



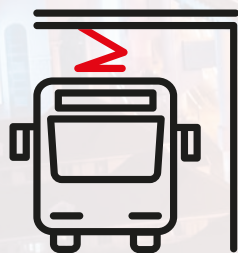
eBus & eTruck charging

Electrifying your fleet

- ChargingPANTO
- DepotPANTO
- RoofRAILS
- ChargingREEL
- EazyCHARGER

Smart charging solutions

Wabtec electric bus charging solutions are backed by decades of leadership developing the world's most reliable energy transfer components for local municipal transportation providers, sophisticated high-speed rail systems, and on-shore port power supply.



ChargingPANTO **E-Bus Top-Down Pantograph**

Fastest, Safest Rapid charging



DepotPANTO **For Indoor Applications**

Light weight, automated depot charging



RoofRAILS **Direct DC Charging System**

Light weight and reliable contact on board



ChargingREEL
E-Bus Depot Cable
Management System
Storing cables safely



EazyCHARGER
eTruck

Safe cable handling solutions for
heavy duty vehicles



EazyCHARGER
eBus

Safe cable handling solutions for
electric buses

Smart eBus charging solutions

Wabtec electric bus charging solutions are backed by decades of leadership developing the world's most reliable energy transfer components for local municipal transportation providers, sophisticated high-speed rail systems, and on-shore port power supply.



Your benefits



Keeping bus schedule:

fast, high power charging



Higher passenger capacity:

or higher travel distance with
light weight RoofRAIL



Cost reduction:

less pantographs for scalable
fleets



Increased flexibility:

using different bus types for
same charging station



Higher availability:

reducing maintenance effort with
no charging equipment on bus



Keeping cities clean:

charging at end stop outside
city centre



Charging in different cities:

interoperability with OppCharge
standard



Easy for drivers:

fail safe and fully automatic
operation

EasyCHARGER – new innovative solution for charging

Wabtec Cable Management for heavy duty vehicles.

Safe cable handling solution

To meet CCS, MCS, NACS and other standards

- safeguarding of the cable and plug against theft and violence
- provides cable on the spot
- decreased OPEX by minimising wear and tear
- controlled and safe cable management
- easy to install and maintain
- futurproof for cables 1000A and above



eBus Charging Products



ChargingPANTO

E-Bus Top-Down Pantograph

Fastest, Safest Rapid Charging

First to meet OppCharge standards, the fully automatic ChargingPANTO system is designed for fast charging of e-bus fleets and reduced infrastructure life cycle costs.

- Automatic operation eliminates depot personnel resources
- Open standard interoperability
- Independent rails ensure positive contact during charging
- Built in winter heating system



Specifications	ChargingPANTO
Nominal Voltage:	1500 VDC
Nominal Current:	600 A to 1500 A
Lowering Time:	6 seconds
Raising Time:	5 seconds
Weight:	Approx 419 lbs / 190 kg
Operation Temp:	-40 °F to +167 °F / -40 °C to +75 °C
Application:	Outdoor/Indoor





DepotPANTO

E-Bus Top-Down Pantograph

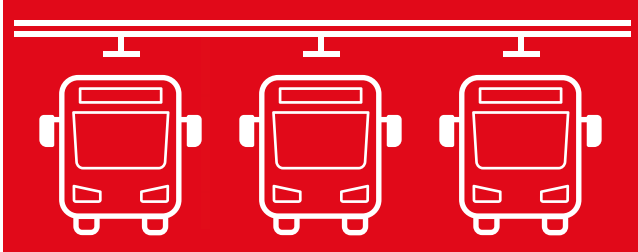
Light weight, automated depot charging

For the fastest overnight DC charging, the DepotPANTO features easy connection to roof-mounted rails and fully automatic loading.

- Ceiling mount increases depot charging throughput and efficiency
- Automatic operation minimizes depot personnel resources
- Lightweight, easy to install, compact design, requires minimal space
- Transfers up to 600 amps for fast charging
- Optional winter heating system



Specifications	DepotPANTO
Nominal Voltage:	1500 VDC
Nominal Current:	600 A
Weight:	<100 kg
Operation Temp:	-40 °F to +167 °F / -40 °C to +75 °C
Application:	Outdoor/Indoor



