

UNDERFLOOR TO DESK SOLUTIONS

DELIVERING INNOVATION
www.marshall-tufflex.com



UK OWNED
UK MANUFACTURER



UNDERFLOOR TO DESK SOLUTIONS

Marshall-Tufflex's underfloor to desk solutions incorporate a range of products for the distribution of power and data services from beneath raised floors and in-screed systems to desks.

Underfloor to desk solutions provide a sustainable wiring option, offering zero waste systems which can be re-used and re-configured.

Powertrack

Standard and CE (Clean Earth) 63Amp powertrack.



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Raised floor boxes and grommets

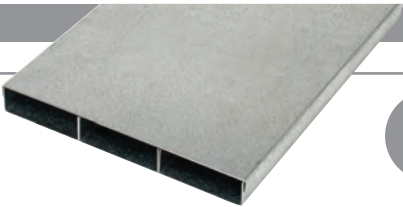
3 and 4 compartment unwired and pre-wired boxes and grommets.



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In-screed system

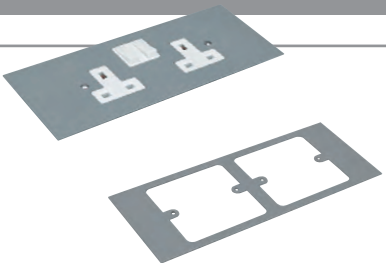
PVC-U or steel ducting with 3 and 4 compartment outlet boxes.



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Faceplates and accessories

Accessories and accessory mounting plates for raised floor and in-screed floor outlet boxes.



Page 10

Power and data modules

A range of moulded pre-wired and assembled power and data units that can be used singly or linked by plug and play cable connectors.



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Desktop modules

Desktop modules with individually fused UK sockets to give easy access to power, data and USB charging at the desk surface.



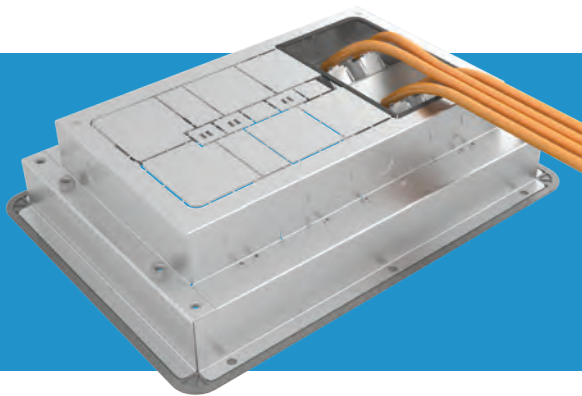
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NEW RANGE OF POWER AND DATA MODULES

This new range of power and data modules offers a more cost effective solution for your complete underfloor to desk project

Contact our technical team on **01424 856688** or **technical@marshall-tufflex.com** to talk about pricing for your next project.

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Raised Floor Box Upgrade

Our raised floor boxes now have a tougher trim for heavy traffic, additional knockouts for improved access and new data connections to meet higher data cable specifications.

Raised floor boxes - configured to meet your installation needs

For quick and easy installation our raised floor box is now available fitted with three UP632 accessory plates or pre-wired with a tap-off and sockets.

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Desktop Modules

A new selection of stylish desktop modules for the modern office environment.



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POWERTRACK

A range of 63Amp powertrack complete with integral mounting brackets and pre-assembled end caps and couplers for ease of installation.

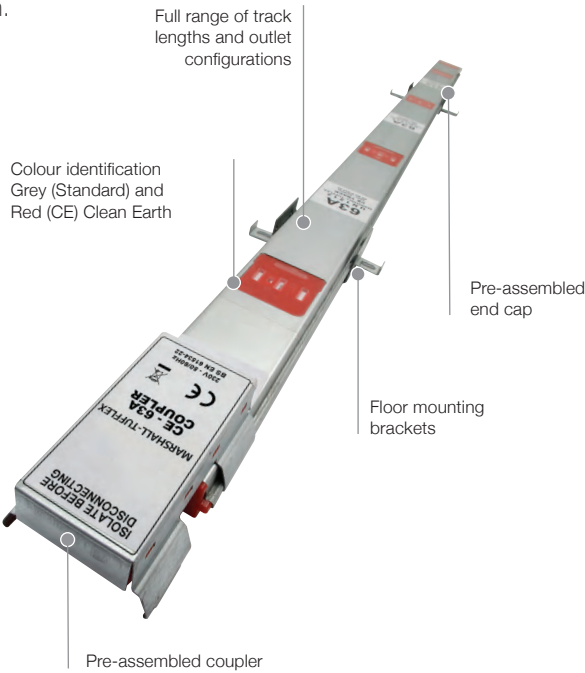
Product information

- Each length of track comes complete with pre-assembled coupler, end cap and floor mounting brackets.
- Maximum 63Amp rating
- Tap-offs are key and colour coded for Standard and CE (Clean Earth)
- Tap-offs are 32Amp rated or fused at 13Amp
- Adhesive dust covers protect outlets
- Compatible with MT32 pre-wired floor boxes



Powertrack and fittings are independently tested by Intertek

Identification	
Standard	CE
Standard: Grey CE (Clean Earth): Red	



To calculate powertrack lengths required for different floor layouts refer to table on opposite page.

Powertrack
Standard



code	length	Number of outlets	pitch (mm)	pack
UN1112	1.2m	4	300	2
UN1118	1.8m	6	300	2
UN1114	2.4m	8	300	2
UN1116	3.6m	12	300	2

Powertrack
CE (Clean Earth)



code	length	Number of outlets	pitch (mm)	pack
UN1212	1.2m	4	300	2
UN1218	1.8m	6	300	2
UN1214	2.4m	8	300	2
UN1216	3.6m	12	300	2

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Technical Information

Standard
 Rated current 63Amp

Low Noise (CE)
 Rated current 63Amp


Feed unit		Interlink		Interlink		Tap-off units		Tap-off units		Tap-off units		Tap-off units	
Female		Length	1.2m	Length	2.4m	Unfused 32Amp		Fused 13Amp		Unfused 32Amp		Fused 13Amp	
Pack	1	Pack	1	Pack	1	Length	3m	Length	3m	Length	5m	Length	5m
						Pack	1	Pack	1	Pack	1	Pack	1
													
UN3100		UN5102		UN5104		UN7113		UN7123		UN7115		UN7125	
UN3200		UN5202		UN5204		UN7213		UN7223		UN7215		UN7225	

All tap-off units comply with the latest version of the Wiring Regulations Section 543 (High Integrity Earthing).

Powertrack – run length component chart

To determine the number and size of track required for a given area, select your total run length (in metres) from the left hand column, then find the correct track combinations along that row.

Total run in metres	Track lengths required			
3.6	3.6			
4.2	1.8	2.4		
4.8	2.4	2.4		
5.4	3.6	1.8		
6.0	3.6	2.4		
6.6	2.4	2.4	1.8	
7.2	3.6	3.6		
7.8	3.6	2.4	1.8	
8.4	3.6	3.6	1.2	
9.0	3.6	3.6	1.8	
9.6	3.6	3.6	2.4	
10.2	3.6	3.6	1.8	1.2
10.8	3.6	3.6	3.6	
11.4	3.6	3.6	2.4	1.8
12.0	3.6	3.6	3.6	1.2

Total run in metres	Track lengths required					
12.6	3.6	3.6	3.6	1.8		
13.2	3.6	3.6	3.6	2.4		
13.8	3.6	3.6	3.6	1.8	1.2	
14.4	3.6	3.6	3.6	3.6		
15.0	3.6	3.6	3.6	2.4	1.8	
15.6	3.6	3.6	3.6	3.6	1.2	
16.2	3.6	3.6	3.6	3.6	1.8	
16.8	3.6	3.6	3.6	3.6	2.4	
17.4	3.6	3.6	3.6	3.6	1.8	1.2
18.0	3.6	3.6	3.6	3.6	3.6	
18.6	3.6	3.6	3.6	3.6	2.4	1.8
19.2	3.6	3.6	3.6	3.6	3.6	1.2
19.8	3.6	3.6	3.6	3.6	3.6	1.8

We recommend that no single run of Powertrack exceeds 20 metres.

RAISED FLOOR BOXES AND GROMMETS

A high quality range of raised floor boxes to provide power and data to desks within the modern office environment. Available as standard or heavy duty versions, boxes are supplied with dividers for quick and easy configuration as either a 3 or 4 compartment box.

