

# Sliding 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 alternative energy collection which doesn't need catenary, the wireless technology.

The two technologies enables a current collection from the floor in a dynamic or a static way.

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 innovates and is the first company to propose two different Current Collector technologies wireless (static and dynamic).

The dynamic Sliding technology is a Current Collector made of a sliding shoe equipped with an antenna to power the energy rail just under the tramway.

During the whole course of the Tramway, the shoe is collecting the energy from a central rail powered under 750VDC and divided into portions of 8 meters.

This third rail is energized, by an antenna fixed on-board, only when the Tramway is above it, for security reasons.

## FEATURES & BENEFITS

- Visual aesthetic, no more catenary
- Proven technology since 10 years with more than 200 trains running every day
- CCD's dimensions and characteristics can be customized to your application
- Minimum weight, especially low dynamic mass
- 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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Since 2003, 200 trains are using these proven technologies in the world and it is still developing.

## References

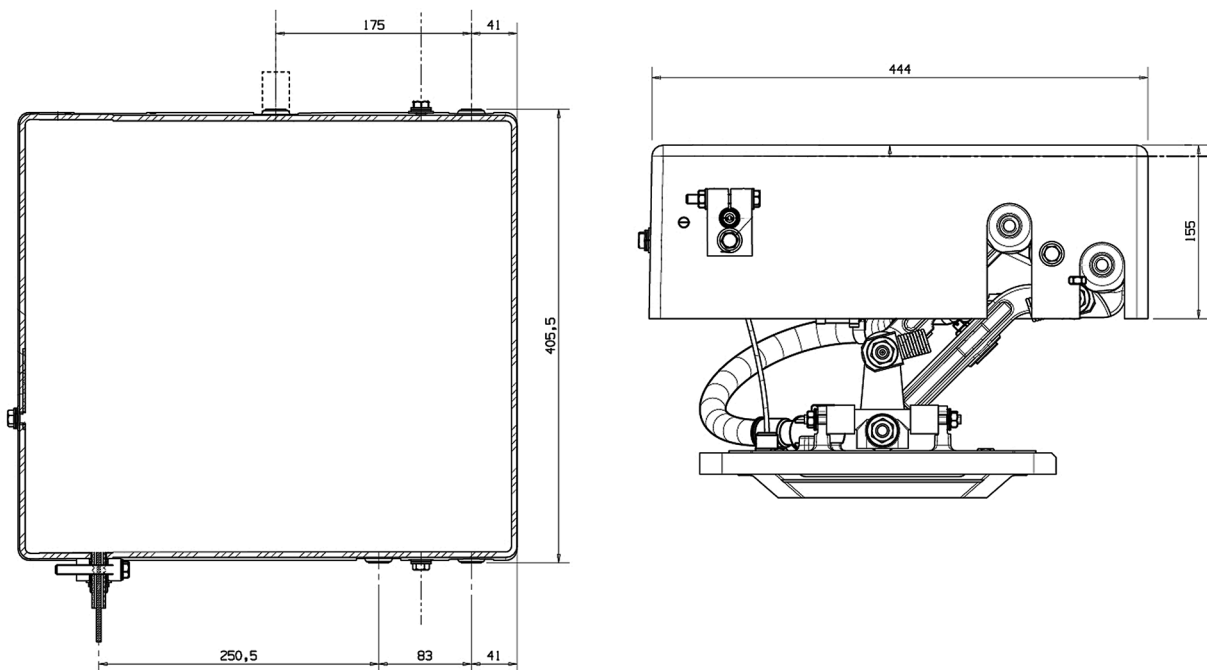
Bordeaux (FR), Dubai (AE), Lusail (AE), Orleans (FR), Reims (FR), Tours (FR), Cuenca (ES), Rio (BR), ...

## TECHNICAL DATA OVERVIEW

Voltage DC	750 VDC
Amper (A)	800 A
Speed/Characteristic	90 km/h
Working Temperature	-40°C / +25°C
Pressure of the Shoe	120N $\pm$ 20%
Humidity	90%

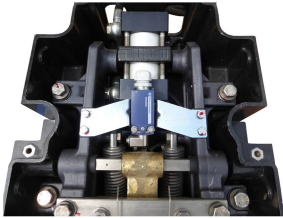
## DIMENSIONS

### 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.

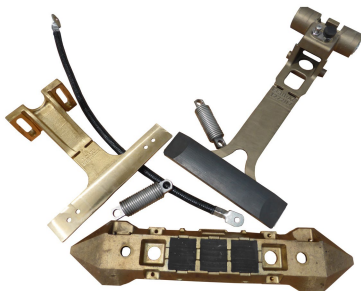
This microswitch is compatible with all traction battery voltage supply (12, 24, 48 and 110VDC).



### 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

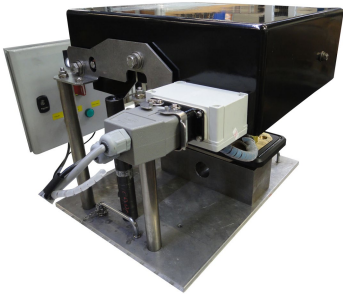


### Training and technical support

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 positions can be set, also, the tool include a pressure measurement system to check the pressure of the CCD on the 3rd rail.

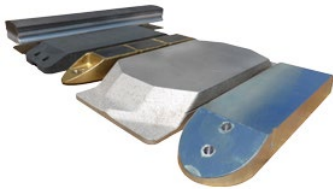
This tool is mandatory to succeed the maintenance when the great overhaul to guarantee a reliable service and longer life time of your CCD fleet



### 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



### Brushes

Catalog number	Package
<b>Brushes</b>	
Cast Iron Shoe	1 piece
Copper shoe	1 piece
Cupro Alu shoe	1 piece
Graphite Shoe	1 piece
Steel shoe	1 piece



Y232597A

### Traction fuses

Catalog number	Item number	Package	Weight
<b>Traction fuses</b>			
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
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
MICROSWTCH HOLDER SIZE 12X	Q1049941A	1 piece	0.15 kg

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