



**ELECTRIC DRIVE
ENGINEERING**

Sevcon Gen4 Series

Permanent magnet motor controllers



Suitable for a wide range of PM motors
Build in ECU - EV, Pump, Power Steering
Designed for on-road & off-road use
CANOpen Compatible



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TECHNICAL DATA

Operating Ranges

Model Name	Voltage Range (V dc)	Cont. Current (A rms)	Peak Current (A rms)
Size 2 - 48V	19.3V - 69.6	110	275
Size 4 - 48V		180	450
Size 6 - 48V		260	650
Size 2 - 80V	39.1 - 120	75	180
Size 4 - 80V		140	350
Size 6 - 80V		210	550
Size 4 - 110V	48 - 150	120	300

* 1 hour minimum without forced-air cooling (Size 2 long-term rating achievable with finned heatsink approx. 250mm x 180mm, 0.5°C/W, Size 4 long-term rating achievable with finned heatsink approx. 330mm x 200mm, 0.3°C/W, Size 6 long-term rating achievable with finned heatsink approx. 330mm x 280mm, 0.2°C/W)

** 2min current (lower ratings are possible for longer periods, higher ratings are possible for shorter periods)

Hardware

Digital Inputs	8 digital inputs
Analog Inputs	4 (2x 3-wire inputs, 2x 2-wire inputs) (can be configured as digital)
Analog Outputs	3 configurable PWM outputs
Temperature	1 motor thermistor input (KTY-83, KTY-84, PT1000, user-defined)
Motor Speed Sensor	Sin Cos, UVW, AB
CAN	2 common channels (configurable baud rate up to 1Mbits/sec)

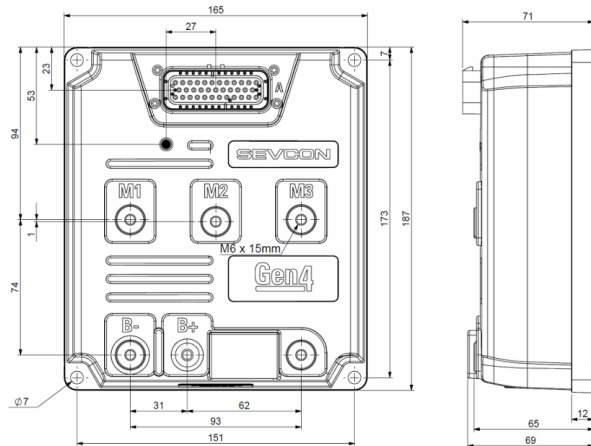
Additional Data

Suitable Motors	Permanent Magnet Synchronous Motors (SPM and IPM), Brushless DC (BLDC) Motors, Induction Motors
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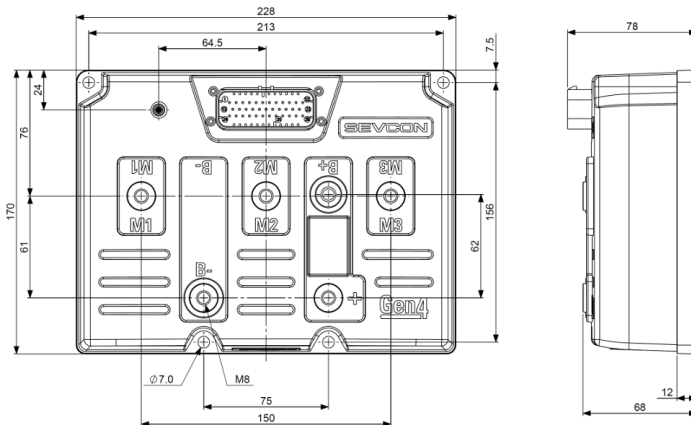
TECHNICAL DRAWINGS



