E-Mobility Connectivity
## Infrastructure charging cables

### Product

- **Typecode**: EV - T2 M4 CC - DC 125A - 5,0M 50 E S BK 0 0 P
- **Electric Vehicle**: EV
- **Charging standard**: Type 1 & Type 2
- **Charging mode Design Handlebar**: Mode 3 & Mode 4
- **Level 2**: G3 & G4
- **HPC (High Power Charging)**: Mode 3 & Mode 4

### Performance

- **Type of current**: AC 1Phase & AC 3Phase
- **Plug & Connector**: P & C
- **Key-Connector**: K
- **Key-Plug**: J
- **Plug & Connector**: PC
- **Plug & Key-Connector**: PK
- **Key-Plug & Key-Connector**: JK
- **CCS Connector**: CC

- **Heads of the cable**:
  - **Plug**: P
  - **Connector**: C
  - **Key-Connector**: K
  - **Key-Plug**: J
  - **Plug & Connector**: PC
  - **Plug & Key-Connector**: PK
  - **Key-Plug & Key-Connector**: JK
  - **CCS Connector**: CC

- **Performance**:
  - **13 Ampere**: 13A
  - **16 Ampere**: 16A
  - **20 Ampere**: 20A
  - **32 Ampere**: 32A
  - **40 Ampere**: 40A
  - **63 Ampere**: 63A
  - **70 Ampere**: 70A
  - **80 Ampere**: 80A
  - **125 Ampere**: 125A
  - **200 Ampere**: 200A
  - **250 Ampere**: 250A
  - **350 Ampere**: 350A
  - **400 Ampere**: 400A
  - **500 Ampere**: 500A

- **Cable length**:
  - **0.2 Meter**: 0,2M
  - **1.0 Meter**: 1,0M
  - **1.5 Meter**: 1,5M
  - **2.0 Meter**: 2,0M
  - **2.5 Meter**: 2,5M
  - **3.0 Meter**: 3,0M
  - **4.0 Meter**: 4,0M
  - **4.5 Meter**: 4,5M
  - **5.0 Meter**: 5,0M
  - **6.0 Meter**: 6,0M
  - **10.0 Feet**: 10F
  - **13.0 Feet**: 13F
  - **No cable**: N

- **Cross section**:
  - **2,5 mm²**: 2,5
  - **6,0 mm²**: 6,0
  - **10 mm²**: 10
  - **16 mm²**: 16
  - **25 mm²**: 25
  - **35 mm²**: 35
  - **50 mm²**: 50
  - **70 mm²**: 70
  - **18 AWG**: 18
  - **10 AWG**: 10
  - **8 AWG**: 8
  - **6 AWG**: 6

### Wire

- **Cable style**: Helix
- **Cable color**: Black
- **Measurement unit for cable**:
  - **AWG (America)**: A
  - **Metric (Europe)**: E
  - **Metric (Japan) conform to PSE**: J
  - **Metric (China) conform to CQC**: C

### Specific

- **Optional Specific**:
  - **AC connector with temperature sensor**: T
  - **Unprotected (without dust cap)**: U
  - **With parking position**: P
  - **With straight HPC panel feed through**: S
  - **With left inclined HPC panel feed through**: L
  - **With right inclined HPC panel feed through**: R
  - **No specific**: N

- **Mating face color**:
  - **Grey**: 0
  - **Black**: 1

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1) DC connectors always contains temperature sensors.

