

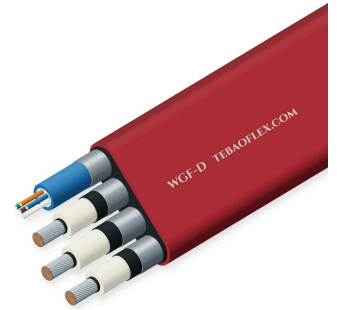


Medium-voltage rubber reeling cables (DIN VDE 0250-813)

WGF / WGF-D (N)TSFLCGEWOEU

WGF / WGF-D Flat MV Reeling Cable (N)TSFLCGEWOEU (3.6/6–8.7/15 kV)

Red 5GM5 flat medium-voltage reeling cable (3.6/6–8.7/15 kV) for monospiral reels



3.6/6–8.7/15 kV

(N)TSFLCGEWOEU

Flat · 120 m/min

Application

Flat medium-voltage reeling cable (3.6/6 to 8.7/15 kV) per DIN VDE 0250 ((N)TSFLCGEWOEU / -FO) with parallel Class 5 tinned copper cores, concentric split earth, optional 6-FO core, and red 5GM5 jacket for single-plane monospiral reels up to 120 m/min.

Typical uses: Stackers & Reclaimers (Monospiral Reels), Urea & Sulfur Bulk Handling Terminals, Port & Stockyard Rail Gantries, Horizontal Material-Handling Machinery

Construction



Cross-section, not to scale

- 1 Flexible Class 5 tinned copper conductor
- 2 Inner & outer semiconductive field control (CGE)
- 3 Special HV-EPR core insulation
- 4 Concentric split protective earth (3E / 4E)
- 5 Parallel 6-fibre optical unit (WGF-D only)
- 6 Outer sheath (5GM5 Red)

Technical data

Typical values

Rated voltage U0/U	3.6/6.0 kV, 6.0/10.0 kV, and 8.7/15.0 kV	Max. operating voltage AC	4.2/7.2 kV (3.6/6 kV) · 6.9/12.0 kV (6/10 kV) · 10.2/18.0 kV (8.7/15 kV)
Max. operating voltage DC	5.4/10.8 kV (3.6/6 kV) · 9.0/18.0 kV (6/10 kV) · 13.0/26.0 kV (8.7/15 kV)	AC test voltage (DIN VDE 0250-813)	11 kV (3.6/6 kV) · 17 kV (6/10 kV) · 24 kV (8.7/15 kV) per DIN VDE 0250-813
Current rating (DIN VDE 0298-4)	According to DIN VDE 0298-4 at 30 °C ambient (apply monospiral reel layer derating factors)	Temperature, flexing	–35 °C to +80 °C (–25 °C to +80 °C in basic table; consult factory below –35 °C)
Temperature, fixed installation	–50 °C to +80 °C	Max. conductor temperature	+90 °C
Short-circuit temperature	+250 °C	Max. travel speed	Up to 120 m/min horizontal (continuous bending in ONE PLANE ONLY)
Max. tensile load (dynamic)	15 N/mm ² of phase conductor cross-section (1,575–5,400 N across 35–120 mm ²)	Min. bending diameter, flexing	Minimum bend diameter D = 1.5 × flat cable height (d) in one plane only; no multi-plane or S-shape bending
Optical fibre unit (WGF-D)	WGF-D: 1 × (6 FO) integrated optical fibre core (G9/125 SM, G50/125 MM, or G62.5/125 MM) laid parallel with the four-part earth system	Optical attenuation (850 / 1300 nm)	G9/125 SM: ≤ 0.4 dB/km (1300 nm) · G50/125 MM: ≤ 2.8 dB/km (850 nm), ≤ 0.8 dB/km (1300 nm) · G62.5/125 MM: ≤ 3.3 dB/km (850 nm), ≤ 0.9 dB/km (1300 nm)
Chemical, sulfur & urea resistance	Resistant to oil, ozone, UV, humidity, moisture, sulfur, and urea; LBS-free and silicone-free (not halogen-free)	Flame retardance	Low flammability / flame-retardant per IEC 60332-1-2
Standards	(N)TSFLCGEWOEU / (N)TSFLCGEWOEU-FO according to DIN VDE 0250		

