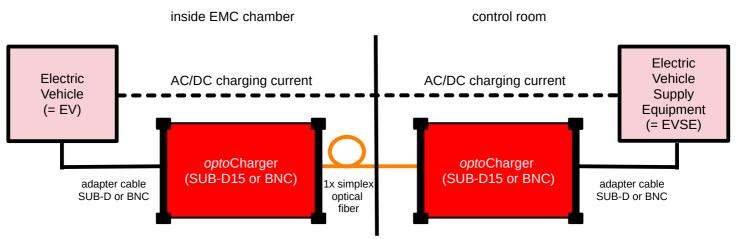
# Field of application and characteristics

The **optoCharger** system is a bidirectional optical transmission device that transmits communication data between an Electric Vehicle Supply Equipment (= EVSE), i.e. charging Station, and an Electric Vehicle (= EV).

It consists of two battery supplied devices that are connected to each other via an optical fiber. With the optical transmission and the shielded case, this system is suitable for the high requirements during automotive EMI and EME tests (for example CISPR 25 Class 5).

Please note: Not all charging standards and additional features are implemented yet.

# Application



## **Technical data**

| Charging standards:     | CCS, CHAdeMO, GB/T   |
|-------------------------|--|
| Data signal interfaces: | Control Pilot (PLC), CAN, Low-Level Signals, additional signals (e.g. temperature monitoring and connector/inlet lock signal)  |
| Data direction:         | bidirectional  |
| Input (Transmitter):    | BNC connector (for Control Pilot), D-SUB-15 female (for all other signals)   |
| Output (Receiver):      | BNC connector (for Control Pilot), D-SUB-15 female (for all other signals)   |
| Power supply:           | integrated batteries 4 Ah, consisting of 7x NiMH cells, 8.4 V<br>operating time with fully charged batteries: approx. 10 h<br>operating time can be extended with an external battery pack |
| Charging connector:     | Binder 712 or push-pull 12 mm PP12 (9 mm PP9 on request)   |
| Housing:                | anodized aluminum with rubber protectors (stackable)<br>140 mm x 86 mm x 65 mm<br>4 mm connector for grounding   |

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Weight: approx. 760 g

Optical connector:

1x FSMA / simplex multimode fiber 62.5/125  $\mu m,$  850 nm, OM1

### Scope of delivery

- 1x optoCharger Transmitter (EV)
- 1x optoCharger Receiver (EVSE)
- 1x 20 m simplex multimode optical fiber
- 2x charger for the integrated batteries, AC plug types available: A(US), C(EU), G(UK) and I(AUS)

#### Accessories

| Optical fiber - types:                  | FSMA, ST, FC, LC, E2000 (combinations possible), $62.5/125 \ \mu m$ or 50 $\mu m$   |
|---|---|
| Optical fiber - lengths:                | 0.5 m – >100 m  |
| Optical fiber - feedthrough             | FSMA/FSMA, ST/FSMA, ST/ST, FC/FC  |
| Optical fiber – cleaning:               | Fiber optic cleaning set  |
| Optical fiber - protective caps:        | protective cap/cover for male FSMA optical fibers<br>captive cap/cover for male FSMA optical fibers                           |
| Optical connector - protective<br>caps: | protective cap/cover of FSMA optical input/output of mk devices cap/cover of FSMA optical input/output of mk devices          |
| External battery pack BP84:             | for run time enhancement of the device in the EMC chamber<br>4 Ah or 10 Ah (high capacity charger needed for 10 Ah batteries) |
| Power supply PS120:                     | for constantly powering the device in the control room  |

#### SUB-D Connector:

GND CC1 CAN-L Temp+ | NC | CPD | CSS1 | GND (8) (7) (6) (5) (4) (3) (2) (1) (15) (4) (13) (12) (10) (3) NC | VCP | CSS2 | NC CC2 CAN-H Temp-

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