

Product Guide

Anti-ligature switches
3-wire versions

AL-3 Standard

AL-3-L with LED indicator

Product Overview

The ALS3 Anti-Ligature Switch is a vandal-resistant touch-sensitive switch for activating/ deactivating the connected load. It is ideal for applications where anti-ligature controls are required for compliance and safety of the room users. The unit is available in two different models

- The ALS3 is a standard anti-ligature switch
- The ALS3-L has an illuminated button to aid location of the unit in the dark.

The unit is simple to install and fits a standard single-gang UK pattress or back box (20mm min. depth). Ideal applications include small booths or rooms, workshops, entrance halls, staircases, toilets, store cupboards, hired sports courts and rooms plus many more. Figure

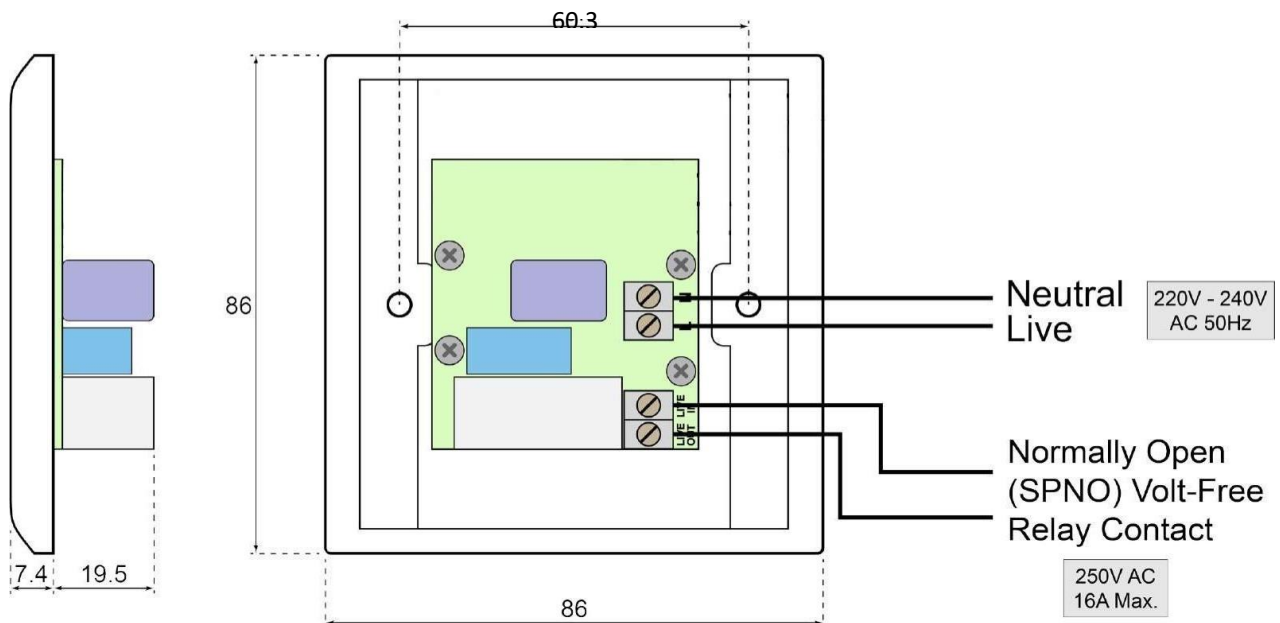
Figure 1a AL-3



Figure 1b AL-3L



Figure 2 Typical wiring example and dimensions (in millimetres)



Electrical Requirements

Before attempting to install the unit, ensure that the intended load and wiring arrangement comply with the following requirements. Figure 2 shows a typical wiring example.

- **3-wire (live/neutral + volt-free switch) connection:** The unit requires a permanent live/neutral connection, and as such is not suitable for replacing an existing light switch with no neutral conductor at the switch location. A volt-free relay output is provided, which can be used to switch a load on the same mains supply (by connecting across from **L** to **LIVE IN**, making **LIVE OUT** a switched live), or to provide a contact closure to a separate load or control signal. There is no minimum load requirement.

