

Back Box Cross Reference Chart

TECHNICAL

FLUSH MOUNTING	METAL BOXES				DRY LINING BOXES		
	Depth	16mm	25mm	35mm	46mm	35mm	46mm
SOCKETS							
1 gang 13A			DB162	DB164 / DB166	DB167	DB2540 / DB2545	DB2542
2 gang 13A			DB163	DB165	DB168	DB2541	DB2543
Round pin sockets			DB162	DB164 / DB166	DB167	DB2540 / DB2545	DB2542
Shaver sockets					DB168		DB2543
CONNECTION UNITS							
Fused/unfused			DB162	DB164 / DB166	DB167	DB2540 / DB2545	DB2542
CONNECTION/BLANK PLATES							
Flex connection plate				DB164 / DB166	DB167	DB2540 / DB2545	DB2542
1 gang blank plate	DB152		DB162	DB164 / DB166	DB167	DB2540 / DB2545	DB2542
2 gang blank plate			DB163	DB165	DB168	DB2541	DB2543
45 AMP SWITCHES							
1 gang					DB167		DB2542
1 gang tall					DB168		DB2543
Cooker connection unit					DB168		DB2543
45A outlet					DB167		DB2542
PLATE SWITCHES							
1, 2 & 3 gang	DB152		DB162	DB164 / DB166	DB167	DB2540 / DB2545	DB2542
4 gang			DB163	DB165	DB168	DB2541	DB2543
Intermediate	DB152		DB162	DB164 / DB166	DB167	DB2540 / DB2545	DB2542
CEILING SWITCHES							
6A				DB2544 (34mm)			
45A					DB167	DB2540 / DB2545	DB2542
TV / TELEPHONE OUTLETS							
Standard size outlets	DB152		DB162	DB164 / DB166	DB167	DB2540 / DB2545	DB2542
DIMMER SWITCHES							
1 gang/2 gang			DB162	DB164 / DB166	DB167	DB2540 / DB2545	DB2542

Deta Square

SURFACE MOUNTING	MOULDED BOXES				
	Depth	16mm	25mm	35mm	45mm
SOCKETS					
1 gang 13A			D1221	D1222	D1228
2 gang 13A			D1223	D1224	D1229
Round pin sockets			D1221	D1222	D1228
Shaver sockets					D1229
CONNECTION UNITS					
Fused/unfused				D1222	D1228
CONNECTION/BLANK PLATES					
Flex connection plate					D1228
1 gang blank plate			D1221	D1222	D1228
2 gang blank plate			D1223	D1224	D1228
45 AMP SWITCHES					
1 gang					D1228
1 gang tall					D1229
Cooker connection unit					D1229
45A outlet					
PLATE SWITCHES					
1, 2 & 3 gang		D1220E	D1221	D1222	D1228
4 gang			D1223	D1224	D1229
Intermediate		D1220E	D1221	D1222	D1228
CEILING SWITCHES					
45A					D1228
TV / TELEPHONE OUTLETS					
Standard size outlets			D1221	D1222	D1228
DIMMER SWITCHES					
1 gang/2 gang			D1221	D1222	D1228

Deta Flatplate & Screwless

FLUSH MOUNTING	METAL BOXES			DRY LINING BOXES		
	Depth	25mm	35mm	46mm	35mm	46mm
SOCKETS						
1 gang 13A			DB164 / DB166	DB167	DB2547 / DB2545	DB2542
2 gang 13A			DB165	DB168	DB2548	DB2543
Round pin sockets			DB164 / DB166	DB167	DB2547 / DB2545	DB2542
Shaver sockets				DB168		DB2543
CONNECTION UNITS						
Fused/unfused			DB164 / DB166	DB167	DB2547 / DB2545	DB2542
CONNECTION/BLANK PLATES						
1 gang blank plate	DB162	DB164 / DB166	DB167		DB2547 / DB2545	DB2542
2 gang blank plate	DB163	DB165	DB168		DB2548	DB2543
HIGH CURRENT SWITCHES						
20A		DB164		DB167		DB2542
45A				DB167		DB2542
45A tall				DB168		DB2543
Cooker control unit				DB168		DB2543
PLATE SWITCHES						
1, 2 & 3 gang	DB162	DB164 / DB166	DB167		DB2547 / DB2545	DB2542
4 gang	DB163	DB165	DB168		DB2548	DB2543
Intermediate	DB162	DB164 / DB166	DB167		DB2547 / DB2545	DB2542
TV / TELEPHONE OUTLETS						
Standard size outlets	DB162	DB164 / DB166	DB167		DB2547 / DB2545	DB2542
DIMMER SWITCHES						
1 gang/2 gang		DB164 / DB166	DB167		DB2547 / DB2545	DB2542

