## BRITISH <br> Be <br> GENERAL <br> Technical Data <br> Dimmers Switches - Push On/Off

## Brief product description:

The screwless slim line design in a range of finishes will blend with any décor - suitable for domestic or commercial installations.

## Features:

- Fixed integrated plastic gasket to protect metal edges from moisture
- Under 5mm thick
- Flat profile with rounded edges
- Available in 4 metal finishes
- Secure easy "Clip on, Clip off frontplate design


## Product Images




## Dimmers Switches - Push On/Off

## Technical Specifications

| Standard(s) | BS EN 60669-2-1 |
| :--- | :--- |
| Rating | $60-400 \mathrm{~W}$ |
| Switch type | Push on - Push off - Rotary to adjust level |
| Terminal Capacity | $3 \times 1 \mathrm{~mm}^{2} 2 \times 1.5 \mathrm{~mm}^{2} 1 \times 2.5 \mathrm{~mm}^{2}$ |
| RoHS Directive | No |
| WEEE Directive | No |
| Mounting Box Depth(Min) | 25 mm |
| Fixing Centres | 60.3 mm (Fxx81P, Fxx82P, Fxx88P products) |
| Size | 120.6 mm (Fxx83P, Fxx84P products) |
|  | $87.4 \mathrm{~mm} \times 87.4 \mathrm{~mm} \times 41.2 \mathrm{~mm}$ (Fxx81P, Fxx82P, Fxx85P products) |

## Line Diagrams



Fxx81P


Fxx82P


Fxx83P


Fxx84P


Fxx85P

## Weights \& Dimensions

| Cat No. | Description | Pack Quantity |  |  | Dimension (W×L×H) cm |  |  | Weight (g) |  |  | $\mathrm{CMB}\left(\mathrm{m}^{3}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Each | Inner <br> Box | Outer Box | Product | Inner Box | Outer Box | Each | Inner Box | Outer Box | Outer Box |
| Fxx81P | 1G 2W 400W Push | 1 | 10 | 100 | $4.8 \times 9 \times 9.2$ | $20 \times 25.5 \times 9.8$ | $41.5 \times 52.5 \times 26.5$ |  |  |  |  |
| Fxx82P | 2G 2W 400W Push | 1 | 10 | 100 | $4.8 \times 9 \times 9.2$ | $20 \times 25.5 \times 9.8$ | $41.5 \times 52.5 \times 26.5$ |  |  |  |  |
| Fxx83P | 3G 2W 400w Push | 1 | 5 | 50 | $4.8 \times 9 \times 15.2$ | $16 \times 25.5 \times 9.8$ | $33.5 \times 52.5 \times 26.5$ |  |  |  |  |
| Fxx84P | 4G 2W 400W Push | 1 | 5 | 50 | $4.8 \times 9 \times 15.2$ | $16 \times 25.5 \times 9.8$ | $33.5 \times 52.5 \times 26.5$ |  |  |  |  |
| Fxx85P | 1G 1000W (Export) | 1 | 10 | 100 |  |  |  |  |  |  |  |

