

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

Reduce the maintenance & ensure longer service life with zero voltage contactors and overvoltage protection devices

iQuick PRD

iCT+



Customer case

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

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

Benefits

- Designers: complete, simple, integrated and scalable 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.
- Improve the return on investment through an optimal technical and economic solution.

Our recommendation

The use of the Acti9 iCT+ allows to reduce the peak current at power up and also the use of the circuit breakers without any derating. The amount of wear on the switchgear is therefore limited and its service life maximized.

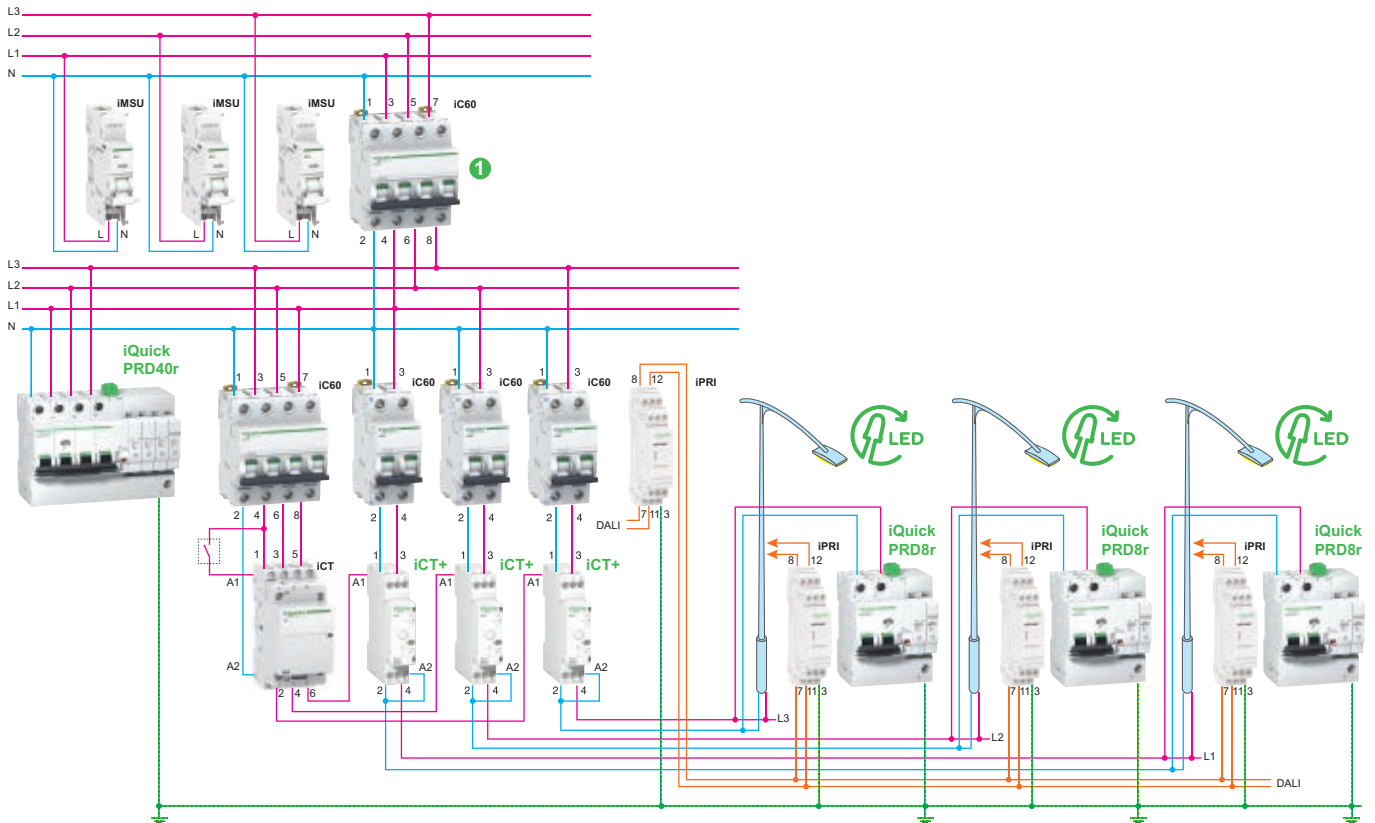
Acti9 iQuick PRD surge arresters are used to protect power circuits. Acti9 iPRI surge arresters are used to protect communication systems that are sensitive to overvoltages.

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Solution Diagram



Note: for electrical lockout, 3 poles and neutral must be opened with corresponding upstream iC60 ①.

Specifications

- A zero voltage contactor must be installed to limit the inrush current when the light units are powered up.
- An overvoltage relay is necessary to 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.

Products used			
Product	Function	Quantity	Reference
Acti9 iQuick PRD40r (*)	3P+N withdrawable surge arrester (Type 2)	1	A9L16294
Acti9 iQuick PRD8r	1P+N withdrawable surge arrester (Type 2)	3	A9L16298
Acti9 iC60N	1P+N MCB	3	Depend on rating
Acti9 iC60N	3P+N MCB	2	Depend on rating
Acti9 iCT+	1P+N 20 A contactor with manual control	1	A9C15031
Acti9 iCT	25 A 3P contactor	1	A9C20833
Acti9 iPRI	Surge arrester for communication network	4	A9L16339
Acti9 IMSU	Voltage threshold release	1	A9N26500

(*) If lightning rod close to the installation: use Type 1 + 2 surge arrester, Acti9 iPRF1 12.5r (A9L16632) + associated disconnector Acti9 iSW.

More about Acti9 iCT+



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