Product information

- Standard depth 83mm
- Supplied with dividers to create 3 or 4 compartment box
- Two earth fixing points for flexible positioning of sockets
- 3mm thick medium load plate
- Fixings are pre-punched for quick and easy installation
- Supplied with metal screws to attach trim to box for a secure fix
- Steel sub-frame option for heavy traffic and fine adjustment to allow for uneven flooring
- Supplied with two snap-in cable retainers/guides
- Cut-out within lid for carpet or carpet tiles up to 6mm
- Reversible and self closing lid for extra safety and security
- Barrel lock option available for extra security
- Knockouts in the base for better access
- Data connections to meet data cable specifications

Standard finish
GY
GY: Grey RAL7011 (floor box trim)

Designed and manufactured to

BS EN 61534-22:2009
BS EN 60670-1:2005
BS EN 60670-23:2008
BS EN 50085-1:2005
BS EN 50085-2-2:2008



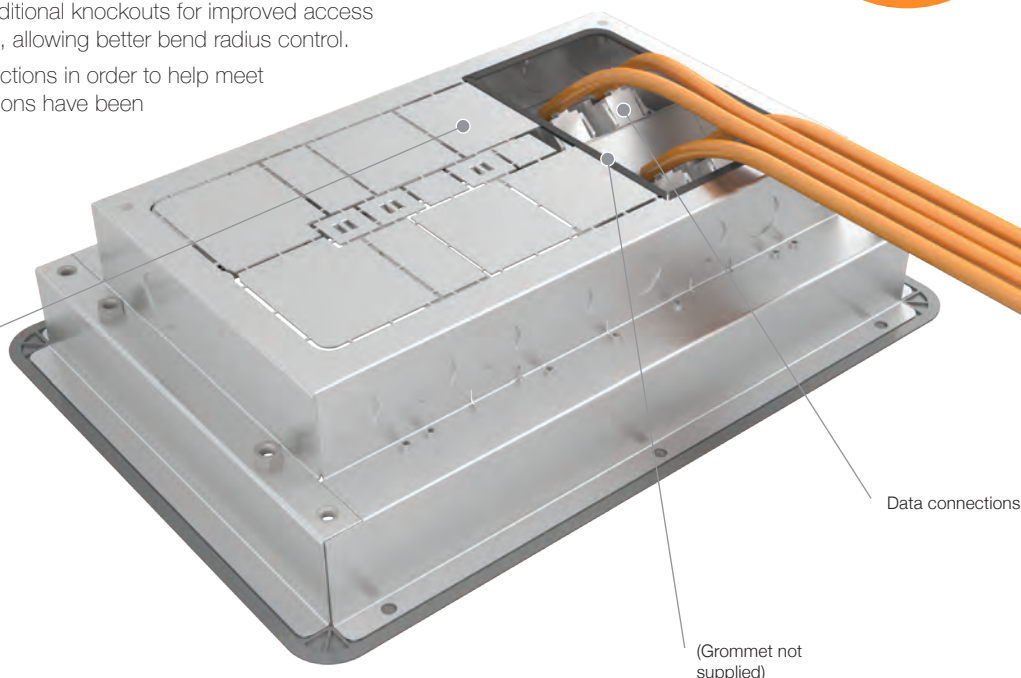
Floor Box Upgrade

To assist installers by reducing installation time, the raised floor box has been upgraded with additional knockouts for improved access through the base of the box, allowing better bend radius control.

In addition, new data connections in order to help meet higher data cable specifications have been incorporated.



Additional knockouts



MT32 pre-wired floor boxes



3 compartment floor box (terminal)
357 x 257 x 83mm

code	description	pack
UM1010	1 x 2 gang Std	1
UM1020	2 x 2 gang Std	1
UM1110	1 x 2 gang CE	1
UM1120	2 x 2 gang CE	1



4 compartment floor box (terminal)
357 x 257 x 83mm

code	description	pack
UM5010	1 x 2 gang Std	1



3 compartment floor box (terminal) with RCD sockets
357 x 257 x 83mm

code	description	pack
UM1410	1 x 2 gang RCD Std1	
UM1420	2 x 2 gang RCD Std1	
UM1610	1 x 2 gang RCD CE 1	
UM1620	2 x 2 gang RCD CE 1	

Please see page 10 for the full range of accessory plates



Floor grommets



Floor grommet

code	description	pack
UTG1BK	without foam insert	1
UTG1GY	without foam insert	1



Floor power grommet

code	description	pack
UPG1BK	with foam insert	1
UPG1GY	with foam insert	1

Cut out size for above grommets Ø125mm

Please note the floor box grommets are available in black BK (RAL9004) and grey GY (RAL7037).

Pre-wired floor boxes



3 compartment standard pre-wired box with 3m tap-off
357 x 257 x 83mm

code	description	pack
UPW400	1 x 2 gang Std	1
UPW420*	2 x 2 gang Std	1



3 compartment CE pre-wired box with 3m tap-off
357 x 257 x 83mm

code	description	pack
UPW405	1 x 2 gang CE	1
UPW425*	2 x 2 gang CE	1



4 compartment standard pre-wired box with 3m tap-off
357 x 257 x 83mm

code	description	pack
UPW410	1 x 2 gang Std	1
UPW430*	2 x 2 gang Std	1



4 compartment CE pre-wired box with 3m tap-off
357 x 257 x 83mm

code	description	pack
UPW415	1 x 2 gang CE	1
UPW435*	2 x 2 gang CE	1

*NEW

Raised floor boxes



Empty floor box

code	description	pack
UM1000	Plastic lid & trim	1
UM1500	Steel lid & trim	1



Floor box pre-fitted with 3 x UP632 plates*

code	description	pack
UM3010	3 x UP632	1

*Ready to accept standard twin gang sockets

NEW

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Technical Information

Accessories



Sub-frame assembly		
code	pack	
UMSF1	1	



Lock kit		
code	pack	
UMLK1	1	



Raised floor box trim		
code	description	pack
UMLD4	Plastic	1



Raised floor lid assembly		
code	description	pack
UMLD1	Plastic	1
UMLD3	Steel	1



Replacement cable flaps pack		
code	pack	
UMCB1	1	

*For plastic lid assembly only

MT32 components



*Female adaptors 220mm tail - fits 20mm knockout		
code	description	pack
UA7134	3 pole (female) black	1
UA7144	4 pole (female) black	1

*For adapting additional equipment and floor boxes to modular system.



Tap-off (Standard) to MT32 connector				
code	length	rating	pack	
UN8113	3m	32Amp unfused	1	
UN8115	5m	32Amp unfused	1	
UN8123	3m	13Amp fused	1	
UN8125	5m	13Amp fused	1	



Tap-off (Clean Earth) to MT32 connector				
code	length	rating	pack	
UN8213	3m	32Amp unfused	1	
UN8215	5m	32Amp unfused	1	
UN8223	3m	13Amp fused	1	
UN8225	5m	13Amp fused	1	

Case Study

700 bespoke Marshall-Tufflex's floor boxes were installed at a prestigious three-storey South London office redevelopment.

The multi-million pound Edinburgh House Project, located in Kennington's conservation area, has seen the complete refurbishment of a 1960's office block into a spacious, contemporary workspace complete with a south-facing central atrium, café, seating areas and a conference suite.

Electrical contractor Andrew Aird of Sapphire Mechanical & Electrical Services, Forest Row, said: "Our specification was for a good value product from a market-leading manufacturer. Marshall-Tufflex's products fitted the bill. In particular the floor boxes were unique as we used a grey powder coated steel option that fitted the bespoke look on this project. Installation went very smoothly."

The high quality Marshall-Tufflex floor boxes, providing power and data to desk areas, have 3mm thick standard support plates that tolerate high traffic levels, while the sub-frame does not restrict wiring space and allows for fine adjustments to be made to accommodate uneven flooring. This meant that the products could be cleverly adapted to address any challenges.

Mr Aird added: "In a couple of areas we had a challenge with minimal floor void space, but we were able to use the angled plates and shallower underfloor boxes to overcome this, which was really helpful."



