



British Coal MGM 109 / MGM 118 & PN-G-90006 Underground Mining Power Cables

MGM 109 Type 3123

Cable

British Coal MGM 109 / BS 6708 1.9/3.3 kV 3-core individually copper-screened
DWA mining

MGM 109 Type 3123 · BS 6708

1.9/3.3 kV · Individually Cu-Screened

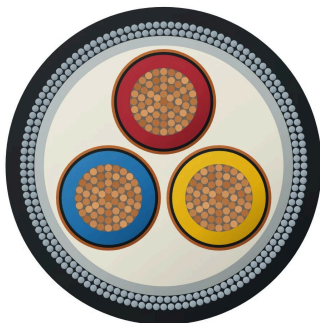
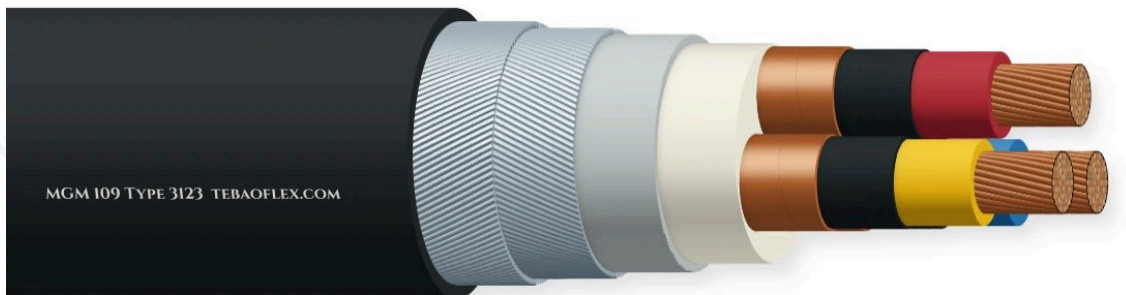
Double Wire Armour (DWA ≥ 75 %)

Application

MGM 109 Type 3123 Cable is the highest-integrity 1.9/3.3 kV underground mining roadway and shaft feeder cable to British Coal Specification MGM 109 and BS 6708, combining three Class 2 tinned copper phase conductors (16 mm² to 185 mm²), 90 °C Type GP4 EPR

Typical uses: 3.3 kV longwall gate-road substations, Vertical mine shaft & drift feeders, Firedamp (methane) Group I gassy coal seams, Heavy armoured conveyor & shearer supply

Construction



Cross-section, not to scale

1	Stranded tinned copper conductor	MGM 109 / BS EN 60228
2	Type GP4 EPR rubber insulation (90 °C)	MGM 109 / BS 7655-1.2
3	Individual tinned copper tape phase	MGM 109 Type 3123
4	Extruded PVC inner bedding	MGM 109
5	Double Wire Armour (DWA ≥ 75 %)	MGM 109 / BS 6708
6	Mining flame-retardant PVC outer sheath	MGM 109 / BS 7655

Technical data

Typical values

Rated voltage U0/U	1.9/3.3 kV AC (1900/3300 V)	AC dielectric test voltage	6,500 V AC for 5 minutes
Max. conductor operating temp.	+90 °C continuous · +250 °C short-circuit	Combined screen + armour conductance	≥ 75 % of the conductance of one phase
Operating temperature range	-15 °C to +90 °C (fixed installation)	Minimum installation temp.	0 °C
Min. bending radius	12 × overall diameter (D) for DWA MV mining	Vertical shaft suspension	Non-twisting counter-helical Double Wire
Flame retardance	BS EN 60332-1-2 & British Coal underground	Short-circuit arc containment	Individual Cu core screens force
Standards	British Coal Specification MGM 109 (Type		

Sizes

6 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Cores × Size	Main cross-section	Outer Ø ≈ mm	Copper kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard MGM 109 Type 3123 configurations 6 sizes						
☐ MGM 109 Type 3123 3C × 25 mm² Cu-Scr DWA	3 × 25 mm²	25.0 mm²	36.8	920	2,950	442
☐ MGM 109 Type 3123 3C × 50 mm² Cu-Scr DWA	3 × 50 mm²	50.0 mm²	43.2	1,690	4,280	518
☐ MGM 109 Type 3123 3C × 70 mm² Cu-Scr DWA	3 × 70 mm²	70.0 mm²	47.6	2,340	5,360	571
☐ MGM 109 Type 3123 3C × 95 mm² Cu-Scr DWA	3 × 95 mm²	95.0 mm²	52.4	3,180	6,690	629
☐ MGM 109 Type 3123 3C × 120 mm² Cu-Scr DWA	3 × 120 mm²	120.0 mm²	56.8	3,980	7,940	682
☐ MGM 109 Type 3123 3C × 185 mm² Cu-Scr DWA	3 × 185 mm²	185.0 mm²	65.4	6,080	10,980	785

– Outer diameters and weights are nominal factory values subject to ±5 % manufacturing tolerance per British Coal MGM 109 / BS 6708 (Type 3123 1.9/3.3 kV Screened DWA).

Electrical & ampacity

6 sizes

Configuration	Max. DC R @ 20 °C Ω/km	Iz free air A	Iz tray / duct A	Isc (1 s) kA	Voltage drop mV/A/m	Dielectric test V
3 × 25 mm²	0.73	131	118	3.58	1.56	6,500
3 × 50 mm²	0.39	192	173	7.15	0.82	6,500
3 × 70 mm²	0.27	238	214	10.01	0.58	6,500
3 × 95 mm²	0.20	288	259	13.59	0.43	6,500
3 × 120 mm²	0.15	332	299	17.16	0.35	6,500
3 × 185 mm²	0.10	430	387	26.46	0.24	6,500

– Conductor DC resistance at +20 °C per IEC 60228 and reference current ratings at 30 °C ambient per British Coal MGM 109 / BS 6708 (Type 3123 1.9/3.3 kV Screened DWA).

Standards and approvals

- ✓ British Coal MGM 109 Type 3123
- ✓ BS 6708
- ✓ CE / UKCA

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.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/mgm-109-type-3123-cable



Typical values for this cable type, based on British Coal MGM 109 / BS 6708 (Type 3123 1.9/3.3 kV Screened DWA). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.