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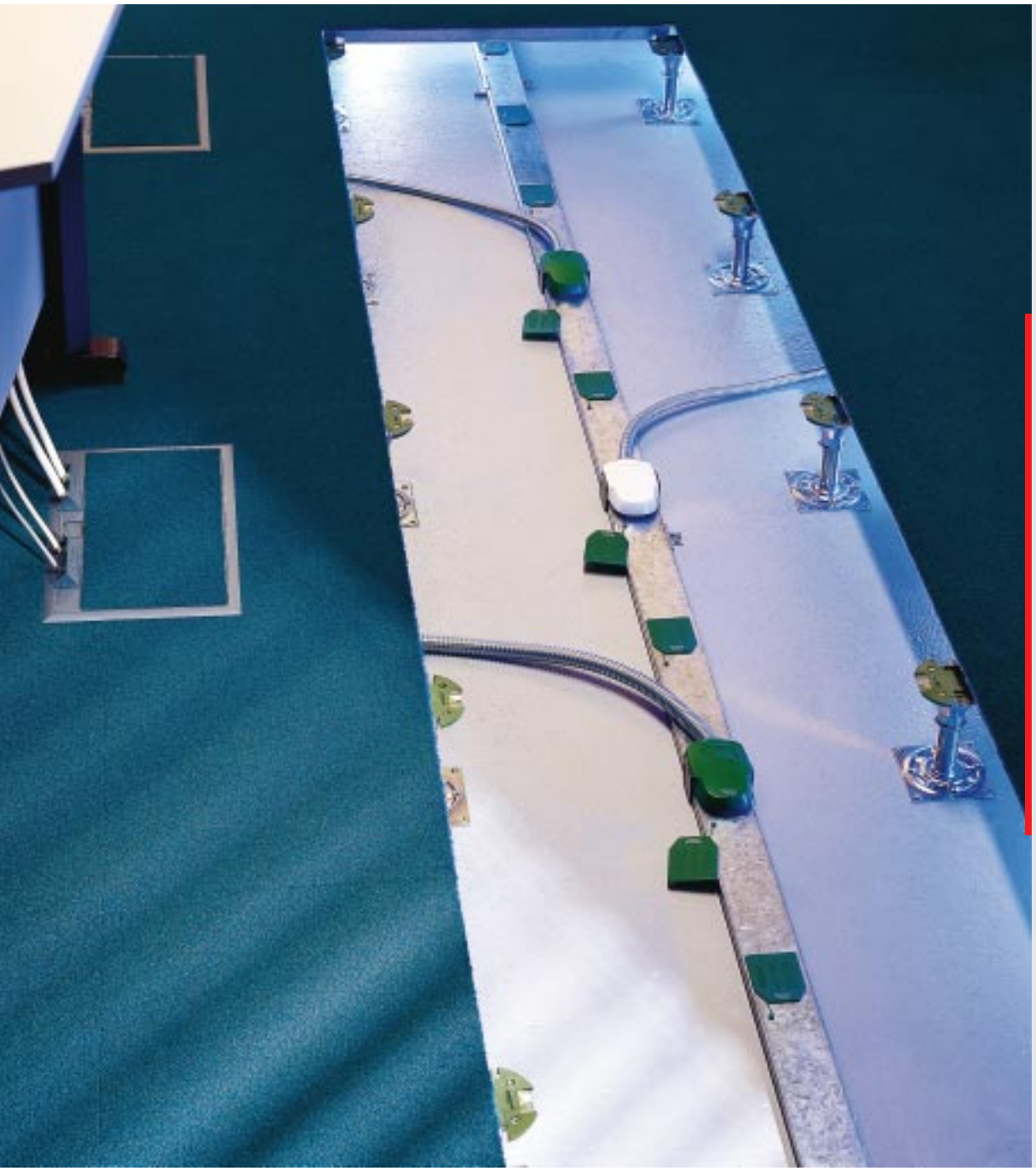
ELECTRAK®



Electrak power track

underfloor power distribution systems

Electrak power track

underfloor power distribution systems

- Even faster installation
- Push fit parts
- Covers all applications
- 48mm clearance height
- Quality materials
- ASTA approved

Integral track connector plugs into track feed unit.

