

**Mining trailing & reeling cables**

BS 6708 Type 307 / 307M / 307S (1.9/3.3 kV)

BS 6708 Type 307, 307M & 307S Mining Cable (1.9/3.3 kV)

1,900/3,300 V screened coalcutter & face equipment trailing cable (25–150 mm²)



BS 6708 Type 307 / 307M / 307S

1,900/3,300 V · 25–150 mm²

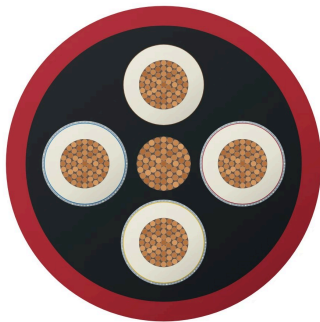
3 Screened + Bare Earth + Pilot

Application

BS 6708 Type 307, 307M and 307S flexible mining trailing cables (1,900/3,300 V, 25–150 mm²) with three copper/nylon braid-screened EPR phase cores, bare central earth core, pilot core/unit and PCP outer sheath.

Typical uses: Underground coalcutters & longwall shearers, Roadheaders & continuous miners, Mobile primary & secondary crushers, Mine face excavating & loading machines, Deep gassy & dusty coal mine faces, Surface quarry 3.3 kV mobile equipment

Construction



Cross-section, not to scale

1	Phase & pilot conductors	IEC 60228 Class 5
2	Core insulation	BS 6708 (7.5 kV AC test)
3	Core identification separator tape	
4	Composite copper / nylon core screen	BS 6708
5	Bare central earth conductor	
6	Rubber bedding compound	BS 6708
7	Outer sheath	BS 6708

Technical data

Typical values

Rated voltage U0/U	1,900/3,300 V AC (BS 6708 coalcutter & face equipment power supply cable)
Current rating (25 °C)	110 to 320 A continuous · 130 to 385 A intermittent cyclic duty
Ambient temperature range	−25 °C to +85 °C
Min. bending radius	399 mm (25 mm²) to 640 mm (150 mm²) (approx. 8 × max OD)
Bedding & outer sheath	Extruded rubber bedding compound + heavy-duty chloroprene (PCP) outer sheath
Abrasion & impact	Unarmoured flexible coalface trailing construction with elastomeric bedding and thick PCP jacket

Routine AC test voltage	7.5 kV AC on phase cores · 2.5 kV AC on Type 307S 3-core pilot unit
Screen & earth fault path	Tinned copper / nylon braided screens in direct contact with bare central earth conductor (0.14–0.50 Ω/km parallel DC res.)
Max. conductor temperature	+90 °C continuous EPR operating temperature
Max. pulling tension	640 kgf (25 mm²) to 2,000 kgf (95–150 mm²)
Flame & oil resistance	Heavy-duty flame-retardant and oil-resistant chloroprene (PCP) outer sheath for gassy/dusty mines
Standards	BS 6708 (British Standard for flexible mining & quarry cables)

Sizes

17 standard constructions

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Designation BS 6708 Type	Phase mm ²	Phase strand n/mm	Phase Ø mm	Insul. Ø mm	Screen Ø mm	Bare earth mm ²	Pilot core / unit mm ²	Pilot Ø mm	Min. OD mm	Max. OD mm	Min. bend mm	Max. pull kgf	Cu mass kg/km	Mass ≈ kg/km
☐ Type 307 · 3×25 + 25E + 16P	25	196/0.40	7.00	13.10	15.50	25	1×16 (unscr.)	11.60	47.4	49.9	400	640	1,654	4,000
☐ Type 307 · 3×35 + 25E + 16P	35	276/0.40	8.50	14.70	17.10	25	1×16 (unscr.)	11.60	51.6	54.6	440	830	1,948	4,800
☐ Type 307 · 3×50 + 35E + 25P	50	396/0.40	10.00	15.70	17.70	35	1×25 (unscr.)	13.10	56.8	59.8	480	1,200	2,666	6,150
☐ Type 307 · 3×70 + 50E + 35P	70	360/0.50	11.70	17.70	19.70	50	1×35 (unscr.)	14.70	62.8	65.8	525	1,680	3,482	7,600
☐ Type 307 · 3×95 + 50E + 50P	95	475/0.50	13.50	19.10	21.10	50	1×50 (unscr.)	15.70	68.9	72.7	580	2,000	4,346	9,250
☐ Type 307 · 3×120 + 70E + 70P	120	608/0.50	15.40	21.40	23.40	70	1×70 (unscr.)	17.70	73.4	77.2	615	2,000	5,450	11,200
☐ Type 307 · 3×150 + 70E + 95P	150	756/0.50	17.20	23.00	25.00	70	1×95 (unscr.)	19.10	75.9	79.7	640	2,000	6,000	13,000
☐ Type 307M · 3×25 + 25E + 25P	25	196/0.40	6.75	13.10	15.50	25	1×25 (screened)	15.50	47.4	49.9	399	642	1,664	4,200
☐ Type 307M · 3×35 + 25E + 35P	35	276/0.40	8.35	14.75	17.10	25	1×35 (screened)	17.10	51.6	54.6	437	834	2,048	5,000
☐ Type 307M · 3×50 + 35E + 50P	50	396/0.40	9.40	15.80	18.20	35	1×50 (screened)	18.20	56.8	59.8	478	1,200	2,866	6,500
☐ Type 307M · 3×70 + 50E + 70P	70	360/0.50	11.35	17.80	20.15	50	1×70 (screened)	20.15	62.8	65.8	526	1,680	3,682	8,100
☐ Type 307M · 3×95 + 50E + 95P	95	475/0.50	12.75	19.20	21.60	50	1×95 (screened)	21.60	68.9	72.7	581	2,000	4,546	9,800
☐ Type 307M · 3×120 + 70E + 120P	120	608/0.50	15.10	21.60	23.95	70	1×120 (screened)	23.95	73.4	77.4	617	2,000	5,650	11,600
☐ Type 307S · 3×50 + 35E + 3×4P	50	396/0.40	9.40	15.80	18.20	35	3×4 (pilot unit)	17.80	56.8	59.8	478	1,200	2,685	5,850
☐ Type 307S · 3×70 + 50E + 3×6P	70	360/0.50	11.35	17.80	20.15	50	3×6 (pilot unit)	19.80	62.8	65.8	526	1,680	3,319	7,150
☐ Type 307S · 3×95 + 50E + 3×6P	95	475/0.50	12.75	19.20	21.60	50	3×6 (pilot unit)	21.20	68.9	72.7	581	2,000	4,039	8,600
☐ Type 307S · 3×120 + 70E + 3×10P	120	608/0.50	15.10	21.60	23.95	70	3×10 (pilot unit)	23.60	73.4	77.2	617	2,000	4,951	10,500