2) Standard articles of CCS 2 connectors handlebar design are with black mating face.
**Typecode**

<table>
<thead>
<tr>
<th>Product</th>
<th>Performance</th>
<th>Wire</th>
<th>Specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV - T2 M3 SE12 - 3AC 32A - 0,7M 6,0 E 1 0 T</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Type of product**
- Socket outlet without E-Lock: S
- Socket outlet with 4 pole 12 V E-Lock: SE12
- Socket outlet with 4 pole 24 V E-Lock: SE24
- Socket outlet with 3 pole 12 V E-Lock: SL12
- Socket outlet with 3 pole 24 V E-Lock: SL24
- Socket outlet mounting frame: SF
- Socket outlet self-closing hinged cover: SC
- Socket outlet self-opening hinged cover: SCO

**Charging mode**
- Type 2: T2
- Mode 3: M3

**Charging standard**
- GB/T: GB

**Type of current**
- AC 1 Phase: 1AC
- AC 3 Phase: 3AC

**Performance**
- 20 Ampere: 20A
- 32 Ampere: 32A
- 63 Ampere: 63A

**Cable length**
- 0.2 Meter: 0.2M
- 0.7 Meter: 0.7M
- 1.0 Meter: 1.0M
- 1.5 Meter: 1.5M
- 2.0 Meter: 2.0M
- 2.5 Meter: 2.5M
- 3.0 Meter: 3.0M
- 4.0 Meter: 4.0M
- 4.5 Meter: 4.5M
- 5.0 Meter: 5.0M
- 6.0 Meter: 6.0M
- No cable: N

**Cross section**
- 2.5 mm²: 2.5
- 6.0 mm²: 6.0
- 10 mm²: 10
- 16 mm²: 16
- 25 mm²: 25

**Measurement unit for cable**
- AWG (America): A
- Metric (Europe): E

**Optional Specific**
- Rear cover mounting
- Rear splash water protected
- Front cover mounting (Easy Mount)
- Front cover mounting & optimized insertion and withdrawal forces (Easy Mount)
- Rear cover mounting & optimized insertion and withdrawal forces

**Actuator mounted**
- Not mounted: 0
- 0° mounted (top): 1
- 90° mounted (right): 2
- 120° mounted: 3
- 180° mounted (bottom): 4
- 240° mounted: 5
- 270° mounted (left): 6

Standard articles are including drain hole
<table>
<thead>
<tr>
<th>Typecode</th>
<th>Infrastructure charging technology accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV - T2 CCS-PARK - E12 - SW - D6,5MM - R</td>
<td></td>
</tr>
</tbody>
</table>

### Product

<table>
<thead>
<tr>
<th>Charging standard</th>
<th>Type of accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Vehicle</td>
<td>EV</td>
</tr>
<tr>
<td>Type 1</td>
<td>T1</td>
</tr>
<tr>
<td>Type 2</td>
<td>T2</td>
</tr>
<tr>
<td>GB/T</td>
<td>GB</td>
</tr>
<tr>
<td>Type 1 &amp; Type 2</td>
<td>TA</td>
</tr>
<tr>
<td>Type 2 &amp; GB/T</td>
<td>TB</td>
</tr>
<tr>
<td>GB/T &amp; Type 2</td>
<td>TC</td>
</tr>
</tbody>
</table>

### Functions

<table>
<thead>
<tr>
<th>E-Lock actuator</th>
<th>Detection of mated vehicle connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>With 12 V E-Lock</td>
<td>E12 With integrated switch SW</td>
</tr>
<tr>
<td>With 24 V E-Lock</td>
<td>E24 With resistance between PE and PP PE</td>
</tr>
<tr>
<td>Without</td>
<td>Without</td>
</tr>
</tbody>
</table>

### Mounting

<table>
<thead>
<tr>
<th>Mounting whole diameter</th>
<th>Mounting whole form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole for M6 screws (6,5 mm diameter) D6,5MM</td>
<td>With hexagon head screw (reinforcement) R</td>
</tr>
</tbody>
</table>

### Type of accessories

- **AC Parking position / holder**: AC-PARK
- **DC Parking position / holder**: DC-PARK
- **CCS Parking position / holder**: CCS-PARK
- **Socket outlet mounting frame**: SF
- **Socket outlet self-closing hinged cover**: SC
- **Socket outlet self-opening hinged cover**: SCO
- **Socket outlet mounting frame for "easy mount cover"**: SF-EM
- **Socket outlet self-closing hinged cover for "easy mount"**: SC-EM
- **Socket outlet self-closing hinged cover for "easy mount"**: SC-EMF
- **Mating face for a repair kit for CCS connectors**: CCS-MF
- **Separate grip for more easy cable handling**: GRIP
- **Separate fan for cooling down the HPC panel feed through**: HPC-FAN

