

Roof contact

CURRENT COLLECTOR DEVICES (CCD)

CCD FOR TRAMWAY WIRELESS



Tramway technology is being more and more used in the development of urban mass transportation projects. The regular Tramway technology uses an energy collection based on a pantograph and catenary but it also exists an energy collection which doesn't need catenary, the wireless technology.

There is one Technology enables a current collection from the roof with a static contact.

There are numerous advantages of these technologies:

- For aesthetic when Tramway is next to classified buildings or monuments or historical city centers. The wireless technology will not disfigure the visual environment.
- For the security of the firefighters, while intervention next to the catenary grid or for the safety of the people doing the maintenance on roads for public lightning
- to enable extra-large dimensions for road transports.

Mersen innovate and is the first company to propose three different Current Collector technologies wireless (static and dynamic).

The static roof technology is a Current Collector made of a contact blades equipped with an antenna to power the energy rail on the roof of the tramway.

The wireless static technology is a Current Collector operating blades in contact with a source above the tramway to re-fuel the batteries during Tramway dwelling time.

At each stop the shoe powered by an electronic system is moved up to be in contact with the electrical source. During the 20 seconds a high DC current is re-fueling the Tramway batteries to enable it to

FEATURES & BENEFITS

- Visual aesthetic, no more catenary
- CCD's dimensions and characteristics can be customized to your application
- Minimum weight, especially low dynamic mass
- Very low noise level
- Extremely compact
- Cost effective, proven technologies and simple fixing
- Low cost maintenance

APPLICATIONS

- Wireless applications for Tramways

STANDARDS

- IEC 61373



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go to the next station. The blades are then moved down and the Tramway can reach the next station.

Since 2018 fifteen trains are using this proven technologies.

References

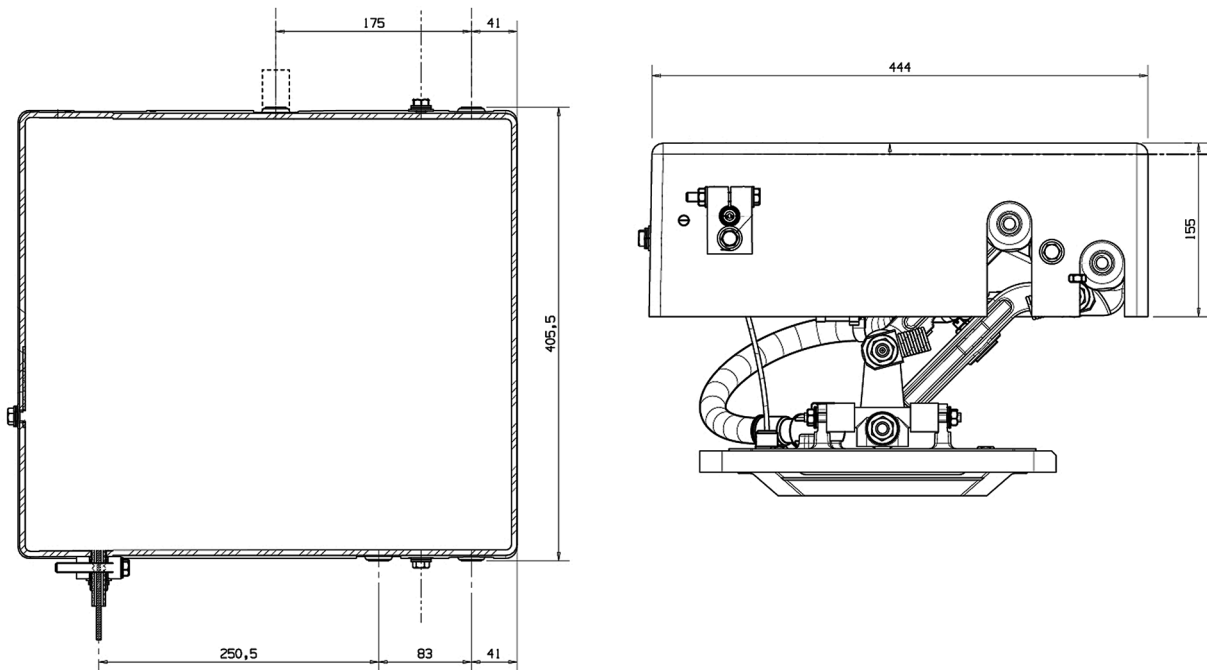
Kaohsiung (TW)

