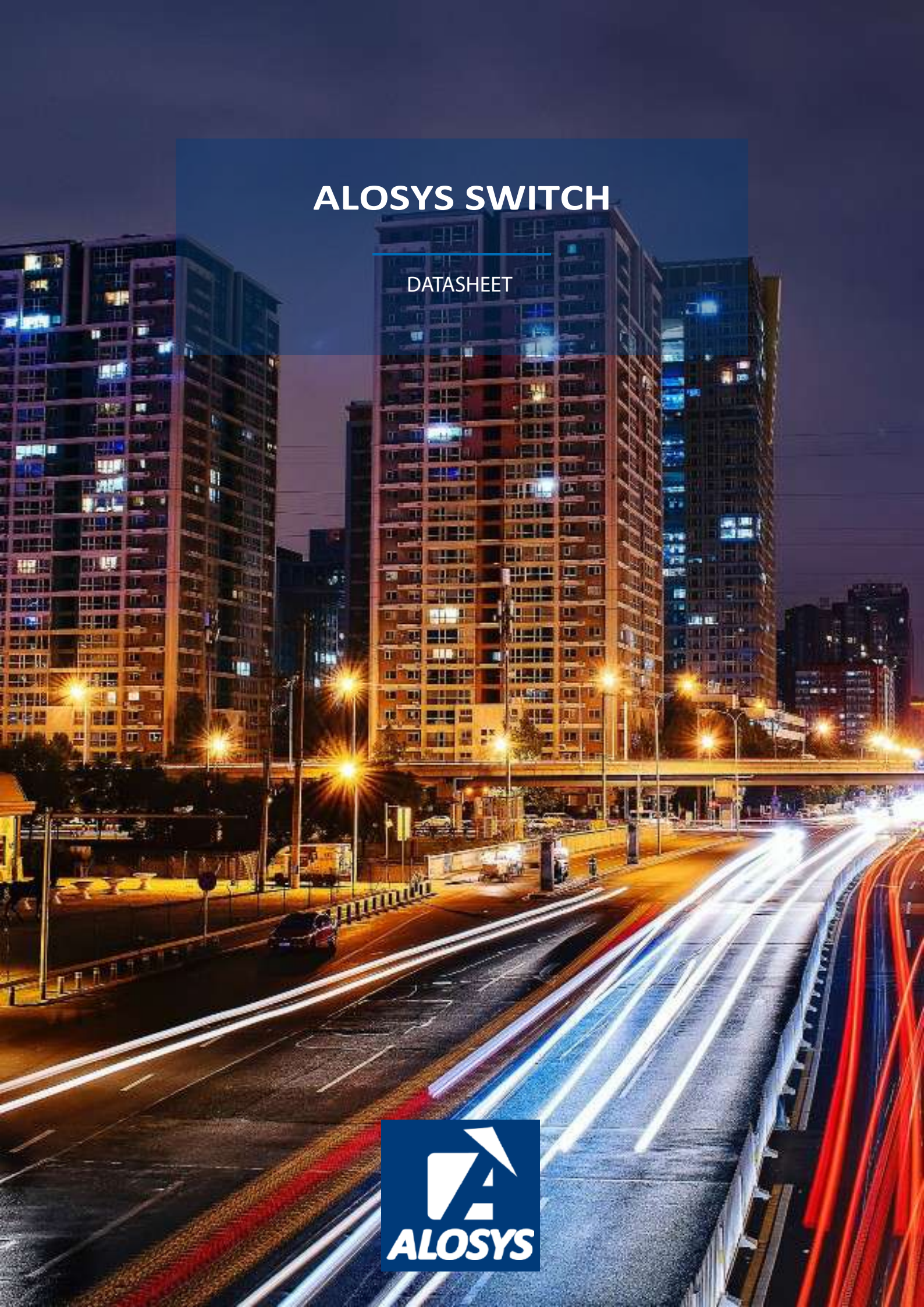
ALOSYS SWITCH

DATASHEET



ALOSYS SWITCH

SOME INFORMATION

Alosys Switch (AS) is a solid-state switch with NO (Normal- ly Open) output and protection circuitry. The **AS** provides output contact closure with an input voltage of 200VAC to 255VAC, the output contact is capable of switching an AC load having a current ≤1A and a voltage ≤255V with a frequency of 50 to 60Hz. The output contact is open with a voltage <10V. In the active control state, the AS has a consumption of less than 180mW. The switching of the contact is random, i.e. it does not depend on the phase of the signal to be switched; this switching is silent, without arcing and bouncing.

