Improve the reliability of LED street lighting system (three-phase network)

iQuick PRD, surge arrester with integrated disconnector

iCT+, zero voltage contactor

Customer needs

When switching from conventional lighting technology to LED technology, the town hall technical department wants to have a solution that is compatible with all the light units on the market.

The solution must minimize maintenance operations through increased reliability and it must be possible to interface it with existing installations.

Users / customer benefits

- **designers**: complete, simple, integrated, upgradeable solution,
- **ease of installation**: this solution allows existing facilities to be refurbished, has smaller physical dimensions, is simple to install and easier to implement,
- **optimized maintenance**: protection against the effects of lightning,
- **maximized return on investment** by opting for the best technico-economic solution.

Proposed solution

iQuick PRD, surge arrester with integrated disconnector

iCT+ allows peak current to be reduced at power up and circuit breakers to be used without derating. The amount of wear on the switchgear is therefore limited and its service life maximized.

iQuick PRD surge arresters protect power circuits.

iPRI surge arresters protect communication systems that are sensitive to overvoltages.

LED street lighting system

Preferred application

- street lighting,
- car parks,
- supermarkets,
- ....

Overvoltage protection +
zero voltage contactor =
reduced maintenance + longer service life

Specifications

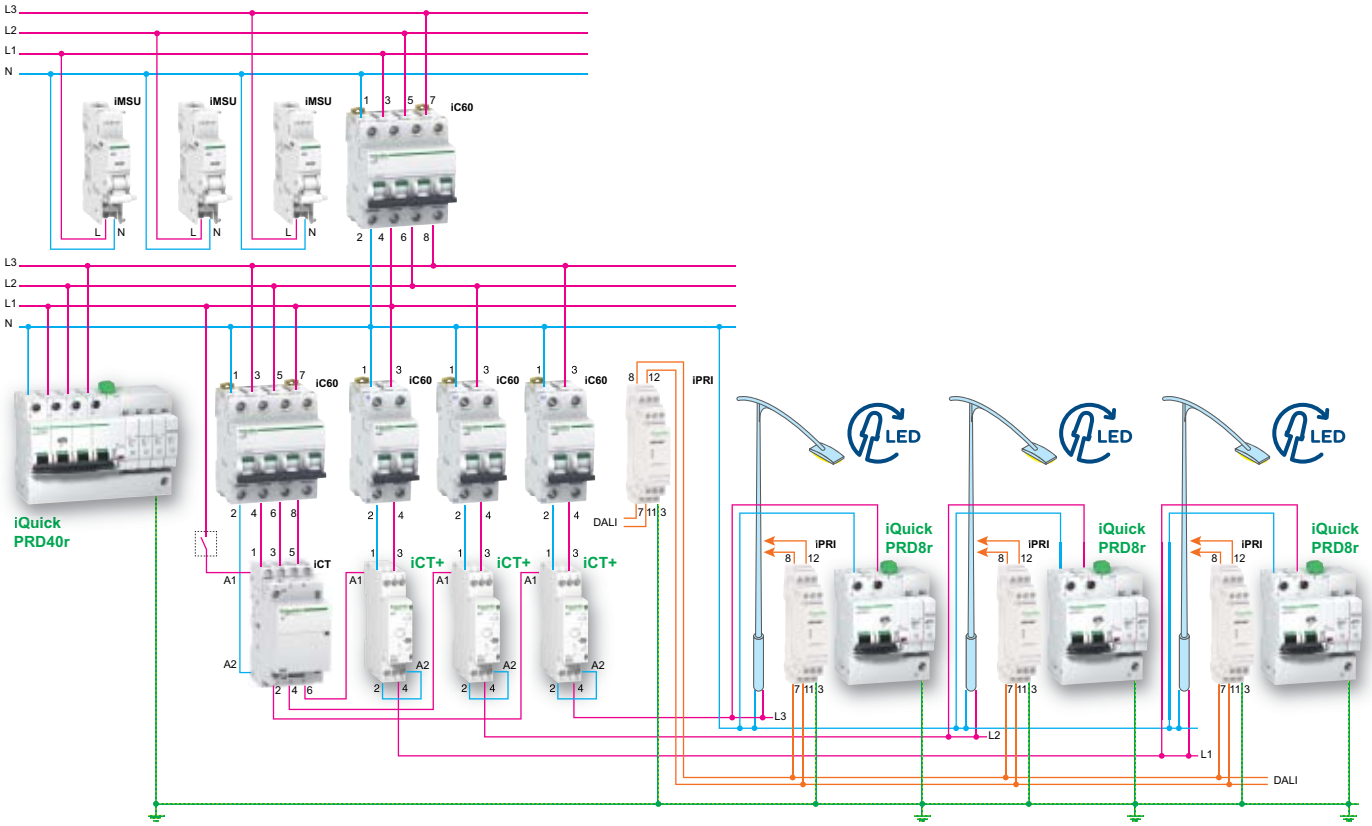
Zero voltage contactors must be installed to limit the inrush current when the light units are powered up.

Overvoltage relays must provide protection against temporary industrial frequency overvoltages.

Energy network surge arresters that are coordinated and fitted with disconnectors must be installed in the distribution enclosure and in the base of each pole.

Communication network surge arresters must be installed in the distribution enclosure and in the base of each pole.

Solution diagram



Products used

Product	Description	Unity	Cat. no.
iQuick PRD40r (*)	3P+N withdrawable surge arrester (Type 2)	1	A9L16294
iQuick PRD8r	1P+N withdrawable surge arrester (Type 2)	3	A9L16298
iC60N	3P+N C40 A circuit breaker	2	-
iC60N	1P+N C40 A circuit breaker	3	-
iCT+	1P+N 20 A contactor with manual control	3	A9C15031
iCT	3P 25 A contactor	1	A9C20833
iPRI	Surge arrester for communication network	4	A9L16339
iMSU	Voltage threshold release	3	A9A26500

(*) If lightning arrestor present: Type 1 + Type 2 surge arrester, iPRF1 12.5r A9L16634 + associated disconnector

35, rue Joseph Monier - CS 30323
F-92506 Rueil-Malmaison - FRANCE

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