

Very compact analog traction servodrive 12 - 24 - 48Vdc power supply range for Brushless servomotors. Driving motor ranges up to 5,5 Nm, tacho generator, encoder or hall signals feedback.

TRACTION DRIVE BLDC

SERVO AMPLIFIER FOR BRUSHLESS MOTORS

Traction Drive BLDC is a precision four quadrant servo drive for permanent brushless servomotors. Possible control methods include velocity and torque modes. There are many different velocity modes: tachogenerator, encoder +hall signals feedback, hall signals feedback and PWM+DIR comand. **Traction Drive BLDC** is particularly suitable for battery applications in which are required high dynamic performance and positioning accuracy.

► Traction BLDC advantage

- Compact drive for 1,8W (5,5Nm) BLDC motors
- Small package, versatility, ease-of-use, cost-effective
- Feedback from encoder + hall , armature or only hall signals.

► Standard characteristic

- Four quadrant regenerative operation
- Single supply DC voltage
- 5 diagnostic Leds (State and Alarms)
- Protections for: Over/Under voltage, max. temperature reaches, Over current, Ixt motor current, hall missing
- Power and signals extractable connectors
- 1 Differential velocity input +/-10V
- 1 Torque mode (demand current) input
- Feedback available (series): Quadrature encoder+ hall signals - tachogenerator - hall signals
- NPN Fault drive output
- Five Potentiometer adjustments (Speed, offset, gain, derivative)
- Acceleration/deceleration ramp



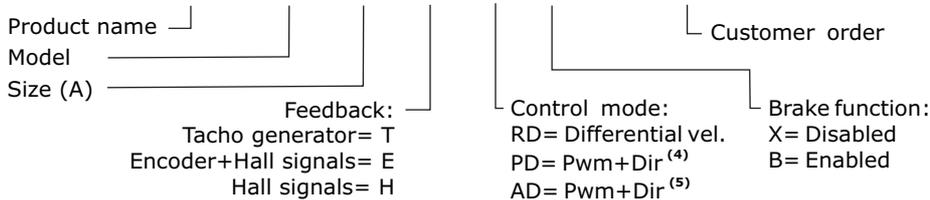
► Specifications

- | | |
|------------------------------|------------------------|
| • Output voltage | 0,9 Vdc Input |
| • PWM frequency | 20Khz |
| • Operative temperature | 0/+40°C |
| • Analog inputs range | +/-10Vdc |
| • Current monitor | +/- 8Vdc (At pk curr.) |
| • Velocity monitor | +/- 8Vdc (At max.vel.) |
| • Encoder power supply (+V) | +5Vdc @130 mA |
| • Ausiliary power supply | +/-10Vdc @ 4mA |
| • Maximum encoder frequency | 300Khz |
| • Logic level encoder inputs | ≥ +2,8V/+24V |
| • Start signal (Input range) | +9V/+30Vdc |
| • Current loop bandwidth | 2KHz |
| • Velocity loop bandwidth | 150Hz |

MODEL	TRXL BLDC 12			TRXL BLDC 24			TRXL BLDC 48		
DC Voltage Supply (Vdc)	12			24			48		
DC Voltage Range (Vdc)	9 - 28			19 - 54			19 - 54		
Size (A)	20	30	40	20	30	40	20	30	40
Rated Current (A)	20	30	40	20	30	40	20	30	40
Peak Current (1) (A)	40	60	80	40	60	80	40	60	80
Rated Power (2) (W)	200	300	400	400	600	800	880	1320	1760
Peak Power (3) (W)	400	600	800	800	1200	1600	1760	2640	3520

Order code example:

TRXL/B - 24 - 40 - E - RD - X - ord. 209/13

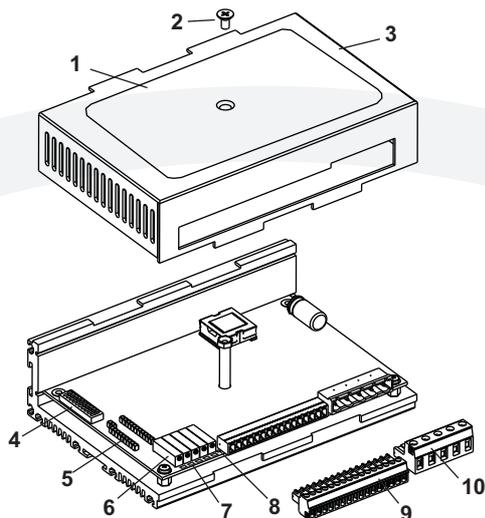


Label example:

