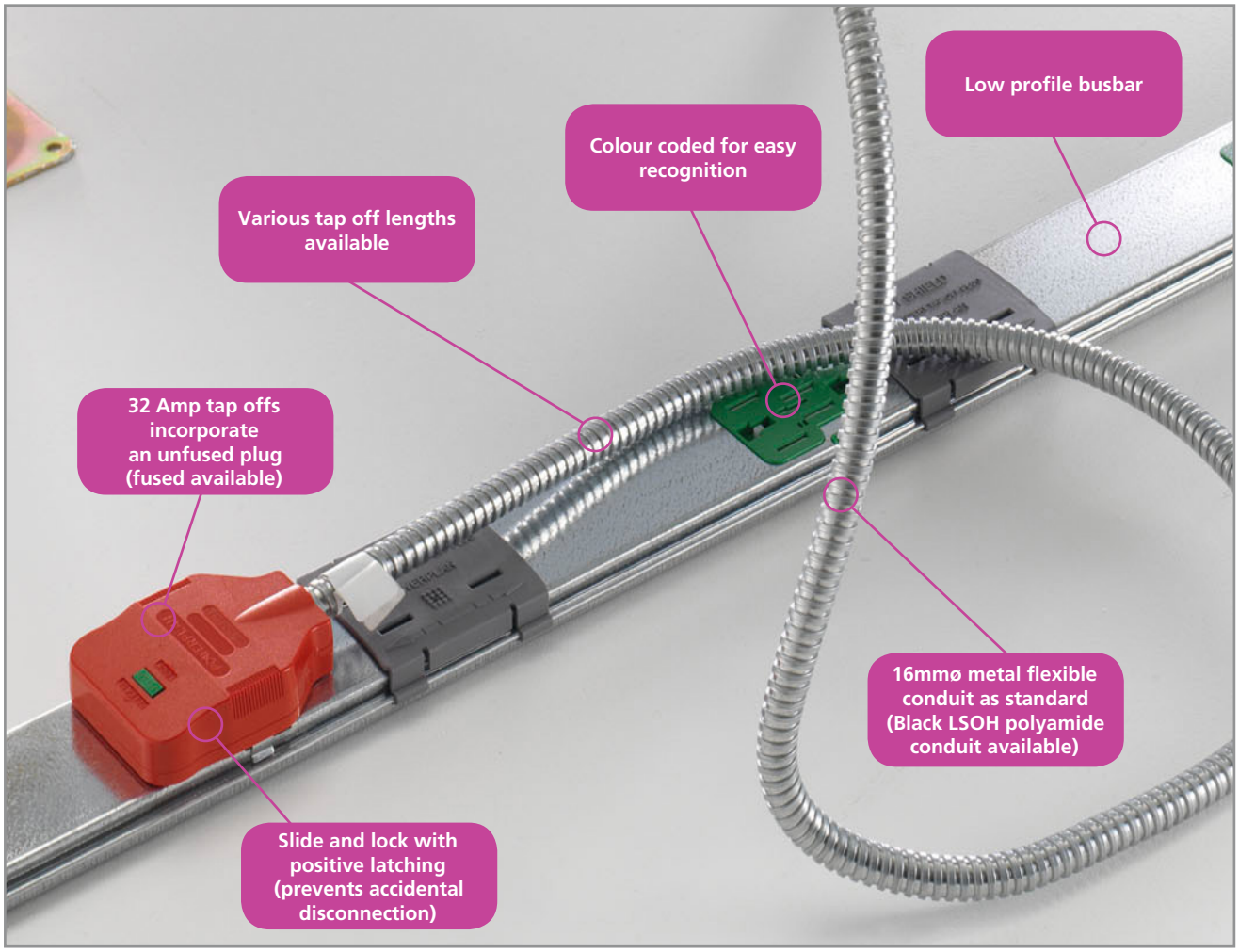
Betatrak® Underfloor Busbar

Busbars offer an efficient, flexible solution to underfloor power distribution as they use a click fit method for that fast and simple install. To reduce up front labour costs all busbars are tested at our manufacturing facilities meaning no onsite commissioning. Underfloor power solutions are also very low maintenance and exceptionally reliable making it the perfect solution in today's modern construction world.