IN-SCREED FLOORING SYSTEMS

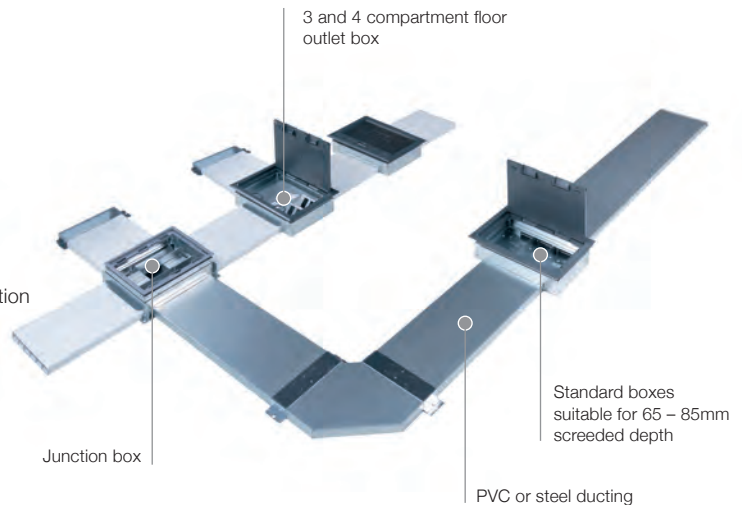
A range of floor outlet boxes, fittings and plates in galvanised steel, with choice of PVC-U or steel ducting designed to be positioned within screed flooring.

Product information

- 3 and 4 compartments (boxes come with extra divider to make 4 compartments)
- Suitable for 65-85mm screed depth
- Boxes for deeper floor screed available on request
- Box tray lid suitable for standard 6mm floor finishes
- For advice on box tray lids for non-standard floor finishes please contact our Technical Team
- Adjustable for box trim height
- Grey moulded carpet trim for floor outlet boxes
- Steel trims with various finishes available
- Universal junction box with integral, fully-reversible cable segregation

Standard floor box trim
GY
GY: Grey RAL7011 (floor box trim)

Other trim finishes: Floor boxes can be provided with a variety of trim finishes such as brass, stainless steel and painted colours. For further information please contact the Technical Team on +44 (0)1424 856688.



Floor materials

Marshall-Tufflex can supply floor outlet boxes and junction boxes that are suitable for different floor materials, such as marble, stone or wood, or where a higher IP rating is required. For more information on these, please contact our Technical Team on +44 (0)1424 856688.

Basic components



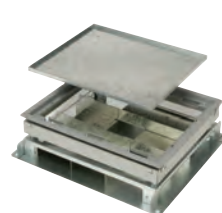
**Floor outlet box
3 and 4 compartment**

code	size	pack
USF32	357 x 257mm	1



Floor box lid assembly

code	description	pack
UMLD1	Plastic	1
UMLD3	Steel	1



**Universal junction box
(excluding adaptors)**

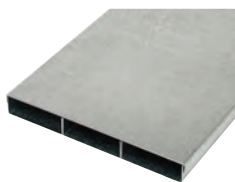
code	size	pack
USJ3	269 x 234mm	1



**Twin section PVC-U duct
(three ducts required per run)**

code	size	pack
MTU125	75 x 25mm	8 x 3m

Please see page 10 for the full range of accessory plates



3 Compartment steel duct

code	description	pack
USFT25	225 x 25mm	1 x 2.5m



Blank end

code	description	pack
USFB1	3 x 20mm KO	1
USFB25	6 x 25mm KO	1



Adaptor

code	pack
USFA1	1



Coupler

code	pack
USFC1	1



**Flat bend
(excluding connector)**

code	description	pack
USFF1	steel	1
HFP125BK	PVC-U	1



**Riser
(excluding connector)**

code	description	pack
USFV1	steel	1
HVP125	PVC-U	1



Steel screeding plate

code	pack
USFSP1	1

Note: Used in place of box lid when screeding.
Minimum order quantities apply

ACCESSORY PLATES

Accessory plates



13Amp 2 gang DP/TE switched socket

code	description	pack
UP651	3 comp	1
UP751	4 comp	1



13Amp 2 gang DP/TE switched socket clean earth

code	description	pack
UP653	3 comp	1
UP753	4 comp	1



Double plate with 2 x 13Amp 2 gang switched socket

code	description	pack
UP751D	4 comp	1
UP753D	4 comp CE	1



13Amp 2 gang RCD switched socket

code	description	pack
UP660	3 comp Std	1
UP663	3 comp CE	1
UP760	4 comp Std	1
UP763	4 comp CE	1

Not suitable for use with in-screed system.

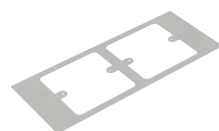


Plate to accept 2 x 1 gang accessory (M3.5 x 60.3mm)

code	description	pack
UP633	3 comp	1



Plate to accept 1 x 2 gang accessory (M3.5 x 120.3mm)

code	description	pack
UP632	3 comp	1

Plate dimensions

3 compartment = 185 x 95mm
4 compartment = 185 x 71mm

Plate material

Plates are manufactured from plain galvanised steel to match floor boxes.

Important

Design of leads, plugs and sockets can vary so thought is required when configuring plates to avoid the clashing of cables which could prevent the floor box lid from closing.



Plate to accept 2 x 1 gang accessory (M3.5 x 60.3mm)

code	description	pack
UP733	4 comp	1

Accessory overlaps adjacent plates

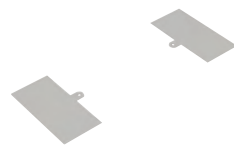


Plate to accept 1 x 2 gang accessory (M3.5 x 120.3mm)

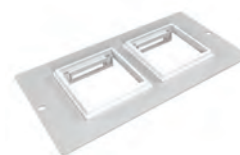
code	description	pack
UP732	4 comp	1

Accessory overlaps adjacent plates



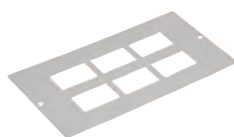
Blank plate

code	description	pack
UP621	3 comp	1
UP721	4 comp	1



Euro plate and collar 2 gang

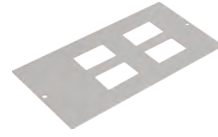
code	description	pack
UP615	3 comp	1
UP715	4 comp	1



Data/voice plate 6 x RJ45

code	description	pack
UP612	3 comp	1
UP712	4 comp	1

6 x 37mm x 22mm cut outs



Data/voice plate 4 x RJ45

code	description	pack
UP610	3 comp	1
UP710	4 comp	1

4 x 37mm x 22mm cut outs



Data wave plate 4 x RJ45

code	description	pack
UP617	3 comp	1

4 x 37mm x 22mm cut outs



Data wave plate 2 x RJ45

code	description	pack
UP717	4 comp	1

2 x 37mm x 22mm cut outs

International accessory plates

It is advisable to use MTOP plates for conversion to a range of continental sockets. Please refer to the main catalogue page 124 for more information.



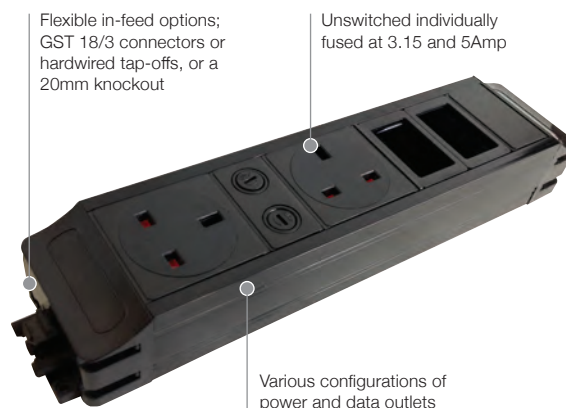
POWER AND DATA MODULES



A range of power and data modules ideal for under desk mounting.