Size 2

Weight 1.3kg

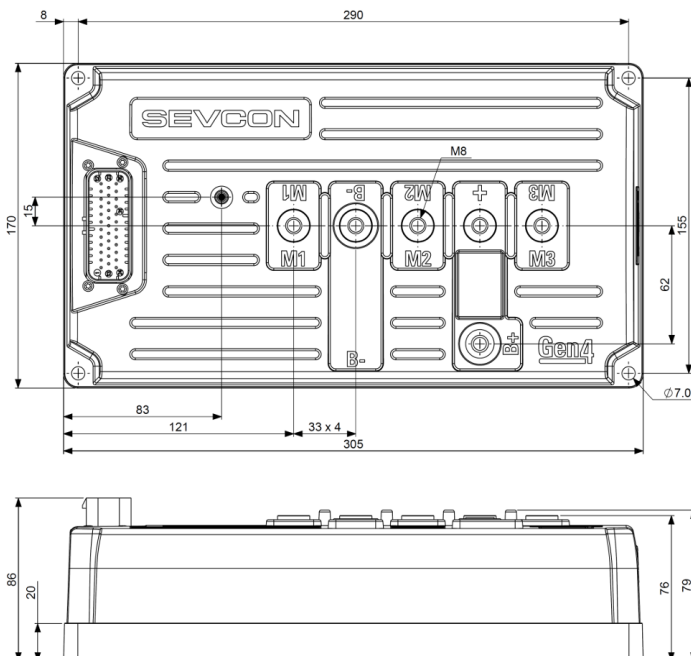
Terminals M6 threaded holes with bolts



Size 4

Weight 2.7kg

Terminals M8 threaded holes with bolts



Size 6

Weight 4.6kg

Terminals M8 threaded holes with bolts



APPLICATIONS

Built-in Electric Vehicle ECU (TracApp)

Applications	Electric Vehicles (torque mode or speed mode), boats, robotics, agricultural equipment, other
Configurable Inputs	Throttle, regen brake, forward, reverse, seat switch, inch forward/back, 4x drive modes (e.g. eco & sports), horn, odometer reset, deadman, steering angle, economy, and more
Configurable Outputs	Line contactor, cooling fan/pump, external LED, alarm, horn, brake light, service due, cooling fan/pump, and more

Vehicle Features

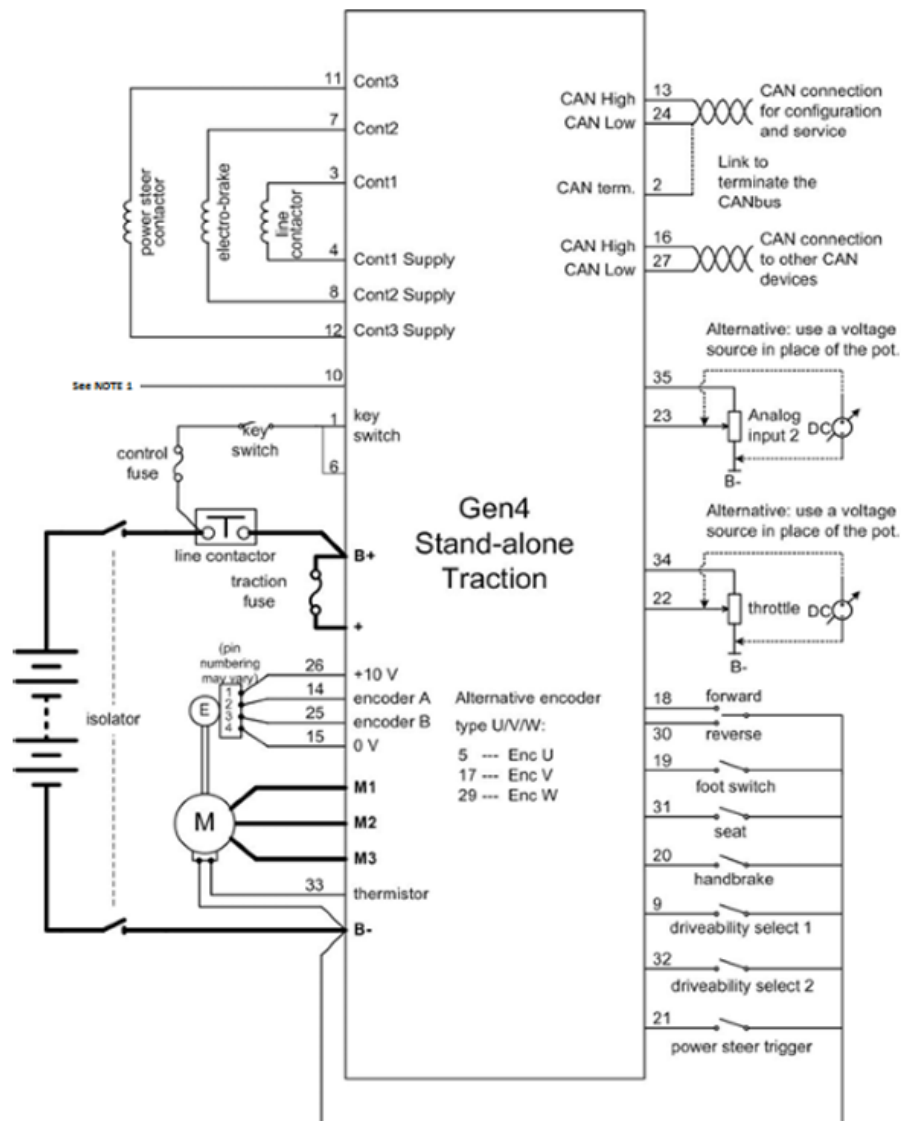
- Adjustable regen braking
- Km/hr calculation
- Hill-hold and controlled roll-off

