Series 507 Powertrack

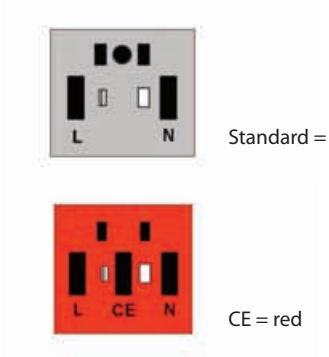
Series 507 Powertrack is an underfloor busbar system rated at 63Amp maximum. It is available in Standard or CE (Clean Earth) versions.

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.



- 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

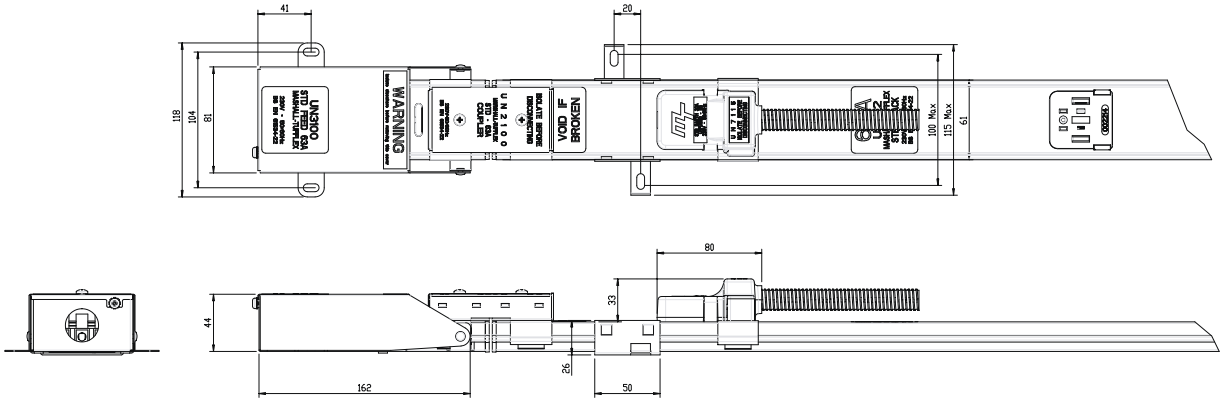
- For the most economic format, it is advised that Series 507 Powertrack is arranged in parallel runs with powertrack feed units orientated to the incoming supply.
- For optimum layout flexibility, spacing should be a maximum of 5.5m between each length of track and 2.5m from the perimeter when using a standard 3m tap-off to a floor box.

Installation

- With the first length of powertrack, snap the integral coupler into the feed unit socket.
- Fit the next length of powertrack to the first length by means of the integral coupler socket.
- Secure the feed unit to the floor via the slots in the base.
- Secure the powertrack every 1200mm (max) using the mounting brackets provided.

Tap-offs

- Each tap-off position along the powertrack is protected by a shutter.
- Provision of power from the powertrack is provided by inserting a key and colour coded tap-off into a shuttered socket.
- The tap-off unit comes complete with 4.0mm² LSOH cabling welded directly to the contacts with a flexible outer steel conduit.
- Available in 3m and 5m lengths
- Fused or unfused
- Remove the tap-off by releasing the twin clips that operate automatically on plug insertion. Tap-offs can be removed when the system is live.



Electrical Characteristics			
Rated Current		63	Amps
Rated Voltage		230	Volts
Frequency		50/60	Hz
Conditional Short Circuit Rating	(Protection device:BS88 fuse)	16	KA
Conductor Resistance Line & Neutral		3.2	mΩ/m
Conductor Impedance		1.6	mΩ/m
Volt Drops Line & Neutral	Powertrack	3.2	mV/A/m
	Feed Unit + Coupler	2.2	mv/A
	Tap-Off	0.73	mV/A
	4mm² Cable	12.0	mV/A/m
	Coupler	1.5	mV/A
	Interlink Unit	4.5	mV/A
	10mm² Cable (1.2m)	4.7	mV/A/m
Earth Fault Loop Impedance:	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
	Feed Unit + Coupler	2.2	mΩ
	Tap-Off	0.73	mΩ
	4mm² Cable	12.0	mΩ/m
	Coupler	1.5	mΩ
	Interlink Unit	4.5	mΩ
	10mm² Cable	4.7	mΩ/m

Mechanical Data			
Number of Copper Conductors		2 or 3	
Conductor Cross-section Area	Nominal	12	mm²
Powertrack Casing Copper Equivalent	(Where casing is protective Earth)	12	mm²
Cable Termination Capacity		16	mm²
Tap-Off Cable 32A		4.0	mm²
Tap-Off Cable 13A or 16A		4.0	mm²
Tap-Off Conduit Sizes		Ø16 or Ø20	mm
Flexible Interlink Cable		10	mm²
Flexible Interlink Conduit		Ø25	mm
Feed Conduit Entry		2 x Ø25	mm
IP Rating		40	
Minimum void depth (track + tap-off)		56	mm