Product information

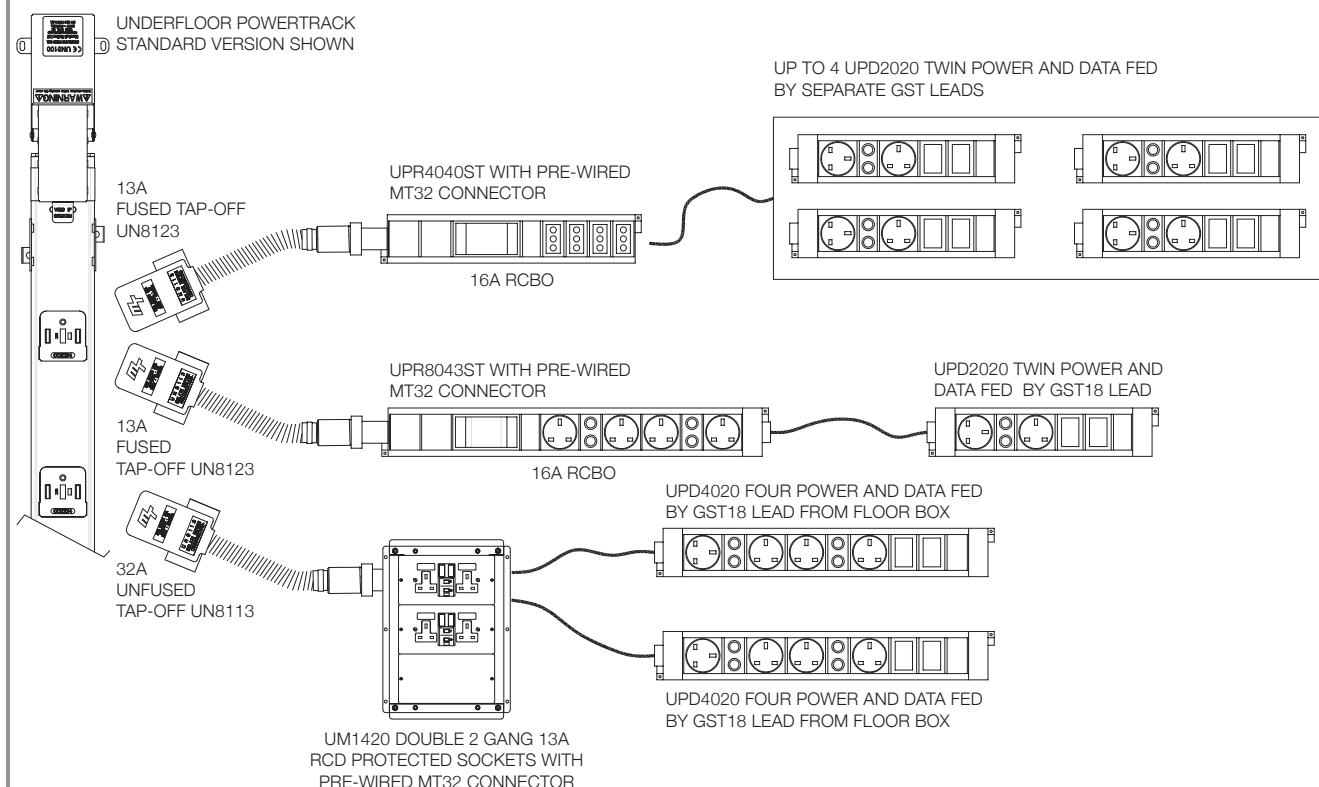
- High strength, flame retardant moulded modules
- Polycarbonate RCBO units
- Power modules
- Can be fed from wall trunking, floor boxes, grommets or powerpoles
- For single use or modules can be interlinked
- In-feed supply either by GST 18/3 connection or plug socket
- Options of unswitched individually fused 3.15Amp or 5Amp sockets
- 2, 4 and 6 gang options plus the ability to link modules
- Polycarbonate power modules with twin USB points
- Desk units comply with BS 6396 for Electrical Systems in Office Furniture when powered from a plug socket outlet and with the current version of the BS 7671 Wiring Regulations when powered from a power distribution network.



Power module configurations

Our range of power modules and RCBOs can be integrated to deliver a complete system from underfloor to desk with a wide range of configurable arrangements.

Desktop Modules can also be used in conjunction with RCBO's to deliver power, data and USB charging at the desktop.



GST in/out modules - Individually fused



Power module 2 gang

code	description	pack
UPM2001	Unswitched	1
UPM2002	Individual switched sockets	1



Power module 4 gang

code	description	pack
UPM4001	Unswitched	1
UPM4002	4 x Power + 2xUSB	1
UPM4003	Individual switched sockets	1



Power module 6 gang

code	description	pack
UPM6001	Unswitched	1
UPM6002	6 x Power + 2xUSB	1
UPM6003	Single master switch	1



Please see page 13 for data and other module options

Direct feed from tap off lead via 20mm gland hole to connector block with multiple 13A socket outlets



Power feed unit 4 gang indiv fused

code	description	pack
UPR8041	4x13A sockets	2



Power feed unit 6 gang indiv fused

code	description	pack
UPR8061	6x13A sockets	2

GST input, data leads exit via 20mm hole



Power and data module 2 gang

code	description	pack
UPD2020	2 x power + 2x6c data KO	1



Power and data module 4 gang

code	description	pack
UPD4020	4 x Power + 2x6c data KO	1
UPD4040	4 x Power + 4x6c data KO	1

Input via GST or 20mm knockout with GST output



16A RCBO module

code	In/Out	pack
UPR2010	GST/GST	1
UPR2020	20mm/GST	1

Input via pre-wired MT32 connector with GST output



16A RCBO module (MT32)

code	In/Out	pack
UPR2020ST	MT32/GST Standard	1
UPR2020CE	MT32/GST Clean Earth	1

Pre-wired MT32 Tap-off Connectors
To connect MT32 RCBO modules to underfloor powertrack

Tap-off (Standard) to MT32 connector

code	length	rating	pack
UN8113	3m	32Amp unfused	1
UN8115	5m	32Amp unfused	1
UN8123	3m	13Amp fused	1
UN8125	5m	13Amp fused	1



Tap-off (Clean Earth) to MT32 connector

code	length	rating	pack
UN8213	3m	32Amp unfused	1
UN8215	5m	32Amp unfused	1
UN8223	3m	13Amp fused	1
UN8225	5m	13Amp fused	1

Direct feed from tap off lead via 20mm gland hole to connector block with multiple GST outputs



16A RCBO type C 4 gang

code	description	pack
UPR4040	30mA	2



16A RCBO type C 8 gang

code	description	pack
UPR4080	30mA	2

Input via pre-wired MT32 connector with multiple GST outputs
(For MT32 tap off options see above)



16A RCBO type C 4 gang

code	description	pack
UPR4040ST	30mA Standard	1
UPR4040CE	30mA Clean earth	1



16A RCBO type C 8 gang

code	description	pack
UPR4080ST	30mA Standard	1
UPR4080CE	30mA Clean earth	1



RCBO Power feed units

Direct feed from tap off lead via 20mm gland hole to connector block with multiple 13A socket outlets



Power feed unit 4 gang indiv fused

code	description	pack
UPR8043	RCBO + 4x13A sockets	2



Power feed unit 6 gang indiv fused

code	description	pack
UPR8063	RCBO + 6x13A sockets	2

Fed via pre-wired MT32 connector with multiple 13A socket outlets (For MT32 tap offs see previous page)



Power feed unit 4 gang indiv fused

code	description	pack
UPR8043ST	RCBO + 4x13A sockets Standard	1
UPR8043CE	RCBO + 4x13A sockets CE	1



Power feed unit 6 gang indiv fused

code	description	pack
UPR8063ST	RCBO + 6x13A sockets Standard	1
UPR8063CE	RCBO + 6x13A sockets CE	1

GST Plugs and adaptors



GST 3 pole connector

code	description	pack
UPA3001	Male	1
UPA3002	Female	1



GST connector coupler

code	description	pack
UPA3003	2xF out	1
UPA3004	3xF out	1
UPA3005	5xF out	1

Modules and leads



Black 6C blank plate

code	pack
UDC1000	1



Black Cat 6 IDC data module

code	pack
UDC1001	1



Black Cat 6 module assembly

code	length	pack
UDC1002	3m	1
UDC1003	5m	1



300mm launch lead F/F

code	pack
UDC1004	VGA 1
UDC1005	USB 1
UDC1006	HDMI 1
UDC1007	Jack - 3.5mm 1

Power cables



GST18/3 F & 13A plug

code	length	pack
DM8301	1m	1
DM8302	2m	1
DM8303	3m	1
DM8305	5m	1



GST18/3 M/F Interconnecting lead

code	length	pack
DM8501	0.5m	1
DM8502	1m	1
DM8503	1.5m	1
DM8504	3m	1

Desk surface units



Desk grommet

code	diameter	pack
DG1BK	92mm	1

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Technical
Information

DESKTOP MODULES

A selection of stylish desktop modules for the modern office environment with individually fused UK sockets. Perfect for use in hot desking situations or conference rooms, the modules give easy access to power, data and USB charging at the desk surface.