Tap-off units plug into shuttered socket outlets and lock onto track body. Remove by compressing side clips and pulling out.

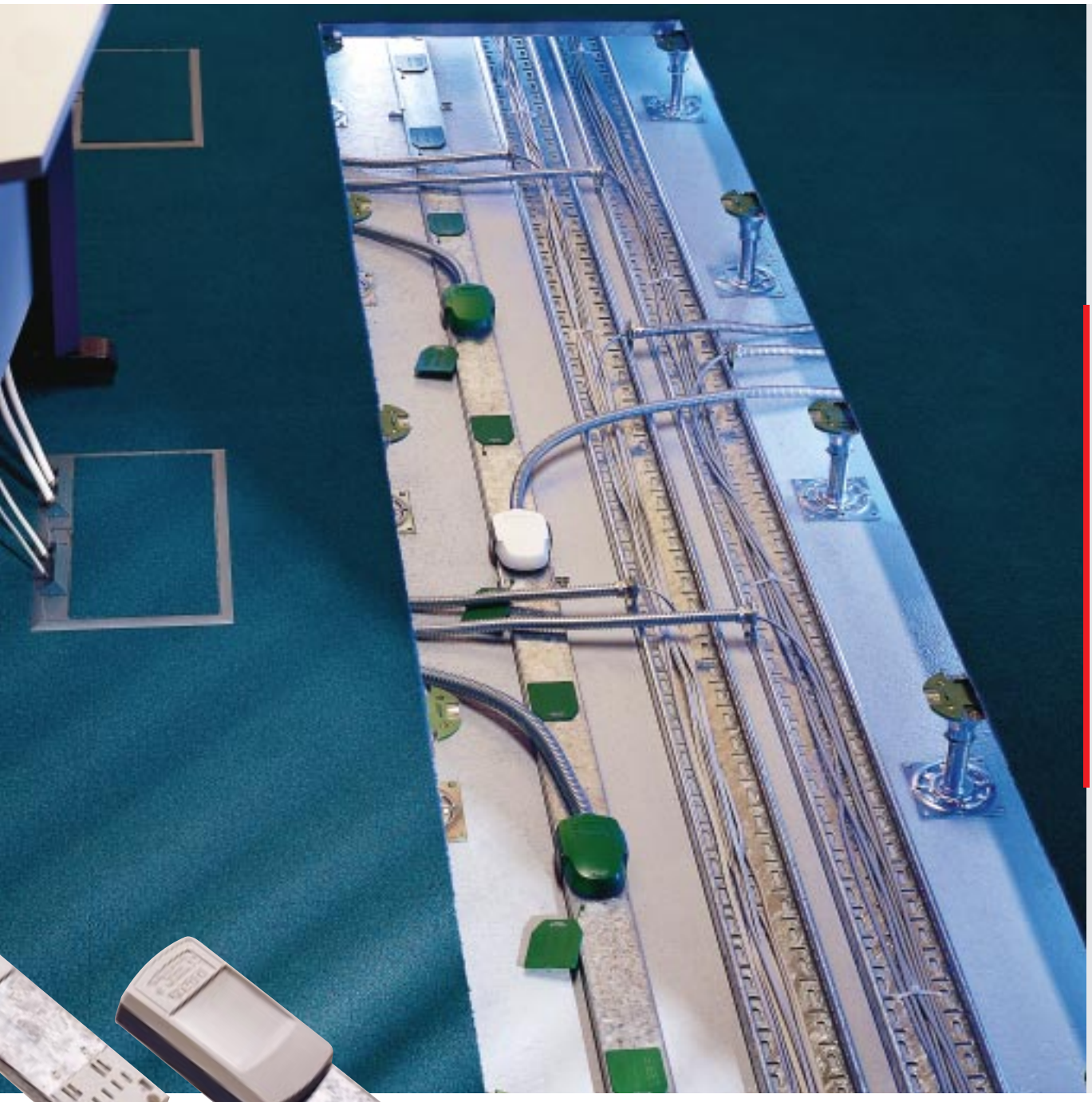
Electrak has led the Power distribution under (raised) floor market since 1984 when it launched the first small power track system. Now track systems are the norm for power distribution under raised floors.