TECHNICAL DATA OVERVIEW

Voltage DC	750 VDC
Amper (A)	1200 A
Speed/Characteristic	static contact
Working Temperature	-40°C / +25°C
Pressure of the Shoe	120N ±20%
Humidity	90%

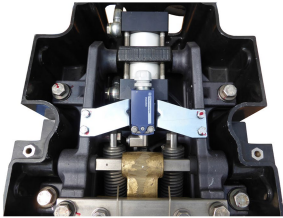
DIMENSIONS

Sliding contact Current Collector Device Dwg 118382



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FUNCTIONS



Retraction position indication

To inform the driver of the retracted position of the CCD, Mersen integrate a micro-switch to relay the information of the position.

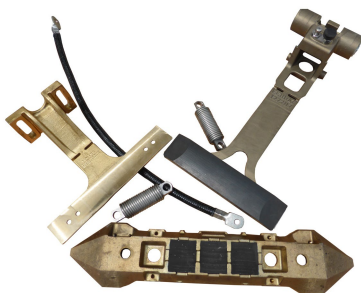
This microswitch is compatible with all traction battery voltage supply (12, 24, 48 and 110VDC).



Shoe material

Mersen can propose different Shoe materials - Copper; Graphite; Cast iron; Steel; Cupro Alu adapted to your third rail.

Once they are worn, it is very easy to change them for new ones supplied by Mersen.



Spare part kits

Mersen will supply you with all the Spare parts kits to increase the life time and guarantee a reliable service of your current collector devices.

- cables,
- fuses,
- replacement shoes and arms,
- hardware,
- and all necessary components

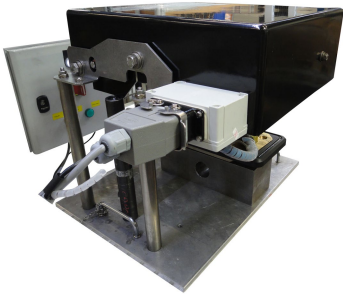


Training and technical support

Mersen team can help you for training your Maintenance team and for commissioning your new installations all around the world

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FUNCTIONS



Tooling

Beside the spare parts, Mersen can supply the necessary tooling to set perfectly your CCD to the technical requirements of your grid and optimize their use.

High, Low and nominal position can be set also the tools include a pressure measurement system to check the pressure of the CCD on the 3rd rail.

This tool is mandatory to succeed in the great overhaul to guarantee a reliable service and a longer life time of your CCD fleet.

Tooling reference :137463



LCC; RAMS; Type tests

All around the world, Mersen technical team can help you for technical support and can offer you customized training sessions for your Maintenance team.

ACCESSORIES



Y232597A

Traction fuses

Catalog number	Item number	Package	Weight
CC 7,5 GRC 123 TTF 0500	D090439A	1 piece	2 kg
CC 7,5 GRC 123 TTF 0600	H239207A	1 piece	2.2 kg
CC 7,5 GRC 123 TTF 0700	N1013714A	1 piece	2.3 kg
CC 7,5 GRC 123 D19SI 0500	C221216A	1 piece	2.3 kg
CC 7,5 GRC 123 D19SI 0600	K1018748A	1 piece	2.2 kg
CC 7,5 GRC 123 D19SI 0700	Y232597A	1 piece	2.3 kg
MICROSWTCH HOLDER SIZE 12X	Q1049941A	1 piece	0.15 kg

ACCESSORIES



Blades

Catalog
number

Kaohsiung

Contact blades