For flexibility of installation, the units are supplied with two methods of attaching to the desktop. G-Clamps with protective desk guards and adhesive pads are both supplied.

- Ergonomic modern design
- 45° angled sockets that can accept large plugs and transformers
- Quick charge USB type C sockets
- Sockets are individually fused to 5A
- 3 pole connector allows different lengths of start leads to be used
- Tough, high impact PVC-U construction
- Flat base for mounting and supplied with desk clamps and adhesive pads
- Master switch with neon power-on indicator
- 6C cut outs for populating with data or multimedia
- GST18/3 plug and play for connectivity to Marshall-Tufflex RCBO modules and feed units



2G power

code	description	pack
DTM2BK	Master switch	1



4G power

code	description	pack
DTM4BK	Master switch	1

For modules, leads and cables, please see page 13

Desktop Power Modules



2G power 2xUSB

code	description	pack
DTM22BK	Master switch	1



4G power 2xUSB

code	description	pack
DTM42BK	Master switch	1

Desktop Power & USB Modules



2G power

2xUSB 2x6C data cut outs

code	description	pack
DTM222BK	Master switch	1



3G power

2xUSB 2x6C data cut outs

code	description	pack
DTM322BK	Master switch	1



4G power

2xUSB 2x6C data cut outs

code	description	pack
DTM422BK	Master switch	1

Desktop Power, USB & Data Modules

p22

Technical Information

MT32 Pre-wired underfloor power distribution

Underfloor Distribution System

Conduit assembly, tap off and adaptor

Cable Type	6491X (BASEC BS 6004 H07V-R)
Protective Earth (P.E)	4.0mm ² x 3 (Grey Plug)
Clean Earth (C.E)	4.0mm ² x 4 (Red Plug)
Protection: Conduit Assembly	25mm Steel flexible conduit (>1KN Tensile Load to BS EN 61386-23)
Protection: Tap Off	20mm Steel flexible conduit (>1KN Tensile Load to BS EN 61386-23)

General specification

Approvals: System	Designed to comply with the latest IET Wiring Regulations BS 7671
Approvals: Connector	Designed to comply with EN 61535:2009 (Fixed installation couplers for permanent connection)
Normal Voltage	250 volts
Frequency	50/60 Hertz
Volt Drop Line & Neutral Connector	1.0 mV/A/M
Volt Drop Line & Neutral	
(Flexible Cabling System) 2.5mm	19.0 mV/A/M
Volt Drop Line & Neutral (Underfloor) 4.0mm	12.0 mV/A/M
Connector Impedance	1.0m Ω /connector
Connector, Body Material	PA66 – GF25
Connector Colour Female	Black
Connector Colour Male	White
Compatibility	Keyed against incorrect insertion
Operating Temperature (Ambient)	-5°C to + 40°C
Safety	PE contact engages first
Degree of Protection	Engaged IP2XC

Earthing requirements for the installation of equipment having High Protective Conductor currents. BS7671:2018 Reg. 543.7

The scope of Reg. 543.7.1.203 requires that every final circuit intended to supply one or more items of equipment, where the total protective conductor current is likely to exceed 10mA. in normal use, shall have a high integrity protective connection.

Singles Cabling System 4.0mm²

Final Circuit

MT32 singles systems conform to the high integrity protective requirement by virtue of having a single copper protective conductor of 4mm², (Reg 543.7.1.203) with the protective conductor being enclosed throughout in trunking or flexible conduit to provide additional protection against mechanical damage.

Powertrack

Powertrack is an underfloor busbar system rated at 63Amp maximum. It is available in Standard or CE (Clean Earth) versions.

Lengths

- Powertrack lengths of 1.2m, 1.8m, 2.4m and 3.6m with tap-off outlets at 300mm

Safety

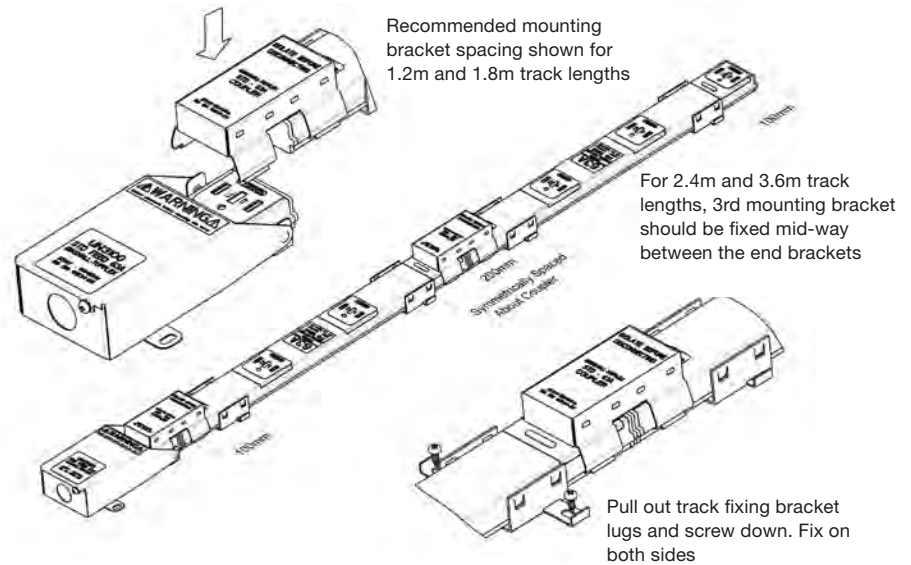
- Snap-fit feed units, couplers and tap-offs are key and colour-coded to avoid assembly errors.



Standard = grey



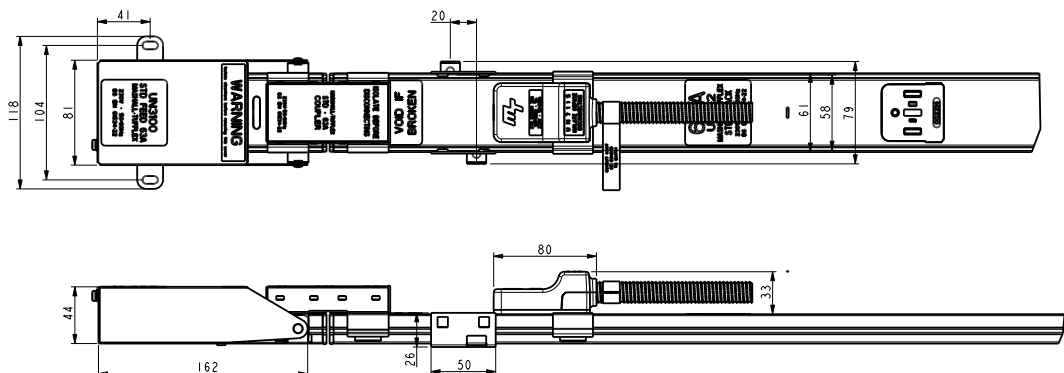
CE = red



- A shutter is operated on insertion to prevent accidental contact.
- Avoid exceeding the maximum power rating of the track. This is ascertained by the maximum power requirement for each floor outlet box

Positioning

- For the most economic format, it is advised that Powertrack is arranged in parallel runs with Powertrack feed units orientated to the incoming supply.
- For optimum layout flexibility, spacing should be a maximum of 5.5m between each length of track and 2.5m from the perimeter when using a standard 3m tap-off to a floor box.



