Green Motion Duo Technical Datasheet

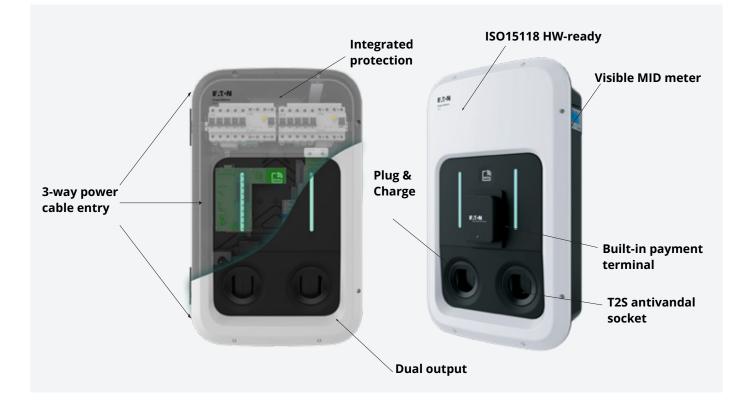




Discover Green Motion Duo

Eaton Green Motion Duo is an AC electric vehicle charger with a dual output design. This EV charger is suitable for indoor and outdoor use, both in public and semi-public settings such as in multi-family properties, offices, and other commercial buildings. The Green Motion Duo EV charger provides multiple benefits, such as:

- Convenient simultaneous charging with safety features rooted in years of technical expertise
- Wall-, and floor-mount installation options to help space optimization
- Static and dynamic load balancing algorithms





Efficient and future-proof

The dual charger delivers up to 2x22 kW power through its dual output system. Thanks to the features rooted in the ISO15118-20 and ISO15118-2 standards, the Green Motion Duo chargers are in line with the latest demands and future tendencies when it comes to EV charging. First, the V2X application ensures synchrony with the power grid, creating a more sustainable energy infrastructure. Second, the Plug & Charge system facilitates authentication and authorization for an enhanced user experience.



Versatile and compatible

The Green Motion Duo offers flexible EV charger adaptability to any setup through its three-way power introduction, fitting perfectly into any parking space design. The easily scalable solution serves the diverse charging needs of multi-family properties, office buildings and other public/semi-public sites.



Safe and simple installation

With its master-node architecture, the Green Motion Duo EV chargers require a maximum of 10 minutes of commissioning. However, the ease of installation and deployment never comes at the expense of safety. On the contrary, the integrated protection with MCB, RCCB and shunt-trip offers full security while minimizing complementary components, thus making installation cost-effective and swift.



Cost saving and revenue generation

Reduce operation and maintenance costs by integrating protection, commissioning, and master-node architecture features. Green Motion Duo also allows to lower installation costs by avoiding grid upgrades and balancing the load consumption.

The EV charger enables revenue generations as billing and payment options are included through the built-in payment terminal, certified energy measurement, RFID authentication, OCPP-based software integration, as well as Plug&Charge readiness.

Technical specifications

All drawings, descriptions or illustrations contained in this document serve to provide a clear overview and/or technical explanation of the present product and its various components and accessories. In line with our goal to continuously improve the products and the customer service we provide, all specifications contained in this document are subject to change without notice.

