



Power Distribution

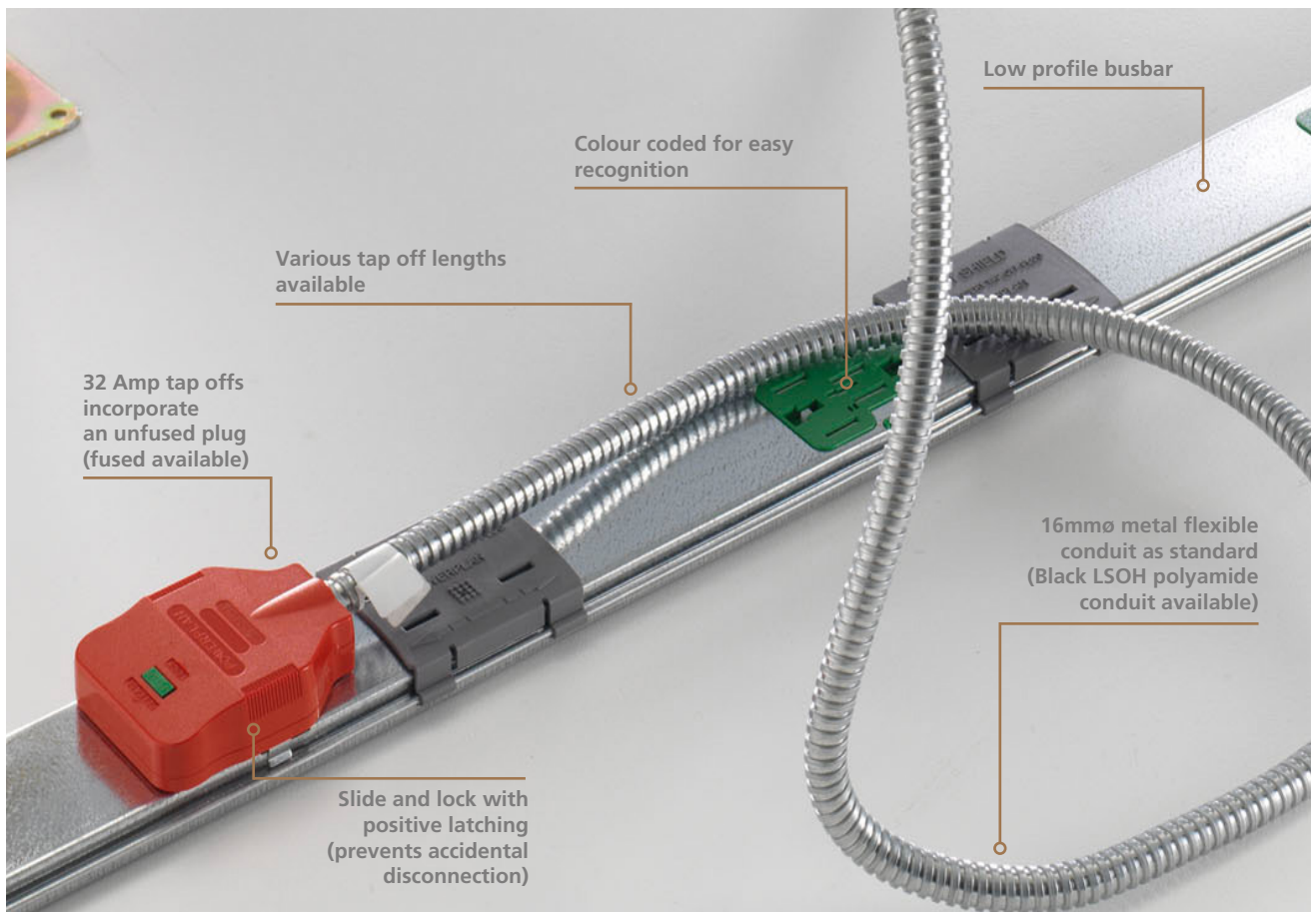
Betrak Busbars | Floor Boxes | Cable Hives

Betrak® 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 Betrak® 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.

