

Electric Vehicle Supply Equipment AC Charge Controller

EEL is a BS EN IEC61851-1:2019 EVSE AC charge controller



EEL is a fully-compliant 61851 AC charge controller that has all the necessary interfaces for any single or 3-phase AC charge solution.

EEL requires very few external components to provide a complete off-the-shelf charging solution. Simply add a 3-pole contactor any 6mA-RDC-DD to EEL for a single-phase AC charger. Smart charge capabilities can be added using MantaRay to comply with international standards including UK OLEV requirements.

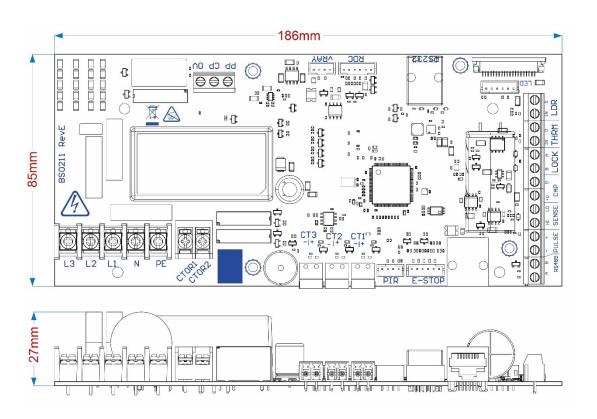
EEL has plenty of flexible features to address all charger requirements. White LED illumination, RGB status LEDs and CT clamps can all be added for metering; PIR for motion; light sensors giving dimming to control status and white illumination LEDs; RFID reader interface for charge cards; RS485 for MID approved meters and a set of general purpose I/Os.

Applications for EEL include simple single- or dual-socket AC chargers for residential installations, through to large scale commercial or fleet installations.

EEL has a number of companion boards allowing fully customisable charging solutions. Software modifications are available on request.



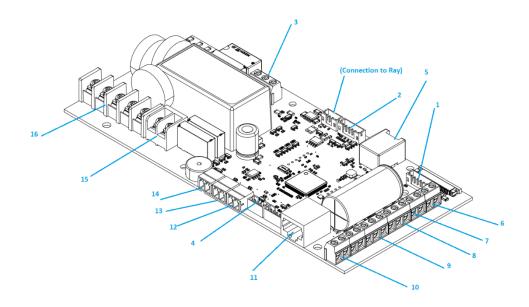
Physical Dimensions





Connectivity

Connector	Description
1	RGB and White LED
2	6mA RDC-DD
3	CP and PP
4	PIR
5	RS232 with 3.3V output (1W) for RFID
6	External Light sensor
7	External Temperature sensor
8	Lock actuator Motor for EV socket
9	Lock actuator sensor for EV socket
10	RS485 for mid meter
11	RS485 for digital CT clamps with 12V output(2W)
12	CT Clamp 1
13	CT Clamp 2
14	CT Clamp 3
15	110 to 240V AC input terminal block
16	Output to power contactor





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Power Consumption Communication RS485 control port Sound Piezo buzzer Input/Output 3 CT clamp inputs 5 x GPIOs RGB status LED port White LED illumination port External Thermistor External Light sensor Onboard Temperature Motion detection (Accelerometer) RS485 for External CT clamp module Broken Earth detector AC contactor control CP and PP signals RS232 interface for RFID reader kWh-meter interface Read out of kWh-meters through RS485 connection Workable temperature -25 °C till +70 °C, 5% till 95%, non-condensing Temperature Control On-board temperature sensor on PCB Updates	Supply Voltage	85 - 264VAC
Piezo buzzer	Power Consumption	10W peak
Input/Output 3 CT clamp inputs 5 x GPIOs RGB status LED port White LED illumination port External Thermistor External Light sensor Onboard Temperature Motion detection (Accelerometer) RS485 for External CT clamp module Broken Earth detector AC contactor control CP and PP signals RS232 interface for RFID reader kWh-meter interface Read out of kWh-meters through RS485 connection Workable temperature -25 °C till +70 °C, 5% till 95%, non-condensing Temperature Control On-board temperature sensor on PCB	Communication	RS485 control port
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RGB status LED port White LED illumination port External Thermistor External Light sensor Onboard Temperature Motion detection (Accelerometer) RS485 for External CT clamp module Broken Earth detector AC contactor control CP and PP signals RS232 interface for RFID reader kWh-meter interface Read out of kWh-meters through RS485 connection Workable temperature -25 °C till +70 °C, 5% till 95%, non-condensing Temperature Control On-board temperature sensor on PCB	Input/Output	3 CT clamp inputs
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Broken Earth detector AC contactor control CP and PP signals RS232 interface for RFID reader kWh-meter interface Read out of kWh-meters through RS485 connection Workable temperature -25 °C till +70 °C, 5% till 95%, non-condensing Temperature Control On-board temperature sensor on PCB		Motion detection (Accelerometer)
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RS232 interface for RFID reader kWh-meter interface Read out of kWh-meters through RS485 connection Workable temperature -25 °C till +70 °C, 5% till 95%, non-condensing Temperature Control On-board temperature sensor on PCB		AC contactor control
kWh-meter interface Read out of kWh-meters through RS485 connection Workable temperature -25 °C till +70 °C, 5% till 95%, non-condensing Temperature Control On-board temperature sensor on PCB		CP and PP signals
Workable temperature -25 °C till +70 °C, 5% till 95%, non-condensing Temperature Control On-board temperature sensor on PCB		RS232 interface for RFID reader
Temperature Control On-board temperature sensor on PCB	kWh-meter interface	Read out of kWh-meters through RS485 connection
	Workable temperature	-25 °C till +70 °C, 5% till 95%, non-condensing
Updates Firmware update over control port	Temperature Control	On-board temperature sensor on PCB
	Updates	Firmware update over control port