Electrical Characteristics			
Rated Current		63	Amps
Rated Voltage		230	Volts
Frequency		50/60	Hz
Conditional Short Circuit Rating	(Protection device: BS 1361 fuse)	16	KA
Conductor Resistance Line & Neutral		4.4	mΩ/m
Volt Drops Line & Neutral	Powertrack	4.4	mV/A/m
	Feed Unit + Coupler	2.2	mV/A
	Tap-Off	0.73	mV/A
	4mm ² Cable	11.0	mV/A/m
	Coupler	1.5	mV/A
	Interlink Unit	4.5	mV/A
	16mm ² Cable (1.2m)	3.9	mV/A/m
	Line to Earth (Casing)	2.8	mΩ/m
	Line to Earth (Conductor)	3.2	mΩ/m
	Line to Earth (Conductor + Casing)	2.8	mΩ/m
Earth Fault Loop Impedance:	Feed Unit + Coupler	2.2	mΩ
	Tap-Off	0.73	mΩ
	4mm ² Cable	11.0	mΩ/m
	Coupler	1.5	mΩ
	Interlink Unit	4.5	mΩ
	16mm ² Cable	3.9	mΩ/m
Mechanical Data			
Number of Copper Conductors		2 or 3	
Conductor Cross-section Area	Nominal	20	mm ²
Powertrack Casing Copper Equivalent	(Where casing is protective Earth)	12	mm ²
Cable Termination Capacity		16	mm ²
Tap-Off Cable 32A		4.0	mm ²
Tap-Off Cable 13A or 16A		4.0	mm ²
Tap-Off Conduit Sizes	Rating: Heavy duty conduit <1KN Tensile Load to BS EN 61386-23	Ø20	mm
Flexible Interlink Cable		16	mm ²
Flexible Interlink Conduit	Rating: Heavy duty conduit <1KN Tensile Load to BS EN 61386-23	Ø25	mm
Feed Conduit Entry		1 x Ø25	mm
IP Rating		40	
Minimum void depth (track + tap-off)		59	mm
Materials specification			
Powertrack Casing	Galvanised Steel		
Conductors	High Conductivity Copper/brass		
Powertrack Insulators	PBT		
Sockets/Tap-Off Plug/Joint Mouldings	Polycarbonate		
Shutter	PBT		
Tap-Off/Interlink Flexible Conduit	Galvanised Steel		
Tap-Off Cable	BASEC BS 6004 H07V-R		
Tap-Off/Coupler Blade	Copper		
Feed Unit Case	Galvanised Steel		
Flexible Interlink Cable	BASEC BS 6004 H07V-R		
Feed/Flexible Interlink Housing	Galvanised Steel		

Technical Specifications

Third party certified and tested to comply with:

BS EN 61534-1: 2011

BS EN 61534-22: 2009

BS 5733: 1995 where applicable.

Marshall-Tufflex is registered by BSI to BS EN ISO 9001: 2008

MT Powertrack is designed to comply with the current version of the BS 7671 Wiring Regulations.

ASTA Type Test Certification

Powertrack is independently tested by Intertek to BS EN 61534-22:2009 clauses 15.4, 18.4.3.2, & 18.4.3.3

Regulation 543.7 Installations to BS 7671:2018 Earthing requirements for the installation of equipment having High Protective Conductor currents.

The scope of Reg. 543.7.1.203 requires that every final circuit intended to supply one or more items of equipment, where the total protective conductor current is likely to exceed 10mA. in normal use, shall have a high protective connection.

All MT Powertrack tap-off units conform to the high integrity protective requirement by virtue of using a protective conductor of 4mm² enclosed within a flexible conduit, thus providing additional protection against mechanical damage. Regulation 543.7.1.203.

32Amp 3 metre tap-off unit

The 32Amp tap-off unit comprises of an unfused tap-off* a flexible metal conduit with integral 4mm² conductors.

These units are designed to comply with regulation 434.2.1(i) of BS7671:2018 by virtue of the following:

- 1 Maximum length of cable is <3 metres.
- 2 Minimum risk of faults as the item is factory assembled and fully tested.
- 3 Fully protected by flexible steel conduit located within raised access floor that offers further protection.

*Fused 3 metre tap-offs are available if required.

5 metre tap-off unit

Tap-off units in excess of 3 metres should only be used if they contain a fuse or the powertrack is protected by a 32Amp rated protective device.

Raised floor boxes

Three and four compartment boxes and a range of grommets that can be configured to meet client requirements for accessing multiple services concealed below a raised floor system.

Technical specifications

Raised floor boxes are third party tested to comply with:

BS EN 61534-22:2009

BS EN 60670-1:2005

BS EN 60670-23:2008

BS EN 50085-1:2005

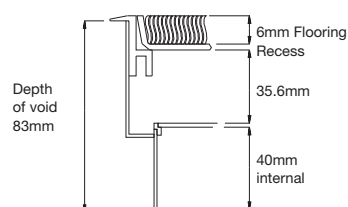
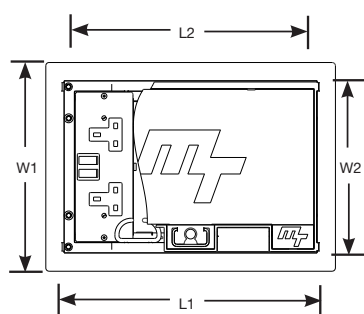
BS EN 50085-2-2:2008

Material

- Lid/trim: flame retardant polypropylene grey RAL 7011
- Box assembly: galvanised steel
- Load plate: 3mm zinc plated steel
- Accessory plate: galvanised steel

Dimensions

- For dimensions of non standard boxes and trims, contact our Technical Team on +44 (0)1424 856688.



Dimensions

No of compartments	Nominal trim size (L1 x W1)	Cut out dimensions (L2 x W2)	Accessory Plate Dimensions
3	357 x 257mm	322 x 222mm	185 x 95mm
4	357 x 257mm	322 x 222mm	185 x 71mm
		General tolerance +3mm	

Care should be taken to ensure that box edges are smoothed and free from burrs. Carpet tile cut size for lid is 303 x 166mm.

Load testing

Load testing of floor boxes to:

BS EN 61534-22:2009

BS EN 50085-2-2:2008

The floor boxes have been tested to and comply with the loading requirements of the aforementioned standards.

There are two loading criteria for the floor boxes:

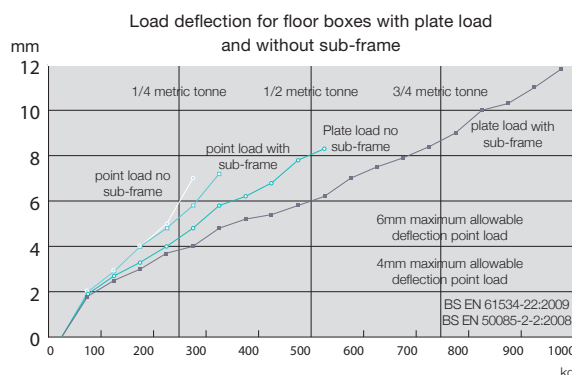
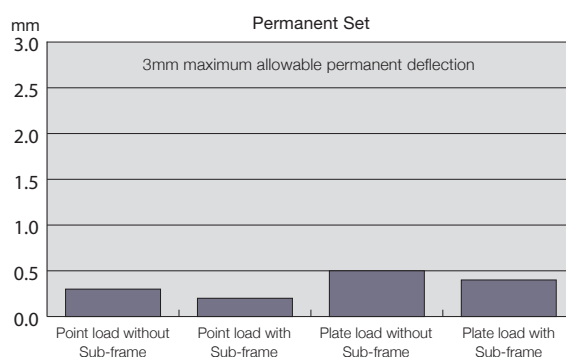
1. A point loading; to simulate foot traffic or light furniture like a chair leg / caster sitting on the lid. The maximum permissible deflection is 6mm (BS EN 61534-22:2009 and BS EN 50085-2-2:2008)
2. A plate loading; to simulate heavy foot traffic or larger furniture loads. The maximum permissible deflection is 4mm (BS EN 61534-22:2009) or 6mm (BS EN 50085-2-2:2008)

Note: The maximum permissible permanent deflection after the load has been removed is 3mm for both standards.

The loading graphs show the deflection based on floor boxes without and with a sub-frame. The point loading value is approaching ¼ of a metric tonne without sub-frame and reaching ¼ of a metric tonne with sub-frame. In both cases the permanent deflection is less than 0.25mm.

For plate loading without sub-frame the value is approaching ¼ of a metric tonne with 4mm deflection and ¼ of a metric tonne with 6mm deflection. With the sub-frame fitted the loading reaches ¼ of a metric tonne with 4mm deflection and ½ a metric tonne with 6mm deflection. In both cases the permanent deflection is reaching 0.5mm.

Note: floor boxes fitted with sub-frame can exceed more than 1 metric tonne plate load before lid failure. In all tests (with and without sub-frame) the required loading was reached without damage to the plastic trim or compromised the lid.