Sizes

21 standard constructions

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Designation	Height d × Width B	Max Height d	Max Width B	Cu number	Weight ≈	Permitted pull	Min Bend D 1.5×d
WGF Flat Power · 3.6/6 kV (5 sizes) 5 sizes							
☐ WGF 3.6/6 kV · 3 × 35 + 3 × 25/3E	25.5–28.5 × 68.2–72.2	28.5	72.2	1,346	3,250	1,575	43
☐ WGF 3.6/6 kV · 3 × 50 + 3 × 25/3E	28.0–31.0 × 74.1–78.1	31	78.1	1,838	3,980	2,250	46
☐ WGF 3.6/6 kV · 3 × 70 + 3 × 35/3E	29.7–32.7 × 79.2–83.2	32.7	83.2	2,573	4,870	3,150	49
☐ WGF 3.6/6 kV · 3 × 95 + 3 × 50/3E	31.7–34.7 × 84.7–89.7	34.7	89.7	3,518	5,920	4,275	52
☐ WGF 3.6/6 kV · 3 × 120 + 3 × 70/3E	35.1–38.1 × 92.9–97.9	38.1	97.9	4,515	7,420	5,400	57
WGF Flat Power · 8.7/15 kV (5 sizes) 5 sizes							
☐ WGF 8.7/15 kV · 3 × 35 + 3 × 25/3E	28.7–31.7 × 76.2–80.2	31.7	80.2	1,346	3,820	1,575	48
☐ WGF 8.7/15 kV · 3 × 50 + 3 × 25/3E	30.2–33.2 × 80.7–84.7	33.2	84.7	1,807	4,440	2,250	50
☐ WGF 8.7/15 kV · 3 × 70 + 3 × 35/3E	33.3–36.3 × 87.5–92.5	36.3	92.5	2,573	5,610	3,150	54
☐ WGF 8.7/15 kV · 3 × 95 + 3 × 50/3E	35.3–38.3 × 93.5–98.5	38.3	98.5	3,518	6,700	4,275	57
☐ WGF 8.7/15 kV · 3 × 120 + 3 × 70/3E	37.3–40.3 × 99.5–104.5	40.3	104.5	4,515	8,000	5,400	60
WGF-D Flat Power + 6 FO · 3.6/6 kV (4 sizes) 4 sizes							
☐ WGF-D 3.6/6 kV · 3 × 35 + 4 × 25/4E + 1 × (6 FO)	24.5–27.5 × 83.5–88.5	27.5	88.5	1,346	3,700	1,575	41
☐ WGF-D 3.6/6 kV · 3 × 50 + 4 × 25/4E + 1 × (6 FO)	27.0–30.0 × 90.9–95.9	30	95.9	1,838	4,530	2,250	45
☐ WGF-D 3.6/6 kV · 3 × 70 + 4 × 35/4E + 1 × (6 FO)	28.7–31.7 × 97.7–102.7	31.7	102.7	2,573	5,590	3,150	48
☐ WGF-D 3.6/6 kV · 3 × 95 + 4 × 50/4E + 1 × (6 FO)	30.6–33.6 × 105.3–110.3	33.6	110.3	3,518	6,720	4,275	50

Designation	Height d × Width B	Max Height d	Max Width B	Cu number	Weight ≈	Permitted pull	Min Bend D 1.5×d
WGF-D Flat Power + 6 FO · 6/10 kV (4 sizes) 4 sizes							
☐ WGF-D 6/10 kV · 3 × 35 + 4 × 25/4E + 1 × (6 FO)	25.3–28.3 × 86.7–91.7	28.3	91.7	1,346	3,870	1,575	42
☐ WGF-D 6/10 kV · 3 × 50 + 4 × 25/4E + 1 × (6 FO)	27.8–30.8 × 94.1–99.1	30.8	99.1	1,838	4,730	2,250	46
☐ WGF-D 6/10 kV · 3 × 70 + 4 × 35/4E + 1 × (6 FO)	29.5–32.5 × 100.9–105.9	32.5	105.9	2,573	5,800	3,150	49
☐ WGF-D 6/10 kV · 3 × 95 + 4 × 50/4E + 1 × (6 FO)	31.4–34.4 × 108.5–113.5	34.4	113.5	3,518	6,940	4,275	52
WGF-D Flat Power + 6 FO · 8.7/15 kV (3 sizes) 3 sizes							
☐ WGF-D 8.7/15 kV · 3 × 35 + 4 × 25/4E + 1 × (6 FO)	28.5–31.5 × 96.6–101.9	31.5	101.9	1,346	4,610	1,575	47
☐ WGF-D 8.7/15 kV · 3 × 50 + 4 × 25/4E + 1 × (6 FO)	30.0–33.0 × 102.9–107.9	33	107.9	1,838	5,340	2,250	50
☐ WGF-D 8.7/15 kV · 3 × 70 + 4 × 35/4E + 1 × (6 FO)	31.7–33.7 × 109.7–114.7	33.7	114.7	2,573	6,460	3,150	51

- Geometry d × B gives flat cable height d (min–max mm) and flat cable width B (min–max mm). Continuous flexing is permitted in ONE PLANE ONLY (bending over height d).
- In the legacy WGF table (page 2), cable weights were printed with truncated trailing zeros after the German thousands dot (e.g. '3.25' for 3.250 = 3,250 kg/km and '6.7' for 6.700 = 6,700 kg/km); all weights are normalized to kg/km.
- On the 70 mm² WGF rows, the legacy table prints '3 × 25 / 3E' while its 2,573 kg/km copper mass (identical to WGF-D 3 × 70 + 4 × 35/4E) and DIN VDE 0250-813 correspond to a 35 mm² total earth cross-section (3 × 35/3E).

