

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

Part number	10-007-000-001-04
Peak output power	15.6 kW
Peak current (max. 2s)	260 A
Continuous output power ⁽¹⁾	7.8 kW
Continuous output current ⁽¹⁾	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) 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
PWM (optional)	High level: 1.5 - 28V Low level : 0 - 0.5 V 10 – 400 Hz
CAN (optional)	CAN2.0

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

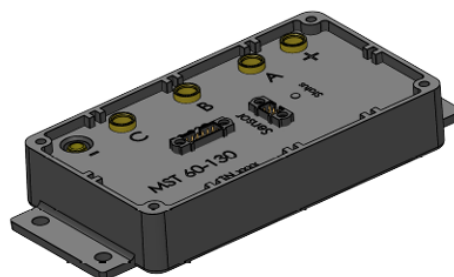
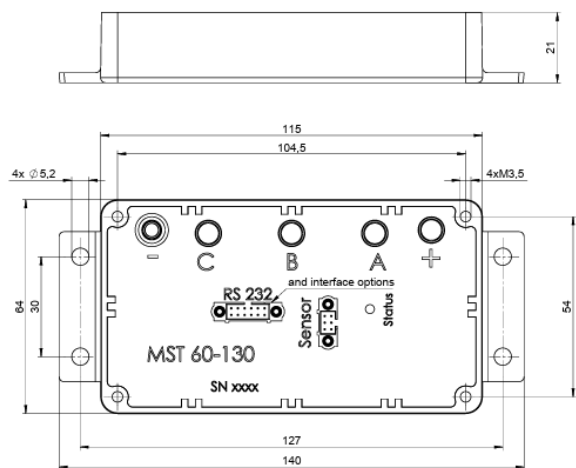
Options & Customization

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



MST Series

Electronic Speed Controller for BLDC Motor	
Continuous power max.	7.8 kW (mounted on heat sink with 3° C/W)
Electric RPM limit	240,000 1/min
Voltage range	10 - 60 V
Current max.	260 A (max 2 sec.)
Current cont.	130 A (at 25°C ambient temperature)
Interfaces	RS232 plus either CAN bus 2.0 or PWM or analog
Cooling	Air cooled without fins
Protection class	IP40 (higher class possible)



all dimensions are in mm	Weight approx: 320 g
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Summary Datasheet

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