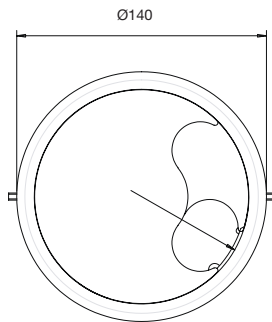


Grommets

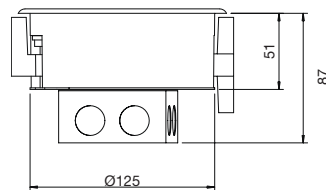
Material

- ABS Flame retardant
- Flammability: UL94 V-0 at 2.0mm
- Colour: polypropylene grey RAL 7011
- Lid: captive screwdown
- Lid recess: 15mm for extra strength
- Through power/data options

Dimensions



Cut out dimensions



In-screed system

Three and four compartment boxes configured to meet client requirements for accessing multiple services concealed within an in-screed floor system.

Standard system is suitable for screed depths of 65mm to 85mm. For other screed depths please contact our Technical Team on +44 (0)1424 856688.

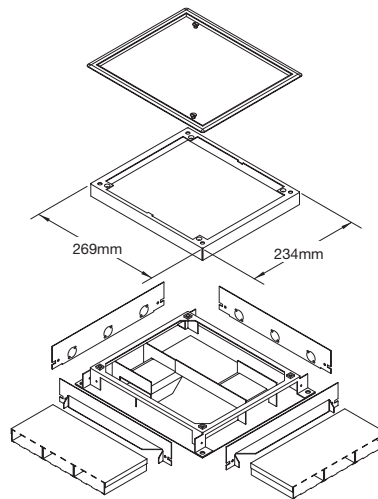
Material

- Lid/trim: polypropylene grey RAL 7011
- Frame assembly: galvanised steel
- Modular boxes: galvanised steel
- Load plate: galvanised steel

Wiring accessories and mounting plates

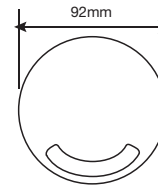
- 3 compartment box: 185 x 95mm
- 4 compartment box: 185 x 71mm
- For use with standard 60.3mm and 120.6mm accessories with blank or pre-punched plates for data/telecoms etc.

Junction box



Desk grommets

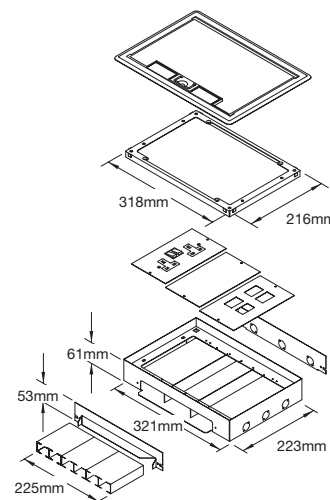
Dimensions



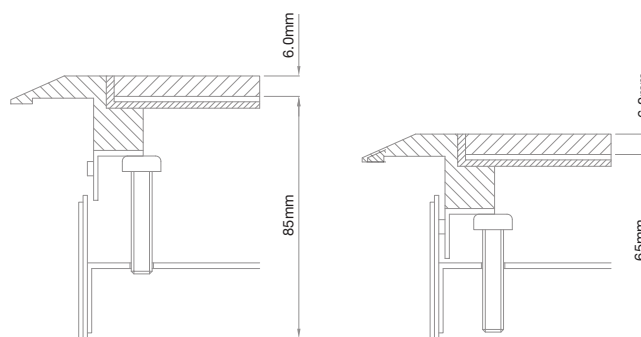
Cut out size

Box type	Diameter
DG1	80mm
General tolerance	2mm

Floor outlet box



Box screed depth adjustment



Power and data modules

Standards and Directives

All products are manufactured to enable compliance with the following where relevant:

- BS 5733
- BS 6396
- BS 7671
- BS EN 55022
- BS EN 60950-1
- CE and UKCA marked
- The Electrical Equipment (Safety) Regulations 2016
- LVD Directive 2014/35/EU
- EMC Directive 2014/30/EU
- The Electromagnetic Compatibility Regulations 2016
- RoHS2 Compliant 2011/65/EU
- REACH Compliant

Further detailed information is available upon request.

Current Rating

Power modules 3 core wire 1.5 mm² rated at 16A
RCBO Power feed 2.5mm² rated at 20A
All leads are supplied with BS 1363 approved 13A three pin UK plugs and GST18 connectors

RCBO Rating

16A Type C 30mA 2 Pole
BS 6396:2008 requires RCD protection for electrical sockets

Earth Bonding

All units are supplied with a 150mm exterior earth lead to ring terminal.
Guidance from BS 6396:2008:

Fusing

The configurations of socket outlets connected to a single supply shall be either:

- a) No more than four sockets, where each socket is separately fused or has other overcurrent protection rated at not more than 5A; or
- b) No more than six sockets, where each socket outlet is separately fused or has other over current protection rated at not more than 3.15A

No single item of equipment having a rated voltage exceeding 250V or a rated current exceeding 5A shall be connected to the item of furniture.

Each unit is individually fused:

2 and 4 gang power sockets fused at 5A (20mm glass fuse)
6 gang power sockets fused at 3.15A (20mm glass fuse)
Power feed units are protected by either a 16A RCBO or 13A fuse

Fixing

Can be used in a cable tray or mounted directly to the desk.
Each unit is fitted with 2 fixing points at either end of the module for ease of mounting and securing the unit in a fixed position.

Materials

All components and plastic mouldings used throughout the products will conform to the relevant Flame Retardancy specifications.

Data and Multimedia

Units with data facilities are fitted with 2 or 4 blank LJ6 6C apertures and can be fitted with data or multimedia modules.
Units fitted with data facilities include a segregation plate that is fixed into the chassis to produce a separate enclosed area within the body of the unit.
Data cables can be fed into the units by way of a 20mm flexible plastic conduit, forming a protected umbilical, or as individual plain cables secured by a soft compression gland, at the opposite end to the power entry.

USB

Dual USB Fast Charge Type A sockets
5V DC 3.4A

Connection Options

Inputs:

RCBO Unit options:

- MT32 input for use with our tap-off units for ease of installation when connection to the MT Powertrack system (Standard or Clean Earth 'CE' options are available)
- 16A GST 18: Unit can either plug directly into Power Module units or be connected via an Interconnecting lead
- Ø20mm knockout

RCBO Feed unit options:

- MT32 input for use with our tap-off units for ease of installation when connection to the MT Powertrack system (Standard or Clean Earth 'CE' options are available)
- 16A GST 18: Unit can either plug directly into Power Module units or be connected via an Interconnecting lead
- Ø20mm knockout

RCBO Power feed unit options:

- MT32 input for use with our tap-off units for ease of installation when connection to the MT Powertrack system (Standard or Clean Earth 'CE' options are available)
- 16A GST 18: Unit can either plug directly into Power Module units or be connected via an Interconnecting lead
- Ø20mm knockout

- Power modules are fitted with 16A GST 18 connectors

Outputs:

RCBO Units: Single GST 18

RCBO Feed units: 4 or 8 GST 18 connectors

RCBO Power Feed units: 4 or 6 13A UK socket outlets

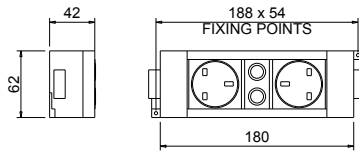
Power modules: Single GST 18 for interconnects to additional units. *BS 6396 notes above.

Quality and Testing

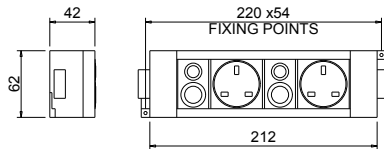
All units are 100% electrically tested. Test consist of Earth Bond, Insulation, Load/Fuse Check, Continuity and Functional.

The following diagrams are suggested configuration options, please always ensure local Regulations are met.