## Dimmers Switches - Push On/Off

Packaging Information

| Cat No. | Description | Barcode |  |  | Cat No. | Description | Barcode |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Individual | Inner Box | Outer Box |  |  | Individual | Inner Box | Outer Box |
| FBS81P | 1G 2W 400W Push | 5050765006545 | 1 | 1 | FBS84P | 4G 2W 400w Push | 5050765006576 | 1 | 1 |
| FPC81P | 1G 2W 400W Push | 5050765005616 | 1 | 1 | FPC84P | 4G 2W 400W Push | 5050765005647 | 1 | 1 |
| FPB81P | 1G 2W 400W Push | 5050765008433 | 1 | 1 | FPB84P | 4G 2W 400W Push | 5050765018753 | 1 | 1 |
| FBN81P | 1G 2W 400w Push | 5050765007030 | 1 | 1 | FBN84P | 4G 2W 400W Push | 5050765007061 | 1 | 1 |
| FBS82P | 2G 2W 400W Push | 5050765006552 | 1 | 1 | FBS85P | 1G 1000W (Export) |  | 1 | 1 |
| FPC82P | 2G 2W 400W Push | 5050765005623 | 1 | 1 | FPC85P | 1G 1000W (Export) |  | 1 | 1 |
| FPB82P | 2G 2W 400W Push | 5050765008440 | 1 | 1 | FPB85P | 1G 1000W (Export) |  | 1 | 1 |
| FBN82P | 2G 2W 400W Push | 5050765007047 | 1 | 1 | FBN85P | 1G 1000W (Export) |  | 1 | 1 |
| FBS83P | 3G 2W 400W Push | 5050765006569 | 1 | 1 | FPB83P | 3G 2W 400W Push | 5050765008457 | 1 | 1 |
| FPC83P | 3G 2W 400W Push | 5050765005630 | 1 | 1 | FBN83P | 3G 2W 400W Push | 5050765007054 | 1 | 1 |

## Installation Information

## Safety Warning

Before use please read carefully and use in accordance with these safety wiring instructions.
Before commencing any electrical work ensure the supply is switched off at the mains. Either by switching off the consumer unit or by removing the appropriate fuse. Wiring should be in accordance with the latest edition of the IEE regulations (BS 7671).

## Wire Identification - Twin \& Earth Cable

EARTH = Green/Yellow Sleeving
NEUTRAL = Black (pre Apr 04) / Blue (after Apr 04)


Technical Helpline: 08451947584

LIVE $=$ Red (pre Apr 04) / Brown (after Apr 04)
If in doubt consult a competent electrician.

The ends of the individual conductors should have the insulation removed by approx. 12 mm . Any bare earth conductors should be sleeved to within 12 mm of the ends (These details are for general information only and conductor lengths may need to be trimmed in certain installations).

## General Installation Instructions

1) If using the new product to replace an old one, note the cable connections and wire up new product in the same way as the old one, with Earthing as stated in these instructions. 2) Ensure the mounting box (metal or patress) for either flush or surface mounting is the appropriate size for the product.
2) Route the cable through the most suitable entry point of the mounting box. If a metal box is used, a protective cable grommet should be used.
3) Cables should be prepared so a sufficient conductor length reaches the terminals. Strip the ends of the individual conductors so that an adequate length enters the terminals. 5) Carefully arrange the wiring to lie along the edges of the product or box, keeping the central area clear.
4) To assist with the correct installation please consult the appropriate wiring diagram on this leaflet.
5) When connecting the new accessory ensure that only the bare end of the wire enters the terminal, and no bare wires are visible. Always tighten the terminal screws securely, but do not overighten. An earth connection should always be made between the mounting box earth terminal, and the accessory earth terminal, where fitted. If this earth wire is bare, it is essential that it is sheathed with a length of green/yellow sleeving.
6) Carefully position the accessory into the wall box, ensuring that no wires are trapped between the plate and the wall. Do not overtighten the screws. (Fit screw covers + clip-on)
7) Once work has been completed correctly, replace the fuse for the circuit, switch the power back on, and test.

The product is now ready for use.

* Note - If your installation uses a four lug metal mounting box, remove the top and bottom lugs or bend fully back.


## Decorative Front Plate Fixing

Fixing method varies depending on which product range is supplied. Always ensure wall surface is reasonably flat and smooth, with no bumps or projections.
Metal Front plates WITH screw fixing holes. These products comprise main unit with integral front plate and rear gasket. Fix unit to back box using two fixing screws supplied. Front plates WTHOUT screw fixing holes. These products comprise main unit with integral gasket, and front plate as separate item. Fix unit to back box using two fixing screws supplied Clip front plate onto main assembly, ensuring screwdriver notch is located bottom right hand corner. To remove plate, place medium size flat bladed screwdriver in notch and lever off against gasket.
For all Decorative Plates - It is essential the gasket is fitted between product and wall, to reduce possibility of discolouration of front plate edges due to natural moisture in some wall finishes. To keep the finish of this product, wipe over with soft cloth periodically.
All Decorative products MUST have an earth connection between the front-plate and back box

## One Way Switching

One way switching is used in installations where the lights are switched from just one position. Connect the dimmer unit as shown in the diagram.