Electrak recognised the need to meet the increasing power requirements of the technology led workplace, and therefore extended its standard underfloor power distribution range to cater for dual, low noise and three phase applications.

Power Track has been designed with the electrical contractor's requirements in mind, speed and ease of installation, with all the systems having minimal parts to facilitate rapid push fit assembly. The flexible features of the system also assist in decreasing the amount of disruption during future installation changes.

Lengths of track fit together by simply snap fitting the integral track connector into the shuttered end of the previous fitted track length (patents pending).

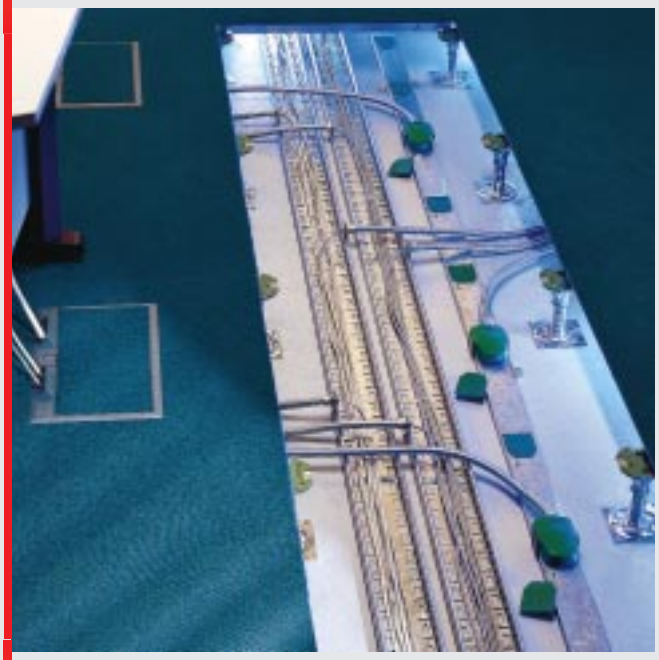
Dual Track System (Electrak 26) - both standard and low noise (clean earth) systems in one track can cut installation times by over 50%



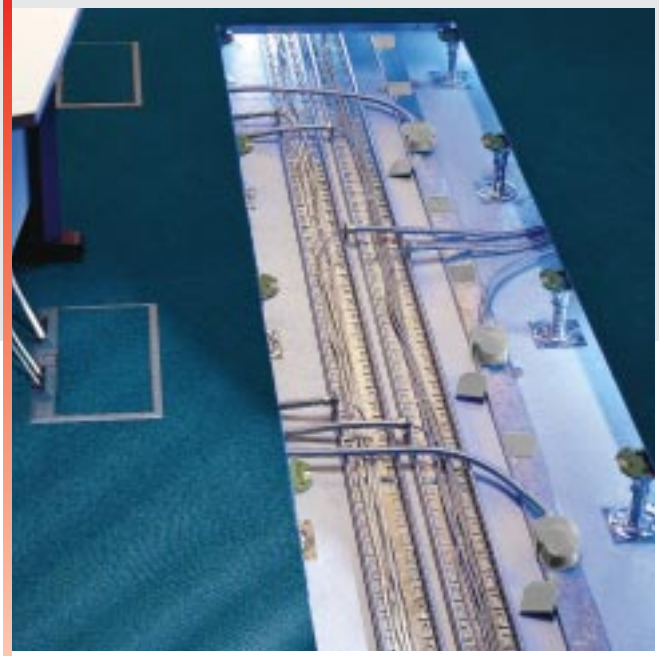
Dual Track System running alongside data & telecom cable trays, supplying Electrak floor service outlet boxes.

Standard, Low Noise and Dual Track tap-off units plug into any socket outlet along the Dual Track length.
The Dual tap-off has both Standard and Low Noise cables within one tap-off unit.

Electrak 24 Standard Power Track running alongside two cable trays carrying telecommunication and data cabling, supplying Electrak floor service outlet boxes.



