

Logic Plus
Dimmer Switches

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Logic Plus™ Dimmer Switches

PRODUCT RANGE

Standard Dimmer Switches

1 gang, 1 way, single dimmer switch, 40-250W	K1531 WHI
1 gang, 1 way, double dimmer switch, 2 x 40-250W	K1532 WHI
1 gang, 1 way, single dimmer switch, 60-450W	K1511 WHI
1 gang, 2 way, single dimmer switch, 40-250W	K1534 WHI
1 gang, 2 way, double dimmer switch, 2 x 40-250W	K1533 WHI
1 gang, 2 way, single dimmer switch, 60-450W	K1535 WHI

Intelligent Dimmer Switches

1 gang, single dimmer switch 40-300W (LV rating 40-240W/VA)	K1521 WHI LV
1 gang, double dimmer switch 2 x 40-300W (LV rating 2 x 40-240W/VA)	K1522 WHI LV
1 gang, single dimmer switch 60-500W (LV rating 60-400W/VA)	K1501 WHI LV

Description

MK Dimmer Switches fall into two categories:

- 1) **Standard Dimmer Switches**
- 2) **Intelligent Dimmer Switches**

Logic Plus offers both categories of Dimmer Switches

Standard Dimmer Switches

Dimmer Switches belonging to this category employ simpler electronic circuitry and make use of thermal switches to conform to the very stringent requirements of the Standard BS EN60669-2-1, for overload protection. They are only suitable for use with normal tungsten filament lamps with internal fuses, conforming to BS 161 standard and **do not** have any added features, e.g. soft start, ability to control dimmable transformers for low voltage, etc. **Standard Dimmer Switches are not suitable for use with transformers for Low Voltage Lighting or Fluorescent Loads, including Energy Saving Lamps.**

Intelligent Dimmer Switches

Dimmer Switches belonging to this category, employ the latest, state of the art, micro-controller based electronic circuitry and use current sensing to compute the load conditions. These products show progressive reaction to overload conditions, depending on the extent of overload as shown in the table below. List numbers belonging to this category are identified by the suffix letters LV, e.g. K1521 WHI LV. All MK Intelligent Dimmer Switches employ one pole change over switches to facilitate two way switching.

MK Intelligent Dimmer Switches are not suitable for use with Fluorescent Loads, including Energy Saving Lamps.

Overload reaction

Case	Approximate load on the dimmer as a percentage of its maximum rating	Power output to load when dimmer control is set to maximum
1	Up to 125	Load will receive maximum power continuously.
2	>125 to 150	Output to load will be reduced to 50% of the maximum after a delay of approximately 20 seconds after switch on.
3	>150 to 200	Output to load will be reduced to the minimum setting of the dimmer after a delay of approximately 20 seconds after switch on.
4	>200	Output will be disabled (load will be switched off) almost instantaneously after switch on.



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TECHNICAL SPECIFICATION

Electrical

Mains Supply Voltage:
230V a.c. (Nominal)

Mains Supply Voltage Range:
216V a.c. to 253V a.c.

Mains Supply Frequency:
50Hz ±3Hz

Type of Loads

Standard Dimmers:
Fused GLS Tungsten Filament lamps only to BS161,
rated at 230/240V

Low Voltage Dimmers:
Fused GLS Tungsten Filament lamps to BS161,
rated at 230/240V. Dimmable wire wound or
electronic Low Voltage Transformers of good quality.

Note: Transformer must be suitable for dimming
using phase delay (leading edge) and NOT only
phase cut (trailing edge) type of dimmers.

Warning: These dimmer switches are not suitable for
use with Fluorescent Lamps or Energy Saving Lamps.

Physical

Operating temperature:
0°C to +40°C

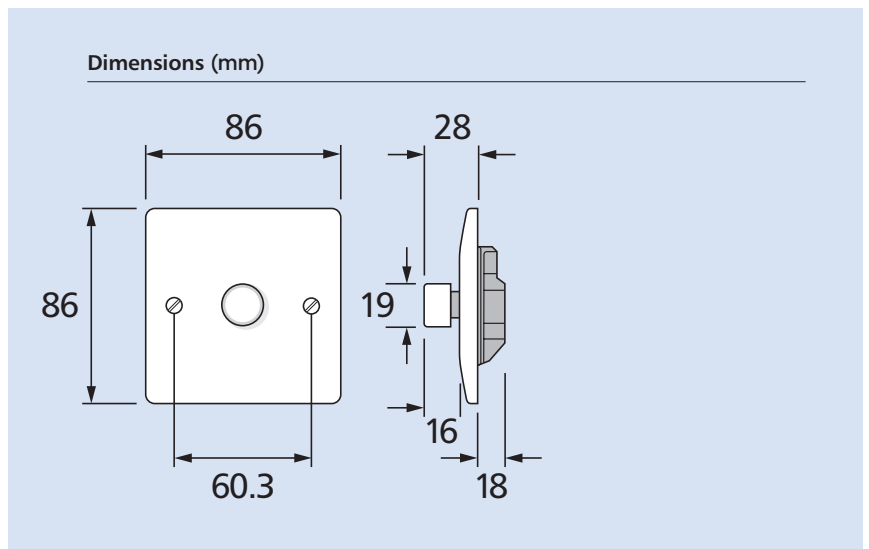
IP rating:
IP4X

Max. installation altitude:
2000 metres

Standards and approvals

All Logic Plus dimmer switches comply with the EC
Low Voltage Directive: 73/23/EEC,
Electromagnetic Compatibility Directive 89/336/EEC

They also comply with BS EN 60669-2-1
and BS EN 55015



Features

Intelligent Dimmer Switches
incorporate the following advanced
features

- Suitable for dimming Low Voltage Halogen lamps via good quality, fully dimmable electronic or wire-wound transformers.
- Unidirectional current sensing. While being used with wire-wound transformers for low voltage lighting, these dimmer switches continuously monitor the drive conditions to the transformers, which require essentially, bi-directional a.c. supply at their input terminals. If, due to some fault condition, the supply to the wire-wound transformer is detected to be unidirectional, which could result in over-heating and/or damaging the transformer, the dimmer switches' circuitry automatically stops supplying the transformer after a few cycles of detected unidirectional supply.
- Soft Start, which gradually increases the light output from the load over 1 to 3 seconds after switch on. The Soft Start feature is also particularly beneficial when used to dim Mains Voltage Tungsten Halogen lamps which have inherent very high inrush current at switch on.

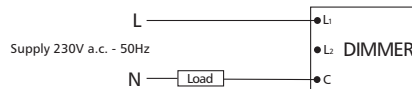
Box types

	Flush	Surface
1 gang (excluding double dimmers)	861 ZIC (25mm)	–
1 gang (for double dimmers)	866 ZIC (35mm)	–

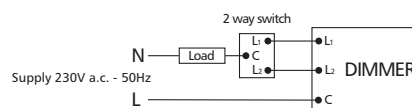
Intelligent Dimmer Switches

	Rating	Max No. of Transformers
1 gang single switches	40-300W (LV rating 40-240W/VA)	4
1 gang double switches	40-300W (LV rating 2 x 40-240W/VA)	4 per dimmer
1 gang single	60-500W (LV rating 60-400W/VA)	5

One-way switching



**Two-way switching
(only one dimmer can be used)**



Wires must be connected to the correct Dimmer terminals.
DO NOT connect earth to Dimmer