**TRXL/B-24-40-E-RD-X
ord. 209/13**

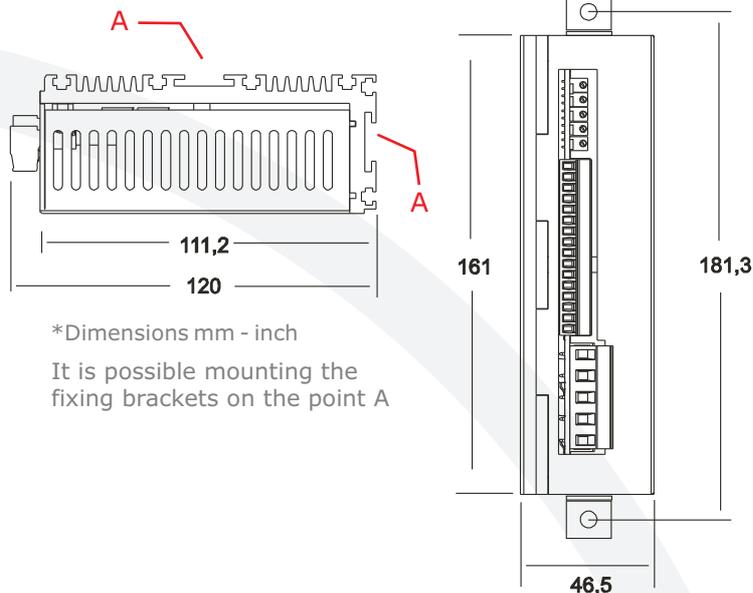
(1) Peak current (Adc) for 2 sec. (2) Power of amplifier at the rated current and rated voltage (3) Power of amplifier at the peak current and rated voltage
 (4) PWM+DIR comand with open loop (5) PWM+DIR comand with close loop and hall signals feedback.
 (*) Model 48V size 30/60 and size 40/80A forced cooling required

► View product



- (1) Product Label
- (2) Fixing screw
- (3) Product Cover
- (4) Solder bridges
- (5) Adjustment zone
- (6) Calibration Potentiometers
- (7) Leds
- (8) Test (velocity monitor)
- (9) M1 Signals terminal 16 pins MC1,5/16-ST-3,81 (pitch 3,81)
- (10) Power Terminal 5 pins GMST 2.5/5-G-7,62 (pitch 7,62)

Mechanical dimensions



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► Typical connection

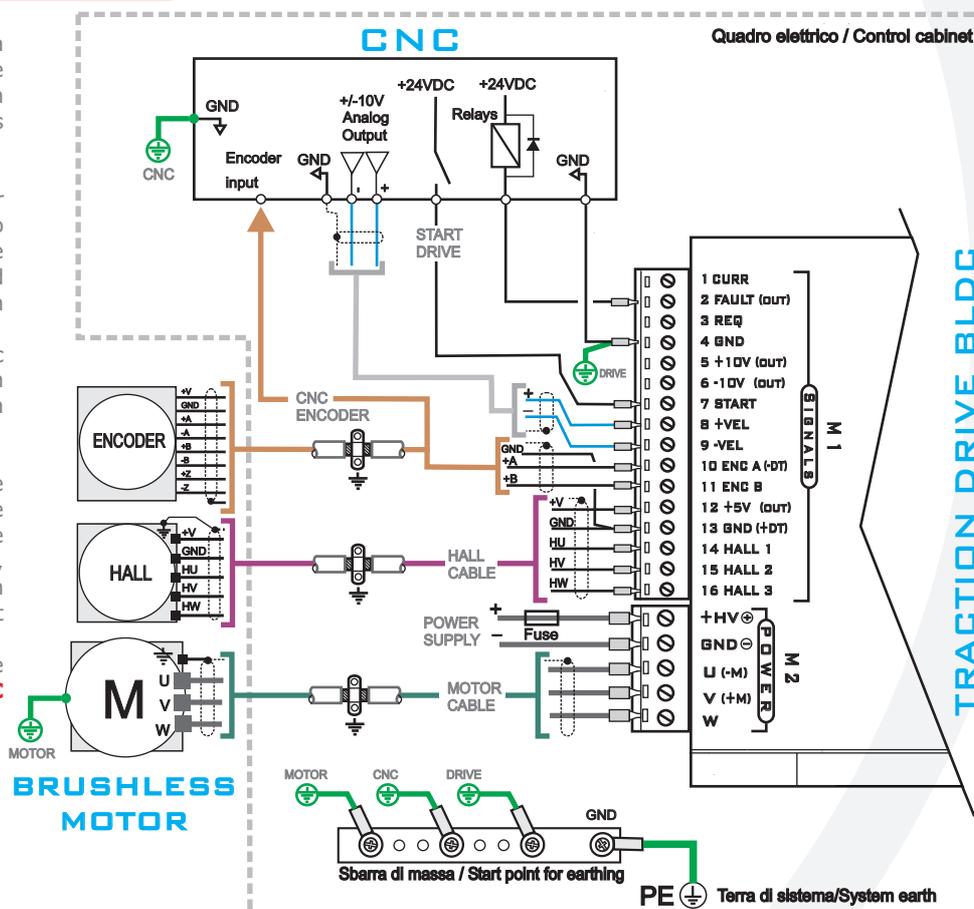
In the figure above is shown a typical connection of the **Traction drive BLDC** in combination with a brushless motor.

The encoder with line driver output is connected directly to the control. Depart from the CNC control wires +A +B and GND to the drive (signals in common mode).

Excellent dynamic performance is obtained with encoder with resolution from 500 to 2000PPR.

It also possible to supply the encoder with the voltage available on the +5V of the drive (+V terminal 12), verifying that the absorption of the encoder does not exceed 130mA.

For all other information see the **Traction drive BLDC** service manual.



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Accessories: • Switching power supply 220-400Vac/55Vdc • Single/3ph transformers from 100 to 7000VA • Single/3ph bridges 600V 35A
• Power supply capacitors 4700uF / 10000uF • Net filters (for CE compliance)