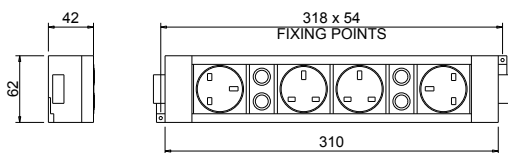
UPM2001



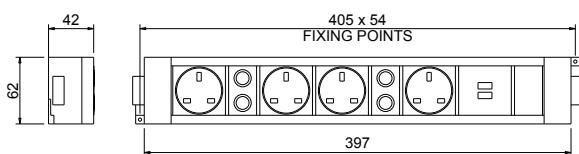
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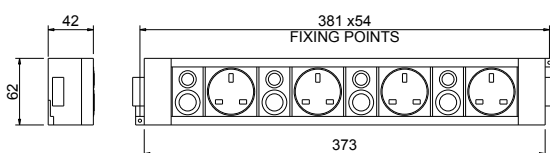
UPM4001



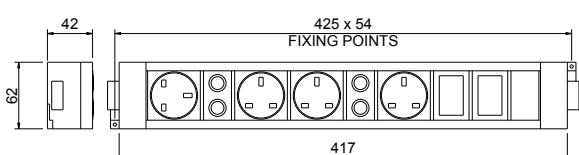
UPM4002



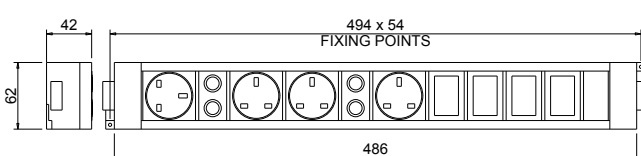
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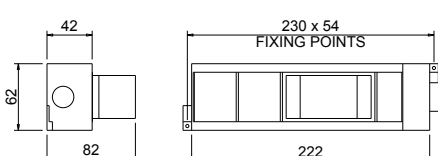
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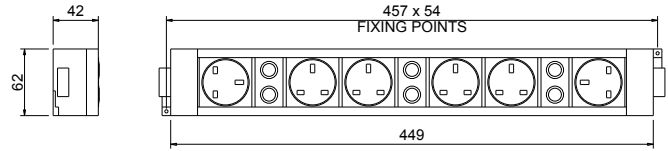
UPD4040



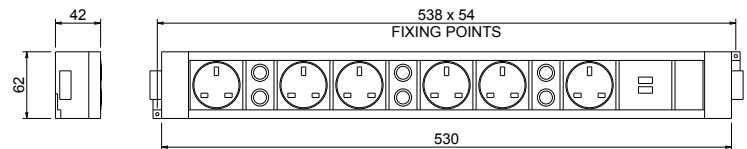
UPR2010 / UPR2020



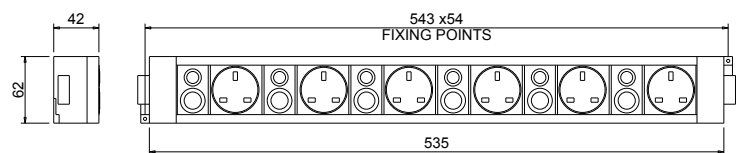
UPM6001



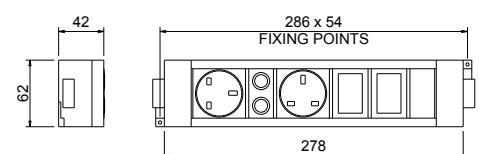
UPM6002



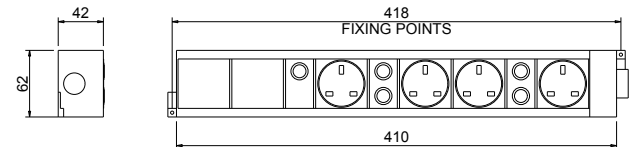
UPM6003



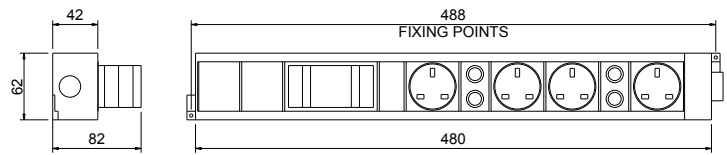
UPD2020



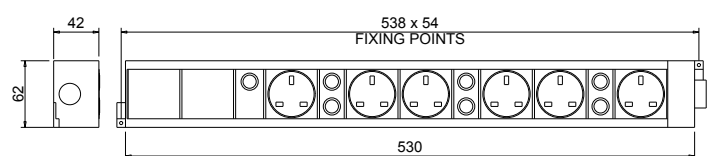
UPR8041



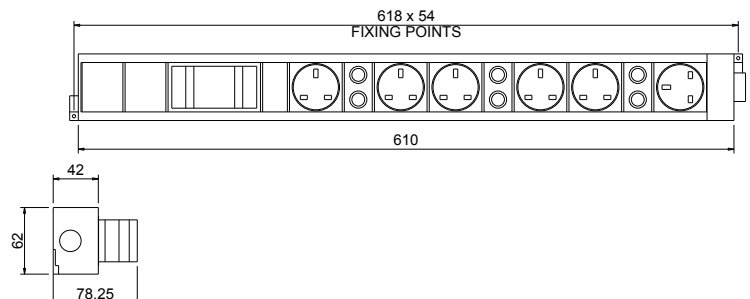
UPR8043



UPR8061



UPR8063



Desktop Modules

Standards

- BS 1363
- BS 6396:2008
- BS 5733
- IEC60884-1:2006
- UL 94V-0

Material

Power and data desk top modules are constructed from high strength, high impact PVC-U

Fusing

To enable compliance to BS 6396 the UK sockets are fitted with Ø5 x 20mm anti-surge ceramic fuses at either 3.15Amp or 5Amp as marked

Quality & testing

100% testing – continuity, polarity, insulation & earth

Dimensions

DTM2BK	2x5A sockets	224x72x78mm
DTM4BK	4x5A sockets	336x72x78mm
DTM22BK	2x5A sockets & dual USB charger	260x72x78mm
DTM42BK	4x5A sockets & dual USB charger	392x72x78mm
DTM222BK	2x5A sockets, dual USB charger & 2x6c cut outs	362x72x78mm
DTM322BK	3x5A sockets, dual USB charger & 2x6c cut outs	409x72x78mm
DTM422BK	4x5A sockets, dual USB charger & 2x6c cut outs	458x72x78mm

Connection

All modules are pre-wired with a 500mm power lead with a GST18/3 3-pole male connector

1.5mm² HO5VV-F 20A

For data modules and lead options please refer to page 13

Max voltage

250V

Switch

Single pole with neon indicator

Compliances

RoHS, WEEE, CE, UKCA

USB

Type C PD, DC 5V3A, 9V2A, 12V1.5A

Usage & maintenance

Not to be used with products and appliances exceeding 5A (3.15A for 6-way unit)

Fuses are 5x20mm and can be user-replaced.

To replace a fuse, disconnect from the mains supply first.

To clean the unit, disconnect from the mains supply and wipe with a clean damp cloth.

Contact our team

Our office opening hours are 8am to 5pm Monday to Friday

Customer Services



+44 (0)1424 856600



sales@marshall-tufflex.com

Technical Services



+44 (0)1424 856688



technical@marshall-tufflex.com

Technical support

Our Technical Team consists of qualified Electricians, Electrical and Mechanical Engineers with many years experience of cable management installations including an understanding of the regulations and compliancy to standards in both domestic and commercial sectors. The team can advise on a wide range of solutions and technical issues, product standards, data cabling control and Part M compliancy.

We pride ourselves on providing and supplying our customers with specialist solutions to suit a variety of needs and the team's expertise enables us to provide quotations for specialist solutions. We aim to complete all standard quotes within 1 working day, although more complex quotations such as 'take offs' can take longer.



First class customer service

Our Customer Service Team are on hand to advise on stock availability, lead times, delivery schedules and order fulfilment.



BIM (Building Information Modelling)

3D Autodesk Revit models are now available to download for Marshall-Tufflex products, with the necessary technical product data for them to be easily specified and integrated into a construction project.

Visit www.marshall-tufflex.com



Same day collection*



Our popular same day collection service gives our customers an unrivalled two-hour turnaround on product orders, allowing them to collect from our dedicated collection point in Manchester. Orders can also be collected next day from our Watford or Hastings depot.

Manchester

Europa Trading Estate, Stoneclough Road, Radcliffe, Manchester M26 1GG

- Orders can be collected two hours after order placement from Manchester.
- Orders received by 5pm will be ready for collection from 10am the following day.

Watford

Unit 4 Trade City, Thomas Sawyer Way, Watford, WD18 0EZ

Hastings

55-65 Castleham Road, St Leonards-on-Sea TN38 9NU

- Orders placed by 12.30pm can be collected from 8am the next day from our Watford or Hastings depot.

* Subject to stock availability

For details regarding collections, please contact our Customer Services team on +44 (0)1424 856600 or email sales@marshall-tufflex.com



Marshall-Tufflex Ltd

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F +44 (0)1424 856611
E sales@marshall-tufflex.com
www.marshall-tufflex.com

Technical Hotline:

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Collect your order from our branches:

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