Electrak 25 Low Noise (Clean Earth) Power Track system running alongside two cable trays carrying telecommunication and data cabling, supplying Electrak floor service outlet boxes.



Electrak 27 Three Phase Power Track supplying Electrak floor service outlet boxes.

End view of integral track connector

Design & installation

Electrak under floor systems consist of continuous lengths of power track, (generally arranged in a parallel format) which are fed from the distribution board via track feed boxes and can be installed in a floor void of only 48mm.

The track feed boxes are provided with one or two 25mm diameter holes to suit MICC, armoured cables or single core in conduit.

The first length of track connects to the track feed by snap fitting the integral track connector into the track feed outlet socket.

Lengths of track fit together by simply snap fitting the track connector which is integral to each length of track into the shuttered end of the previous fitted track length.

Track lengths have integral floor fixing brackets; three on the 3.6m length, two on 2.4m and one on 1.2m.

Access to power is provided along the power track by simply plugging tap-off units into shuttered socket outlets.

These tap-off units feed all types of conventional floor service outlet boxes or directly through the floor to workstations, via 4mm^2 insulated conductors contained in 3 metres of flexible metal or VO rated nylon conduit.

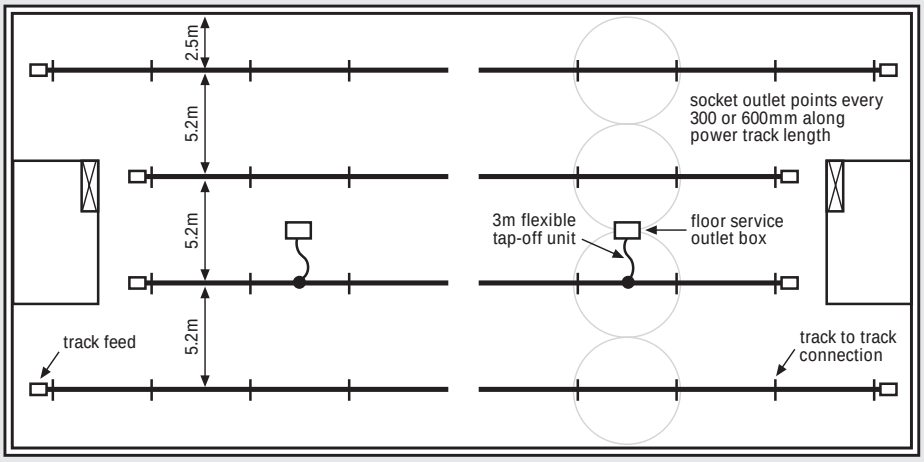
The dual power track system has both standard and low noise systems incorporated.

As well as dual tap-offs both standard and low noise tap offs can be plugged into any socket outlet along the track length. The dual tap-off incorporates both standard and low noise cables.