Deta Slimline & Deta Vimark

SURFACE MOUNTING	MOULDED BOXES				
	Depth	16mm	25mm	35mm	45mm
SOCKETS					
1 gang 13A		V1221/V1225	V1222/V1226	V1228	
2 gang 13A		V1223	V1224	V1229	
Round pin sockets		V1221/V1225	V1222/V1226	V1228	
Shaver sockets		V1223	V1224	V1229	
CONNECTION UNITS					
Fused/Unfused		V1221/V1225	V1222/V1226	V1228	
FLEX CONNECTION/BLANK PLATES					
Flex connection plate			V1222/V1226	V1228	
1 gang blank plate	V1220E	V1221/V1225	V1222/V1226	V1228	
2 gang blank plate		V1223	V1224	V1229	
45 AMP CONTROL SWITCHES					
1 gang				V1228	
1 gang tall				V1229	
1 gang with socket				V1229	
45A outlet				V1229	
PLATE SWITCHES					
1, 2 & 3 gang	V1220E	V1221/V1225	V1222/V1226	V1228	
4 gang		V1223	V1224	V1229	
Intermediate	V1220E	V1221/V1225	V1222/V1226	V1228	
ARCHITRAVE SWITCHES					
1 gang	V1324				
2 gang	V1325				
CEILING SWITCHES					
6A					
45A				V1228	
TV / TELEPHONE OUTLETS					
Single & twin, Co-axial & Satellite		V1221/V1225	V1222/V1226	V1228	
DIMMER SWITCHES					
1 gang / 2 gang		V1221/V1225	V1222/V1226	V1228	

The IP (international protection) rating given to an enclosure states the degree of protection it offers by means of two digits.

A summary of these is shown below; for a more detailed definition, see IEC 529: 1989, BS EN 60529: 1992.

First Digit

Protection against solid foreign objects and access to hazardous parts

The first digit covers protection against penetration by solid objects, which includes hands and tools such as screwdrivers. At the lowest of seven levels, 0, no protection is offered, either of the equipment itself from damage by intrusion or of a person contacting live or moving parts. At the highest, 6, there shall be no entry of dust.

Second Digit

Protection against ingress of water

The second digit covers the degree of protection against the entry of water, on a progressive scale. For example, number 1 indicates that dripping water shall have no harmful effect, and number 6, that water projected in powerful jets against the enclosure from any direction shall have no harmful effects.

IP		IP	
0	No protection	0	No protection
1	Protected against solid objects up to 50mm eg accidental touch by hands	1	Protected against vertical falling drops of water, eg condensation
2	Protected against solid objects up to 12mm, eg fingers	2	Protected against direct sprays of water up to 15° from the vertical
3	Protected against solid objects over 2.5mm, eg tools and wires	3	Protected against sprays of water up to 60° from the vertical
4	Protected against solid objects over 1mm, eg tools, wires and small wires	4	Protected against water splashed from all directions - limited ingress permitted
5	Protected against dust - limited ingress, no harmful deposits	5	Protected against low pressure jets of water from all directions - limited ingress permitted
6	Totally protected against dust	6	Protected against strong jets of water, eg for use on ship decks - limited ingress permitted

