

Millipak™

Compact DC & AC Motor Controllers

For Traction & Pump Motors

24 V / 3 kW to 48 V / 6 kW

The Millipak™ family of DC and AC motor controllers provides an enhanced thermal design for traction and pump systems. Millipak™ controllers deliver high power capabilities in a minimum of space without compromising performance.

Feature Overview

- Very compact design
- Silent operation
- Regenerative braking
- PC Configuration
- Flash memory
- Diagnostic LED
- IP66 protection



Partner with Performance™

Millipak™

Features and Benefits

Enhanced Thermal Design

Ideal for harsh environments where compact size and maximum reliability are vital. Using an advanced mechanical package the Millipak™ controllers provide high power in a very small footprint.

Improved Reliability and Performance

Sevcon's patented MOSFET switching design delivers peak dependability and performance, as well as silent operation utilizing a 16kHz high switching frequency.

Flash Memory for Increased Flexibility

As application programs are stored in Flash Memory on the controller, it can be reprogrammed in place, increasing flexibility and commonality of system design.

Inputs and Outputs

Various configurations of digital and analog inputs and outputs (I/O) are standard and suitable for many applications. Functions can include throttle inputs, limit switch inputs, contact drives, hour counters, and instrumentation. This allows use as a stand-alone controller or integration into a vehicle system.

Rugged Endurance

Rigorous testing ensures that Millipak™ delivers unparalleled reliability.

Simple Configuration and Service

A PC with the Sevcon PCpak™ configuration system or a hand-held cali-brator can be used to adjust parameters and reprogram the controller via the calibrator port. The prominent diagnostic LED provides “no tools” fault finding assistance.

Separately Excited Motor Controller (SEM)

Speed, efficiency, flexibility. SEM offers a contactor-free solution to regenerative braking and field weakening, with improved efficiency. Complementary switching techniques provide improved speed control without added sensors.



Separately Excited Motor (SEM) Controller



Series Pump Controller



Series Pump Controller

Dedicated solution with flexibility. A dedicated pump motor solution offers two variable-speed inputs and eight configurable speed inputs, as well as speed compensation for use with hydraulic power steering applications.

Brushed Permanent Magnet Motor Controller

This controller operates in fullb, 4-quadrant mode allowing contactor-free operation in direction changing and regenerative braking. It operates in either torque control or speed control mode.

Permanent Magnet AC Controller

The PMAC controller operates in Trapezoidal or Sinusoidal wave-form switching modes. Brushless PM motors offer absolute speed control that is hard to duplicate on a series motor without adding extra circuitry and costly speed probes, sensors, or tacho generators. A brushless solution requires no motor access for maintenance so the motor can be positioned anywhere on the vehicle. Absence of motor brushes also means no arcing during operation, hence lower EMC emissions.

Technical Specifications

	Battery Voltage	Max Power (kW)	Peak Current 1 min (A)	Field Current (A)	Package Size (See Dimensions)
SEM Traction	24	2	300	30	1
	24	4	600	40	2
	48	4	300	30	1
	48	6.5	500	40	2
Series Pump	24	2	300	-	1
	24	4	600	-	2
	48	4	300	-	1
	48	6.5	500	-	2
Brushed PM	48	4	300	-	2
Permanent Magnet AC	24/36	4	300	-	2
	36/48	4	300	-	2

- Ingress: Enclosure protected to IP66
- Humidity: 10 Cycles 60°C, 95% RH (ref. SAE J1211)
- Vibration: NAVMAT P9492 Random Vibration Test Profile
- Operating Temperature: -30°C + 40°C (ref. SAE J1211)
- Storage Temperature: -40°C to + 70°C (ref. SAE J1211)
- Switching frequency: 16 kHz

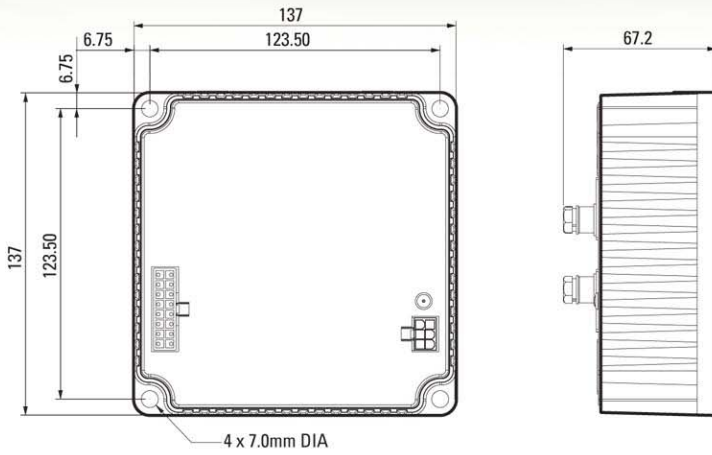


Brushed Permanent Magnet Motor Controller

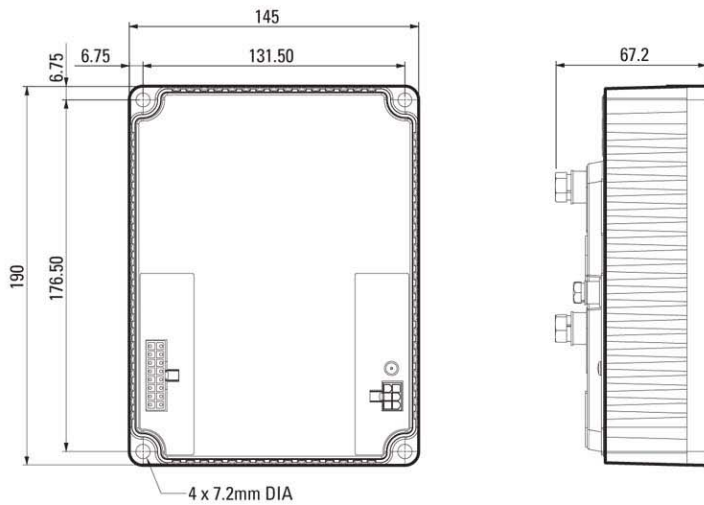


Permanent Magnet AC Controller

Package Size "1"



Package Size "2"



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