

2400-W EV Charger For 48-V Li-Ion Applications Features CAN And IP66 Rating

From [Green Watt Power](#), a division of Powerland Technology, the EVC-60-2400 series ruggedized ac chargers with 48-V, 40-A output are designed for charging lithium-ion batteries in electric vehicle (EV) applications, material handling, motorcycles, scooters, and e-carts. The high-density design allows easy mechanical integration into a variety of form factors and has options for either fan- or liquid-cooled designs. Part numbers for the different models are shown in the table.

The standard overall dimensions of the fan-version EVC-60-2400 is 240 x 187 x 70mm (9.45 x 7.36 x 2.76 in.) with a weight of only 5.2 kg. The package is designed for high power density and thermal efficiency, is fully potted to help in high-stress environments and has an IP66 rating (see the figure).

With a universal input range of 90 to 264 Vac and an input frequency range of 47 to 63 Hz, the EVC2400 is able to handle a wide range of wall power input voltages and frequencies. With efficiencies up to 93%, the unit's power factor correction (PFC) achieves a PF of 0.99 at 110 Vac and 0.98 at 220 Vac.

The charger has CAN communications for unit status and control with many protection features including OVP, OCP, SCP, OTP and UVLO. The turn-on delay at full load is 5 s max. The operating temperature has a range of -40°C to +60°C with a storage range of -40°C to +85°C. The EVC is designed to meet UL/CSA, TUV and EN55022 Class B and EN55032 Class B.

Units are available from stock to 8 weeks. For more information, see the [datasheet](#) or go to the company [website](#). Or contact Green Watt/Powerland North America at 1-310-881-3890 or sales@greenwattpower.com. For information on the company's other battery chargers, see the ac-dc chargers [page](#).

Table. Cooling options and output specifications for the EVC-60-2400 series power supplies with 48-V nominal, 40-A output.

Model Number*	Cooling	J1772	Output Power	Maximum Output Current	Voltage Range
EVC-60-2400-FC (PLD2400-EVCS03-48)	Fan Included	No	2400W	40A	35~60V
EVC-60-2400 (PLD2400-EVCS03-48L)	No-Fan Version	No	2400W	40A	35~60V
EVC-60-2400-J1772-J (PLD2400-EVCS03-48LJ)	No-Fan Version	Yes	2400W	40A	35~60V
EVC-60-2400-J1772-FC (PLD3200-EVCS03-48FJ)	Fan Included	Yes	2400W	40A	35~60V

* Model numbers in parenthesis are factory numbers



Figure. The EVC-2400 series supports a constant current, constant voltage and constant power charging. The charging current and voltage are controlled through CAN communication. The charger has been designed for a variety of applications including the on-board charging of electric vehicles and the battery systems contained within them.