



Mining trailing & reeling cables

BS 6708 Type 11 / 14 / 16

BS 6708 Type 11, Type 14 & Type 16 Mining Trailing Cable

640/1,100 V elastomeric-cradle screened coalcutter & shearer cables



BS 6708

640/1,100 V · Types 11 / 14 / 16

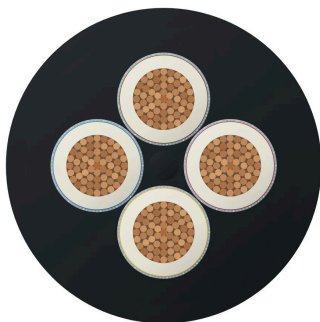
Elastomeric Cradle

Application

640/1,100 V flexible coalcutter trailing cables to BS 6708:1998 laid up around a central elastomeric cradle, with composite copper/nylon braided phase screens, EPR insulation and heavy-duty chloroprene (PCP) sheath across Types 11, 14 and 16.

Typical uses: Underground coalcutters & shearers, Roadheaders & continuous miners, Mobile face crushers & stage loaders, Deep-mine gassy workings, Surface quarry mobile plant, Gate-end box trailing feeders

Construction



Cross-section, not to scale

1	Phase, earth & pilot conductors	IEC 60228 Class 5
2	Core insulation	BS 7655 / BS 6708
3	Identification separator	
4	Composite core screen	
5	Elastomeric cradle	
6	Inner bedding	
7	Outer sheath	BS 6708 / BS 7655 EM2

Technical data

Typical values

Rated voltage (U0/U)	640/1,100 V AC (U0/U)	AC test voltage	3.0 kV AC on phase cores (Type 11/14/16); 1.5 kV AC on interstitial pilot & earth cores (Type 16)
Current ratings (25 °C)	85 A (16 mm ² Type 11, 96 A intermittent) · 110 to 250 A continuous (25 to 95 mm ² Types 14 & 16) at 25 °C	1 s short-circuit rating	3,450 to 7,300 A (1 s adiabatic short-circuit rating across 25 to 95 mm ² Types 14 & 16)
Core screening by Type	Type 11: composite tinned copper/nylon braid on all 3 phase + 1 pilot core · Type 14 & Type 16: composite braid screen on 3 phase cores (25.4–53 mm ² total screen CSA); pilot and earth cores unscreened	Max. conductor temperature	+90 °C maximum continuous conductor temperature (EPR insulation)
Operating temperature range	–25 °C to +85 °C ambient flex / surface range (current ratings referenced at 25 °C)	Minimum bending radius	264 mm (8 × Max OD on Type 11) · 420 to 666 mm (9 × Max OD on Type 14) · 353 to 567 mm (9 × Max OD on Type 16)
Maximum pulling tension	384 kgf (Type 11 3×16+16) · 638 to 1,446 kgf (Type 14) · 533 to 1,002 kgf (Type 16)	Cradle, bedding & outer sheath	Central elastomeric cradle + rubber-based inner bedding + heavy-duty polychloroprene (PCP) outer sheath (5.0 to 7.0 mm radial thickness)
Flame retardance	Flame retardant polychloroprene outer sheath to BS 6708 / BS EN 60332-1-2	Mine & quarry environment	Resists coalface abrasion, crushing impact, mineral oils, grease and mine moisture in gassy underground workings
Standards	BS 6708 (Types 11, 14, 16); IEC 60228 Class 5; BS 7655		

