



EV Net COMPACT SERIES

Type 3SLC, 3TLC

PRODUCT HIGHLIGHTS

- Easy to install and service
- Multiple connectivity options
- Compact and modular design allows for separate power/data connections
- NFC-compatible access control
- Full control with the EVPointSmart App (via local Wi-Fi)
- BLE functionality (Wi-Fi access point provisioning)
- Integrated open PEN conductor protection on all models (no auxiliary grounding necessary)
- Integrated Type A 30mA RCD with 6mA DC protection
- Type 2 socket with automatic electromechanical lock
- Available as tethered or untethered (socketed) models

TECHNICAL SPECIFICATION

Main Features			
Electrical	Power	7.4kW max	22kW max
	Voltage	230VAC, 50 Hz, 1-Phase	3 x 230 / 400VAC, 50 Hz, 3-Phase
	Current	1 x 32A max	3 x 32A max
	Power Level Control	6-32A (software control)	
	Socket Type	IEC 62196 Type 2	
	Standby power	<8 VA, 5.2 W	
	Protection	<ul style="list-style-type: none"> • RCD Type A (30mA)/ DC (6mA), IEC 61008-1 compliant • Neutral voltage (70 V_{rms}) • Overcurrent (Overcurrent protection trip when $I_L > 1.2 \times I_{max}$) • Temperature (limiting 72°C -78°C, fault at 79°C) • Undervoltage (software fault at 90% V_{nom} with configurable offset, hardware shutdown at 115V_{rms} ±10 V_{rms}) • Overvoltage (software fault at 110% V_{nom} with configurable offset, hardware shutdown at 300V_{rms} ±10 V_{rms}) • Reverse phase or phase-to-phase: the hardware can handle mains misconnection • Tamper sensor: detects unauthorized opening of the charger body 	
	Certification	CE (IEC 61851-1, IEC 61851-21-2, IEC 60950-1, IEC 60950-22)	
Mechanical	Material	PC Plastic (up to 100% recycled feedstock) V-2 UL94 Flame retardant	
	Lock mechanism	Servo-type actuator lock (socketed models)	
	Dimension (WxDxH)	200 x 129 x 350 mm (socketed) ; 200 x 108 x 350 mm (tethered)	
	Color	Matt Black	
	Weight, approx:	3.10 kg (tethered model w/ bracket, nocable)	3.20 kg (tethered model w/ bracket, no cable)

		3.50 kg (socketed model w/bracket) Package weight: 1.5 kg	3.60 kg (socketed model w/bracket) Package weight: 1.5 kg
	Type	3 elements: modular front panel, top cover and body mount	
	Mounting	Included metal mounting bracket	
Connectivity	Access Type	Ethernet: wired LAN via RJ45 port (10/100Mbps) GSM: 2G (3G, LTE, CAT M1, CAT NB-1 on request) WLAN: 2.4 GHz (802.11 b/g/n/e/i) Bluetooth LE: for configuration of wireless access point	
	Protocol	OCPP 1.6 JSON	
	Wireless capabilities	Access Point: integrated web server for settings and diagnostics (web client) Station: for backend connectivity Note: Supports simultaneous Access point and Station functionality	
Authorization/ Status Indicator	Reader	Integrated NFC reader, 13.56 MHz, MIFARE compatible	
	App	EVPoint App Android & IOS	
	LED	RGB horizontal bar light (9 states)	
Measurement	Metering	Internal: corresponds to accuracy class 2%	
	CT Clamp	External current monitoring via dedicated CT clamp device. Wired communication via RS-485 up to 30m.	
	External MID meter compatibility	Yes, on request. Can be configured for operation with Eastron DIN rail MID electricity meters via RS-485 wired communication up to 30m.	