Electrical reference data

21 sizes

Designation	Rated U0/U	Max. DC R 20 °C	Ref. Ampacity 30 °C	AC Test Voltage
WGF Flat Power · 3.6/6 kV (5 sizes) 5 sizes				
WGF 3.6/6 kV · 3 × 35 + 3 × 25/3E	3.6/6 kV	0.565	162	11 kV AC (DIN VDE 0250-813)
WGF 3.6/6 kV · 3 × 50 + 3 × 25/3E	3.6/6 kV	0.393	202	11 kV AC (DIN VDE 0250-813)
WGF 3.6/6 kV · 3 × 70 + 3 × 35/3E	3.6/6 kV	0.277	250	11 kV AC (DIN VDE 0250-813)
WGF 3.6/6 kV · 3 × 95 + 3 × 50/3E	3.6/6 kV	0.210	301	11 kV AC (DIN VDE 0250-813)
WGF 3.6/6 kV · 3 × 120 + 3 × 70/3E	3.6/6 kV	0.164	352	11 kV AC (DIN VDE 0250-813)
WGF Flat Power · 8.7/15 kV (5 sizes) 5 sizes				
WGF 8.7/15 kV · 3 × 35 + 3 × 25/3E	8.7/15 kV	0.565	162	24 kV AC (DIN VDE 0250-813)
WGF 8.7/15 kV · 3 × 50 + 3 × 25/3E	8.7/15 kV	0.393	202	24 kV AC (DIN VDE 0250-813)
WGF 8.7/15 kV · 3 × 70 + 3 × 35/3E	8.7/15 kV	0.277	250	24 kV AC (DIN VDE 0250-813)
WGF 8.7/15 kV · 3 × 95 + 3 × 50/3E	8.7/15 kV	0.210	301	24 kV AC (DIN VDE 0250-813)
WGF 8.7/15 kV · 3 × 120 + 3 × 70/3E	8.7/15 kV	0.164	352	24 kV AC (DIN VDE 0250-813)
WGF-D Flat Power + 6 FO · 3.6/6 kV (4 sizes) 4 sizes				
WGF-D 3.6/6 kV · 3 × 35 + 4 × 25/4E + 1 × (6 FO)	3.6/6 kV	0.565	162	11 kV AC (DIN VDE 0250-813)
WGF-D 3.6/6 kV · 3 × 50 + 4 × 25/4E + 1 × (6 FO)	3.6/6 kV	0.393	202	11 kV AC (DIN VDE 0250-813)
WGF-D 3.6/6 kV · 3 × 70 + 4 × 35/4E + 1 × (6 FO)	3.6/6 kV	0.277	250	11 kV AC (DIN VDE 0250-813)
WGF-D 3.6/6 kV · 3 × 95 + 4 × 50/4E + 1 × (6 FO)	3.6/6 kV	0.210	301	11 kV AC (DIN VDE 0250-813)
WGF-D Flat Power + 6 FO · 6/10 kV (4 sizes) 4 sizes				
WGF-D 6/10 kV · 3 × 35 + 4 × 25/4E + 1 × (6 FO)	6/10 kV	0.565	162	17 kV AC (DIN VDE 0250-813)
WGF-D 6/10 kV · 3 × 50 + 4 × 25/4E + 1 × (6 FO)	6/10 kV	0.393	202	17 kV AC (DIN VDE 0250-813)
WGF-D 6/10 kV · 3 × 70 + 4 × 35/4E + 1 × (6 FO)	6/10 kV	0.277	250	17 kV AC (DIN VDE 0250-813)
WGF-D 6/10 kV · 3 × 95 + 4 × 50/4E + 1 × (6 FO)	6/10 kV	0.210	301	17 kV AC (DIN VDE 0250-813)
WGF-D Flat Power + 6 FO · 8.7/15 kV (3 sizes) 3 sizes				
WGF-D 8.7/15 kV · 3 × 35 + 4 × 25/4E + 1 × (6 FO)	8.7/15 kV	0.565	162	24 kV AC (DIN VDE 0250-813)
WGF-D 8.7/15 kV · 3 × 50 + 4 × 25/4E + 1 × (6 FO)	8.7/15 kV	0.393	202	24 kV AC (DIN VDE 0250-813)
WGF-D 8.7/15 kV · 3 × 70 + 4 × 35/4E + 1 × (6 FO)	8.7/15 kV	0.277	250	24 kV AC (DIN VDE 0250-813)

- Maximum DC conductor resistance at 20 °C per IEC 60228 Table 3 for Class 5 tinned copper conductors.
- Free-air reference ampacity at 30 °C ambient per DIN VDE 0298-4; apply monospiral reel layer derating factors.

Standards and approvals

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

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