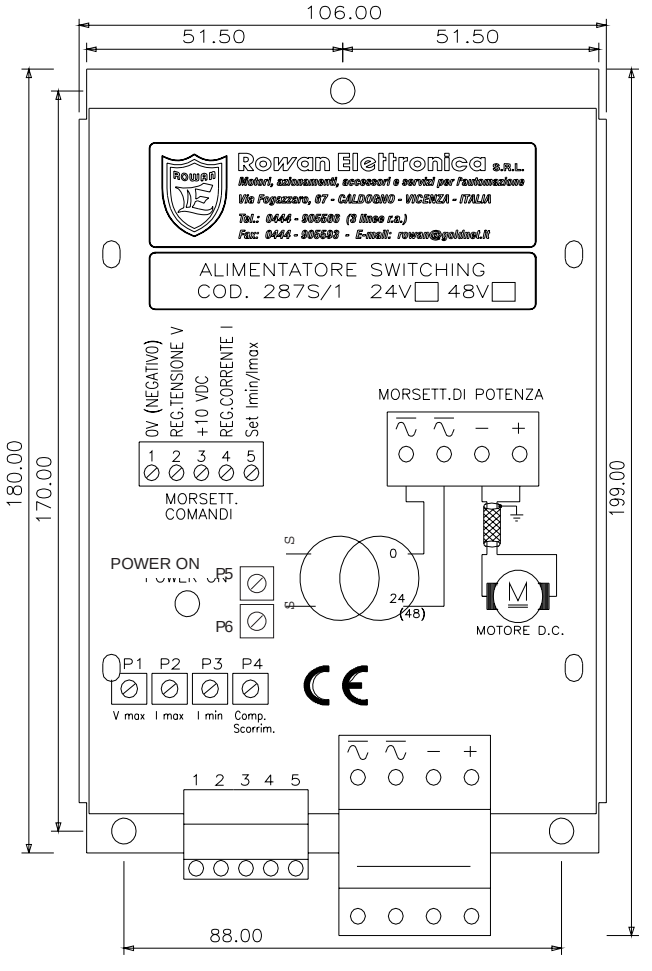
TECHNICAL CHARACTERISTICS:
Alternate power supply 48VAC ± 10% 50-60Hz; continuos 43VDC minimum - 55VDC maximum: in this case the maximum output voltage is the 90% of the input supply voltage.
Maximum power 350W for DC Motors (Motor Rated Current 9A); different loads 432W (48VDC/9A).
Maximum current in continuous service 9A. Switching frequency 5KHz.
Output voltage and current feedback regulation, by 10KOhm potentiometer or 0 +10VDC analog signal
Working environment air limits temperature -5° C + 40°C and variable non condensated humidity from 5% to 95%.
Storage temperature air limits temperature -25°C + 70°C
Maximum output voltage variation 3VDC from unloaded to nominal loaded.
Possibility of slipping compensation in case of DC motor control.
Europe board form in standard version on a plate support IP20 protection

CONFORMITY TO ELECTROMAGNETIC COMPATIBILITY REQUIREMENTS
The code 287S.C/1Y board conforms to the EMC 89/336/EEC (electromagnetic compatibility) with reference to the limits and to the test conditions and product regulations CEI EN 61800-3 for electric drivers; such conformity is guaranteed if the following precautions are observed:
- screened cables must be used for the potentiometer and motor connection;
- must be avoided passing signal cables in channels together with power cables ;
- one end of the screened cable shield must be connected to earth;

The code 287S.C/1Y is supplied with an internal electromagnetic disturbance suppression system, **therefore no external filter system is necessary.**

CONNECTION AND SET-UP INSTRUCTIONS
1) The code 287S.C/1Y board works correctly with room air temperature between -5°C and +40°C; above these limits abnormalities may accur as thermal drift or breakage; it is advisable to position the board away from heat sources and ventilate the cabinet if high environment temperatures are reached.
2) When many boards are used into the same cabinet it is possible to use a single transformer with a 24Vac secondary to supply all boards, **but only if they don't have the common negative connected (connector 1)**; **in the opposite case any board must be singularly supplied by its own transformer.**
3) **It is not possible to connect to ground , at the same time,** one end of the alternate 48Vac and the NEGATIVE connector 1 from the board, or a drive failure will occur; **it is possible to connect to ground only one of the two terminals.**

CONNECTION DIAGRAM
OVERALL DIMENSIONS AND FITTINGS



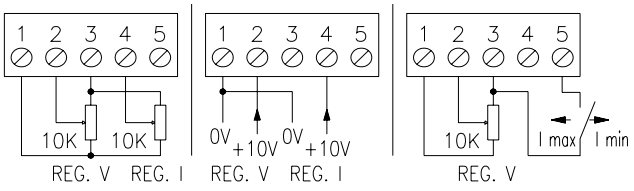
HIGH = 65mm

TRIMMERS DESCRIPTION
P1 = output maximum voltage
P2 = output maximum current
P3 = output current
P4 = slipping compensation of the DC motor since unloaded until full loaded
P5 = acceleration ramp 0 ÷ 3 sec.
P6 = deceleration ramp 0 ÷ 3 sec.
(all trimmers clockwise regulated raise the relative value)

COMMAND BOARD DESCRIPTION
1 = OV common negative
2 = signal input 0 ÷ +10Vdc to regulate the output voltage
3 = +10Vdc pot. supply max 10mA
4 = signal input 0 ÷ +10Vdc to regulate the output voltage: in this case the trimmer P3 works as the minimum
5 = limitation on output voltage selection:
- non connected clip = minimum current (adjustable by P3)
- 10÷24Vdc connected clip = max current (adjustable by P2)

FUSE = 16A Fuse on the transformer secondary (low voltage)

HOW TO CONNECT THE COMMAND BOARD



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