3TLC Features

Built in Cable	Tethered cable; Type 2 plug
Cable	5m tethered cable

Remote Diagnostic and Management Features

Error detection and auto restore
Remote Reset
Remote compensation of RCD offset
Remote Firmware Update

Compliance

General: IEC 61851-1:2019 Part 1, BS 7671:2018
EMC: Directive 2014/30/EU IEC 61851-21-2:2021 Part 21-2 (Emissions Class B, Immunity – Residential Environments); Class B for EN 55032:2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 61000-4-2: 2009, EN 61000-4-4: 2004, EN 61000-4-5:2014; EN 61000-4-8: 2009, EN 61000-4-11: 2004
Safety: Directive 2014/35/EU IEC 60950-1:2005, IEC 61508, IEC61810-1 (contactors), EN 60947-2:2017/A1:2020, ISO 13849-1:2015, IEC60364-4-41, IEC 61008-1:2012 (RCD)
Radio equipment: Directive 2014/53/EU EN 62311:2008; GSM module - EN 60950-1:2006 & A11:2009 & A1:2010 & A12:2011 & A2:2013, ETSI EN 301 489-1 V2.2.0, EN 301 511 V12.5.1 (2017-03); WiFi module - EN 301 489-1 V2.2.0 (2017-03), EN 301 489-17 V3.2.0 (2017-03), EN 60950-1: 2006 & A11: 2009 & A1: 2010 & A12: 2011 & A2: 2013, EN 300 328 V2.1.1 (2016-11)

Working and Storage Environment	
Electrical	OVC III, PD2
IP Rating	IP54
IK Rating	IK08 (base model)
Temperature	Operational: -25°C ÷ +55°C(3K6) Transportation: -40°C ÷ +85°C (2K4 modified)
Cooling	Natural air cooling
Storage Temperature	-40°C to 70°C (1K5)
Humidity	10% ÷ 100% Relative humidity, non-condensing
Altitude	-50 to +2000 m

RS-485 peripherals (CT clamp/E-meter)

CT Clamp

For connection with CT clamp no specific settings are needed. Both the COMPACT and the CT clamp are pre-set to operate together.

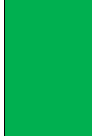
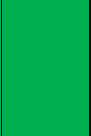


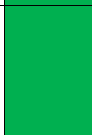













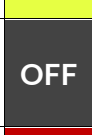


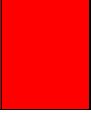

E-meter

- Baud rate: 9600bps.
- Start bit: 1
- Data bits: 8
- Parity: None
- Stop bits: 1
- MDBUS device address: 0x01

The following table provides the register set that must be implemented in a compatible MID meter (parameters marked with an asterix * are required for three-phase measurements):

Address (Register)	Parameter Number	Modbus Input Register Parameter	Units	Hi Byte Addr	Lo Byte Addr
30073	37	Total Import kWh	kWh	00	48
30075	38	Total Export kWh.	kWh	00	4A
30001	1	Phase 1 line to neutral volts	Volts	00	00
30003	2	Phase 2 line to neutral volts*	Volts	00	02
30005	3	Phase 3 line to neutral volts *	Volts	00	04
30007	4	Phase 1 current	Amps	00	06
30009	5	Phase 2 current *	Amps	00	08
30011	6	Phase 3 current *	Amps	00	0A
30013	7	Phase 1 power	Watts	00	0C
30015	8	Phase 2 power *	Watts	00	0E
30017	9	Phase 3 power *	Watts	00	10

1. Appendix I: Light state description with error codes and light indication explained

COMPACT RGB Light Status Indicators					
Status	Online Illumination		Offline Illumination		Description
Available					Device is available to start a charging session. In the online state, it is connected to the OCPP backend. Offline, it may be set up as Plug-in Charge"
Preparing		OFF		OFF	The charger is preparing to start a charging session. Occurs when an EV is plugged in and the charger is waiting for authorization to being charging.
Charging					The COMPACT is charging the EV as per app settings.
SuspendedEV		OFF		OFF	The EV has caused the COMPACT to stop the charging session.
SuspendedEVSE					The COMPACT has stopped the charging session.
Finishing		OFF		OFF	The COMPACT is preparing to terminate the charging session.
Reserved		OFF		OFF	The COMPACT has been reserved for a user (public chargers)
Unavailable	OFF	OFF	OFF	OFF	The charger is not available. This may have been set by the OCPP backend for diagnostic or service purposes.
Faulted				OFF	The COMPACT has encountered a problem and is in a fault state. More information can be accessed via the web client (see 3.3.1).
Note: The two adjacent patches indicate whether the status lights are constantly lit (identical colors) or blinking - switching between the two different colors					

Temperature Current Limit Thresholds

The COMPACT monitors its internal temperature at two locations. If the temperature exceeds values considered to be dangerous to the electronics and safety, the charger will first limit its maximum charging current to lower its power dissipation. If the temperature still increases beyond that set-point (79°C), the charger will stop the session and enter a "Fault" state.