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






Betrak® 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

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.

| | | | Standard | Clean Earth (CE) (Low Noise Earth) | Auxiliary | Dual Circuit (Standard/Low Noise) | 3 Phase |
|----------------------------|---------------|--------------|---|---|--|---|---|
| | | | White 63 Amp | Red 63 Amp | Black 63 Amp | Green 63 Amp | Blue 63 Amp |
| Length | No of Sockets | Centres (mm) |  |  |  |  |  |
| 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 |

Underfloor Busbar

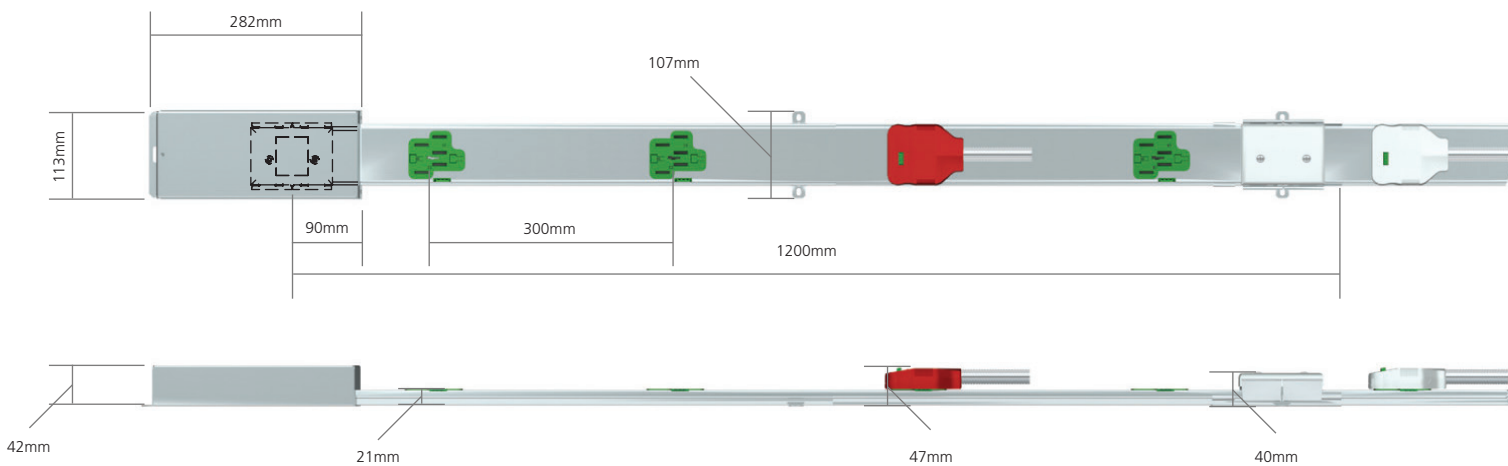


How to install the Busbar

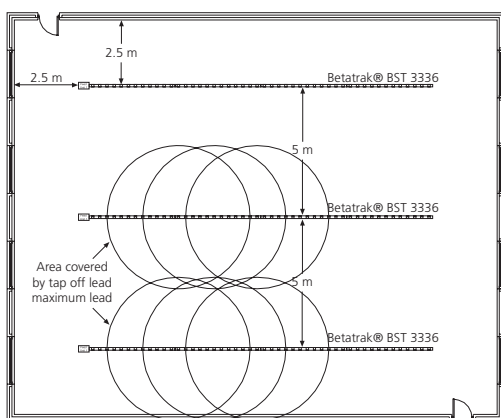
Starting with the feed unit, remove the dust cover over the colour coded socket and simply snap the integral coupler, pre-installed on the busbar, into the feed socket. The next length of track is then fitted to the socket end of the first length of busbar as previously described, this is then repeated 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.

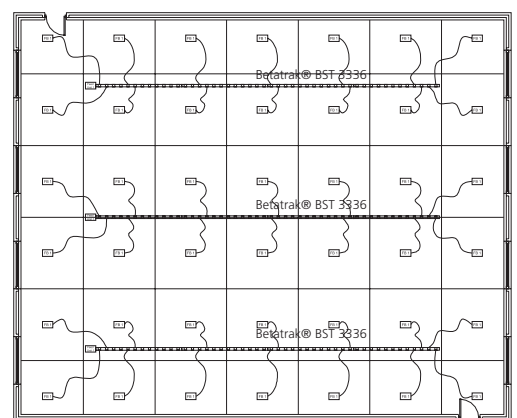


Typical Floor Layouts



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.