Materials specification	
Powertrack Casing	Galvanised Steel
Conductors	High Conductivity Copper
Powertrack Insulators	PBT
Sockets/Tap-Off Plug/Joint Mouldings	Polycarbonate LSF
Shutter	PBT
Tap-Off/Interlink Flexible Conduit	Galvanised Steel
Tap-Off Cable	LSF cable to BS7211
Tap-Off/Coupler Blade	Brass Silver Plated
Feed Unit Case	Galvanised Steel
Flexible Interlink Cable	LSF cable to BS7211
Feed/Flexible Interlink Housing	Galvanised Steel

Ambient temperature correction factors

Temperature	25°C	30°C	35°C	40°C	50°C
Factor	1.13	1.07	1.0	0.92	0.76

Technical Specifications

Third party certified and tested to comply with:
BS EN 60 439-1: 1999 IEC 60439-1: 1999
BS EN 60 439-2: 2000 IEC 60439-2: 2000
BS 5733: 1995 where applicable.
Marshall-Tufflex is registered by BSI to BS EN ISO9001
MT Powertrack is designed to comply with the requirements of BS 7671: 2008 (IEE Wiring Regulations).

Regulation 543.7 Installations to BS 7671:2008 Earthing requirements for the installation of equipment having high protective/conductor currents.

The scope of Reg. 543.7.1.3 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 507 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 543.7.1.3(ii).

32Amp 3 metre tap-off unit

The 32Amp tap-off unit comprises of an unfused tap-off* a flexible metal conduit with integral 4mm² LSF conductors.
These units are designed to comply with regulation 434.2.1(i) of BS 7671:2008 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.

Series 507
Raised floor boxes

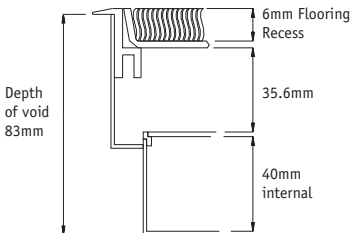
Three and four compartment boxes and a range of grommets that can be configured to meet client requirements for accessing multiple services concealed below a raised floor system.

Material

- Lid/trim: polypropylene grey RAL 7011
- Box assembly: galvanised steel
- Load plate: galvanised steel
- Accessory plate: plastisol RAL 7044

Installation

- Box module has 20 and 25mm knockouts (pre-wired options available).
- Mounting plates:
  3 compartment = 185 x 95mm
  4 compartment = 185 x 71mm
- Standard accessory mounting plates available depending on suitability of floor box configuration.
- Cable covers protect cables when lid is closed.
- Detailed installation instructions are supplied in box.



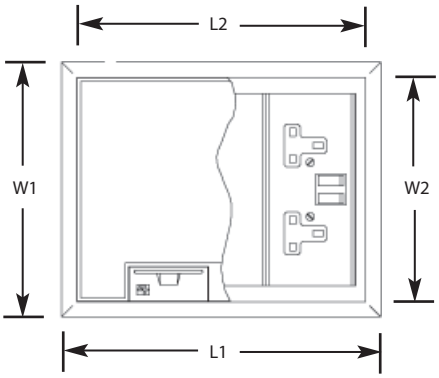
Standards

- Steel load plate: withstands working loads to PSAMOB PF2PS January 1990 (specification for raised floors).

Dimensions

Box type	Nominal trim size (L1 x W1)	No of compartments	Cut out dimensions (L2 x W2)	Accessory Plate Dimensions
URF32	355 x 255mm	3	322 x 222mm	185 x 95mm
URF42	355 x 255mm	4	322 x 222mm	185 x 71mm
			General tolerance +3mm	

Care should be taken to ensure that box edges are smoothed and free from burrs.



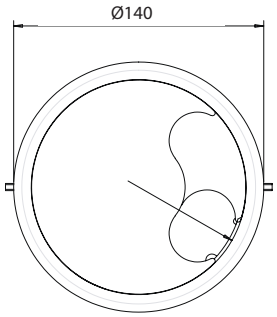
For dimensions of non standard boxes and trims, contact Technical Hotline on 01424 856688.

Series 507
Grommets

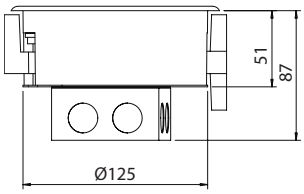
Material

- ABS Flame retardant
- Flammability: UL94 V-O 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



Series 507 In-screed system

Three and four compartment boxes configured to meet client requirements for accessing multiple services concealed below a raised floor system.