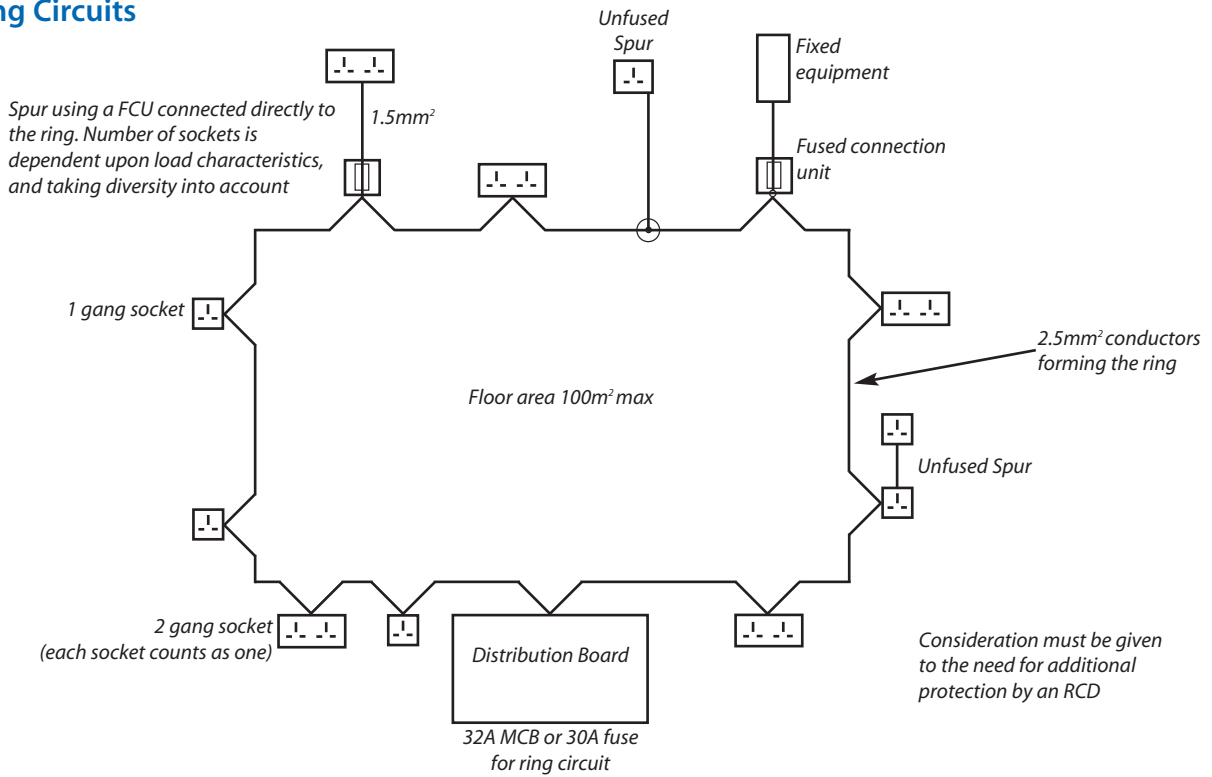
The letter X can be used in place of the first or second digit to indicate that tests have either not been made or are not applicable.

NOTE

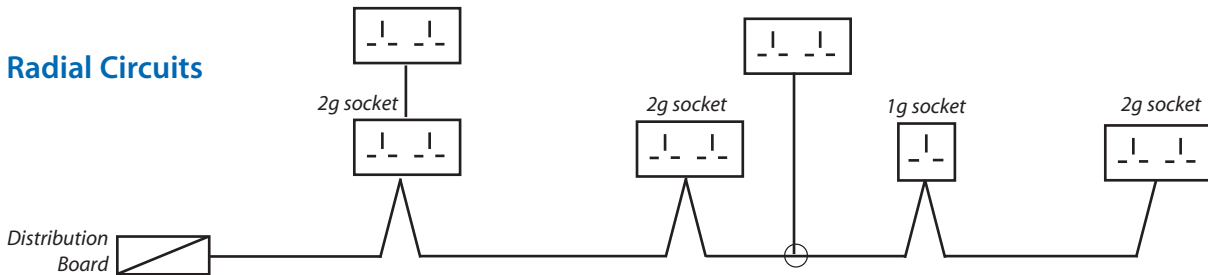
In the event of additional holes being drilled/pierced or knockouts removed, suitable measures should be taken to restore the products to the original ratings.

IEC 529, BS EN 60529 does not apply to protection against the risk of explosion or conditions such as humidity, corrosive gases, fungi or vermin. In certain cases equipment designed to be mounted in an enclosure will contribute towards the stated IP rating (eg pushbuttons mounted in an enclosure). Different parts of enclosures can have different degrees of protection and still conform to the standard (eg enclosures with pre-drilled conduit entry).

Final Ring Circuits



Final Radial Circuits



Final Circuits Using BS 1363 Socket-Outlets

Type of circuit	Overcurrent protective device		Minimum conductor size*		Maximum floor Area served
			Copper conductor Thermo-setting or PVC insulation	Copper conductor mineral insulated cables	
	Rating Amps	Type	mm ²	mm ²	
A1 Ring	30 or 32	Any	2.5	1.5	100
A2 Radial	30 or 32	Cartridge fuse or circuit breaker	4	2.5	75
A3 Radial	20	Any	2.5	1.5	50

*The tabulated values of conductor size may be reduced for fused spurs

Refer to the IEE Wiring Regulations (BS 7671) for a complete description of conventional circuit arrangements.