| 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 | |
| | +4mm ² Cable | 11.00 | | | mV/A/m | |
| | +2.5mm ² | 18.00 | | | mV/A/m | |
| | Flexible Corner Unit | 3.6 | | | mV/A | |
| | +10mm ² 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 | |
| +4m ² Cable | | 11.0 | | | mΩ/m | |
| +2.5mm ² and 4mm ² Cable | | 14.5 | | | mΩ/m | |
| Flexible Corner Unit | | 4.0 | | | mΩ | |
| +10mm ² Cable | | 4.7 | | | mΩ/m | |
| Mechanical Data | | | | | | |
| Number of Copper Conductors | | 2, 3, or 5 | | | | |
| Busbar Cross-section Area | | 14 | | | mm ² | |
| Betatrak® Basing Copper Equivalent (Where casing is protective Earth) | | 14 | | | mm ² | |
| Cable Termination Capacity | | 16 | | | mm ² | |
| Tap off Cable 32Amp (BS 7211) | | 4.0 | | | mm ² | |
| Tap off Cable 13Amp fused (BS 7211) | | 2.5 | | | mm ² | |
| Tap off Conduit Sizes | | Ø16 or Ø20 | | | mm | |
| Flexible Corner Unit Cable (BS 7211) | | 10 | | | mm ² | |
| 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) | | 47 (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 | |

*Allowance for plug pins.

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

| 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 | | |
| | +4mm ² Cable | 11.00 | | mV/A/m | | |
| | +2.5mm ² | 18.00 | | mV/A/m | | |
| | Flexible Corner Unit | 3.6 | | mV/A | | |
| | +10mm ² 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 | | |
| +4m ² Cable | | 11.0 | | mΩ/m | | |
| +2.5mm ² and 4mm ² Cable | | 14.5 | | mΩ/m | | |
| Flexible Corner Unit | | 4.0 | | mΩ | | |
| +10mm ² Cable | | 4.7 | | mΩ/m | | |
| Mechanical Data | | | | | | |
| Number of Copper Conductors | | 2, 3, or 5 | | | | |
| Busbar Cross-section Area | | 14 | | mm ² | | |
| Betatrak® Basing Copper Equivalent (Where casing is protective Earth) | | 14 | | mm ² | | |
| Cable Termination Capacity | | 16 | | mm ² | | |
| Tap off Cable 32Amp (BS 7211) | | 4.0 | | mm ² | | |
| Tap off Cable 13Amp fused (BS 7211) | | 2.5 | | mm ² | | |
| Tap off Conduit Sizes | | Ø16 or Ø20 | | mm | | |
| Flexible Corner Unit Cable (BS 7211) | | 10 | | mm ² | | |
| 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) | | 47 (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 | |

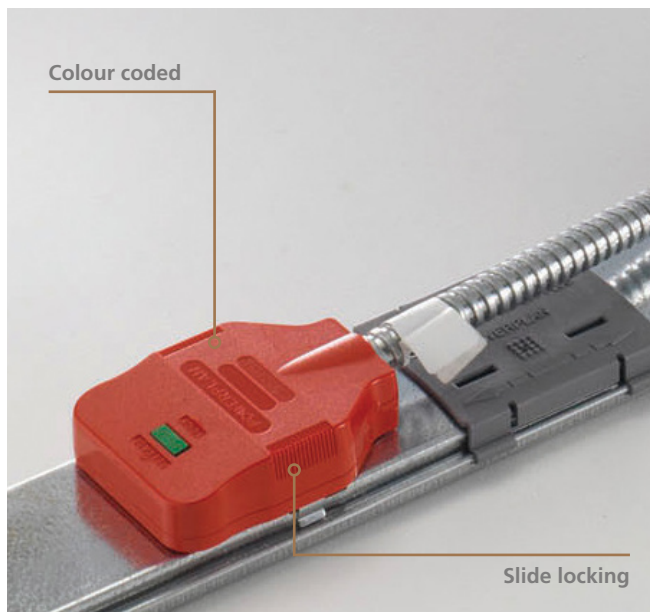
*Allowance for plug pins.

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

Tap Offs

Tap offs are colour coded and non-interchangeable between busbar types. The slide locking, positive latching tap off plug prevents accidental disconnection and can be added to or removed from the busbar while the system is live. All 3 metre, 32 Amp tap offs incorporate an unfused plug, and as standard, 16mmØ metal flexible conduit enclosing 3 metres of 4mm² cables. These units are designed to comply with Regulation 434.2.1 of BS 7671:2008 Amd 3. 5 metre unfused tap offs are also available for use with individual track runs that are rated at no more than 32Amp, where the protection of the tap off against both overload and fault current is provided by the track protective device.