Standard system is suitable for screed depths of 60mm to 85mm. For other screed depths please contact the Technical Team on 01424 856688.

Material

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

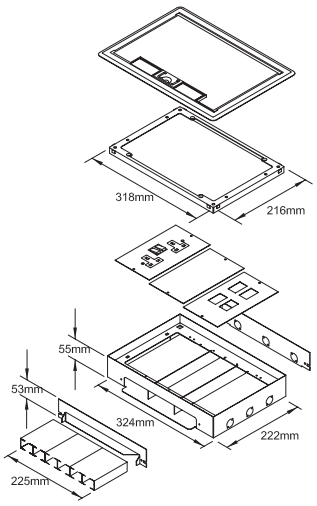
Installation

- Layout planning essential as alterations are not possible once screed is laid.
- Place floor boxes and junction boxes in position with top of boxes level and in line with expected finished floor level.
- Adjust boxes to screed depth by adjusting sub frame height.
- When boxes are in correct position, use PVC-U or steel duct to link between.
- To use conduit for linking boxes, utilize the Ø20mm knockout in the blank plate.
- Floor boxes can only be used as through boxes.
- Junction boxes have all round access with internal segregation.
- Duct adaptors and blank ends are not supplied for junction and service boxes. These must be ordered separately to individual requirements.
- Use a connector to join lengths of ducting.
- Flat and vertical bends or junction boxes are used where a change of direction is required.
- An optional steel screeding plate (USFSP1) is available to replace the box lid temporarily when screeding the floor.

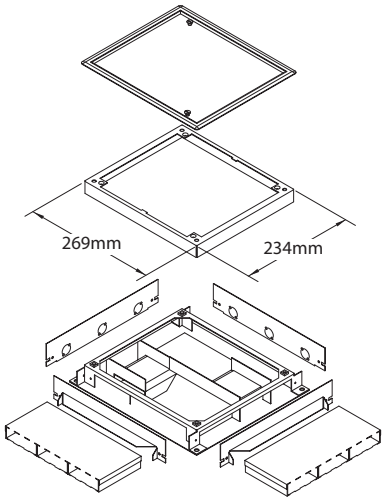
Wiring accessories and mounting plates

- 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.

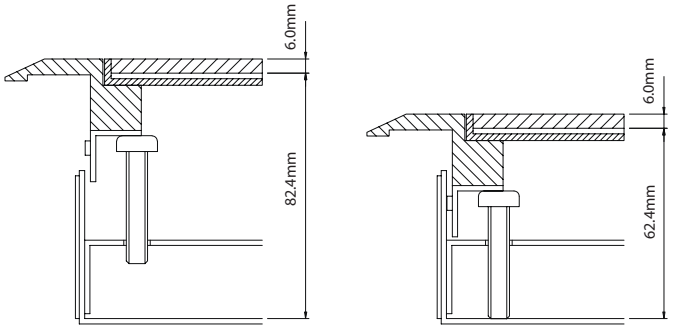
Floor outlet Box



Junction box



Box screed depth adjustment



MT32 Pre-wired underfloor power distribution

Singles Cabling System

Extension, Connection, Adaptor and Terminal Cables

Cable Type	6491B (HO1Z-R) to BS 7211 (LSOH)
Size	4.0mm² x 3
Connector Self Lock Retention	> 80N
Male/Female Connector Diameter	19.2mm
Terminal Block	6 x 4.0mm²
Adaptor (4.0mm²)	20mm

Underfloor Distribution System

Conduit Assembly, Tap Off and Adaptor

Cable Type	6491B (HO7Z-R) to BS 7211 (LSOH)
Protective Earth (P.E)	4.0mm² x 3 (Grey Plug)
Clean Earth (C.E)	4.0mm² x 4 (Red Plug)
Protection: Conduit Assembly	25mm Steel flexible conduit
Protection: Tap Off	20mm Steel flexible conduit

Master Distribution Unit, Slave Unit, MCB Distribution Unit, Floor Box Assembly

Cable Type	4.0mm² 6491B (HO7Z-R) to BS 7211 (LSOH)
Protection	Outer: Galvanised steel
MCB Rating	On request
Adaptor (4.0mm²) entry size	20mm

Master Distribution Unit, MCB Distribution Unit

SWA Gland entry size	25mm

Different key ways apply between 2.5mm² and 4.0mm²

General Specification

Approvals: System	Designed to comply with BS 7671:2008 IEE Wiring Regulations
Approvals: Connector	Designed to comply with EN 61535 (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. BS 7671: 2008 Reg. 543.7

The scope of Reg. 543.7.1.3 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, (543.7.1.3ii) with the protective conductor being enclosed throughout in trunking or flexible conduit to provide additional protection against mechanical damage.