The benefits of using an Underfloor Power Distribution System

- Choice: a comprehensive range of supply systems
- Flexibility: can be used in new or existing layouts
- Versatility: all kinds of configurations are possible including bends/corners
- Safety: colour coded tap offs for easy recognition. Sliding dust covers to protect outlets
- Height clearance: low profile busbar suitable for shallow floor voids
- Convenience: variety of Betatrak® lengths with different socket centres. 300mm standard (150mm and 600mm available on request)



Due to transport restrictions 3.6m length busbars have a minimum order requirement of 10 lengths. Orders of less than 10 units will be supplied as 2x 1.8m lengths per 3.6m length ordered.

Underfloor Busbar

The 63 Amp Betatrak® System caters for single phase standard, clean earth (CE) low noise, auxiliary, three phase or dual applications. Betatrak® comes in lengths of 1.2m, 1.8m, 2.4m or 3.6m with tap off positions provided at 300mm as standard (Note: 150mm and 600mm available on request). As a result, the system is extremely versatile and suitable for high to low density tap off requirements.

All integral connectors and tap off plug sockets are colour coded to avoid any possible errors during assembly. For maximum safety each operates a shutter on insertion to ensure no accidental contact can be made.

Installation

Betatrak® used within raised access floors is normally arranged in parallel runs with the feed units to the Betatrak® orientated towards the incoming supply. This offers an economic format inherent in long straight runs. Spacing should be a maximum of 5 metres between each length of track and 2.5 metres from the perimeter when using a standard 3 metre tap off to a floor box.

Attention should be given to the total power requirements to avoid exceeding the maximum power rating of the Busbar.

The following versions are available for both Busbar and Tap Offs:

- Standard Earth
- Clean Earth (CE) Low Noise Earth
- Auxiliary Earth
- Dual Circuit
- Three Phase

Length	No of Sockets	Centres (mm)	Standard White 63 Amp	Clean Earth (CE) (Low Noise Earth) Red 63 Amp	Auxiliary Black 63 Amp	Dual Circuit (Standard/Low Noise) Green 63 Amp	3 Phase Blue 63 Amp
3.6m	12	300	PBST3336	PBCT4336	PBAT3336	PBDT6336	PBTT5336
2.4m	8	300	PBST3324	PBCT4324	PBAT3324	PBDT6324	PBTT5324
1.8m	6	300	PBST3318	PBCT4318	PBAT3318	PBDT6318	PBTT5318
1.2m	4	300	PBST3312	PBCT4312	PBAT3312	PBDT6312	PBTT5312
Feed Unit			PBSF3010/SM	PBCF4010/SM	PBAF3010/SM	PBDF6010	PBTF5010
Flexible Corner		1m	PBSB3031H/SM	PBCB4031H/SM	PBAB3031H/SM	PBDB6031H	PBTB5031H
		2m	PBSB3032H/SM	PBCB4032H/SM	PBAB3032H/SM	PBDB6032H	PBTB5032H
Flexible Corner Kit			PBSB3000/SM	PBCB4000/SM	PBAB3000/SM	PBDB6000	PBTB5000

Due to transport restrictions 3.6m length busbars have a minimum order requirement of 10 lengths. Orders of less than 10 units will be supplied as 2x 1.8m lengths per 3.6m length ordered.

