

Protection of elevator power network

Earth leakage protection B-SI type

"Elevators are essential in our building.
We expect they operate without interruption".



Acti9 iID B-SI type

The solution dedicated to elevators

Customer story

Fabio is a building facility manager. His mission is to provide good experience for people living and visiting its building. Elevators are supposed to work 24/7.

He had to face nuisance tripping and this was very negative for building image. Fabio knows that International standards such as IEC 62477-1, require a RCCB 300 mA B type protection in elevator environment.

Moreover such electrical protection needs to be installed in coordination with the other existing electrical devices for better discrimination in the system.

Proposed solution

RCCB Acti9 iID B-SI type is designed to:

- **Protect people** against **multifrequency** earth leakage current (including pure DC). Such currents can be generated by speed drive technology embedded into elevators and they can cause fibrillation and electrocution.
- **Minimize nuisance tripping** thanks to Super Immunized (SI) technology tested on long distances of cables.
- **Be installed in coordination** with other upstream and parallel RCD (refer to Schneider Electric Residual Protection Device guide for coordination tables).
- **Simplify** operation thanks to Acti9 VisiSafe and VisiTrip.
- **Adapt** to your needs thanks to full range of **accessories and auxiliaries**.
- **Monitor and control** the electrical panel with PowerTag and Smartlink auxiliaries.

Customer benefits

For facility manager and building owner

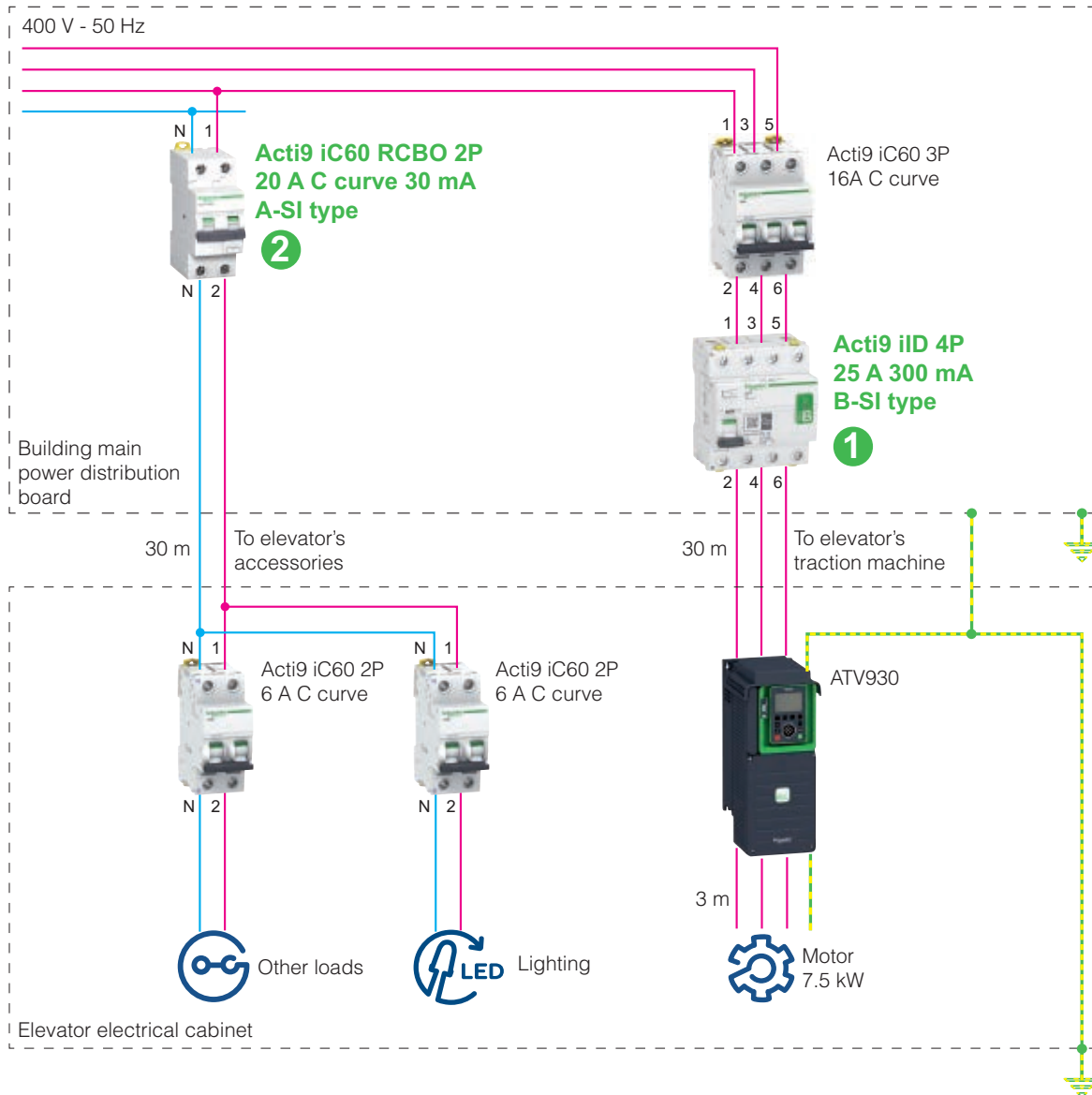
- **Peace of mind:** continuity of service and people protection compliant with the standard.
- **Productivity:** full compatibility with speed drive, even with long cable distance, SI technology is designed to improve availability of the installation.

For design office and elevator OEM

- **Productivity:** designed, tested and certified to protect from multifrequency disturbances generated by speed drives.
- **Savings:** with the cascading and coordination tables you propose the optimum solution for your customer's electrical installation.



Solution diagram for TT system



Note: during design phase, it's essential to define protections to avoid upstream and parallel protection disablement (blinding of upstream and parallel protection due to direct current signal presence).

In example above, ①, ② Residual Current Devices have been defined accordingly and the same should apply to any upstream RCD.

In this application the use of protection with 300 mA sensitivity is defined because access to the elevator panel is only available to qualified electrical maintenance personnel.

For more information about sensitivity choice, selectivity, coordination of protections and continuity of service, refer to earth leakage protection guide reference CA908066E and associated coordination tables.

Products used

Product	Function	Quantity	Reference
Acti9 iC60 RCBO 2P 20 A C curve 30 mA, A-SI type	RCBO for other loads	1	A9D27220
Acti9 iC60 3P 16 A C curve	MCB for motor	1	Specific to country
Acti9 iC60 2P 6 A C curve	MCB for other loads	2	Specific to country
Acti9 iD 4P 25 A 300 mA B-SI type	RCCB for motor	1	A9Z61425
Altvair ATV930 7.5 kW	Variable speed drive 3 phases for elevator	1	ATV930U75N4