



# SEM300

## Vehicle & Motor Controller

### Product Highlights

- 24V Sepex Traction and DC Pump
- Tilt sensor and overload system

### General Features

- Integrated dual Sepex Traction motor and DC Pump motor controller
- Integrated tilt sensor can be configured to limit or prevent selected functions when vehicle is tilted
- Platform overload can be configured for EN280 compliance (requires pressure sensor and height sensor [EZfit])
- Flash memory allows factory configuration to exact vehicle needs
- Inputs from platform joystick & switches (or ground mode emergency switches) control vehicle functions via protected valve & line contactor drivers
- Inputs from various cutout switches can be configured to limit or prevent selected functions depending on vehicle state.
- Dual micro-controller ensures failsafe operation
- Available **EZcal** hand-held allows access to configuration settings and diagnostics including history log (via RS232)
- CAN bus
- Integral status LED provides (flashing) fault code indication



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vehicle controls

**Optional:** Text display module provides end-user status & fault descriptions to minimize down time

### Technical Data

<b>Power supply</b>	16 to 33 Vdc	Under and Over voltage shutdown Reverse battery protected
<b>Drive current</b>	400A	
<b>Pump current</b>	300A	
<b>PWM Frequency</b>	16 KHz	
<b>Integral tilt sensor</b>	+/- 0 to 10°	$\sqrt{(x+y)}$
<b>Safe High side ON/OFF outputs</b>	4	3A Automotive spec. protected drivers
<b>Safe High side Proportional outputs</b>	4	3A Automotive spec. protected drivers
<b>High side ON/OFF outputs</b>	4	3A Automotive spec. protected drivers
<b>Indicator ON/OFF outputs</b>	6	1A Automotive spec. protected drivers
<b>Digital inputs</b>	19	Low impedance eliminates moisture problems
<b>Analog inputs</b>	7	0.5-4.5Vdc, protected from wiring errors
<b>Water proof</b>	IP65	
<b>Ambient working temperature</b>	-40 to +50°C	Controller must be mounted to vehicle frame to provide heatsink
<b>Overall dimensions</b>	206 x 155 x 68	L x W x H (mm)

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### Mounting Instructions

- The module should be installed vertically as shown below

### Installation & Connections

The **SEM300** control module requires special installation due to its integral tilt sensor. The controller must be mounted perpendicular to the ground, with the connectors at the bottom. To achieve full power capability, heat sink should be bolted to a large metal part of the chassis.

All dimensions  $\pm 1\text{mm}$