CMD tap off units conform to the high integrity protective requirement by virtue of using a protective conductor of 4mm enclosed within a flexible conduit, thus providing additional protection against mechanical damage.



The benefits of using a CMD Tap off

1. Choice: a comprehensive range of supply versions
2. Flexibility: can be used in new or existing layouts
3. Safety: all units are designed to comply with regulation 434.2.1 of BS 7671: 2008 Amd 3
4. Convenience: all tap offs are colour coded and non-interchangeable with slide locking and positive latching to prevent accidental disconnection

Tap off units

| Socket key codes | Standard Earth | Clean Earth | Auxiliary Earth | Dual Circuit | 3 Phase |
|-------------------|----------------|-------------|-----------------|--------------------------|------------------------|
| 3m unfused | | | | PBDX 7283H* | PBTX 5283H** |
| 3m unfused 32 Amp | PBSX 3323H | PBCX 4323H | PBAX 3323H | PBSX 3323H PBCX 4323H | BTX 3323H 1, 2 or 3 |
| 3m fused 13 Amp | PBSX 3133H | PBCX 4133H | PBAX 3133H | PBSX 3133H PBCX 4133H | BTX 3133H 1, 2 or 3 |
| 5m unfused 25 Amp | | | | PBDX 7285H* | PBTX 5285H** |
| 5m unfused 32 Amp | PBSX 3325H | PBCX 4325H | PBAX 3325H | PBSX 3325H PBCX 4325H | BTX 3325H 1, 2 or 3 |
| 5m fused 13 Amp | PBSX 3135H | PBCX 4135H | PBAX 3135H | PBSX 3135H PBCX 4135H | BTX 3135H 1, 2 or 3 |

*These tap offs have 2 circuits (1 x standard and 1 x clean earth) rated at 25 Amp

**These tap offs are 3 Phase (L1, L2, L3, N, E) rated at 28 Amp

32 Amp 3 metre tap off

32 Amp 3 metre tap off unit is comprised of an unfused plug with 16mmØ flexible metal conduit with integral 3m x 4mm² cables.

These units are designed to comply with regulations 434.2.1(i) BS 7671:2008 Amd 3 by virtue of the following:








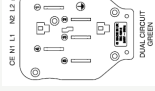


1. Maximum length of cable is <3 metres
2. Minimum risk of faults as the item is factory assembled and fully tested
3. Fully protected by flexible steel conduit located within raised access floor that offers further protection

5 metre tap off unit

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

All tap off units comply with 17th Edition Wiring Regulations Section 543.7 (High Integrity Earthing).

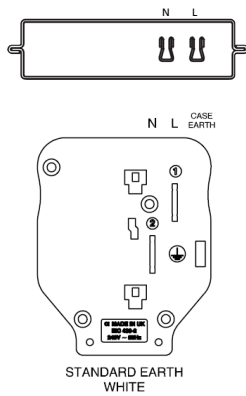
Numerous configurations of tap off units including fuse options are available on request. Longer lengths available on request. CMD tap off units conform to the high integrity protective requirement by virtue of using a protective conductor of 4mm enclosed within a flexible conduit, thus providing additional protection against mechanical damage.

| Mechanical data | Track type | Tap off type |
|---|---|---|
| Standard earth White 63 Amp |  |  |
| Clean earth (CE) (low noise earth) Red 63 Amp |  |  |
| Auxiliary earth Black 63 Amp |  |  |
| Dual circuit (standard/low noise) Green 63 Amp |  |  |
| 3 phase Blue 63 Amp |  |  |

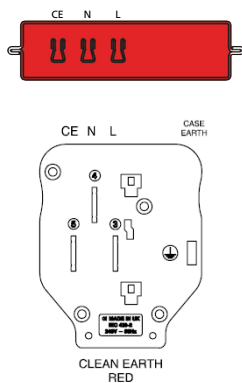
| Mechanical data | |
|--------------------------------------|-------------------------------|
| Tap off cable 32 Amp (BS 7211) | 4.0 mm ² |
| Tap off cable 13 Amp fused (BS 7211) | 2.5 mm ² |
| Tap off conduit sizes | Ø16 or Ø20 mm |
| Tap off socket and plug mouldings | Flame retardant polycarbonate |
| Tap off shutter | Polyester |
| Tap off plug pins | Brass |
| Tap off cable | LSOH BS 7211 |
| Flexible corner cable | Tri rated BS 6231 |