All earth wires must be sleeved and terminated to the back box

## Two Way Switching

Two way switching is used in installations where a light is controlled from two separate positions. The dimmer may replace only one of these switches, and may be fitted in either position. Connect the dimmer unit as shown in the diagram.


## Dimmers Switches - Push On/Off

## Installation Information

## 1000W Dimmer (Export Only)



| Plate Size | No. of <br> Dimmers | Max. each <br> Dimmers | Min. each <br> Dimmers | Max. total <br> per plate |
| :---: | :--- | :--- | :--- | :--- |
|  | 1 | 250 W | 40 W | 250 W |
| Square plates | 1 | 400 W | 60 W | 400 W |
| $86 \mathrm{~mm} \times 86 \mathrm{~mm}$ | 1 | 630 W | 60 W | 630 W |
|  | 2 | 250 W | 40 W | 250 W |
|  | 2 | 400 W | 60 W | $630 \mathrm{~W}^{\star}$ |
|  |  |  |  |  |

*Maximum load of 630W for the plate should not be exceeded.

| Plate Size | No. of <br> Dimmers | Max. each <br> Dimmers | Min. each <br> Dimmers | Max. total <br> per plate |
| :---: | :--- | :--- | :--- | :--- |
|  | 1 | 1000 W | 150 W | 1000 W |
| Rectangular plates | 2 | 630 W | 60 W | $1000 \mathrm{~W}^{*}$ |
| $86 \mathrm{~mm} \times 146 \mathrm{~mm}$ | 3 | 250 W | 40 W | 750 W |
|  | 4 | 400 W | 60 W | $1000 \mathrm{~W}^{*}$ |
|  | 4 | 250 W | 40 W | $1000 \mathrm{~W}^{*}$ |
|  | 400 W | 60 W | $1000 \mathrm{~W}^{\star}$ |  |

*Maximum load of 630W for the plate should not be exceeded.

## Please Note:

The dimmer is a LEADING EDGE type.
The dimmer unit will emit a faint buzz and may become warm while in operation, this is quite normal and no cause for concern

## Tungsten Lighting

Tungsten dimmers are not suitable for dimming any transformer, low voltage, fluorescent or motor loads
Mains voltage tungsten halogen lamps may be dimmed, but the maximum rating of the dimmer must be de-rated by 50\% (i.e., a 40-250W dimmer must be treated as 40-125W, a 60-400W dimmer as 60-200W, etc.)

## Low Voltage Lighting

2-Way (Push ON/OFF) low voltage dimmers are only suitable for dimming wire wound laminated and some dimmable electronic transformers.
They are not suitable for dimming torodial transformers, Flourescent or Tungsten Lamps. Many electronic transformers are not dimmable and many which claim to be dimmable may not be compatiable. Most UK dimmers, use a 'leading edge' principle, therefore, transformers which require a 'trailing edge', 'falling edge', 'phase lagging' or 'transistor' dimmer, must not be used. To dim any compatiable transformer, a low-voltage (inductive) dimmer must always be used.
These are not 'inductive only' dimmers
The dimmer VA rating refers to the total circuit load, not lamp load. Allow for transformer losses. Typically 20\% (or 15\% for electronic transformers). Therefore, maximum load for 400 VA dimmer becomes 330W (350W electronic), and 250VA becomes 210 W (215W for electronic).
Low voltage dimmers should be connected on the 'mains side' of the transformer.
Load resistors are not required.
Transformers should be installed in accordance with the manufacturer's instructions. If setup with laminated transformer either buzzes excesively or lights flicker, it may be necessary to install a snubber circuit across the transformer primary. (one per dimmer circuit).