PATENT AND DEGREE OF PROTECTION

The Alosys Switch device is protected by patent (Patent Cooperation Treaty) under protocol number PCT/IT2017/00201. The device has a native protection rating of IP68.

PRINCIPLE OF OPERATION

AS in conjunction with the distribution and control cabinet of the street lighting network power supply systems allows 24-hour power supply while maintaining a high level o f energy efficiency.
giving the lamp off during the pre-set hours.
All this is done in a simple and effective manner without making its use invasive and without any particular installation or electrical connection costs.

FIELDS OF APPLICATION

This energy can be used to power any equipment compatible with the withdrawal capacity of the distribution system. Below is a series of application fields for the device:

- Electric charging stations for e-mobility
- Environmental sensors - pollution - smart parking
- 5g communication antennas
- Real-time traffic signs
- IoT devices
- Wireless communication systems
- Video surveillance systems
- Hotspost wifi
- etc.

Product Data Sheet	
General Information	
Dimensions	65 mm x 38 mm x 27 mm
ON /OFF Switching Time	<6500ms
Switching time OFF/ON	<620ms
Output	NO (Normally Open)
Unit weight	93 g
Electrical Data	
Control voltage	200VAC to 255VAC
Maximum Current	≤ 1 A
Frequency of Operation	50 : 60Hz
Open contact for voltages	<10VAC
Consumption	<140 mW
Input-output isolation	3KV
Dielectric rigidity	3KV AC
Type of current	AC
Operating voltage	200 VAC : 255 VAC

Temperature	
Operating temperature	-20°C : 60°C
Category and Protection Class	
Protection Category	IP68
Protection Class	II
Enclosure Material	ABS
Plant connections	
Number of connections	4
Load current	≤ 1 A
Type of connection	Control with two-wire cable and single-wire contacts with double insulation
Technical reference standards	
Certification	CE
Electromagnetic compatibility of emission and immunity	EN 55015 (2013); EN 61547 (2010)
Climate tests	-20°C + 60°C
Electrical safety tests	EN 61347-2-11 (2001); EN 60529 (1997)

ALOSYS SWITCH AND LIGHTING SYSTEM ARCHITECTURE

Figure 1 shows a public lighting system consisting of a three-phase switchgear feeding a single three-phase line. The lighting system is activated by an astronomical clock, alternatively a twilight switch can be used.

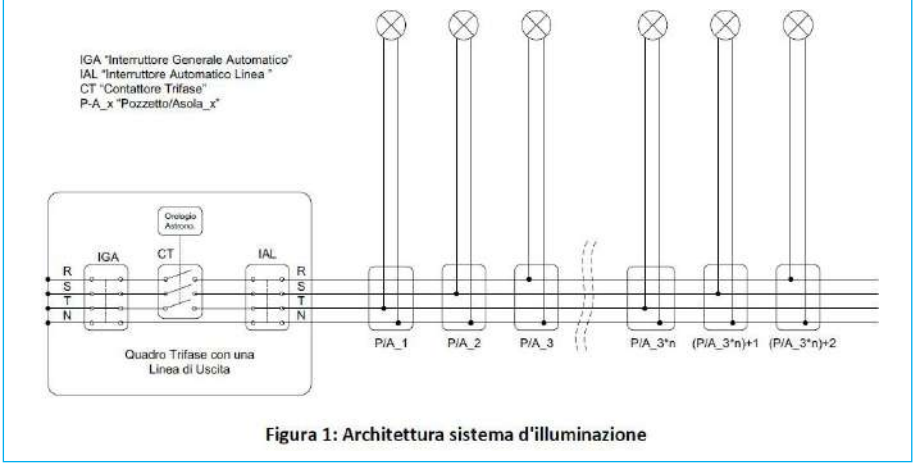


Figura 1: Architettura sistema d'illuminazione

Figure 2 shows a public lighting system consisting of a three-phase switchboard and a single three-phase line. The changes to be made are described below.