Tap Offs

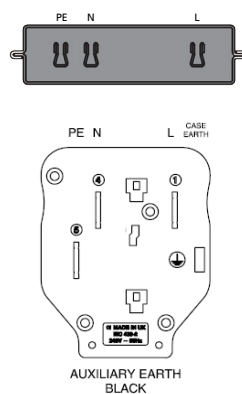
Standard Earth - 63 Amp



Clean Earth (CE) - 63 Amp



Auxiliary Earth - 63 Amp



| Code | Description |
|------|-------------|
|------|-------------|

Betatrak®

| | |
|--------------|---------------------------|
| PBST3336 | 3.6 Metre Length |
| PBST3324 | 2.4 Metre Length |
| PBST3318 | 1.8 Metre Length |
| PBST3312 | 1.2 Metre Length |
| PBSF3010/SM | Feed Unit c/w End Stop |
| PBSB3000/SM | Flexible Corner Kit |
| PBSB3031H/SM | Flexible Corner - 1 Metre |
| PBSB3032H/SM | Flexible Corner - 2 Metre |

Tap Offs

| | |
|-----------|--------------------------------|
| PBSX3323H | 3 Metre Tap off 32 Amp Unfused |
| PBSX3325H | 5 Metre Tap off 32 Amp Unfused |
| PBSX3133H | 3 Metre Tap off 13 Amp Fused |
| PBSX3135H | 5 Metre Tap off 13 Amp Fused |

| Code | Description |
|------|-------------|
|------|-------------|

Betatrak®

| | |
|--------------|---------------------------|
| PBCT4336 | 3.6 Metre Length |
| PBCT4324 | 2.4 Metre Length |
| PBCT4318 | 1.8 Metre Length |
| PBCT4312 | 1.2 Metre Length |
| PBCF4010/SM | Feed Unit c/w End Stop |
| PBCB4000/SM | Flexible Corner Kit |
| PBCB4031H/SM | Flexible Corner - 1 Metre |
| PBCB4032H/SM | Flexible Corner - 2 Metre |

Tap Offs

| | |
|-----------|--------------------------------|
| PBCX4323H | 3 Metre Tap off 32 Amp Unfused |
| PBCX4325H | 5 Metre Tap off 32 Amp Unfused |
| PBCX4133H | 3 Metre Tap off 13 Amp Fused |
| PBCX4135H | 5 Metre Tap off 13 Amp Fused |

| Code | Description |
|------|-------------|
|------|-------------|

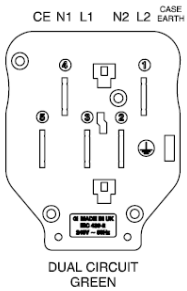
Betatrak®

| | |
|--------------|---------------------------|
| PBAT3336 | 3.6 Metre Length |
| PBAT3324 | 2.4 Metre Length |
| PBAT3318 | 1.8 Metre Length |
| PBAT3312 | 1.2 Metre Length |
| PBAF3010/SM | Feed Unit c/w End Stop |
| PBAB3000/SM | Flexible Corner Kit |
| PBAB3031H/SM | Flexible Corner - 1 Metre |
| PBAB3032H/SM | Flexible Corner - 2 Metre |

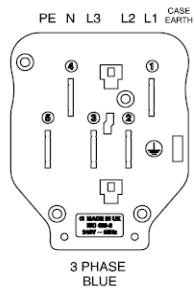
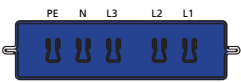
Tap Offs

| | |
|-----------|--------------------------------|
| PBAX3323H | 3 Metre Tap off 32 Amp Unfused |
| PBAX3325H | 5 Metre Tap off 32 Amp Unfused |
| PBAX3133H | 3 Metre Tap off 13 Amp Fused |
| PBAX3135H | 5 Metre Tap off 13 Amp Fused |

Dual Circuit - 63 Amp



3 Phase - 63 Amp



| Code | Description |
|-----------------|---|
| Betrak® | |
| PBDT6336 | 3.6 Metre Length |
| PBDT6324 | 2.4 Metre Length |
| PBDT6318 | 1.8 Metre Length |
| PBDT6312 | 1.2 Metre Length |
| PBDF6010 | Feed Unit c/w End Stop |
| PBDB6000 | Flexible Corner Kit |
| PBDB6031H | Flexible Corner - 1 Metre |
| PBDB6032H | Flexible Corner - 2 Metre |
| Tap Offs | |
| PBDX7283H | 3 Metre Tap off 25 Amp Unfused Dual Circuit |
| PBDX7285H | 5 Metre Tap off 25 Amp Unfused Dual Circuit |