Also available: ALS2 / ALS2-L (2-wire versions) — Suitable for 'inline' connection with the load to be switched (no neutral required), such as to replace a standard light switch. A minimum load of **20W (per switch unit)** applies; a load capacitor is required for smaller loads.

- **Maximum load:** The maximum load rating is **16A (4000W)**, however for high inrush loads (such as most types of lighting), a lower limit applies: see *Technical Specification*.



All electrical installation and maintenance must be carried out by a competent person. If in doubt, consult a qualified electrician. Any new wiring must be carried out by qualified personnel in accordance with the current edition of the IET Wiring Regulations (BS7671)



Ensure the electrical supply is isolated before making any connections or adjustments.

Installation

1. Prepare a single-gang pattress or back box as necessary.

2. Connect the wiring as shown in Figure 2 (or in any suitably appropriate form).

Supply connections (L, N): Use appropriate mains cable to power the unit. If the load is also powered via this wiring, ensure the current rating is adequate. Otherwise (i.e. if the output is independently powered), low-current cable may be used.

Load connections (LIVE IN, LIVE OUT): Use cable rated for the load current and voltage.

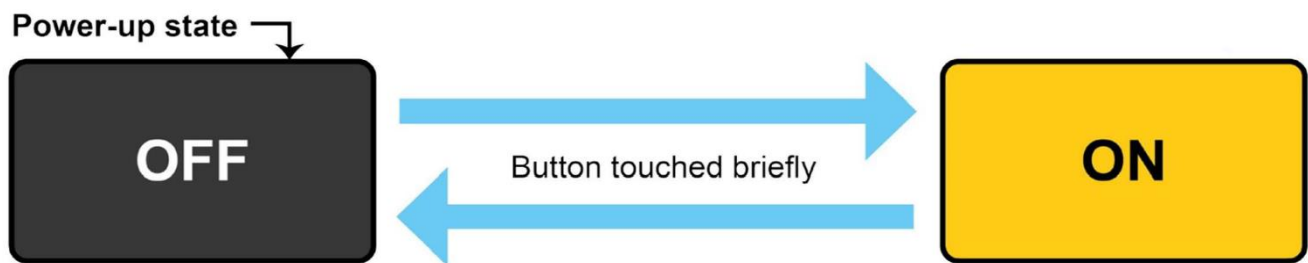
Fix the unit into position with the two screws and caps supplied.

Additional Guidelines

The screw caps may be removed at a later date with the aid of an adhesive putty such as Blu-Tack.

Operation

The diagram below illustrates the sequence of operation for the unit.



Operation Notes

ALS3-L only In the 'OFF' state, the LED is lit to facilitate location of the unit in the dark.

Fault Finding



Ensure the electrical supply to the unit is isolated before making any adjustments.

Load will not switch on

a) Unit is not powered

Ensure the unit is correctly connected to an active mains supply.

b) Load is not connected correctly

Ensure the load is connected appropriately. The relay output is volt-free so must be connected suitably to a supply in order to power a load.

Check that the load works on its own by- passing the anti-ligature switch.

Technical Specification	
Power supply	220V – 240V AC 50Hz (live/neutral)
Output switch type	Volt-free SPST (normally open) relay
Output switch rating	16A, 250V AC (resistive)
Maximum lighting load	Incandescent: 12A (3000W) Fluorescent: 10A (2500W)
Mounting hardware	20mm (min.) single-gang UK pattress box
Operating temperature	-10°C to +40°C
Guarantee	3 Years
Weight	87g
Dimensions	86mm x 86mm x 27 mm

IMPORTANT INSTALLATION NOTICE

The installation of this product should be carried out in accordance with the latest IEE wiring regulations and all wiring completed by a qualified electrician.

Technical Support

For further help or information on this and the other products in the MS Electronics range visit www.mselectronics.co.uk or call 0333 666 1176.

Alternatively, email techsupport@mselectronics.co.uk

Additional copies of this product guide can be downloaded from our website.

Product Warranty

MS Electronics guarantees all their products against manufacturing defects for 3 years from the purchase date. If your product is found to be faulty, MS Electronics will, at their discretion, repair or replace the product free of charge.

Note

Any modification or damage to the outer casing of the product, as well as any damage to the product due to abuse or incorrect wiring may invalidate the guarantee.

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