System Features

- Automatic pre-charge
- Inbuild battery fuse

Safety Features

- Dynamic regen/discharge current limits
- Power limit protection
- Over current protection
- Over temperature torque cutback/protection
- Overspeed protection





APPLICATIONS

Built-in Pump Controller (PumpApp)

Application	Pumps
Configurable Inputs	2x pump throttle, 7x pump speed switch
Configurable Outputs	Line contactor, external LED, alarm, cooling fan/pump, and more

Pump Features

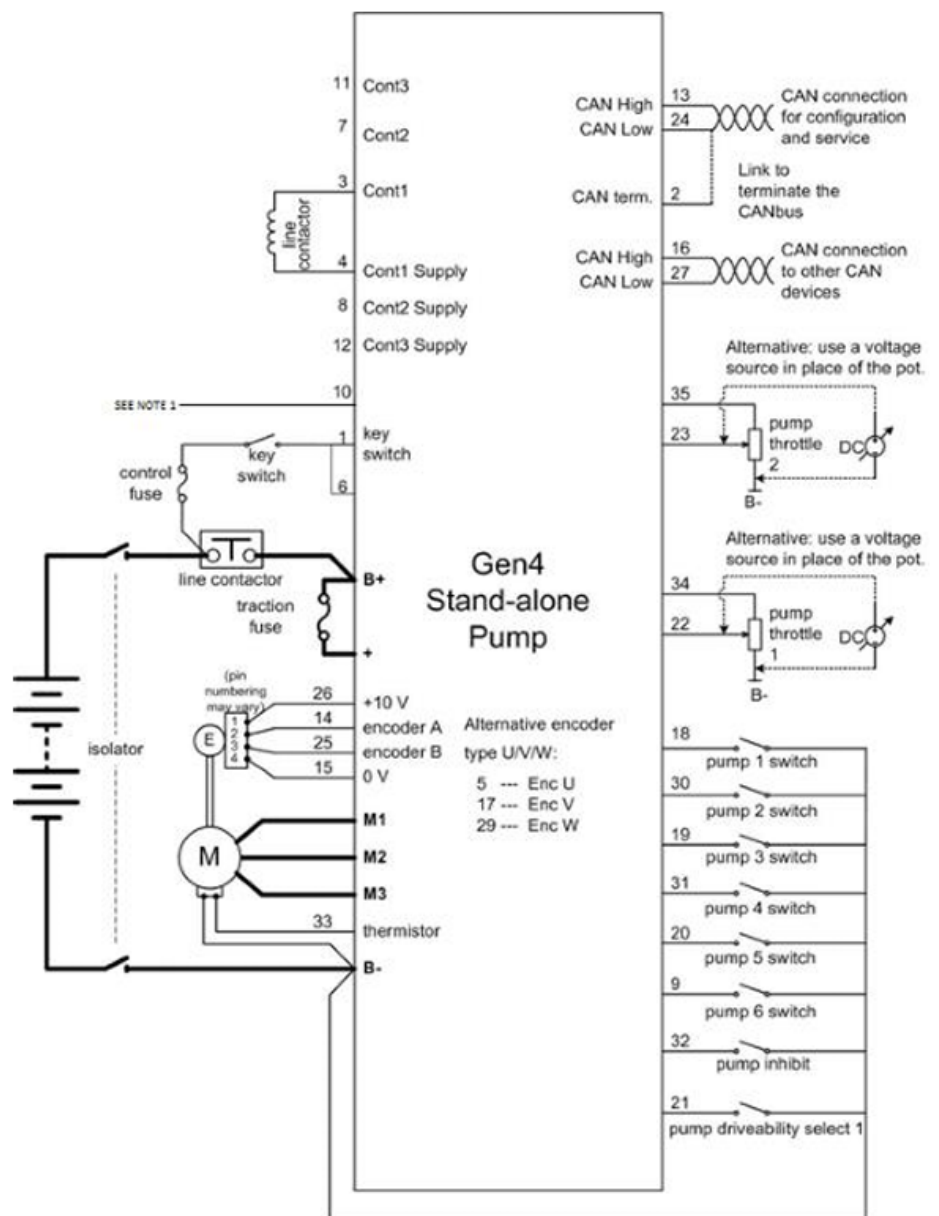
- Speed mode
- Multiple speed inputs with adjustable priority
- Automatic start
- Pump mode switches

System Features

- Automatic pre-charge
- Inbuild battery fuse

Safety Features

- Dynamic regen/discharge current limits
- Power limit protection
- Over current protection
- Over temperature torque cutback/protection
- Overspeed protection





Device Verification Tool (DVT) Programming Software

Features	Configure devices, CANbus sniffing tool (with filters), device monitoring and logging, fault code detection, CANOpen CiA402 controller, J1939 controller, PI loop tuning tools, encoder alignment tools
Programming Dongle	IXXAT USB to CAN Interface V2 1.01.0281.12001 (no other device will work)