### Screws for repair kit

- **With M4X10 screws**: M4X10
- **With M4X45 screws**: M4X45

### Content for repair kit

- **With bit and contacts including temperature sensors BIT-CTS**
- **With bit BIT**
- **Without Without**
<table>
<thead>
<tr>
<th>Typecode</th>
<th>Infrastructure charging technology test adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong></td>
<td><strong>Functions</strong></td>
</tr>
<tr>
<td><strong>EV - T2 CCS - CT - E12 - 1P20A125A - 2,0M</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Charging standard affiliation</th>
<th>Type of test adapter</th>
<th>E-Lock</th>
<th>Performance AC</th>
<th>Performance DC</th>
<th>Cable length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Vehicle EV</td>
<td>Connector test adapter (similar to inlets)</td>
<td>With 12 V E-Lock</td>
<td>1-phase, 20 Ampere</td>
<td>60 Ampere</td>
<td>0.7 Meter</td>
</tr>
<tr>
<td>Type 1 AC</td>
<td>CT</td>
<td>E12</td>
<td>1P20A</td>
<td>65A</td>
<td>0.7M</td>
</tr>
<tr>
<td>Type 2 AC</td>
<td>ST</td>
<td>With 24 V E-Lock</td>
<td>3-phase, 20 Ampere</td>
<td>125 Ampere</td>
<td>1.0 Meter</td>
</tr>
<tr>
<td>GB/T AC</td>
<td>IT</td>
<td>Without</td>
<td>1-phase, 32 Ampere</td>
<td>200 Ampere</td>
<td>1.5 Meter</td>
</tr>
<tr>
<td>Type 1 DC</td>
<td>T1CCS</td>
<td></td>
<td>3-phase, 32 Ampere</td>
<td>250 Ampere</td>
<td>2.0 Meter</td>
</tr>
<tr>
<td>Type 2 DC</td>
<td>T2CCS</td>
<td></td>
<td>3P32A</td>
<td></td>
<td>2.5 Meter</td>
</tr>
<tr>
<td>GB/T DC</td>
<td>GBDC</td>
<td></td>
<td></td>
<td></td>
<td>3.0 Meter</td>
</tr>
</tbody>
</table>

- **Performance AC**
  - 1-phase, 20 Ampere: 1P20A
  - 3-phase, 20 Ampere: 3P20A
  - 1-phase, 32 Ampere: 1P32A
  - 3-phase, 32 Ampere: 3P32A

- **Performance DC**
  - 60 Ampere: 65A
  - 125 Ampere: 125A
  - 200 Ampere: 200A
  - 250 Ampere: 250A

- **Cable length**
  - 0.7 Meter: 0.7M
  - 1.0 Meter: 1.0M
  - 1.5 Meter: 1.5M
  - 2.0 Meter: 2.0M
  - 2.5 Meter: 2.5M
  - 3.0 Meter: 3.0M
  - 4.0 Meter: 4.0M
  - No cable: N
E-Mobility Control & Smart Charging
# Electric Vehicle (EV) Charging Technology

## Infrastructure Charging Technology Sets

<table>
<thead>
<tr>
<th>Typecode</th>
<th>Infrastructure Charging Technology Sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV - SET - T2 AC - BAS - RCM - C5MEH - 3,7</td>
<td></td>
</tr>
</tbody>
</table>

### Charging Standard Affiliation

- **EV**
  - Type 1 AC: T1AC
  - Type 2 AC: T2AC
  - GB/T AC: GBAC
  - Type 1 DC: T1CCS
  - Type 2 DC: T2CCS
  - GB/T DC: GBDC

### Application Form

- **BAS**: "Basic" for home application (AC)
- **ADV**: "Advanced" for semi public application (AC)
- **PRO**: "Professional" for public application (DC)