Note: Different key ways apply between 2.5mm² and 4.0mm²

Technical information

Desk units

Flip up units

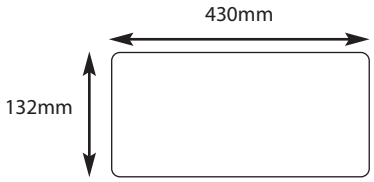
- Units have bi-directional access and are suitable for installation to BS 6396.
- Up to 4 x individually fused 3.15 and 5Amp sockets.
- Up to 4 x data outlets.

Fitting

- Simple, secure ratchet with hidden screw fixing.

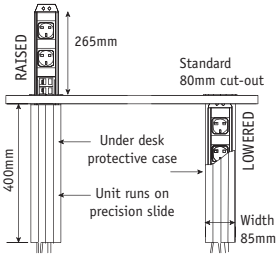
Desk cut out size

- 132 x 430mm.
- Unit casing depth 90mm from top surface of desk.
- It is recommended that at least 400mm is clear below the cut out to allow cables to move freely.
- Cut out width is constant (132mm).
- Cut out length (430mm) will vary according to order requirements.

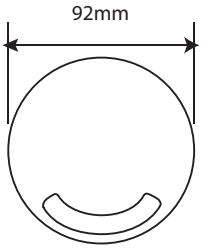


Pull up units

- 2 x sockets and 2 x RJ45 maximum.



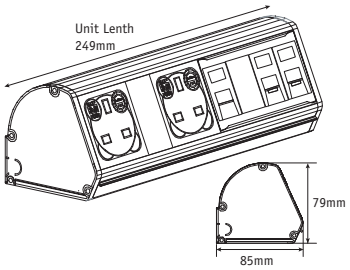
Desk grommets



Cut out size

Box type	Diameter
DG1	80mm
General tolerance	2mm

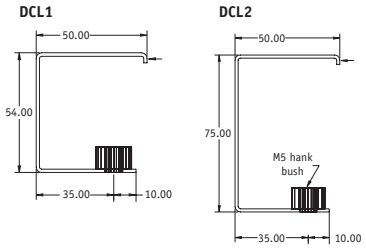
Curved surface units



Adjustable desk clamp

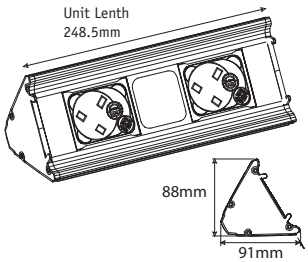
Adjustable clamps suit desks from 5mm – 48mm thick.

- For use with curved surface units only.



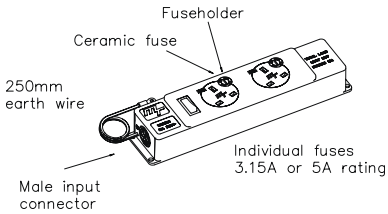
Angled surface units

- Adhesive pad fixing included



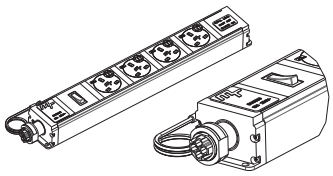
Moulded units

- Maximum of 4 sockets fused at 5Amps or 6 sockets fused at 3.15Amps fed from 13Amp supply plug.
- Through units with a female exit must be specified on order.



Aluminium units

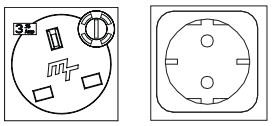
Aluminium units with optional MT32 sockets.



Socket type and orientation

Most European socket types can be accommodated, including Schuko.

All BS 1363 sockets are available individually fused.

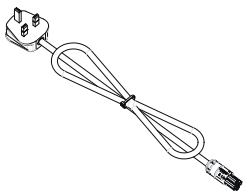


UK Fused Schuko

Cable type

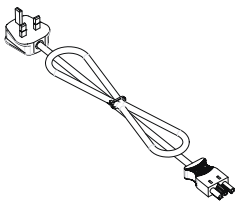
In-feed power cable shown with optional MT32 connector.

- 13Amp rating.
- Specification of cable length is necessary.



In-feed power cable shown with optional Wieland connector.

- 13Amp rating.
- Specification of cable length is necessary.



Power module earth lead

Size: 2.5mm²
Length: 250mm with 5mm ring terminal.

Standards

- BS 6396 Electrical Systems in Office Furniture.
- BS 1363-2 (where applicable).