Temperatures \leq , °C	Current limit, A per phase
72	31.8
73	29.4
74	26.8
75	24
76	20.8
77	17
78	12
79	6

VendorID1 : EVSE Limits			
EVSE Limits are generated by the COMPACT to define the maximum permissible charging current. The device will offer charging current based on the lowest-value limit. 3-phase models have global current limits (i.e., the currents offered on the three phases are always identical).			
Code	Name	Description	Detailed Description
0	DeviceCurrentLimit	Max device limit	Default principal current limit, defined by the charger's hardware and set to 32A per phase
1	ProximityPilotLimit	Limit set due to cable's proximity pilot	Type II charging cables have a built-in resistor between the PE and PP terminals, which encodes the maximum current the cable can handle. The limit is enacted if the cable is rated for less than 32A charging current.
2	DeviceTemperatureLimit	Limit set due to high temperature	See "TemperatureCurrent Limits" above. The charger derates the current offered when its internal temperature reaches certain thresholds.
3	ExtTransformerCurrentLimit	Limit set by external transformer	Current limit set by the CT clamp(s) on the mains feeder line based on the rating of the installation's MCB.
4	OCPPGridLimit	Limit set by OCPP grid operator	The limit is enacted when a smart charging profile such as "Charge Point Max Current (A)" is sent by the backend.
5	FuseLimit	Limit set by fuse	The limit is defined by the current rating of the circuit breaker(s) for the charger's mains circuit. Enacted when the charger needs to be derated in installations which cannot provide 32A per phase.

VendorID2 :RTM Errors RTM errors are generated by the COMPACT when an error occurs and the charging is stopped. They can be found as "RTM err code" in the Diagnostics tab of the web client.			
Code	Name	Description	Detailed Description
0x0001	EVSE_FAULT_RCD	RCD protection error	This error code is sent when the AC RCD protection is triggered. RCD or "Residual Current Device" is a fault current protection hardware used in chargers to protect the user from current leakage.
0x0002	EVSE_FAULT_NEUTRAL	Neutral line error	This error code is sent when one of the following occurs:
			The line terminal and the N terminal are swapped
			There is more than 70VAC between the N line and the earth
0x0004	EVSE_FAULT_OVERCURRENT	Overcurrent error	There is a missing earth or bad earth connection
			This error code is sent when the car decides to import higher current than charge point offers. If the current demand is 10% above the set current limit and lasts more than 6 seconds, the fault is generated. Note that the threshold is 10% of the present current limit, not the absolute maximum.
0x0010	EVSE_FAULTS_POWER_RELAY	Output RELAYS state error	This fault can be cleared by power cycling the system, by unplugging the charging cable or via the web client
			This fault can be cleared by system power cycle, by the charger's web client
0x0008	EVSE_FAULT_RCD_DC	RCD DC protection error	This error code is sent when the DC RCD protection is triggered.
			Note that when the DC RCD is triggered the error code 0x0001 is also sent!
0x0020	EVSE_FAULT_ACT_LOCK_FAULT	Actuator lock malfunction	On models with a safety electromechanical lock, the COMPACT monitors the lock position. A fault occurs if the actuator fails to lock its pin when a command is sent
0x0040	EVSE_FAULT_ACT_UNLOCK_FAULT	Actuator unlock malfunction	On models with a safety electromechanical lock, the COMPACT monitors the lock position. A fault occurs if the actuator fails to unlock its pin when a command is sent
0x0080	EVSE_FAULT_CP_STATE	Control pilot error	
0x0100	EVSE_FAULT_DIODE_UNPRESENT	EV diode error - diode in EV not detected	EVs have a diode on the CP line as part of the charging standard. This error code is sent if the COMPACT cannot detect the diode in the EV. The fault is in a problematic EV diode and is cleared by removing the faulty device
0x0200	EVSE_FAULT_PP_UNPRESENT	Proximity pilot not detected	This error code is sent when a charging cable is plugged in and an attempt is made to start a session, but the charging station cannot read the PP resistor of the charging cable. The charging session will not start.
0x0400	EVSE_FAULT_MISSING_HOST	Internal host error	For internal use only
0x0800	EVSE_FAULT_TEMPERATURE	Overheating error	This error code is sent when the temperature of the charging station reaches more than 79 degrees. At this point the charging station will stop charging at all. This fault is cleared when the charging station is power cycled or through the web client.
0x1000	EVSE_FAULT_	Overvoltage	This error code is sent when the power supply voltage

