

# Electric Vehicle Infrastructure

## HVC-PD UL opportunity charging for electric buses



ABB's HVC-PD opportunity charging system offers high-power charging via an automated rooftop connection. With typical charge times of 3 to 6 minutes the system can be easily integrated in existing operations by installing chargers at endpoints, terminals and intermediate stops.

The HVC-PD charging system leverages an automated connection to enable extremely fast charge times.

### A practical solution for route charging

ABB's Heavy Vehicle Charger (HVC) system architecture offers an ideal solution for opportunity charging, ensuring zero-emission public transit during the day without impacting daily route operations.

#### Key Benefits

- + Charge in 3 to 6 minutes
- + One charger serves many vehicle makes and models
- + Safe and reliable fully automated connection
- + SAE J3105-1 and OCPP 1.6 compliant
- + Remote diagnostics and management tools

### Future-proof modular design

Additional power cabinets can be installed at any time, allowing operators to scale their operation and flexibly spread out infrastructure investments as their fleet grows.

### Safe and reliable operation

ABB fast chargers are designed to the highest international electrical, safety, and quality standards, and are certified by notified bodies - ensuring safe and reliable operation.

### Interoperability

ABB HVC chargers are based on international standards for operational compatibility with multiple

vehicle types and brands. This allows operators to select vehicles from multiple vendors and not be locked into a single supplier.

### Connectivity and remote services

ABB chargers come with an extensive suite of connectivity features including remote services such as monitoring, diagnostics and software upgrades. These advanced services provide equipment owners with powerful insights into their charging operations while delivering high uptime.

### OCPP 1.6

ABB HVC-PD charging systems can be connected to standardized charging infrastructure management platforms using OCPP 1.6. ABB's HVC suite supports OCPP 1.6 Core and Smart Charging Profiles.

### Buy America

ABB can offer the HVC-PD Depot Charging Solution with compliance to the Buy America Act, Rule 49 CFR Part 661.5.

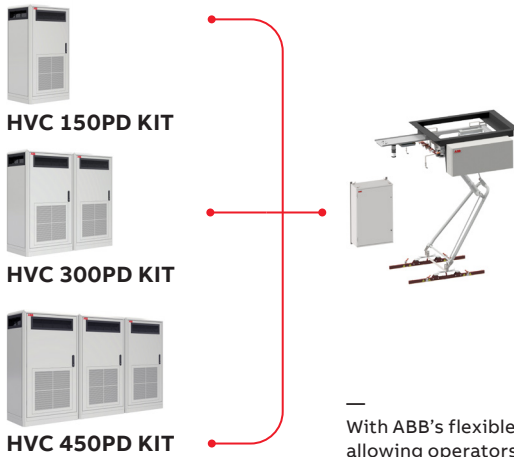
### ABB is your experienced partner

ABB HVC products are based on a decade of high-power experience in EV charging solutions. ABB has installed over 30,000 fast charging systems in more than 85 countries – and is the leading EV infrastructure technology supplier globally.

# Opportunity charging 150 kW to 450 kW

A scalable system with future-proof reliability

## Charging on existing structure



## Charging on route



With ABB's flexible HVC architecture, power capability can be expanded over time, allowing operators to spread out infrastructure investments as their fleet grows.

## Technical specifications

| Configurations                          | HVC 150PD   | HVC 300PD                     | HVC 450PD                     |
|---|---|-------------------------------|-------------------------------|
| Maximum output power                    | 150 kW  | 300 kW                        | 450 kW                        |
| Input AC connection                     | UL: 3-phase, 480Y/277 VAC +/- 10% (60 Hz); CSA: 3-phase, 600Y/347 VAC +/-10% (60 Hz)      |                               |                               |
| Rated input power                       | 170 kVA   | 2x 170 kVA                    | 3x 170 kVA                    |
| Rated input current                     | UL: 198 A<br>CSA: 168 A   | UL: 2x 198 A<br>CSA: 2x 168 A | UL: 3x 198 A<br>CSA: 3x 168 A |
| Recommended upstream circuit breaker(s) | 1 x 250 A   | 2 x 250 A                     | 3 x 250 A                     |
| Output voltage range                    | 150 – 850 VDC   |                               |                               |
| Maximum DC output current               | 250 A   | 500 A                         | 600 A*                        |
| Vehicle connection interface            | Inverted crossrail pantograph - OppCharge   |                               |                               |
| DC connection standard                  | SAE J3105-1 - IEC 61851-23-1 - ISO 15118  |                               |                               |
| Environment                             | Indoor/Outdoor  |                               |                               |
| Operating temperature                   | Standard: -10 °C to +50 °C (de-rating characteristic applies); Optional: -35 °C to +50 °C |                               |                               |
| Protection                              | IP54 – IK10 (NEMA 3R)   |                               |                               |
| Network connection                      | GSM/3G/4G modem   10/100 base-T Ethernet  |                               |                               |
| Compliance and safety                   | CSA No. 107.1-16 and UL 2202, certified by TUV<br>BA Rule 49 CFR Part 661.5 (Optional)    |                               |                               |

## Dimensions

| Power cabinet (each)                    | Number of Power Cabinets | 1  | 2 | 3 |
|---|--------------------------|--|---|---|
| Dimensions (H x W x D)                  |                          | 2030 x 1170 x 770 mm / 79.9" x 46.1" x 30.3"   |   |   |
| Weight                                  |                          | 1340 kg / 2954 lbs   |   |   |
| Charge pole (includes Pantograph & ACM) | Dimensions (H x W x D)   | 5240 x 1040 x 300 mm / 206.3" x 40.9" x 11.8"  |   |   |
|   | Outreach                 | 4670 mm / 183.9" x 30.3"   |   |   |
|   | Weight                   | 1706 kg / 3762 lbs   |   |   |
| ACM Control Module KIT                  | Dimensions (H x W x D)   | 1600 x 1000 x 476.9 mm / 63" x 39.4" x 18.8"   |   |   |
|   | Weight                   | 193 kg / 425 lbs   |   |   |
| Pantograph KIT                          | Dimensions (H x W x D)   | (resting position / bolt-hole pattern) 574 x 1300 x 900mm / 22.6"H x 51.2"W x 35.4"D |   |   |
|   | Weight                   | 387 kg / 854 lbs   |   |   |

\* Limited by inverted pantograph contact ratings

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