



# Technical Data

## 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
- Suitable for compact fluorescent lamps(CFL) and LED Dimming
- There can be issues with dimming CFL and LED lamps at a low lighting level. The Nexus dimmer products have an adjustable minimum level feature which can be used to adjust the lighting output at a low level, to stabilise the load.

### Product Images

#### Black Nickel



FBN81P/ FBN85P



FBN82P



FBN83P



FBN84P

#### Polished Chrome



FPC81P/ FPC85P



FPC82P



FPC83P



FPC84P

#### Polished Brass



FPB81P/ FPB85P



FPB82P



FPB83P



FPB84P

#### Brushed Steel



FBS81P/ FBS85P



FBS82P





FBS83P



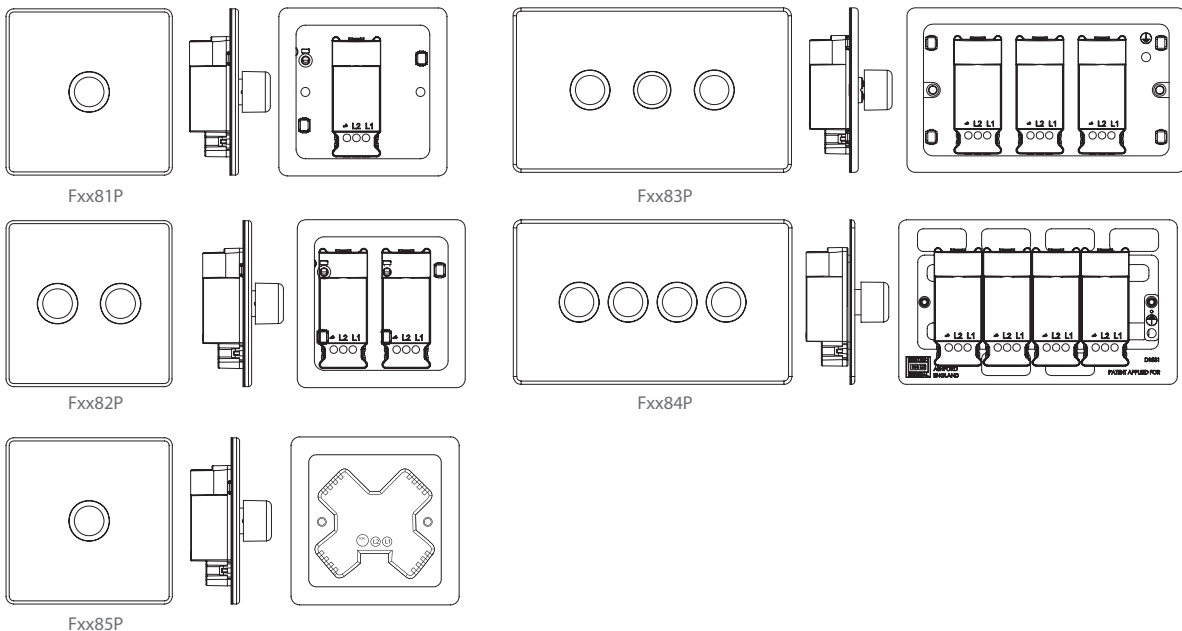
FBS84P

# Dimmers Switches - Push On/Off

## Technical Specifications

Standard(s)	BS EN 60669-2-1	 
ASTA Approval	License Number 1019	
Voltage	200-250V AC	
Load Ratings(Max/Min per module)		
Tungsten lamp	60-400W	
Halogen lamp(Mains Voltage)	50-400W	
Halogen lamp(Low Voltage, 12V)	35-350W	
Dimmable LED	5-50W	
Dimmable Compact Fluorescent (CFL)	10-100W	
Type	Leading Edge	
Terminal Capacity	3 x 1mm <sup>2</sup> 2 x 1.5mm <sup>2</sup> 1 x 2.5mm <sup>2</sup>	
RoHS Directive	No	
WEEE Directive	No	
Mounting Box Depth (min)	25mm	
Fixing Centres	60.3mm (Fxx81P, Fxx82P, Fxx88P products) 120.6mm (Fxx83P, Fxx84P products)	
Size	87.4mm x 87.4mm x 41.2mm (Fxx81P, Fxx82P, Fxx85P products) 146.5mm x 86mm x 41.2mm (Fxx83P, Fxx84P products)	

## Line Diagrams



# Dimmers Switches - Push On/Off

## Weights & Dimensions

Cat No.	Description	Pack Quantity			Dimension (W x L x H) cm			Weight (g)			CMB (m <sup>3</sup> )
		Each	Inner 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 x 9 x 9.2	20 x 25.5 x 9.8	41.5 x 52.5 x 26.5				
Fxx82P	2G 2W 400W Push	1	10	100	4.8 x 9 x 9.2	20 x 25.5 x 9.8	41.5 x 52.5 x 26.5				
Fxx83P	3G 2W 400W Push	1	5	50	4.8 x 9 x 15.2	16 x 25.5 x 9.8	33.5 x 52.5 x 26.5				
Fxx84P	4G 2W 400W Push	1	5	50	4.8 x 9 x 15.2	16 x 25.5 x 9.8	33.5 x 52.5 x 26.5				
Fxx85P	1G 1000W (Export)	1	10	100							