	OVERVOLTAGE	error	rises by more than 10% of nominal
0x2000	EVSE_FAULT_UNDERVOLTAGE	Undervoltage error	This error code is sent when the power supply voltage drops by more than 10% of nominal
0x4000	EVSE_FAULTS_AUTO_RECOVERY	Auto Recovery	The COMPACT is designed to automatically recover from noncritical faults. This is an auto-recovery flag, sent together with another fault flag to indicate that the charger will attempt to recover from the fault. For example, in over/undervoltage situations, the COMPACT will recover once the supply voltage falls back within its nominal value.
0x8000	EVSE_FAULT_CAL	EVSE calibration data error	The RTM has calibration data such as Voltage, Current, Power, Energy and RCD as well as the device Serial Number. The fault indicates that the MCU cannot access these data. The fault may be cleared by an authorized technician by reloading the calibration data
0x10000	EVSE_FAULT_VN_OUT_OPEN	Power Relay	Stuck power relay fault: the charger monitors its relay contacts and has detected that the neutral contact has failed to open and remains closed
0x20000	EVSE_FAULT_VN_OUT_CLOSE	Power Relay	Stuck power relay fault: the neutral contact has failed to close and remains open
0x40000	EVSE_FAULT_VL_OUT_OPEN	Power Relay	Stuck power relay fault: the line contact has failed to open and remains closed
0x80000	EVSE_FAULT_VL_OUT_CLOSE	Power Relay	Stuck power relay fault: the line contact has failed to close and remains open
0x100000	EVSE_TAMPER_EVENT	Device open cover detected by tamper switch	This status flag is set to "1", when the device detects the opening of the main cover. At time of detecting of this event the timestamp is recorded into NVM. The flag is cleared at power cycle.
0x200000	EVSE_FAULT_TAMPER2_EVENT	Service cover opening detected	It has been detected an event of opening the service cover. You can check the tamper event timestamp in the backend log.
0x400000	EVSE_FAULT_MISING_EXT_EMETER	There is no connection with external meter	This error occurred because a loss of communication with an external meter was detected, while the charger is configured to use an external meter.

VendorID3 : Main MCU errors
Debugging information related to the COMPACT's main CPU.

Code	Name	Description	Detailed Description
0	CC_RST_UNKNOWN	Reset reason cannot be determined	The CPU cannot determine the cause of the reset.
1	CC_RST_POWERON	Reset due to power-on event	The CPU was reset by a power cycle situation.
2	CC_RST_EXT	Reset by external pin	The main CPU was reset by an external trigger, such as a debugging tool or another MCU in the Compact.

3	CC_RST_SW	Software reset via esp_restart	Reset triggered via an OCPP command (Soft Reset) or via the web client / installer's app. Reset can also be triggered following a firmware upgrade.
4	CC_RST_PANIC	Software reset due to exception/panic	Reset triggered by a critical error in the CPU (stack overflow, memory corruption, etc.).
5	CC_RST_INT_WDT	Reset (software or hardware) due to interrupt watchdog	Reset triggered by the watchdog timer due to a timeout at an interrupt.
6	CC_RST_TASK_WDT	Reset due to task watchdog	Reset triggered by the watchdog timer due to a hung task (timeout based on task's priority).
7	CC_RST_WDT	Reset due to other watchdogs	Reset triggered by a custom watchdog timers. For internal troubleshooting only.
8	CC_RST_DEEPSLEEP	Reset after exiting deep sleep mode	For internal use only.
9	CC_RST_BROWNOUT	Brownout reset (software or hardware)	Reset triggered by an UVLO event at the CPU core power supply.
10	CC_RST_SDIO	Reset over SDIO	Triggered by an internal system bus event.