Product	No. & size of conductors accommodated					
	1.0mm ²	1.5mm ²	2.5mm ²	4.0mm ²	6.0mm ²	10mm ²
13 Amp sockets			4	2	2	1
Connection units			4	2	1	1
2 Amp round pin sockets	3	2	1			
5 Amp round pin sockets		3	2			
15 Amp round pin sockets		4	3	1		
20 Amp switch			4	2	1	1
Shaver socket outlet	3	2	1			
45 Amp switches			5	3	2	1
Plate switches	4	3				

CW1308 British Telecom Specification

All telephone sockets use paired wires.

Each wire is identified throughout its length with two colour bands, a base colour and a ring colour.

Each wire of a pair uses the same two colours but the base colour and the ring colours are reversed to permit identification.

2 or 3 pair cable is required to connect together sockets on each exchange line.

Socket terminals 1 and 6 are frequently unused, 2 pair (4 wire) cable is normally used in these installations.

Wire Identification For 2 or 3 Pair Cable

Terminal No.	Base colour	Ring colour	Colour Coding	
			2 Pair	3 Pair
01	Green	White		•
02	Blue	White	•	•
03	Orange	White	•	•
04	White	Orange	•	•
05	White	Blue	•	•
06	White	Green		•

Lampholder 'T' Rating

Bayonet (B22) lampholders without a T marking or marked T1 are suitable for temperatures on the cap up to and including 165°C. Bayonet (B22) lampholders with a T2 marking are suitable for temperatures on the cap up to and including 210°C.

Alternatively T ratings may state the operating temperature, e.g. T190 would equate to 190°C.

Lamp cap temperatures will depend on the lampholder orientation, lampshade or enclosure used and lamp rating.

Refer to the I.E.E. Wiring Regulation (BS7671) for the use of T2 rated lampholders.

12V Wiring

When wiring 12V products you need to bear in mind that low voltage means higher current (e.g. a 12V, 50W lamp requires 4.2A), therefore the conductor size of the cable between the fitting and the transformer is normally larger than that used in a mains-voltage lighting circuit. The table opposite will help you select the cable size required.

Selecting the cable size

1. Calculating the total wattage of the lamps to be supplied by the cable in question.
2. Find the corresponding value in the Watts column.
3. Read across until the distance stated in metres is equal to or greater than the cable run required.
4. Read up the column to see which cable size is required.

General

1. Ensure that the transformer is loaded correctly in terms of lamp wattage.
2. Due to the high localised temperatures generated by low-voltage lamps (in addition to the radiant heat produced by step-down transformers), the ceiling void must provide adequate ventilation.

Watts	Cable size in mm ²	
	1.5	2.5
20	8.6m	14.1m
40	4.3m	7.1m
50	3.4m	5.6m
60	2.9m	4.7m
80	2.1m	3.5m
100	1.7m	2.8m
120	1.4m	2.3m
140	1.2m	2.0m
150	1.1m	1.9m
200	0.9m	1.4m

Engraving

An engraving service is available for a limited range of white wiring accessories. Products can be engraved in an upper and lower case standard font, with either red or black in fill.

Engraved products must be ordered in multiples of 10, and are available with a 14 day lead time for stock items, with delivery subject to normal terms.

To order engraved products, please contact the sales office.

Photocells

Cat No.	JPZ30507 JPZ3061	PZ30527 JPZ3063	JHL4M JHL4MREM
Photocell Type	Electronic	Electronic	Electronic
Operating Voltage	230 VAC 50Hz	230 VAC 50Hz	230 VAC 50Hz
Switch on Lux Level	70	70	70
Typical load (H.P.S)	2 x 250W	2 x 250W	2 x 250W SON
Load switching Capacity	5 amps	5 amps	5 amps
Switching time delay	60 seconds	60 seconds	30 seconds
Operating temperature	-20°C to 55°C	-20°C to 70°C	-20°C to 70°C
Power consumption	Light (Standby)	3 Watts	0.35 Watts
	Dark (Operation)	0 Watts	Negligible
Enclosure material	Polycarbonate	Polycarbonate	Polycarbonate