

## MST Series

# MST 60-80

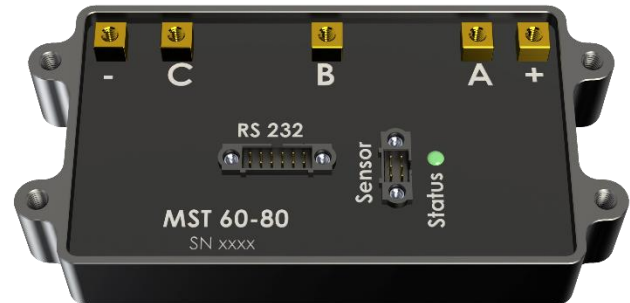
Electronic speed controller for BLDC motors

### Overview

The MST 60-80 is a compact and rugged ESC designed for up to 60 V and 80 A, ideal for demanding applications in aerospace, robotics, and racing. Optimized for our NOVA 4 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 <sup>(1)</sup>	10-014-000-001-01
Peak output power	7.2 kW
Peak current (max. 5s)	120 A
Continuous output power <sup>(2)</sup>	4.8 kW
Continuous output current <sup>(2)</sup>	80 A
Power dissipation at 80 A	45 W
Electric RPM limit	240,000 rpm
Voltage range	10-60 V
Length	112 mm
Width	59 mm
Height	19 mm
Weight	230 g
Recommended Phase cable length	100 cm
Recommended conductor diameter (phase/battery)	4 mm <sup>2</sup> / 12 AWG
Protection class	IP40
Cooling	Air cooled
Recommended air flow	3 m/s
Heatsink	5.0 °C/W
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 5 °C/W.

### Control Interfaces

RS232	115,200 Baud / 8N1
Analog (optional)	0 – 5 V
Software P/N <sup>(1)</sup> : 59-10000026	
PWM (optional)	High level: 1.5 - 28V
Software P/N <sup>(1)</sup> : 59-10000027	Low level : 0 - 0.5 V
	10 – 400 Hz
CAN (optional)	CAN2.0
Software P/N <sup>(1)</sup> : 59-10000028	

### Connection Interfaces

Motor phases (A, B and C)	screw terminal M3
Battery poles	screw terminal M3
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-B8 P20 LW
  - NOVA 4-30-B12 P20 LW
  - NOVA 4-50-B4 P20 LW
  - NOVA 4-50-B8 P20 LW

### Options & Customization

- Tailored software features upon request
- MTBF/S report
- Mechanical customization
- Higher IP Class possible



Electronic Speed Controller for BLDC Motor	
Continuous power max.	4.8 kW (mounted on heat sink with 5° C/W)
Electric RPM limit	240,000 1/min
Voltage range	10 - 60 V
Current max.	120 A (max. 5 sec.)
Current cont.	80 A (at 25°C ambient temperature)
Interfaces	RS232 plus either CAN bus 2.0 or PWM or analog
Cooling	Air cooled
Protection class	IP40 (higher class possible)

all dimensions are in mm	Weight approx.: 250 g
MST 60-80	
Summary Datasheet	
A3	

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