



CHKCU Substation & British MGM 109 / 118 Mining Feeders

MGM 109 Type 1023 / 1024

Double-Armoured LV Feeder Cable

MGM 109 / BS 6708 640/1100 V Type 1023 (3C) & Type 1024 (4C) EPR double-wire-armoured LV



MGM 109 / BS 6708 · 640/1100 V

Type 1023 (3C) & Type 1024 (4C)

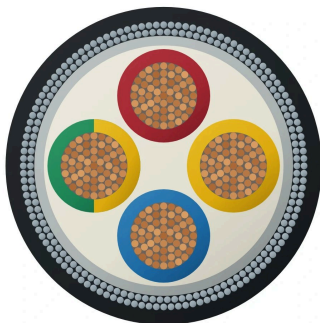
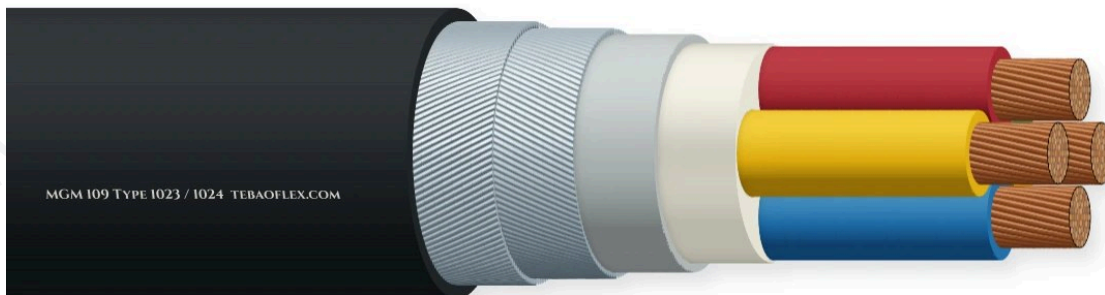
Double-Wire-Armoured (DWA) ≥75% Earth

Application

MGM 109 Type 1023 / 1024 Double-Armoured LV Feeder Cable is the British Coal Specification MGM 109 and BS 6708 640/1100 V underground coal and hard-rock roadway power cable in 3-core (Type 1023) and 4-core (Type 1024) constructions (16 mm² to 185 mm²)

Typical uses: Underground longwall coal roadways, Mine vertical shafts & incline drifts, 1,100 V gate-end box interconnections, Hard-rock & potash underground mines

Construction



Cross-section, not to scale

1	Class 2 stranded copper conductors	MGM 109 / BS 6708
2	Type GP4 EPR rubber insulation (90 °C)	BS 6708
3	Extruded PVC inner bedding	MGM 109
4	Double wire armour (DWA — 2 counter	MGM 109 Digit 3 = '2'
5	Heavy-duty mining FR-PVC outer sheath	MGM 109 / BS 6708

Technical data

Typical values

Rated voltage U0/U	640/1100 V AC (1.1 kV mining LV standard)	Routine AC dielectric test	3,500 V AC for 5 minutes
Min. armour conductance	≥ 75 % of the conductance of the largest	Max. conductor operating temp.	+90 °C continuous (EPR) · +250 °C
Operating temperature range	-20 °C to +85 °C fixed roadway / shaft	Minimum installation temp.	0 °C
Min. bending radius	12 × overall diameter (D) for Double Wire	Torque-balanced shaft capability	Counter-helical inner & outer DWA layers
Mine flame retardancy	BS EN 60332-1-2 & NCB / British Coal	Corrosion & mine water protection	Galvanized steel wires + bitumen/PVC
Standards	British Coal Specification MGM 109 & BS 6708		

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 1023 / 1024 configurations 6 sizes						
☐ MGM 109 Type 1024 4C × 16 mm ² 640/1100V DWA	4 × 16 mm ² (Type 1024)	16.0 mm ²	31.2	680	2,480	374
☐ MGM 109 Type 1023 3C × 25 mm ² 640/1100V DWA	3 × 25 mm ² (Type 1023)	25.0 mm ²	32.8	820	2,760	394
☐ MGM 109 Type 1023 3C × 50 mm ² 640/1100V DWA	3 × 50 mm ² (Type 1023)	50.0 mm ²	38.6	1,610	3,940	463
☐ MGM 109 Type 1023 3C × 95 mm ² 640/1100V DWA	3 × 95 mm ² (Type 1023)	95.0 mm ²	47.4	3,080	6,120	569
☐ MGM 109 Type 1023 3C × 120 mm ² 640/1100V DWA	3 × 120 mm ² (Type 1023)	120.0 mm ²	51.2	3,890	7,280	614
☐ MGM 109 Type 1023 3C × 185 mm ² 640/1100V DWA	3 × 185 mm ² (Type 1023)	185.0 mm ²	59.8	5,980	10,250	718

– Outer diameters and weights are nominal factory values subject to ±5 % manufacturing tolerance per MGM 109 / BS 6708 (Type 1023 3-Core & Type 1024 4-Core 640/1100 V 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
4 × 16 mm ² (Type 1024)	1.15	96	86	2.29	2.50	3,500
3 × 25 mm ² (Type 1023)	0.73	127	114	3.58	1.60	3,500
3 × 50 mm ² (Type 1023)	0.39	190	171	7.15	0.85	3,500
3 × 95 mm ² (Type 1023)	0.19	285	256	13.59	0.44	3,500
3 × 120 mm ² (Type 1023)	0.15	330	297	17.16	0.36	3,500
3 × 185 mm ² (Type 1023)	0.10	425	382	26.46	0.25	3,500

– Conductor DC resistance at +20 °C per IEC 60228 and reference current ratings at 30 °C ambient per MGM 109 / BS 6708 (Type 1023 3-Core & Type 1024 4-Core 640/1100 V DWA).

Standards and approvals

- ✓ British Coal MGM 109
- ✓ 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-double-armoured-lv-feeder-cable



Typical values for this cable type, based on MGM 109 / BS 6708 (Type 1023 3-Core & Type 1024 4-Core 640/1100 V DWA). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.