LEAFLET

Electric vehicle charging infrastructure

Heavy Vehicle Charger (HVC): zero-emission bus transit

ABB Heavy Vehicle Charger (HVC) solutions offer high power fast charging systems that allow electric transit buses to charge on-route and at the bus depot, with minimal impact on operation; enabling true zero-emission public transit.

A Heavy Vehicle Charger (HVC) is a high power fast charging system that allows zero-emission transit buses to operate 24/7, thus enabling true zero-emission public transit.

Enable zero emission bus transit in your city

With increasing air pollution levels and a stronger public commitment to clean transportation, electric city buses offer a great opportunity to improve life in cities, while also reducing operational costs. ABB's high power fast charging system solves the key problems for large scale adoption of zero emission electric buses: long charging times and short driving range belong to the past.

Opportunity Charging

ABB's opportunity charging solution allows electric buses to have short charging times along their routes; thus enabling true zero-emission public transportation in cities. With its automated rooftop connection and typical charge time of 3–6 minutes, the system can easily be integrated in existing bus routes by installing chargers at endpoints, terminals and/or intermediate stops.

Key Benefits
+ Charge electric bus in 3-6 minutes
+ Easy integration into existing bus lines
+ Automated 4-pole rooftop connection
+ OCPP compliant for remote management
+ Based on international IEC 61851-23 standard
+ Safe and reliable connection
+ Remote diagnostics and service

Depot Charging

Save energy without requiring depot staff to monitor the charging procedure with ABB's depot charging solution. This system allows up to three electric buses to be connected and charged sequentially while parked at the bus depot. The logic programmed into the depot feeding station "wakes up" each bus in turn for charging, and then puts them back into "sleep mode" once the charge is complete.

Key Benefits
+ Sequential charging (up to three buses)
+ Small infrastructure footprint
+ Easy to upgrade power capacity on-site
+ OCPP compliant for remote management
+ CCS protocol compliant
+ Safe and reliable connection
+ Remote diagnostics and service

ABB connectivity and services put you in control
All ABB chargers come with an extensive suite of connectivity features including remote monitoring, remote management and smart software upgradeability. These advanced services enable high uptime of the equipment, a fast response to problems and provide owners of chargers with powerful insight into statistics of their charging operation. Combined with ABB's global presence of service teams we can provide a reliable overall charging solution, anywhere in the world.

Future-proof solutions for interoperability
ABB's high power fast chargers are designed to the highest international electrical, quality and safety standards, including IEC 61851-23, guaranteeing safe and reliable operation. ABB has invested heavily into standardization and is a leading authority in all key standardization developments with respect to fast charging. This provides you with the confidence that long term support and industry-wide understanding of the solution is secured.

ABB is your experienced partner
The new fast charging solution for e-bus charging is based on ABB's solid experience in charging solutions for electric vehicles. For almost a decade, ABB has installed over 5000 fast charging systems for electric vehicles around the world and is the globally leading supplier in this market. This unique position and experience is leveraged to provide the best value to our customers.

Technical specifications	Depot Charging	Opportunity Charging
Power	Modular: 50 kW, 100 kW, 150 kW	Modular: 150 kW, 300 kW, 450 kW
Input AC connection	3P + PE	
Rated input current and power	3 x 230 A, 173 kVA (per 150 kW module)	3 x 230 A, 173 kVA (per 150 kW module)
Input voltage range	480 V_{AC} +/-10% (60 Hz)	
Maximum output current	200 A	225 A (per 150 kW module)
Output voltage range	200 – 920 V_{DC}	200 – 920 V_{DC}
DC connection standard	IEC 61851-23 / DIN 70121	
Connection method between charger and bus	CCS-1 or CCS-2 connector	4-pole automatic connection system
Environment	Indoor/Outdoor	
Operating temperature	Standard: -10 °C to +50 °C (de-rating characteristic applies); Optional: -35 °C to +50 °C	
Compliance and Safety	cUL us	
Network connection	GSM/3G modem | 10/100 base-T Ethernet	
Protection	IP54 – IK10 - NEMA 3R	

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ABB Inc.