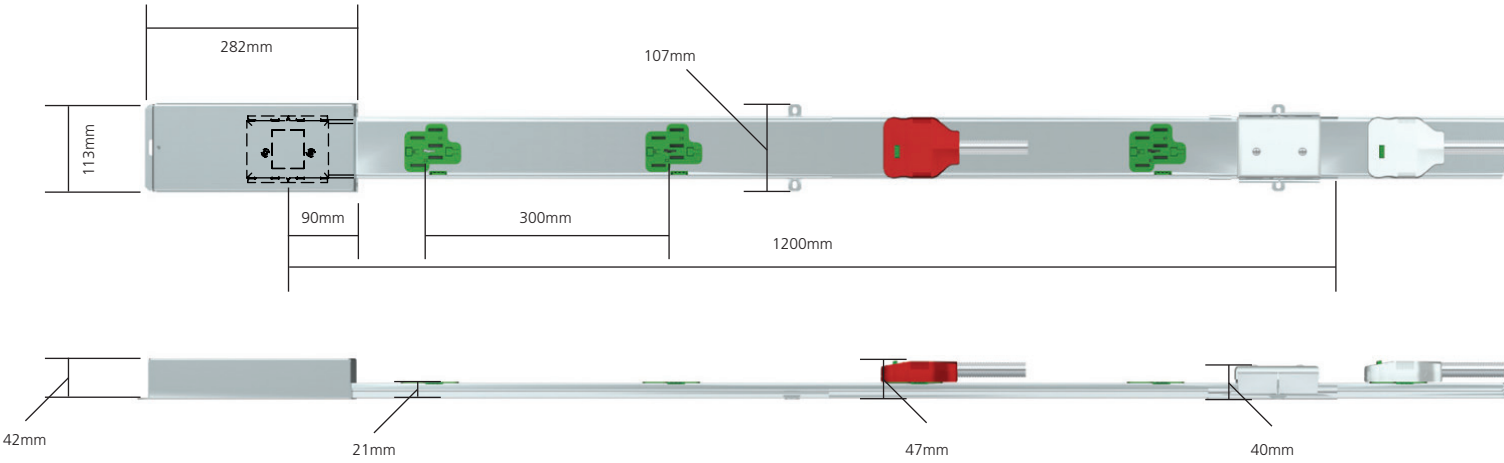
Underfloor Busbar

How to install the Busbar

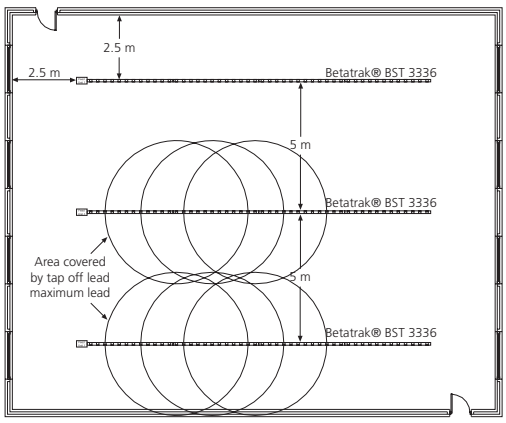
Starting with the feed unit, remove the dust cover over the colour coded socket and simply snap the integral coupler, pre-installed on the busbar, into the feed socket. The next length of track is then fitted to the socket end of the first length of busbar as previously described, this is then repeated for the following lengths until the run is complete. On the final length of busbar section the dust cover supplied is fitted on the final unused coupling point to protect against the ingress of foreign contaminants. The feed unit is then secured via the slots in the base and the busbar every 1200mm (max) by using the mounting brackets provided.

CMD is registered by BSI to BS EN ISO 9001 and BS EN ISO 14001. Betatrak® is designed to comply with regulation 434.2 of BS 7671: 2008 Amd 3 (IEE Wiring Regulations) and 543.7 earthing requirements for the installation of equipment having high protective conductor currents.