### Monitoring

- **RCM**: With RCM module

### Type of Connection

- **SE12**: Socket outlet including 12 V E-Lock
- **SE24**: Socket outlet including 24 V E-Lock
- **C5MES**: Connector with 5.0 m straight cable
- **C5MEH**: Connector with 5.0 m helix cable

### Performance

<table>
<thead>
<tr>
<th>Type</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAS</td>
<td>22 KW</td>
</tr>
<tr>
<td>ADV</td>
<td>11 KW</td>
</tr>
<tr>
<td>PRO</td>
<td>3.7 KW</td>
</tr>
</tbody>
</table>

## Infrastructure Charge Control Monitoring

<table>
<thead>
<tr>
<th>Typecode</th>
<th>Infrastructure Charge Control Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV - RCM - C1 - AC30 - DC6</td>
<td></td>
</tr>
</tbody>
</table>

### Measurement

- **Chanel 1 x**: C1, 30mA AC30
- **Chanel 2 x**: C2

### AC Residual Current

- **AC30**: 30mA

### DC Residual Current

- **DC6**: 6mA

## Product Safety

- **EV**
- **RCM**
- **C1**
- **AC30**
- **DC6**
### Typecode | Infrastructure charge control - Advanced
--- | ---

**Product**

**EM - CP - PP - ETH**

- **E-Mobility**: EM
- **Control Pilot**: CP
- **Proximity Pilot**: PP
- **Communication**: Ethernet (ETH)

### Typecode | Infrastructure charge control - Advanced plus
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**Product**

**EV - CC - AC1 - M3 - CBC - RCM - ETH - 3G**

- **Electric Vehicle**: EV
- **Charging Control**: CC
- **Type of current**: AC 1 charging point (AC1), AC 2 charging points (AC2)
- **Charging mode**: Mode 3 (M3)
- **Charging case**: Case B, C (CBC), Case C (CC)
- **Residual current monitoring**: RCM
- **Communication**: Ethernet (ETH), Mobile communication (3G)
**Typecode** | **Infrastructure charge control - Basic**
---|---

**EV - CC - AC1 - M3 - CBC - SER - HS - XC**

**Product**

- **Type of current**
  - AC 1 charging point: AC1
  - AC 2 charging points: AC2

- **Charging mode**
  - Mode 3: M3

- **Charging case**
  - Case B, C: CBC
  - Case C: CC

- **Interface**
  - Serial: SER

- **Variant**
  - Printed circuit board: PCB
  - DIN-rail housing: HS

**Specific**

- Painted PCB (extended conditions): XC
- MSTB connection: MSTB
- Packaging unit: 2SP

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**Typecode** | **Infrastructure charge control - Professional**
---|---

**EV - PLCC - AC1 - DC1**

**Product**

- **AC Charging, numbers**
  - 1 Charging point: AC1
  - 2 Charging points: AC2

- **DC Charging, numbers**
  - 1 Charging point: DC1
  - 2 Charging points: DC2
**EV - CC - S - SUITE - CP10**

<table>
<thead>
<tr>
<th>Typecode</th>
<th>Infrastructure software</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product</strong></td>
<td></td>
</tr>
<tr>
<td>Electric Vehicle (EV)</td>
<td>Charging Control (CC)</td>
</tr>
<tr>
<td>Software (S)</td>
<td>Software name (Charging Suite, SUITE)</td>
</tr>
<tr>
<td>Charging points</td>
<td></td>
</tr>
<tr>
<td>10 charging poles</td>
<td>CP10</td>
</tr>
<tr>
<td>30 charging poles</td>
<td>CP30</td>
</tr>
<tr>
<td>50 charging poles</td>
<td>CP50</td>
</tr>
<tr>
<td>Upgrade from 10 to 30</td>
<td>UPG10-30</td>
</tr>
<tr>
<td>Upgrade from 30 to 50</td>
<td>UPG30-50</td>
</tr>
</tbody>
</table>