2. Appendix II: OCPP and Manufacturer Configuration Keys

Configuration Key	Custom Key	In use	Example Value	Description
AllowOfflineTxForUnknownId		yes	TRUE	When offline, the device can be set to allow automatic authorization of any "unknown" identifiers that cannot be explicitly authorized by Local Authorization List or Authorization Cache entries.
AuthorizationEnabled			TRUE	
AuthorizeRemoteTxRequests			TRUE	
ChargeProfileMaxStackLevel			100	
ChargingScheduleAllowedChargingRateUnit		yes	A,W	Configures the units of "charge power" to be used in a charging schedule.
ChargingScheduleMaxPeriods			60	
ClockAlignedDataInterval			0	
ConnectionTimeOut			90	Interval of time from status "Preparing" until the transaction is automatically canceled, due to failure of the EV driver to insert the charging cable into the charger or vehicle. The charger will revert to the original state.
ConnectorSwitch3to1PhaseSupported			FALSE	Configures the three phase chargers to work on a single-phase grid as single-phase charger.
c_ChargingVentilatedEnabled	yes	yes	FALSE	Allows the charger to offer charge when the vehicle enters in state "D"
c_DeviceLimit_I	yes	yes	320	Sets a hard limit on the maximum current the device will offer in 1/10ths of an ampere. The limit cannot be overridden by profiles.
c_MainFuseLimit	yes	yes	600	CT clamp current limit, fuse set in 1/10ths of an ampere
c_RCDProtectionType	yes	yes	0	Configures RCD protection type. Permitted states: 0 - Both AC + DC protection is on 2 - Only AC protection is on
c_VoltageProtectionOffset	yes	yes	0	Enables configuration of expanded voltage protection limits. The default range with the key

				set to "0" is +-10% of the nominal supply (207-253VAC). Values of 1-23 are allowed, which expand both lower and upper threshold by the respective amount in VAC.
GetConfigurationMaxKeys		yes	5	The number of OCPP configuration keys that can be acquired from a single get configuration command.
HeartbeatInterval		yes	60	The interval between each heartbeat PDU.
LightIntensity		yes	100	The light intensity of the LED ring of the charger in % of maximum.
LocalAuthListEnabled			FALSE	
LocalAuthListMaxLength			0	
LocalAuthorizeOffline			TRUE	
LocalPreAuthorize			FALSE	
MaxChargingProfilesInstalled			10	
MeterValueSampleInterval		yes	60	The time interval between each meter value during a session.
MeterValuesSampledData		yes	Voltage.L1-N, Voltage.N, Temperature, Current.Offered.L1, Current.Import.L1, Power.Active.Import.L1, Energy.Active.Import.Register.L1	A list of measurands sent for each meter value during a session.
NumberOfConnectors			1	
SendLocalListMaxLength			0	
StopTransactionOnEVSideDisconnect			TRUE	
StopTransactionOnInvalidId			TRUE	
UnlockConnectorOnEVSideDisconnect		yes	TRUE	When set to TRUE the Charge Point SHELL unlock the connector on Charge Point side when the cable is unplugged at the EV
c_MainOfflineTimeout	yes	yes	null	Defines the timeout value for the main communication network interface
c_FallbackOfflineTimeout	yes	yes	null	Defines the timeout value for the fallback communication network interface
c_FallbackOnlineTimeout	yes	yes	null	Defines the duration for which the fallback network interface is active before reverting to the main network interface
C_OCPPNetLog	yes	yes	FALSE	Configures whether

				diagnostic network data logs are sent via OCPP
c_ChargeOffPeriod1	yes	yes	enable,08:00,1 1:00	Defines the first standard period for offline charging
c_ChargeOffPeriod2	yes	yes	enable,16:00,2 2:00	Defines the second standard period for offline charging
c_MaxStartDelay	yes	yes	600	Defines the maximum value for the randomized delay functionality for offline charging
c_LockerDisengage	yes	yes	TRUE	Defines whether the built-in locker is enabled or disabled.
c_CTClamp	yes	yes	FALSE	Presence or absence of a CT clamp
c_CTClampValue	yes	yes	65535	Defines the value range of the CT clamp measurand data
c_MainNetworkInterface	yes	yes	0	Defines the main network interface
c_FallbackNetworkInterface	yes	yes	0	Defines the fallback network interface
c_APN	yes	yes	0	Sets or gets the APN used for cellular network interface