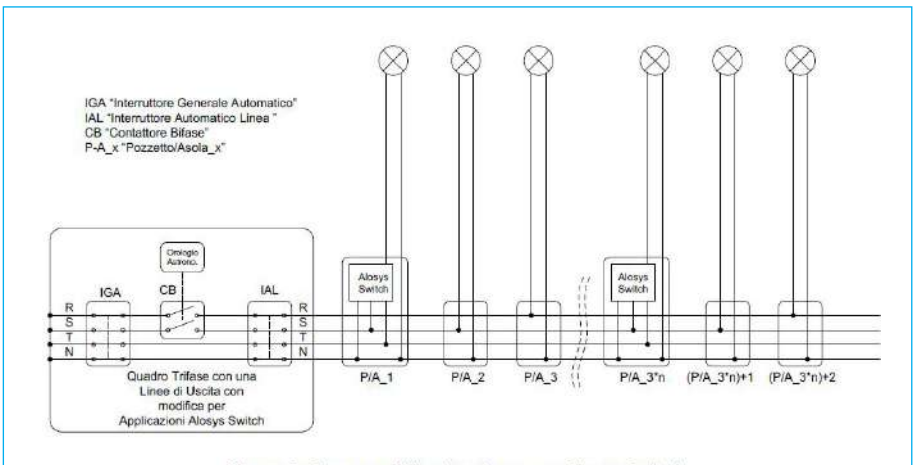


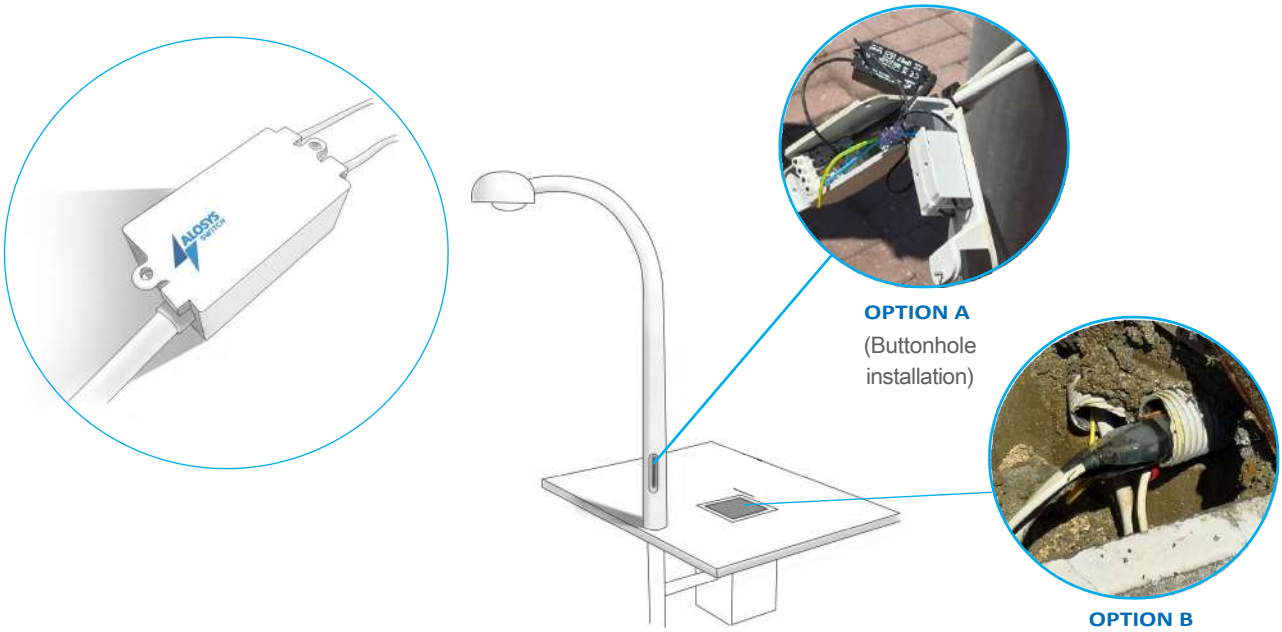
Figura 2: Sistema d'illuminazione con Alosys Switch

The following steps must be taken when using the architecture with Alosys Switches:

- **Switchboard.** One chooses which phase is always active, in figure 2 reference is made to phase T. Without recertifying the installation but only updating the switchboard documentation, the intervention consists of disconnecting the always active phase from the input of the contactor and connecting it to its output. It is also possible to replace the three-phase contactor in figure 1 with a two-phase contactor. Leaving the phase in continuity
  activate T of the example.

- **Streetlights:** The Switch system is installed on lampposts fed from the active phase either on the shaft or on the slot.

N.B. This architecture allows energy to be drawn from all the manholes/holes of the lighting network.



TECHNICAL DRAWINGS

Alosys Switch (AS) consists of two parts:

1. a 230 VAC signal switching part

2. a logical part to detect the status of the lighting system (Day/Night) and depending on the status, control the switch, so at night it is closed and during the day it is open.

The switch has its ends towards the outside of the IS by means of two wires marked 'L' and 'Load' which must be connected in series to the phase carrying the electricity to the lamppost.