| Code | Description |
|-----------------|--------------------------------|
| Betrak® | |
| PBTT5336 | 3.6 Metre Length |
| PBTT5324 | 2.4 Metre Length |
| PBTT5318 | 1.8 Metre Length |
| PBTT5312 | 1.2 Metre Length |
| PBTF5010 | Feed Unit c/w End Stop |
| PBTB5000 | Flexible Corner Kit |
| PBTB5031H | Flexible Corner - 1 Metre |
| PBTB5032H | Flexible Corner - 2 Metre |
| Tap Offs | |
| PBTX3323H-1 | 3 Metre Tap off 32 Amp Unfused |
| PBTX3325H-1 | 5 Metre Tap off 32 Amp Unfused |
| PBTX3133H-1 | 3 Metre Tap off 13 Amp Fused |
| PBTX3135H-1 | 5 Metre Tap off 13 Amp Fused |

NB: Add suffix -1, -2 or -3 to indicate required phase configuration of the above 3 Phase Tap Offs
E.G. PBTX3323H-1

Non Standard Tap Offs

| Code | Description |
|--|--|
| Betrak® Non Standard Tap Offs 32 Amp Neutrik Tap Offs | |
| PPA8284K | 5m, 32 Amp unfused, Std Earth tap off c/w 32 Amp Neutrik |
| PPA7842K | 5m, 32 Amp unfused, Std Auxiliary Earth Tap off c/w 32 Amp Neutrik |
| PPA8306 | 5m, 32 Amp unfused, Clean Earth Tap off c/w 32 Amp Neutrik |
| Alphatrak® Non Standard Tap Offs Standard Earth | |
| PASX3323H | 3 Metre Tap off 32 Amp Unfused |
| PASX3325H | 5 Metre Tap off 32 Amp Unfused |
| Alphatrak® Non Standard Tap Offs Clean Earth | |
| PACX4323H | 3 Metre Tap off 32 Amp Unfused |
| PACX4325H | 5 Metre Tap off 32 Amp Unfused |

Betrak Compliance Standard



ASTA Certificate of Verification Tests

| | |
|---------------------|---|
| Laboratory Ref. No: | 45673/1 |
| APPARATUS: | Rated current 63A, rated voltage 240V/415V, rated impulse voltage 4kV, 50Hz, with a conditional short circuit rating of 16kA. A range of underfloor powertrack systems and associated tap-off units. |
| DESIGNATION: | Betrak system |
| MANUFACTURER: | CMD Limited, Sycamore Road, Eastwood Trading Estate, Rotherham, S65 1EN |
| TESTED BY: | kA Testing Facility, John Street, New Basford, Nottingham, NG7 7HL, UK Prof. Ir. Damstra Laboratory, P.O Box 23, 7550 AA, Hengelo, Europalaan 202, 7559 SC Hengelo, The Netherlands Exova (UK) Limited, 6 Coronet Way, Centenary Park, Salford, M50 1RE, UK Exova Warringtonfire, Holmesfield Road, Warrington, WA1 2DS, UK Exova (UK) Limited, Key Industrial Estate, Fernside Road, Willenhall, West Midlands, WV13 3YA, UK |
| DATE(S) OF TESTS: | 26th February - 23rd August 2016 |

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with:

IEC 61534-22 Edition 2.0, 2014-06 and BS EN 61534-22: 2014

Verifications with reference to the tests listed in Sub-Clause 5.3 of IEC 61534-1: Edition 2.1 2014-06

- | | |
|---|--|
| 1. Marking and Documentation, Clause 8 | 8. Insulation resistance test and dielectric strength test, Clause 15 |
| 2. Construction, Clause 9 | 9. Normal operation, Clause 16 |
| 3. Clearances, creepage distances and solid insulation, Clause 10 | 10. Temperature rise, Clause 17 |
| 4. Protection against electric shock, Clause 11 | 11. Short-circuit protection and short-circuit withstand strength, Clause 18 |
| 5. Terminals and Terminations, Clause 12 | 12. Resistance to heat, Clause 19 |
| 6. Screws, current carrying parts and connections, Clause 13 | 13. Fire hazard, Clause 20 |
| 7. Mechanical strength, Clause 14 | 14. External influences, Clause 21 |

This certificate applies only to the apparatus tested. Responsibility for conformity of any apparatus having the same or other designations rests with CMD.

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