

MST Series

MST 60-130

Electronic speed controller for BLDC motors



Overview

The MST 60-130 is a compact and rugged ESC designed for up to 60 V and 130 A, ideal for demanding applications in aerospace, robotics, and racing. Optimized for our NOVA 4 and 15 motors. Developed and manufactured in Germany.

Features

- Super robust housing for applications in the harshest environments
- Standard protection class IP 40 (higher class possible)
- Favorable power-to-weight ratio
- Specifically designed for our high pole motor design
- Combined with our motors, the highest system efficiency can be achieved



Specifications

Hardware P/N ⁽¹⁾	10-007-000-001-04
Peak output power	15.6 kW
Peak current (max. 2s)	260 A
Continuous output power ⁽²⁾	7.8 kW
Continuous output current ⁽²⁾	130 A
Power dissipation at 130 A	74 W
Electric RPM limit	240,000 rpm
Voltage range	10-60 V
Length	115 mm
Width	64 mm
Height	21 mm
Weight	320 g
Recommended Phase cable length	100 cm
Recommended conductor diameter (phase/battery)	8 mm ² / 8 AWG
Protection class	IP40
Cooling	Air cooled
Recommended air flow	1 m/s
Heatsink	4.5 °C/W 3.0 °C/W (at 1 m/s air flow)
Ambient temperature range	-20 to +100 °C
Max. temperature of ESC (as measured by sensor)	+110 °C
Position sensor input	Hall effect sensor with UVW-commutation signals
Temperature sensor	Integrated NTC

Notes:

- (1) Please always provide the hardware and software part numbers (P/N) while ordering. This is required to uniquely identify the product.
- (2) Rated at 25 °C ambient temperature. Performance decreases at higher temperatures. A minimum airflow of 1 m/s is required. The ESC must be mounted on a heat sink with a thermal resistance of 3 °C/W.

Control Interfaces

RS232	115,200 Baud / 8N1
Analog (optional)	0 – 5 V
Software P/N ⁽¹⁾ : 59-10000029	
PWM (optional)	High level: 1.5 - 28V
Software P/N ⁽¹⁾ : 59-10000030	Low level : 0 - 0.5 V
	10 – 400 Hz
CAN (optional)	CAN2.0
Software P/N ⁽¹⁾ : 59-10000031	

Connection Interfaces

Motor phases (A, B and C)	Gold socket contact 6mm
Battery positive pole (+)	Gold socket contact 6mm
Battery negative pole (-)	Gold plug contact 6mm
RS 232 / analog / digital / CAN	Harwin 12-pole (M80-5101242)
Motor sensor	Harwin 6-pole (M80-5101242)
Compatible with 47 kΩ NTC motor temperature sensors	

Complementary Products

- Plettenberg COTS Motors:
 - NOVA 4-30-BXX P20 LW
 - NOVA 4-50-BXX P20 LW
 - NOVA 15-25-B12 P30 LW
 - NOVA 15-30-B10 P30 LW

Options & Customization

- Available with optional cooling fins
- Tailored software features upon request
- MTBF/S report
- Mechanical customization
- Higher IP Class possible

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