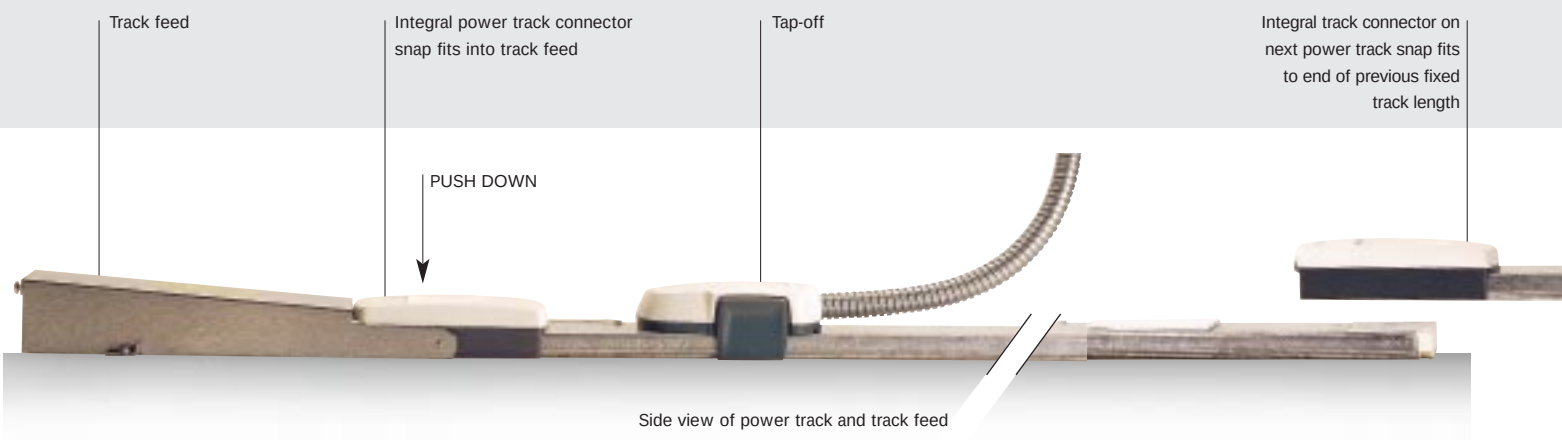
By positioning the power tracks a maximum of 5.2 metres apart and 2.5 metres from the wall, by connecting the 3 metre tap-off units to floor outlet boxes, optimum layout flexibility is achieved. This means every part of the floor area can be served.

When connecting tap-offs directly through the floor via grommet outlets to workstations care must be taken to ensure that the tap-off length is adequate.

Flexible interlinks can be used to overcome obstructions or used as corners if required.



Example floor layout



Side view of power track and track feed

Buyer's guide

Description:		Length (m):	No. of sockets:	Electrak 24 Standard system - white Catalogue No:	Electrak 25 Low noise (clean earth) system - green Catalogue No:	Electrak 26 Dual track, standard & low noise combined - green Catalogue No:	Electrak 27 3 Phase system - grey Catalogue No:
Electrak power track 300mm socket centres		1.2 2.4 3.6	4 8 12	DA 1123 DA 1243 DA 1363	JA 2123 JA 2243 JA 2363	KA 3123 KA 3243 KA 3363	NA 4123 NA 4243 NA 4363
Electrak power track 600mm socket centres		1.2 2.4 3.6	2 4 6	DA 1126 DA 1246 DA 1366	JA 2126 JA 2246 JA 2366	KA 3126 KA 3246 KA 3366	NA 4126 NA 4246 NA 4366
Track Feed				DF 1010	JF 2010	KF 3010	NF 4010
Flexible interlink/corner		Excluding cables & conduit 1.2m metal flexible conduit 2.4m metal flexible conduit		DW 1000 DW 1010 DW 1020	JW 2000 JW 2010 JW 2020	KW 3000 KW 3010 KW 3020	NW 4000 NW 4010 NW 4020
Tap-off units		Metal flexible conduit					
32A Unfused	3m 5m	16mm Ø L, N, PE		DP 1332 DP 1532		DP 1332 DP 1532	
13A Fused	3m 5m	16mm Ø L, N, PE		DP 1313 DP 1513		DP 1313 DP 1513	
32A Unfused	3m 5m	16mm Ø CE, L, N, PE			JP 2332 JP 2532	JP 2332 JP 2532	
13A Fused	3m 5m	16mm Ø CE, L, N, PE			JP 2313 JP 2513	JP 2313 JP 2513	
32A Unfused	3m 5m	20mm Ø CE, L_1, N_1 L_2, N_2, PE				KP 3328 KP 3528	
13A "607" Fused	3m 5m	16mm Ø L, N, PE		DP 1327 DP 1527		DP 1327 DP 1527	
13A "607" Fused	3m 5m	20mm Ø CE, L, N, PE			JP 2327 JP 2527	JP 2327 JP 2527	
32A 415v 3-Phase	3m 5m	20mm Ø L_1, L_2, L_3, N, PE					NZ 4331 NZ 4531
32A L1	3m 5m	Unfused Reconfigurable live pin 16mm Ø L, N, PE					NP 4332* NP 4532*
32A L2	3m 5m	Unfused Reconfigurable live pin 16mm Ø L, N, PE					NP 4302* NP 4502*
32A L3	3m 5m	Unfused Reconfigurable live pin 16mm Ø L, N, PE					NP 4303* NP 4503*
Tap-off, track feed and track connector key code				 L_2 N_2 PE	 L_1 N_1 CE PE	 L_2 N_2 L_1 N_1 CE PE	 L_3 L_2 L_1 N PE

*All NP tap-offs are reconfigurable between L1, L2 or L3 for 3 phase track.

