



# São Paulo Metro Line 5 Tunnel & Patio

## RAILWAY ELECTRIFICATION PROJECT

The existing Line 5 of the São Paulo Metro was inaugurated in 2002. The Line 5 extension project, from the southwest of the city to the expanded center, will improve the mobility of public transport users in the Capão Redondo-Largo Treze Chácara Klabin corridor. The extension involves the construction of 11km of twin tunnels. The new Line 5 will be 20.1 km long, including 15 intermediate stations.

### Technical characteristics:

SDCEM provided outdoor disconnectors (disconnectors cubicles) for the switchyard project and indoor disconnectors for tunnels with smart grid solutions to control and monitor SDCEM disconnectors : S-VOLT. It allows completely safe maintenance to be proceeded , including safety fuses & earth fault relay 64. With the flexible rod, our products are designed to fit tunnels and urban installations' requirements.

SDCEM's scope of supply :

### Disconnectors Switches

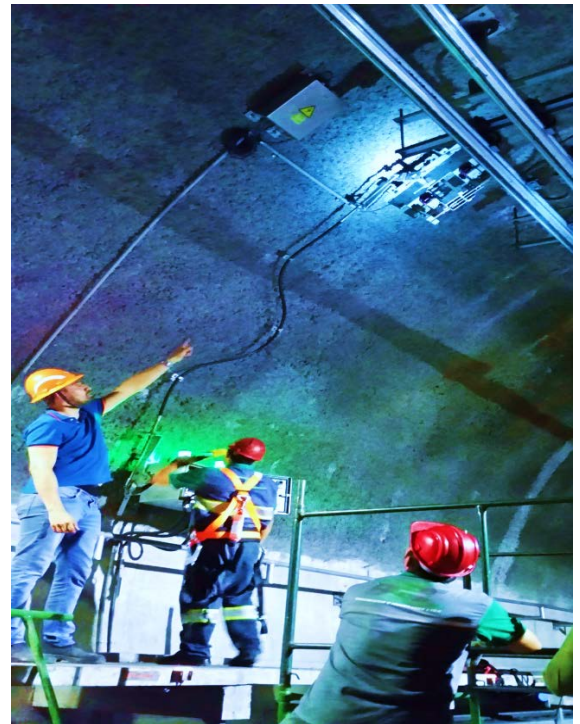
- 8 Outdoor Single Pole Vertical Break Disconnectors SBE
- 17 Indoor Single Pole Vertical Break Disconnectors SBI
- 2 Outdoor Disconnectors Cubicles

### Operating Mechanisms

- 25 Electrical Universal Smart Drives MR41E
- 13 Flexible rod for tunnel

### Control & Monitoring

- 25 S-VOLT – Voltage presence relay for railway that detects presence of DC voltage



25 S-LUX – Light alarm / information status that gives to on-site operator immediate visual information of the status of the EOM thanks to a color code.

### Key data

Location	Brazil
Industry	Railway Electrification
Delivery date	2017
Rated voltage	25 kV
Owner	São Paulo Metrô
EPC	Toshiba América do Sul
Commissioning date	2017

