ICEA/NEMA MSHA 2000 V symmetrical bare-ground mining VFD cable

TYPE VFD-BGC

2000 V MSHA Symmetrical Mining VFD Cable

ICEA S-75-381 / NEMA WC 58 · 2000 V · Symmetrical bare-ground shielded mining VFD cable



ICEA S-75-381 / MSHA | 2000 V 3 Bare Grounds+GC | Braid-Under-Foil EMC

Application

TYPE VFD-BGC 2000 V MSHA-approved symmetrical mining VFD cable per ICEA S-75-381, with 3 rope-lay tinned copper EPR phases, central extensible ground-check (GC), 3 bare symmetrical grounds under a tinned copper braid + foil shield and CPE jacket.

Typical uses: Underground Coal & Hard-Rock Mining, Open-Cast Excavators, Draglines & Shovels, Vertical Mine Shafts, Hoists & Boreholes, Tunneling, Mineral Processing & Slurry Plants

Construction





Cross-section, not to scale

1. Phase Conductors (3×2/0 AWG)
2. Central Extensible GC (16 AWG)
3. Three Bare Symmetrical Grounds (3×5 AWG)
4. Braid-Under-Foil Composite Shield
5. Two-Layer Lead-Cured CPE Jacket

Technical data

Typical values

Rated voltage / transmission duty	2000 V (ICEA S-75-381 / NEMA WC 58 / MSHA)	**Core / conductor construction**	Phase Conductors (3×2/0 AWG) — 329-strand rope-lay tinned copper with Black, White & Red 90 °C EPR
Primary dielectric / buffering	Central Extensible GC (16 AWG) — Tinned copper center conductor with yellow high-strength polypropylene	**Continuous operating temperature**	-40 to +90 °C (mining & industrial service)
Short-circuit / peak thermal rating	Verified thermal stability per ICEA S-75-381 / NEMA WC 58 / MSHA	**Storage & transport temperature**	−40…+80 °C on export wooden/steel drum
Outer protection / armouring	Two-Layer Lead-Cured CPE Jacket — Reinforced heavy-duty two-layer black EHD CPE thermoset outer jacket	**Minimum bending radius**	8 × OD
Crush, impact & abrasion duty	Heavy-duty mining rock-cut, impact and tensile protection per ICEA S-75-381 / NEMA WC 58 / MSHA	**Flame retardancy & mine fire safety**	Self-extinguishing / flame-retardant mining jacket per ICEA S-75-381 / NEMA WC 58 / MSHA
Mine water, oil & chemical resistance	Resistant to acidic mine water, hydraulic oils and abrasion per ICEA S-75-381 / NEMA WC 58 / MSHA	**RoHS & REACH compliance**	RoHS 2 (2011/65/EU + 2015/863) & REACH SVHC compliant
Standards	ICEA S-75-381 / NEMA WC 58 / MSHA		

Sizes

3 standard constructions

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

Order designation	Configuration	Core / stranding	Outer Ø ≈ mm	Net weight ≈ kg/km	Tensile rating kN ≈	Min. bend R mm
TYPE VFD-BGC Construction Schedule (-40 to +90 °C) 3 sizes						
☐ **TYPE VFD-BGC 2 kV 3×2 AWG + 3×6G + 16GC**	3×2 AWG + 3×6 Bare G + 16 GC	259-wire tinned Cu	39.4	2,580	20.1	315
☐ **TYPE VFD-BGC 2 kV 3×2/0 AWG + 3×5G + 16GC**	3×2/0 AWG + 3×5 Bare G + 16 GC	329-wire tinned Cu	48.0	4,210	40.2	385
☐ **TYPE VFD-BGC 2 kV 3×4/0 AWG + 3×3G + 16GC**	3×4/0 AWG + 3×3 Bare G + 16 GC	532-wire tinned Cu	55.8	6,190	64.0	445

– Custom core cross-sections, pair/fibre counts, armour grades and factory drum lengths available per ICEA S-75-381 / NEMA WC 58 / MSHA.

Electrical, optical & thermal parameters

3 sizes

Configuration	Max. DC R_{20} / Atten. Ω/km or dB/km	Rating / Impedance	Operating temp.
3×2 AWG + 3×6 Bare G + 16 GC	0.55	2000 V (159 A)	-40 to +90 °C
3×2/0 AWG + 3×5 Bare G + 16 GC	0.27	2000 V (243 A)	-40 to +90 °C
3×4/0 AWG + 3×3 Bare G + 16 GC	0.17	2000 V (321 A)	-40 to +90 °C

– Every production length undergoes routine conductor DC resistance, high-voltage Spark/AC dielectric or OTDR continuity and dimensional verification.

Standards and approvals

- ICEA S-75-381 Compliant
- EN 10204 3.1 Factory Test Certificate
- CE, RoHS 2 (2011/65/EU) & REACH

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/type-vfd-bgc-2000v-msha-symmetrical-bare-ground-shielded-mining-vfd-cable

Typical values for this cable type, based on ICEA S-75-381 / NEMA WC 58 / MSHA. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.