A tap-off length is determined by the cable and not the conduit length, e.g. a 3m tap-off has 3m of cable and 2.8m of conduit.

All Electrak unfused tap-offs conform to section 607 of BS 7671 : 2001.

Technical specifications

Approved to ASTA Standard 138
BS EN 60 439-1 : 1994
BS EN 60 439-2 : 1993

Electrak is approved to ISO9002 1994
Assessed Quality Assurance Certificate No. 10270.

BS 7671 : 2001 (IEE Wiring Regulations)
Electrak fully complies with the requirements of BS 7671 : 2001 (IEE Wiring Regulations).

607 Installations
The scope of Section 607 in BS 7671 : 2001 requires every installation expected to have high protective conductor currents to conform to the requirements of Regulation 607-02. Electrak busbar systems and tap-off units conform to the high integrity protective connection requirements of BS 7671 : 2001 Regulation 607-02-04 when wired in accordance with Electrak's installation sheet.

All unfused tap-offs now comply with section 607 without the need for additional earth conductors. The new section 607-02-04 (ii) states "a single copper protective conductor having a cross-sectional area of not less than 4mm^2, complying with the requirements of Regulations 543-02 and 543-03, the protective conductor being enclosed to provide additional protection against mechanical damage, for example, within a flexible conduit."

For 607 installations requiring fused tap-offs, a 607 compliant tap-off must be used. Normally fused tap-offs incorporate 1.5mm^2 conductors, however in the fused 607 tap-offs, the 1.5mm^2 earth conductor is replaced with a 4mm^2 conductor and therefore complies with Section 607-02-04 (ii).

Durability
Electrak systems are superbly designed and extremely robust. They can be expected to stand up to all normal site conditions. Electrak has been short circuit strength tested by ASTA.

32 Amp tap-off unit
The 32 amp tap-off unit comprises an unfused tap-off with either 2.8 metres of 16mm/20mm diameter flexible metal conduit or VO rated nylon conduit both with integral 4mm^2 LSOH conductors.

These units are designed to comply with regulation 473-02-02 of the IEE Wiring regulations by virtue of the following:

1 Maximum length of cable is 3 metres
2 It is factory assembled and fully tested item with cable installed in high quality flexible conduit.
3 It is installed in a location that affords additional protection by the structural fabric of the access floor.

Fault condition protection for the tap-off assembly and the floor box socket outlets is afforded by the circuit protective device. Disconnection time for socket outlets is 0.4 seconds (IEE Reg. 413-02-08). The Electrak system meets this requirement.

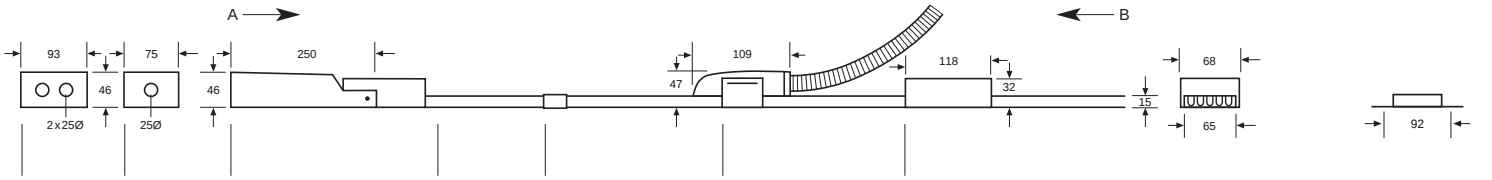
Tap off units in excess of 3 metres should only be used if they contain a fuse or the power track is protected by a 32 amp rated protective device.

