

Technical Specifications

Technical data

ASTA Approved to
IEC 439-1 and BS EN 60439-1
IEC 439-2 and BS EN 60439-2

Electrak is approved to ISO9001:2000
Assessed Quality Assurance Certificate No. 10679.

Electrak fully complies with the requirements of BS 7671 : 2008 (IEE Wiring Regulations).

Electrical Test Data

Rated Current (In)	25	40	A
Derating factor for Electrak 32 single sided	-	0.8	
Derating factor for Electrak 32 double sided	0.8	0.7	
Derating factor for Electrak 33 double sided	-	0.8	
Rated Operational Voltage (Ue)	230/415	230/415	V~
Rated Insulation Voltage (Ui)	500	500	V~
Frequency (f)	50/60	50/60	Hz
Rated Impulse withstand voltage	4	4	KV
Busbar Resistance (R ₂₀)	3.9	2.7	mΩ/m
Resistance (R ₁)	4.2	3.0	mΩ/m
Impedance (Z ₁)	4.8	3.4	mΩ/m
Reactance (X ₁)	2.5	1.6	mΩ/m
Protective conductor	1.5	1.5	mΩ/m

Volt Drops

Live & Neutral: (R ₁ +R ₂)	Busbars	9.0	6.0	mV/A/m
	Feed unit	3.0	2.4	mV/A
	Tap-Off 0.8m	22	22	mV/A
	Tap-Off 2.0m	52	52	mV/A
	Flexible length assembly 0.5m	5	3.5	mV/A
	Flexible length assembly 2m	20	14	mV/A

Earth Fault Loop

Impedance :	Busbar	4.5	3.0	mΩ/m
	Earth housing	1.5	1.5	mΩ/m
	Feed unit	2.4	2.4	mΩ
	Tap-Off 0.8m	23	23	mΩ
	Tap-Off 2.0m	53	53	mΩ
	Flexible length assembly 0.5m	2.5	1.75	mV/A
	Flexible length assembly 2m	10	7	mV/A

Rated Conditional short-circuit current (I _{cc})	16	16	KA
Rated short time withstand current (I _{cw}) at 1 sec	0.65	1	KA
Rated peak short-circuit current (I _{pk})	0.975	1.5	KA
Direct protection by	Enclosure		
Indirect protection by	Protective circuit		
Ambient Temperature	35	35	°C

Mechanical Data

Number of conductors	2-10	2-10	
Busbar conductor cross sectional area	4	6	mm ²
Cable terminal capacity	6	16	mm ²
Cable terminal capacity bus	1.5	1.5	mm ²
Tap-Off cable 16A	1.5	1.5	mm ²
Tap-Off cable 13A fused	1.5	1.5	mm ²
Tap-Off entry	16	16	mmØ
Feed unit entry holes power	25	25	mmØ
Feed unit entry holes bus	16	16	mmØ
IP rating (optional)	4X (54)	4X (54)	

Durability

Electrak power distribution systems are well 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.

Earth Fault Loop Impedance

BS 7671 : 2008 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.

Busbar Trunking Rating in Ambient Temperatures

Average Ambient Air Temperature	25°C	30°C	35°C	40°C	45°C	50°C
Rating Factor (K1)	1.1	1.05	1	0.95	0.90	0.85

For ambient temperatures other than 35°C apply the multiplier factor K1 to the rated current.

Busbar Trunking Mechanical Loading

For point loads and evenly distributed loads the maximum weight that can be supported is given below.

Maximum loading for suspended busbar trunking

Fixing distance in metres	m	1.5	2	2.5	3	3.5	4
Max point load (deflection = 1/500 x span)	kg	20	17	13	12	9	7
Max distributed load (deflection = 1/500 x span)	kg	33	28	22	20	15	12
Max point load (deflection = 1/350 x span)	kg	33	24	18	16	10	9
Max distributed load (deflection = 1/350 x span)	kg	55	40	30	26	16	15

Maximum loading for surface mounted busbar trunking

Fixing distance in metres	m	1.5	2	2.5	3	3.5	4
Max point load (deflection = 1/500 x span)	kg	10	6	4.5	4	3.5	3
Max distributed load (deflection = 1/500 x span)	kg	16	10	7.5	7	6	5
Max point load (deflection = 1/350 x span)	kg	13	10	7	6	5	0
Max distributed load (deflection = 1/350 x span)	kg	20	16	11	10	8	0

Notes

1. Where trunking joints occur in the middle of the suspension span, and weight is to be suspended from that point, it is recommended to use a strengthening bracket EEC364 over joint to stop deflection.
2. If the load requirements exceed the above figures please contact the Electrak sales department.
For design information and technical specification please contact the Electrak sales department.
Suspension rods and fixings should be of suitable size to carry the weight of both the track and suspended load.

FOR INFORMATION ON OTHER FIXING METHODS, ADDITIONAL INSTALLATION SHEETS OR TECHNICAL HELP CONTACT ELECTRAK.

Electrak
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Because of our policy of continuous improvement, Electrak reserve the right to change product specification without notice