



TRANSPORTATION

POWER TRANSFER FOR RAIL VEHICLES



TO COLLECT - TO CONNECT - TO SELECT - TO REJECT

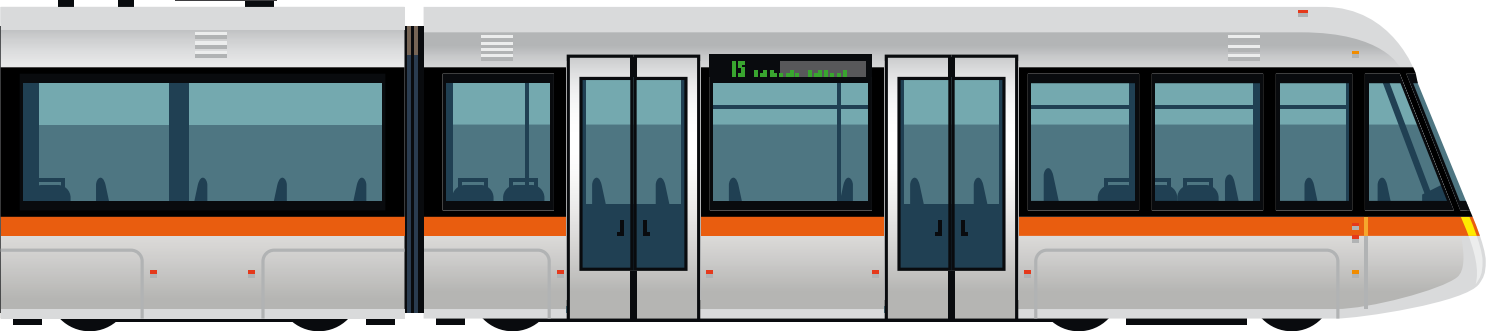
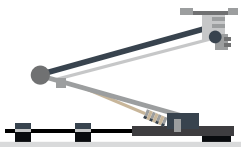
TRAMWAY



R - Pantograph contact strips



R/B - Fuse Boxes /
Energy measurement



R - Carbon brushes and
brush-holders for auxiliary
motors



B - Current Collector Devices
(CCD)



B - Carbon brushes and
brush-holders for generators /
alternators



B - Earth Return Current
units - Carbon brushes



B - Carbon brushes and
brush-holders for traction
motors



B - Lubricating sticks
and applicators



R/B/C - Services and
Maintenance tools



C - Disconnecter Inverters



R - Enclosures

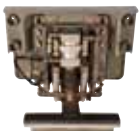
M E T R O



R/B - Fuse Boxes /
Energy measurement



B - Connection Boxes



B - Current Collector Devices
(CCD)



B - CCD shoes: traditional
and EcoDesign



R - Carbon brushes and brush-
holders for auxiliary motors



B - Earth Return Current
units - Carbon brushes



B - Lubricating sticks
and applicators



B - Carbon brushes
and brush-holders
for generators / alternators



R/B/C - Services and
Maintenance tools



B - Carbon brushes and brush-
holders for traction
motors



C - Disconnect Inverters

R: Roof

B: Bogie

C: Car interior

ELECTRIC OR DIESEL LOCOMOTIVE



R - Pantograph contact strips



R - Surge arrester



R - Carbon brushes and brush-holders for auxiliary motors



C - Disconnecter Inverters



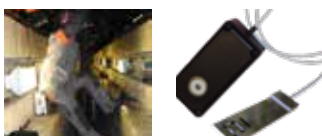
B - Earth Return Current units - Carbon brushes



B - Lubricating sticks and applicators



B - Carbon brushes and brush-holders for traction motors



R/B/C - Services and Maintenance tools



B - Carbon brushes and brush-holders for generators / alternators



B - Slip ring assemblies

TO COLLECT - TO CONNECT - TO SELECT - TO REJECT

CARBON BRUSHES, BRUSH-HOLDERS AND SLIP RING ASSEMBLIES FOR TRACTION AND AUXILIARY MOTORS

Carbon brushes:

- Good mechanical stability
- High transient current density
- High quality tamping / Optimised cable dimensions
- Specific design

Brush-holders and slip ring assemblies:

- Full range of materials: non-ferrous alloys, stainless steel, dielectric materials and anti-corrosion materials
- Fitted with independent pressure systems (constant force or clock spring)
- Single or multiple pockets
- Complete brush-holders and rocker rings
- Reinforced plastic injection moulding
- International standards (ISO 9001, DIN, VDE, CSA/UL)

PANTOGRAPH CONTACT STRIPS

- Plain carbon or metal impregnated
- High intensity applications grades
- Bonded, soldered, crimped or Kasperowski designs
- Integrated end horn designs
- Automatic Dropping Device (ADD) designs
- DIN6701 certified bonding
- EN50405, IEC62499 and EN45545 standards

CURRENT COLLECTION DEVICE SHOES:TRADITIONAL AND EcoDESIGN

- Plain carbon or metal impregnated
- Soldered or EcoDesign
- Designs as cast or with end metal pieces
- EN45545 standard

WHEEL FLANGE LUBRICATING SOLUTIONS: LUBRICATING STICKS AND APPLICATORS

Lubricating sticks:

- Low friction coefficient carbon material
- Long-lasting performances
- Preservation of rail and wheel
- Specific design for better mechanical stability
- EN16028 and EN45545 standards

Applicators and brackets:

- Easy lubricating stick inspection and adjustment
- Corrosion resistance
- Permanent pressure spring
- EN61373 standard

SERVICES, TRAINING AND MAINTENANCE TOOLS

- Motor Maintenance Service (On site motor inspection and diagnostic, In Situ machining)
- Training and technical seminars
- R&D expertise
- Measuring devices (CL-Profilers, Electronic CL-DynamoMeter)
- Wide range of maintenance tools

CURRENT COLLECTOR DEVICES

With over forty years of experience, Mersen offers the largest range of current collectors with reliable, low maintenance cost, and innovative solutions for E-buses, Tramways, and third rail Metros while integrating the most advanced technical capabilities and smart solutions.

EARTH-RETURN UNITS OR GROUNDING

As the designer of this system, Mersen offers a wide range of solutions including radial, axial, low floor and pulse generators for all kinds of applications, current levels and IP or BS protection levels required by the applications.

FUSE BOXES AND CONNECTION BOXES

The isolated fuse boxes are moulded in one single shape of SMC. They are designed in compact sizes to house 750 and 1500VDC fuses while respecting fire and smoke, shock and vibrations and IP protection standards. The same moulded boxes can be used as junction boxes to connect cables.

ON-BOARD DISCONNECTORS AND INVERTERS

Mersen's on board range of disconnectors and inverters offer modular designs for the configuration (positions), number of poles, locking and voltage levels of 85, 750, 1500VDC and 25kVAC applications with control panels and manual or motorized operation.

ENCLOSURES

Mersen provides integrated enclosure solutions including on-board disconnectors or inverters, fuse protection and smart functions in very compact designs located on the roof of trains.

ENERGY MEASUREMENT

Mersen provides on-board energy measurement enclosures for Metros and Tramways composed of DC fuse protection and instantaneous volt and Amp monitoring for ecodriving training, real-time consumption calculations and measurement of energy injected back to the grid when regenerating.

SURGE ARRESTERS

Mersen provides on-board surge arresters enclosures to protect railway networks against disturbances incurred by lightning in the power lines mounted on the roof (near the pantograph).



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IN ELECTRICAL POWER
AND ADVANCED MATERIALS

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