Earth Fault Loop Impedance
BS 7671: 2001 IEE Wiring Regulations require accurate determination of the total earth loop impedance, which must be sufficiently low to allow the protective device to operate within the specified time, which for socket outlets is 0.4 seconds. The values relevant to Electrak for calculating the earth fault loop impedance are shown in the electrical test data table.

Electrical Test Data:			
Rated Current		63	A
Rated Voltage		230/415	V~
Frequency		50/60	Hz
Conductor Resistance -	Live & Neutral	3.0	mΩ/m
Conductor Impedance		1.5	mΩ/m
Volt Drops			
Live & Neutral:	Busbars	3.0	mV/A/m
	Cable Connector	0.4	mV/A
	Track Connector	0.4	mV/A
	32A Tap-Off	0.4	mV/A
	+ 4mm^2 Cable	10	mV/A/m
	Flexible corner assembly	1.5	mV/A
	+ 10mm^2 Cable	4.0	mV/A/m
Earth Fault Loop Impedance:			
	Phase busbar	1.5	mΩ/m
	Earth busbar	1.5	mΩ/m
	Earth housing	1.1	mΩ/m
	Earth busbar & housing	0.8	mΩ/m
	Cable connector	0.4	mΩ
	Track connector	0.6	mΩ
	32A Tap-Off	0.6	mΩ
	+ 4mm^2 Cable	10	mΩ/m
	Flexible corner assembly	1.5	mΩ
	+ 10mm^2 Cable	4.0	mΩ/m
Rated Conditional Short-Circuit Current		16	KA
Ambient Temperature		25	˚C

Mechanical Data:		
Number of conductors	3 to 6	
Busbar conductor cross sectional area	13	mm^2
Housing cross sectional area (copper equivalent)	13	mm^2
Cable terminal capacity	16	mm^2
Tap-off cable 32A	4	mm^2
Tap-off cable 13A fused	1.5	mm^2
Tap-off conduit, up to 4 conductors	16	mmØ
Tap-off conduit, 5 and 6 conductors	20	mmØ
Flexible corner cable (Tri-rated, high temperature)	10	mm^2
Flexible corner conduit	25	mmØ
IP rating	40	

Material Specifications:	
Power track housing	Galvanised Steel, natural finish
Busbars	High conductivity copper
Busbar insulator	PTFE
Track connector/Socket outlet/Track feed connector	Flame Retardant Polycarbonate
Socket outlet entry shutter	Acetal
Tap-off Housing	Flame Retardant Polycarbonate
Track Connector Blades	Copper
Tap-off Blades	Brass
Tap-off/Flexible corner conduit, metal	Electro-galvanised steel
Tap-off conduit, plastic	VO rated
Tap-off cable	LSOH to BS7211
Flexible interlink cable	Tri-rated to BS6231
Track feed box/Flexible interlink boxes	Galvanised steel
Track feed connector Terminals/Earth block	Brass
Track fixing brackets	Galvanised steel
13A Tap-off, fuse	To BS 1362, ASTA approved



All dimensions are in mm.

The Electrak range

the route to total cable management

Electrak manufactures a comprehensive range of high quality systems for the safe and reliable distribution of power, voice and data services throughout all types of building from the floor to ceiling. Precision engineered to give a durable and attractive finish, Electrak products include:

- Underfloor Power Track
- Access Floor Service Outlet Boxes
- Access Floor Grommet Outlets
- Modular Desk and Screen Power, Data and Telecom Outlet Units
- Busbar Trunking Lighting and Power Distribution Systems
- Busbar Trunking with Integral Communication Bus Circuit
- Lightrak EIB Electronic Lighting Control System
- Electrical Accessories

A design and quotation service is available to help you achieve the optimum use of the Electrak range of products.

Quick Fit Consett Range Floor Service Outlet Boxes and underfloor Power Track

Rotasoc, a range of modular desk and screen power, telecom and data units (360˚ rotating sockets)

Lightrak EIB Lighting Control System with Busbar Trunking Lighting and Power Distribution System

Lighting and Power Distribution Systems with Integral Communication Bus

Services pass through access floor grommet outlet to workstation power, telecom and data

ELECTRAK®

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