eBus Charging Products



ChargingREEL

E-Bus Depot Cable Management System

Storing cable safely

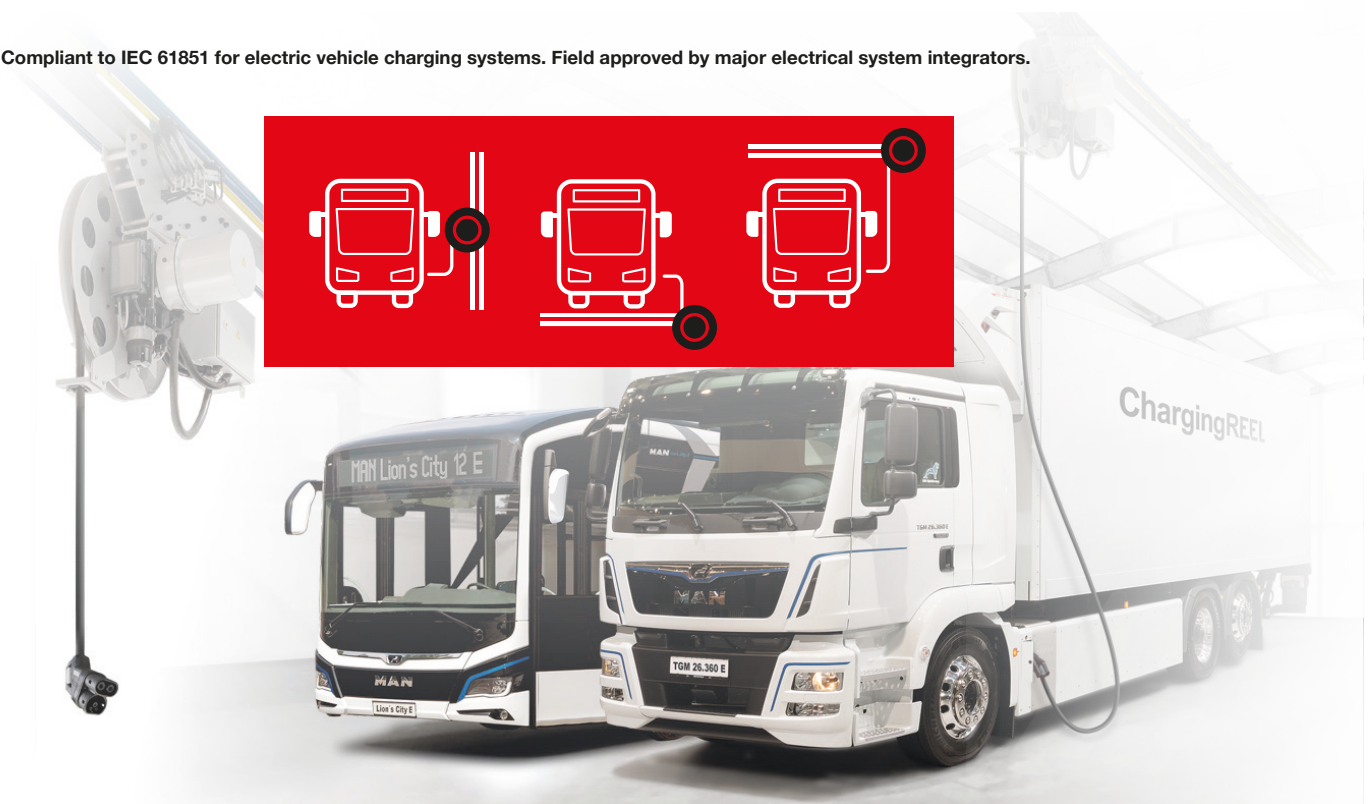
ChargingREEL design optimizes cable management for electric buses and other fleet vehicles in depot charging areas, like intralogistic industry. High output power transfer minimizes charging time. Automatically deploys plug to specific heights.

- Fast power transfer for buses, trucks and cars
- Protects connector plug and cable from damage
- Ceiling, wall and under-floor applications
- Emergency crank
- Optional remote control



Specifications	ChargingREEL
Nominal Voltage:	1000 VDC
Nominal Current:	200 A
Lowering Time:	≤ 20 seconds
Raising Time:	≤ 20 seconds
Weight with cable:	Approx 176 lbs / 80 kg
Operation Temp:	+14 °F to +113 °F / -20 °C to +45 °C

Compliant to IEC 61851 for electric vehicle charging systems. Field approved by major electrical system integrators.





RoofRAILS

Direct DC Charging System

Light weight and reliable contact onboard

Designed to OppCharge standards for interoperability, the Wabtec Stemmann roof rail system features four lightweight rail strips to ensure safe connection and reliable power transfer. Accommodates up to 1,500 amps for fastest charging and trouble-free, year-round operation. For new and retrofit applications.

- Simple, easy installation
- Built-in winter heating element
- Minimum weight and maintenance need
- Compliant with all North American charging standards



Specifications	RoofRAILS
Nominal Voltage:	Up to 1500 VDC
Nominal Current:	Up to 1500 A
Weight (Set of 4):	67 lbs / 30.4 kg
Operating Temp:	-40 °F to +167 °F / -40 °C to +75 °C
Operating Voltage:	24 VDC for heating
IP Ingress Protection:	IP65 for heater

Service & Maintenance

Our best performance when things work

Ensuring ongoing availability

We strive to make mobile equipment available at all times in everyday industrial life. For this purpose, we have competent and skilled service technicians at our disposal with standardized tools and equipment. We would be more than happy to compile an individual maintenance proposal for you.

Acting instead of reacting

- Routine, predictable maintenance intervals
- Application of original spare parts
- Ensuring ongoing availability
- Direct costs control



Heavy duty vehicles Charging Products



EasyCHARGER

Cable Management for heavy duty vehicles high power charging systems

Future proof, secure and flexible cable management solutions

The patent pending Wabtec EasyCHARGER cable management system for bus and truck charging has been developed to enable a safe and economical handling of charging cables whatever the plug standard in use. The system can be upgraded from CCS to MCS without implementing a new mounting structure, usage pattern and integrator documentation.

- Compliant with all current and future standards
- Controlled cable descent and ascent
- Long cable life and theft protection
- Less cable break downs
- Parallel or diagonal mounting
- Tried and tested standard components





Specifications

Power rating according to charging standard applied. Comply with MCS, NACS, CCS1, CCS2, CHAdeMO

Cable up to 6m usable length

Temp range: -25 °C up to +55 °C

Weight: approx. 120 kg, excluding the I-beam

Lowering time: 12 sec

Liquid cooling system: capable to be added



Future proof, secure and flexible cable management solutions

Innovative Wabtec EazyCHARGER cable management system for bus and truck charging has been developed to enable a safe and economical handling of charging cables adaptable for each plug standard that's required. The system can be upgraded from CCS to MCS without implementing a new mounting structure, nor integrator documentation.



- Expertise from decades of development and production of current supply systems
- High-quality and proven components
- Ideal system design for trouble-free charging operations
- Low-maintenance and reliable components for countless charging cycles



Interested? Find out more on www.stemmann.com or call us at +49 592381 0

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