## 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	/	/	FBS84P	4G 2W 400W Push	5050765006576	/	/
FPC81P	1G 2W 400W Push	5050765005616	/	/	FPC84P	4G 2W 400W Push	5050765005647	/	/
FPB81P	1G 2W 400W Push	5050765008433	/	/	FPB84P	4G 2W 400W Push	5050765018753	/	/
FBN81P	1G 2W 400W Push	5050765007030	/	/	FBN84P	4G 2W 400W Push	5050765007061	/	/
FBS82P	2G 2W 400W Push	5050765006552	/	/	FBS85P	1G 1000W (Export)		/	/
FPC82P	2G 2W 400W Push	5050765005623	/	/	FPC85P	1G 1000W (Export)		/	/
FPB82P	2G 2W 400W Push	5050765008440	/	/	FPB85P	1G 1000W (Export)		/	/
FBN82P	2G 2W 400W Push	5050765007047	/	/	FBN85P	1G 1000W (Export)		/	/
FBS83P	3G 2W 400W Push	5050765006569	/	/	FPB83P	3G 2W 400W Push	5050765008457	/	/
FPC83P	3G 2W 400W Push	5050765005630	/	/	FBN83P	3G 2W 400W Push	5050765007054	/	/

## 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 Sleaving

**NEUTRAL** = Black (pre Apr 04) / Blue (after Apr 04)

**LIVE** = Red (pre Apr 04) / Brown (after Apr 04)



**Technical Helpline: 0845 194 7584**  
If in doubt consult a competent electrician.

The ends of the individual conductors should have the insulation removed by approx. 12mm. Any bare earth conductors should be sleeved to within 12mm 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.
  - 3) 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.
  - 4) 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.
  - 6) To assist with the correct installation please consult the appropriate wiring diagram on this leaflet.
  - 7) 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 overtighten. 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 sleaving.
  - 8) 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)
  - 9) 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.

# Dimmers Switches - Push On/Off

## Installation Information

### 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 WITHOUT 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.

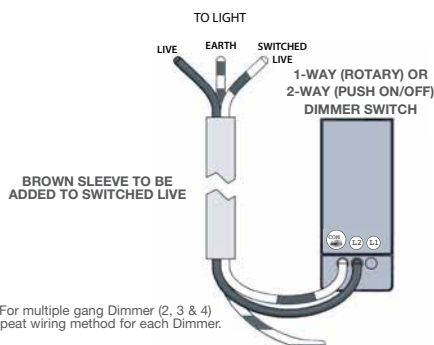
For all Decorative Plates - It is essential the gasket is fitted between product and wall, to reduce possibility of discolouration of front plate edges due to natural moisture in some wall finishes.

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

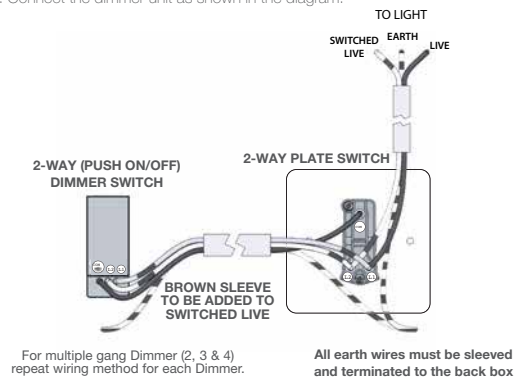
One way switching is used in installations where the lights are switched from just one position. Connect the dimmer unit as shown in the diagram.



For multiple gang Dimmer (2, 3 & 4) repeat wiring method for each Dimmer.

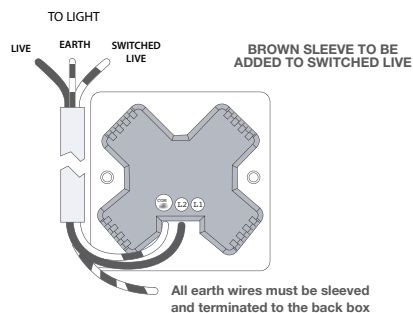
### Two Way Switching

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.



For multiple gang Dimmer (2, 3 & 4) repeat wiring method for each Dimmer.

### 1000W Dimmer (Export Only)



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

Plate Size	No. of Dimmers	Max. each Dimmers	Min. each Dimmers	Max. total per plate
	1	250W	40W	250W
Square plates 86mm x 86mm	1	400W	60W	400W
	2	630W	60W	630W
	2	250W	40W	250W
	2	400W	60W	630W*
*Maximum load of 630W for the plate should not be exceeded.				
Plate Size	No. of Dimmers	Max. each Dimmers	Min. each Dimmers	Max. total per plate
Rectangular plates 86mm X 146mm	1	1000W	150W	1000W
	2	630W	60W	1000W*
	3	250W	40W	750W
	3	400W	60W	1000W*
	4	250W	40W	1000W*
4	400W	60W	1000W*	
*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 toroidal transformers, Fluorescent or Tungsten Lamps. Many electronic transformers are not dimmable and many which claim to be dimmable may not be compatible. 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 compatible 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 400VA dimmer becomes 330W (350W electronic), and 250VA becomes 210W (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 excessively or lights flicker, it may be necessary to install a snubber circuit across the transformer primary. (one per dimmer circuit).

To maintain the high quality appearance of decorative finish switches and sockets, BG Electricals recommend the use of a soft cloth periodically to clean the front face. When installing a decorative product please ensure that the wall is decorated, finished and free of moisture prior to installation. Please note that it can take several weeks for the chemicals in paint or wallpaper paste to become inert. Before this time there is a danger that they will react with the product if it has a metal faceplate.

BG recommends avoiding using, but not restricted to, the substances from becoming in contact with the decorative metal front-plates when cleaning or decorating;

- Adhesive tape, including masking tape
- Solvents
- White spirit
- Multi surface cleaners
- Industrial multipurpose cleaning wipes
- Wet wipes

Using these items like those listed above may cause a degrading effect to the front-plates lacquer/plated finish, although the function will remain unaffected.