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# Sitras LCU-C

Compact local charging unit for railway vehicle operation without overhead contact line

The compact local charging unit Sitras® LCU-C quickly recharges mobile energy storage systems on railway vehicles.

The Sitras LCU-C diode box may be placed at any places – as well outdoors or buried – or may be integrated in stops or traction substations.

Recharging takes place during dwell time by overhead conductor rail.

## Features

- High charging currents for charging during typical dwell times
- Easy integration in the environment and accordingly in the station and no active cooling necessary
- Can be used instead of or together with Sitras LCU
- Diodes prevent electric arcs at decoupling during driving
- Optional integration of anti-condensation and vehicle locating system (auxiliary power supply connection necessary)

## Technical data \*

Input voltage (tolerances acc. to EN 50163)	[V DC]	750
Operating voltage for full charging power	[V DC]	750...900
Charging current	[A]	1,000
Charging time, e.g. a storage with 3.2 kWh	[s]	20
Permissible ambient temperature	[°C]	-20...+50
Maximum operating height above sea level	[m]	1,000
Degree of pollution acc. to EN 50124		PD4A
Dimensions of container		
– Length	[mm]	ca. 600
– Width	[mm]	600
– Height	[mm]	1,800

\* other values available on request

## Components

Sitras LCU-C comprises the following main components:

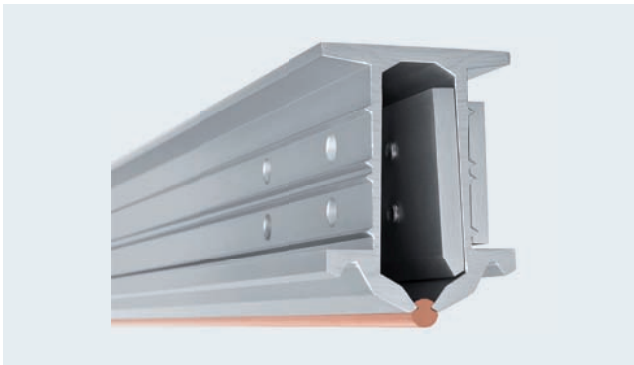
- Box with diodes
- Overhead conductor rails,
- Cable connections to DC traction substations.

## Operation

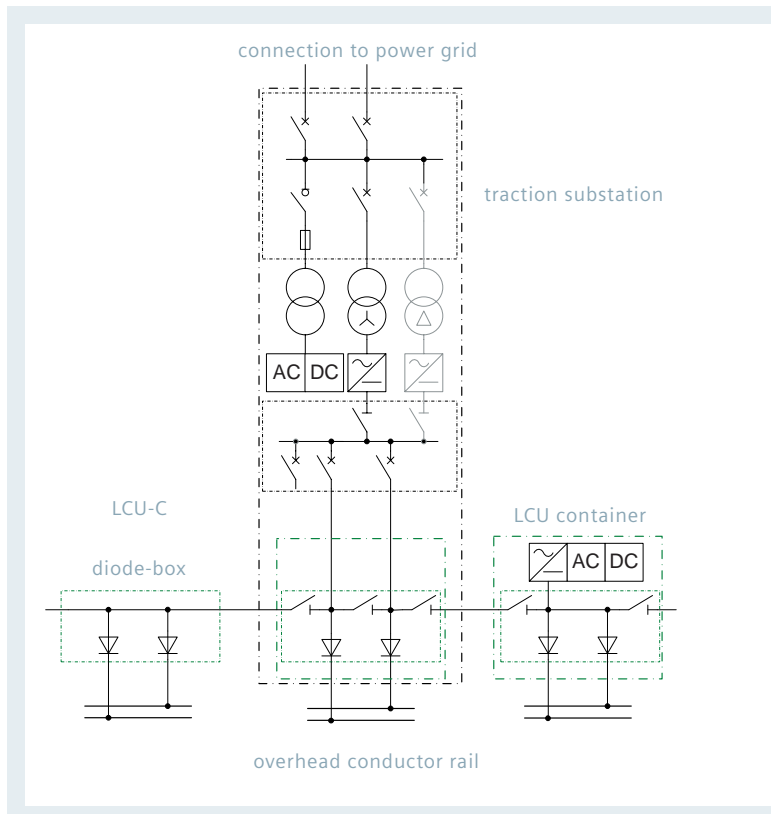
The LCU overhead conductor rails are always energized, except in case of faults. In case of failures, control devices in the traction substations reconfigure the system arrangement. Sitras LCU-C operates without active current control. The charging currents are regulated by the vehicles according to their demands.

## Mechanical Design

The diode-box is based on technology of the compact switchgear Sitras CSG in a sealed cabinet, which emits the waste heat over the cabinet walls to the environment. It can be placed anywhere, also outdoors or in the ground. A project dependant integration into customer's rooms is possible. Protection and control technology is located in the traction substation. The overhead conductor rails Sicat SR consist of aluminum with copper wire.



Overhead conductor rail Sicat SR



Integration of Sitras LCU-C in the system environment

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The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. If not stated otherwise, we reserve the right to include modifications, especially regarding the stated values and dimensions.