- On Type 307, 'Pilot Ø' is the diameter over the unscreened pilot insulation; on Type 307M it is the diameter over the screened pilot core; on Type 307S it is the nominal diameter over the 3-core pilot unit sub-sheath (17.80–23.60 mm).
- All three types include a bare central Class 5 tinned copper earth conductor laid in direct contact with the metallic core screens.

Electrical parameters

17 sizes

Designation BS 6708 Type	Cont. current A (25 °C)	Intermittent A (25 °C)	Phase DC 20 °C Ω/km	Pilot DC 20 °C Ω/km	Screens + earth Ω/km	Reactance 50 Hz Ω/km	Reactance 60 Hz Ω/km	Min. IR 20 °C MΩ·km	3-ph V-drop mV/A/m
Type 307 · 3×25 + 25E + 16P	110	130	0.795	1.240	0.50	0.125	0.150	1,250	1.69
Type 307 · 3×35 + 25E + 16P	135	155	0.565	1.240	0.50	0.117	0.141	1,100	1.21
Type 307 · 3×50 + 35E + 25P	170	210	0.393	0.795	0.35	0.113	0.136	950	0.85
Type 307 · 3×70 + 50E + 35P	205	255	0.277	0.565	0.35	0.108	0.129	820	0.61
Type 307 · 3×95 + 50E + 50P	250	315	0.210	0.393	0.28	0.105	0.126	720	0.48
Type 307 · 3×120 + 70E + 70P	295	360	0.164	0.277	0.28	0.101	0.121	660	0.39
Type 307 · 3×150 + 70E + 95P	320	385	0.132	0.210	0.14	0.098	0.118	600	0.32
Type 307M · 3×25 + 25E + 25P	110	130	0.795	0.795	0.45	0.125	0.150	1,250	1.69
Type 307M · 3×35 + 25E + 35P	135	155	0.565	0.565	0.45	0.117	0.141	1,100	1.21
Type 307M · 3×50 + 35E + 50P	170	210	0.393	0.393	0.31	0.113	0.136	950	0.85
Type 307M · 3×70 + 50E + 70P	205	255	0.277	0.277	0.31	0.108	0.129	820	0.61
Type 307M · 3×95 + 50E + 95P	250	315	0.210	0.210	0.25	0.105	0.126	720	0.48
Type 307M · 3×120 + 70E + 120P	295	360	0.164	0.164	0.25	0.101	0.121	660	0.39
Type 307S · 3×50 + 35E + 3×4P	170	210	0.393	5.090	0.35	0.113	0.136	950	0.85
Type 307S · 3×70 + 50E + 3×6P	205	255	0.277	3.390	0.35	0.108	0.129	820	0.61
Type 307S · 3×95 + 50E + 3×6P	250	315	0.210	3.390	0.28	0.105	0.126	720	0.48
Type 307S · 3×120 + 70E + 3×10P	295	360	0.164	1.950	0.28	0.101	0.121	660	0.39

– Screens + earth DC resistance is the parallel combination of the 3 phase screens + central earth (Types 307 & 307S) or all 4 core screens + central earth (Type 307M).

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 · IEC 60228 Class 5. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.