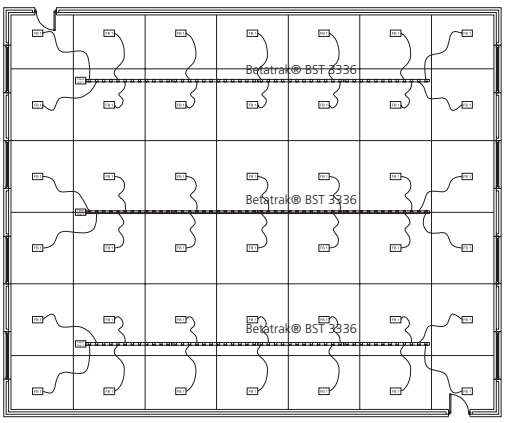
The scope of Reg. 543.7.1.3 requires that every final circuit is intended to supply one or more items of equipment, where the total protective conductor current is likely to exceed 10mA. in normal use, shall have a high protective connection.



Typical Floor Layouts



Busbar
3m tap offs provide full coverage when busbar is laid out on 5m centres.



Floor Boxes
Typical layout: 1 floor box for every 10m².

Due to transport restrictions 3.6m length busbars have a minimum order requirement of 10 lengths. Orders of less than 10 units will be supplied as 2x 1.8m lengths per 3.6m length ordered.

Underfloor Busbar

Electrical Characteristics					
Rated Current				63	Amps
Rated Voltage				240/415	Volts
Frequency				50	Hz
Conditional Short Circuit Rating	(Protection devices IEC 60269/BS88 Fuse and IEC 60898 MCB)			16	KA
Max withstand current				10 kA Peak	
Short time withstand current				1200A for 0.4 Sec	
Volt Drops (Line and Neutral)	Busbars			3.2	mV/A/m
	Feed Unit			0.4	mV/A
	Track Coupler			0.6	mV/A/m
	Tap off Connection			0.5	mV/A
	+4mm² Cable			11.00	mV/A/m
	+2.5mm²			18.00	mV/A/m
	Flexible Corner Unit			3.6	mV/A
	+10mm² Cable (1.2m)			4.7	mV/A/m
Earth Fault Loop Impedance	Line to Earth (Housing)			3.0	mΩ/m
	Line to Earth (Bar)			3.2	mΩ/m
	Line to Earth (Bar + Housing)			2.5	mΩ/m
	Feed Unit			0.8	mΩ
	Track Coupler			0.6	mΩ
	Tap off Connection			0.6	mΩ
	+4m² Cable			11.0	mΩ/m
	+2.5mm² and 4mm² Cable			14.5	mΩ/m
	Flexible Corner Unit			4.0	mΩ
	+10mm² Cable			4.7	mΩ/m
Mechanical Data					
Number of Copper Conductors				2, 3, or 5	
Busbar Cross-section Area				14	mm²
Betatrak® Basing Copper Equivalent (Where casing is protective Earth)				14	mm²
Cable Termination Capacity				16	mm²
Tap off Cable 32Amp (BS 7211)				4.0	mm²
Tap off Cable 13Amp fused (BS 7211)				2.5	mm²
Tap off Conduit Sizes				Ø16 or Ø20	mm
Flexible Corner Unit Cable (BS 7211)				10	mm²
Flexible Interlink Conduit				Ø25	mm
Feed Conduit Entry				1 or 2 x Ø25	mm
IP Rating BS EN 60529				4X	
Minimum void depth (track + tap off)				59	mm
Material Specification					
Betatrak® Casing	Galvanised Steel				
Busbars	High Conductivity Copper				
Busbar Insulators and Coupling Mould	Flame Retardant Polycarbonate				
Couple Contacts	Copper				
Feed Unit Terminals	Brass Silver Plated				
Tap off Socket and Plug Mouldings	Flame Retardant Polycarbonate				
Tap off Shutter	Polyester				
Tap off Plug Ins	Brass				
Tap off Cable	LSOH BS 7211				
Flexible Corner Cable	Tri Rated BS 6231				
Ambient Temperature Control Factors					
Temperature	25C	30C	35C	40C	50C
Factor	1.13	1.07	1.0	0.93	0.75

distribution power

Betatrak products has been independently tested to fully comply with BS EN 61534 and IEC 61534 2014 for Underfloor Powertrack Systems.