| Power input | |
|---|---|
| Input voltage | 1 x 230 V - 1 phase |
| | 3 x 400 V - 3 phase |
| Input current | Up to 2x 32 A |
| · | Up to 1x 64 A |
| Input frequency | 50 Hz, 60 Hz |
| Grid compatibility | TN, TT, 230V-IT |
| Power output | |
| Output power ¹ | Up to 2x 22 kW |
| Output type | 2x T2S Socket with interlock |
| Simultaneous charging | 2 |
| Environmental | |
| Operating temperature | -30°C to +50 °C4 |
| Storage temperature (charger) | -40°C to +80°C |
| Storage temperature (payment terminal) | -35°C to +70°C |
| Altitude | Up to 2000 m |
| Installation | Indoor or outdoor |
| Relative humidity | < 95% non-condensing |
| Mechanical | |
| Mounting method | Wall-mount |
| | Floor-mount pedestal (Optional) Top ^{2,2} , bottom and back |
| Power input cable entry Dimensions (W x H x D) in mm | 415 x 663 x 168 (196 with payment terminal) |
| Weight | Up to 15 kg |
| Housing material | Bio-based polycarbonate |
| Ingress protection rating | IP55 |
| Impact protection rating (charger) | IK10 |
| Impact protection rating (payment terminal) | IK09 |
| Impact protection rating (Energy meter window) | IK08 |
| Protection | |
| Earth fault protection | RCCB Type A 30 mA + RDC-DD 6 mA |
| Overcurrent protection | 40 A MCB 6 kA (Optional) |
| Welded contacts protection | Yes (shunt trip) |
| User interface and control | |
| | LED strip status indicator |
| User interface | MID energy meter display |
| Access control | ISO 15693, ISO 14443-A, ISO 14443-B, ISO15118-2 Plug & Charge |
| Payment terminal | Yes (Optional) |
| Connectivity | |
| Communication interface | Modbus TCP/IP, Modbus RTU |
| Network interface | Wi-Fi (IEEE 802.11a/b/g/n/ac), Ethernet (10/100 Mbps) LTE 4G |
| Protocol | OCPP 1.6J, upgradable to OCPP2.0.1 |
| Remote monitoring | Yes |
| EV charging balancing | |
| Static and Dynamic load balancing | Yes, up to 16 EV chargers (32 charge points) in one cluster |
| Branch load balancing | Yes, up to 8 clusters (128 EV chargers/256 charge points) |
| Phase balancing | Yes |
| Communication interface with energy meter | Modbus RTU, Modbus TCP/IP |
| Energy metering | |
| MID | Yes |
| | |

¹⁾ The actual power output may vary due to external factors, such as the available grid power, capacity of the electrical installations, and the electric vehicle model.
²⁾ In the case of outdoor installation, top entry requires additional overhead cover.
³⁾ Topside entry is not available for the RCCB version.
⁴⁾ Derating applies at +40 °C.

Certifications and standards (not limited to)

| Certifications and standards | | |
|--|---|--|
| Conformity | IEC 61851-1 | |
| ISO15118-20 HW-ready | Yes for V2X applications | |
| Plug and charge ISO15118-2 | Yes | |
| Charging mode | Mode 3 in accordance with EN/IEC 61851-1 AC charging | |
| Electric vehicle charging infrastructure | IEC 63110-1:2022, IEC 63380-1, EN 17186, IEC 62196-1, IEC 60364-7-722 | |
| Electromagnetic compatibility | EN 61851-21-2, EN 61000-6-1, EN 61000-6-3, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12 | |
| Cybersecurity | IEC 62443 | |

Product part numbers

| Part number | Description |
|------------------|---|
| GMM2222BBCG00C03 | Green Motion Duo Master 2xT2S MCB 40 A, 6 kA + RCCB Type A 30mA 4G ISO15118 |
| GMM2222BBCH00C03 | Green Motion Duo Master 2xT2S MCB 40 A, 6 kA + RCCB Type A 30mA 4G ISO15118 + POS |
| GMM2222BACG00C04 | Green Motion Duo Node 2xT2S MCB 40 A, 6 kA + RCCB Type A 30mA ISO15118 |
| GMM2222BBBH00C03 | Green Motion Duo Master 2xT2S RCCB Type A 30mA 4G ISO15118 + POS |
| GMM2222BBBG00C03 | Green Motion Duo Master 2xT2S RCCB Type A 30mA 4G ISO15118 |
| GMM2222BABG00C04 | Green Motion Duo Node 2xT2S RCCB Type A 30mA ISO15118 |

Accessories part numbers

| Part number | Description |
|-----------------|--|
| GMA03AF00000000 | Wall-Mounted Cable Holder for Type 2 AC Charging Cables |
| GMA03AB00000000 | Green Motion Duo Floor-mount Pedestal Single |
| GMA03AC00000000 | Green Motion Duo Floor-mount Pedestal Dual Extension Kit |
| GMA03A000000000 | 5 m Straight Type 2 AC Charging Cable, Black |
| GMA03AP00000000 | 7.5 m Straight Type 2 AC Charging Cable, Black |
| GMA03AQ00000000 | 5 m Coiled Type 2 AC Charging Cable, Black |

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