Sizes

11 standard constructions

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Type · nominal CSA mm ²	Phase stranding	Cond. Ø mm	Insul. wall mm	Total screen CSA	Earth + pilot cores	Sheath mm	Min. OD mm	Max. OD mm	Min. R mm	Max. pull kgf	Mass ≈ kg/km	Cu wt kg/km	Current (25 °C) A
BS 6708 Type 11 · 640/1,100 V (3 Screened Phase + 1 Screened Pilot around Elastomeric Cradle) 1 sizes													
☐ Type 11 · 3×16+16	126/0.40	5.50	1.55	Braid (Ø 10.9)	1×16 scr. pilot	4.2	30.9	33.0	264	384	2,000	1,100	85
BS 6708 Type 14 · 640/1,100 V (3 Screened Phase + 1 Earth + 1 Pilot in 5-Core Cradle Lay) 5 sizes													
☐ Type 14 · 3×25+2×16	196/0.40	6.75	1.60	25.4 mm ²	1×16E + 1×16P	5.0	43.2	46.6	420	638	3,550	1,307	110
☐ Type 14 · 3×35+2×16	276/0.40	8.00	1.60	25.4 mm ²	1×16E + 1×16P	5.2	47.3	50.7	457	729	4,280	1,675	135
☐ Type 14 · 3×50+2×25	396/0.40	9.75	1.70	33.0 mm ²	1×25E + 1×25P	5.7	53.7	57.6	519	910	5,650	2,340	170
☐ Type 14 · 3×70+2×35	360/0.50	11.60	1.80	35.0 mm ²	1×35E + 1×35P	6.3	61.2	65.0	585	1,148	7,520	3,228	205
☐ Type 14 · 3×95+2×50	475/0.50	12.75	2.00	53.0 mm ²	1×50E + 1×50P	7.0	69.3	73.9	666	1,446	9,800	4,326	250
BS 6708 Type 16 · 640/1,100 V (3 Screened Phase + 2 Interstitial Earths + 1 Interstitial Pilot) 5 sizes													
☐ Type 16 · 3×25+3×10	196/0.40	6.75	1.60	25.4 mm ²	2×10E + 1×10P	5.0	36.5	39.2	353	533	2,770	1,298	110
☐ Type 16 · 3×35+3×10	276/0.40	8.00	1.60	25.4 mm ²	2×10E + 1×10P	5.0	39.5	42.7	385	580	3,250	1,666	135
☐ Type 16 · 3×50+3×16	396/0.40	9.75	1.70	33.0 mm ²	2×16E + 1×16P	5.0	43.9	47.0	423	649	4,200	2,321	170
☐ Type 16 · 3×70+3×25	360/0.50	11.60	1.80	35.0 mm ²	2×25E + 1×25P	5.4	49.6	53.3	480	795	5,650	3,276	205
☐ Type 16 · 3×95+3×35	475/0.50	12.75	2.00	53.0 mm ²	2×35E + 1×35P	6.0	56.2	63.0	567	1,002	7,350	4,374	250

– Type 16 places two split earth cores and one pilot core in the outer interstices between the three phase cores, reducing maximum cable OD by 7 to 11 mm compared with the equivalent 5-core Type 14.

Electrical & short-circuit data

11 sizes

Type · nominal CSA mm ²	Max. phase DC res. (20 °C) Ω/km	Max. pilot/earth DC res. (20 °C) Ω/km	Max. 3-screen parallel res. Ω/km	1 s short-circuit / interm. rating	Reactance (50 Hz) Ω/km	Min. insul. res. (20 °C)	3-phase V-drop mV/A/m
BS 6708 Type 11 · Electrical Parameters 1 sizes							
Type 11 · 3×16+16	1.240	1.240	1.05	96 A interm.	0.109	435 MΩ·km	2.62 mV/A/m
BS 6708 Type 14 · Electrical Parameters 5 sizes							
Type 14 · 3×25+2×16	0.795	1.240	1.10	3,450 A	—	BS 6708	—
Type 14 · 3×35+2×16	0.565	1.240	1.20	3,450 A	—	BS 6708	—
Type 14 · 3×50+2×25	0.393	0.795	1.40	4,550 A	—	BS 6708	—
Type 14 · 3×70+2×35	0.277	0.565	0.70	4,820 A	—	BS 6708	—
Type 14 · 3×95+2×50	0.210	0.393	0.85	7,300 A	—	BS 6708	—
BS 6708 Type 16 · Electrical Parameters 5 sizes							
Type 16 · 3×25+3×10	0.795	1.950	1.10	3,450 A	—	BS 6708	—
Type 16 · 3×35+3×10	0.565	1.950	1.20	3,450 A	—	BS 6708	—
Type 16 · 3×50+3×16	0.393	1.240	1.40	4,550 A	—	BS 6708	—
Type 16 · 3×70+3×25	0.277	0.795	0.70	4,820 A	—	BS 6708	—
Type 16 · 3×95+3×35	0.210	0.565	0.85	7,300 A	—	BS 6708	—

- Maximum 3-screen parallel resistance (0.70 to 1.40 Ω/km on Types 14 & 16; 1.05 Ω/km combined screen+earth on Type 11) ensures earth-fault current tripping sensitivity across all coalface gate-end boxes.

Standards and approvals

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

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Typical values for this cable type, based on BS 6708. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.