



Armoured MV mining & tunnel feeder cable

(N)3GHSSYCY

3.6/6–18/30 kV Armoured MV Mining & Tunnel Cable

3GI3 EPR insulated, double-screened & steel-wire-braid armoured red PVC MV feeder cable



Based on DIN VDE 0250-605

U0/U 3.6/6–18/30 kV

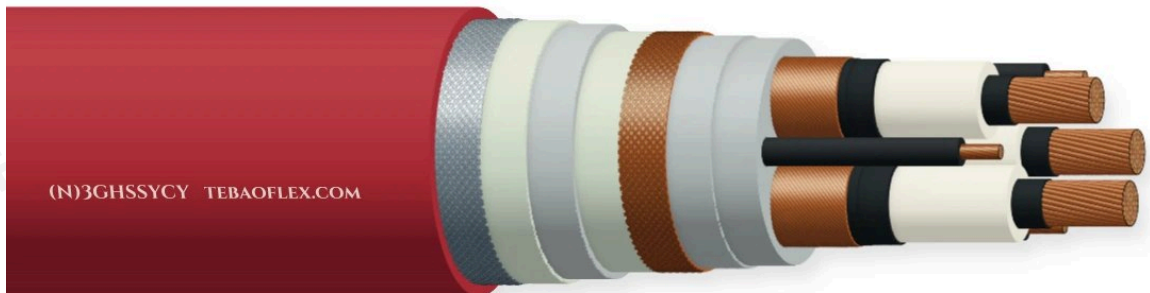
Double screen + steel braid

Application

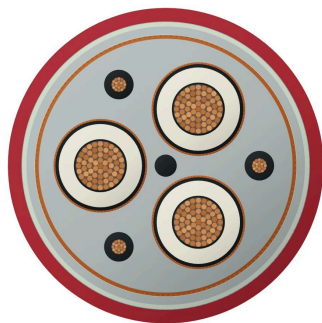
Flexible medium-voltage feeder cable to DIN VDE 0250-605 (3.6/6–18/30 kV) for shiftable transformers in mines and tunnels — with Class 5 copper cores, 3GI3 EPR insulation, /3E phase screens, ÜL monitoring screen, steel braid and red PVC sheaths.

Typical uses: Underground coal, potash & hard-rock mining, Shiftable flameproof MV transformers & substations, Tunnel boring & gallery feeder networks, Heavy industrial & cavern MV power distribution

Construction



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Cross-section, not to scale

1	Phase & control conductors	IEC 60228 / DIN VDE 0295 Class 5
2	Electrical field control	DIN VDE 0250-605
3	Phase core insulation	DIN VDE 0207-20 (3GI3)
4	Individual phase earth screens (/3E)	DIN VDE 0250-605 (/3E)
5	First inner sheath	DIN VDE 0250-605 (DMV6 / YM5)
6	Monitoring conductor (ÜL)	DIN VDE 0250-605 (ÜL)
7	Second (intermediate) sheath	DIN VDE 0250-605 (DMV6 / YM5)
8	Mechanical armour (C)	DIN VDE 0250-605 (C)
9	Outer sheath (Y)	DIN VDE 0250-605 (DMV6 / YM5)

Technical data

Typical values

Rated voltage U0/U	3.6/6 · 6/10 · 8.7/15 · 12/20 · 14/25 · 18/30 kV
Max. operating voltage DC	5.4/10.8 · 9/18 · 13.5/27 · 18/36 · 22.5/45 · 27/54 kV
Max. conductor operating temperature	+90 °C
Ambient temperature (fixed installation)	-40 °C to +80 °C
Max. permissible tensile load	15 N/mm ² on phase conductors (up to 20 N/mm ² peak)
Permissible torsional stress & speed	±25 °/m · max. 30 m/min shifting speed
Flame retardancy	IEC 60332-1-2 / DIN EN 60332-1-2 (VDE 0482-332-1-2)
Standards	Based on DIN VDE 0250-605 & IEC 60502-2

Max. operating voltage AC (Um)	4.2/7.2 · 6.9/12 · 10.4/18 · 13.9/24 · 17.3/30 · 20.8/36 kV
AC test voltage (5 min, main / control)	11 · 17 · 24 · 29 · 36 · 43 kV (control cores: 2 kV)
Max. short-circuit temperature (1 s)	+250 °C
Ambient temperature (flexed / shifting)	+5 °C to +60 °C (up to +80 °C short-term)
Minimum bending radius (fixed / flexed)	6 × OD fixed (5 × OD min) · 10 × OD flexed
Armour coverage	Galvanized steel wire braid, min. 75 % optical coverage
UV, ozone & moisture resistance	Ozone-, UV- and moisture-resistant; underground mine duty to DIN VDE 0118

Sizes

48 standard constructions

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

Construction Phase+Earth+Control+ÜL	U0/U	Cond. Ø max	Outer Ø min	Outer Ø max	Weight ≈	Max tensile	R20 max	Capacitance	Inductance	Ampacity 30 °C	Isc 1s	Min. bend R
3.6/6 kV (Um 7.2 kV) 10 sizes												
☐ 3×25 + 3×16/3E + 3×2.5ST + ÜL	3.6/6	6.4	42.7	45.7	3,180	1,125	0.780	0.36	0.32	131	3.58	457
☐ 3×25 + 3×25/3E + 3×2.5ST + ÜL	3.6/6	6.1	47.2	52.1	4,160	1,125	0.780	–	–	139	3.58	521
☐ 3×35 + 3×16/3E + 3×2.5ST + ÜL	3.6/6	7.6	45.3	48.3	3,700	1,575	0.554	0.41	0.30	162	5.01	483
☐ 3×35 + 3×25/3E + 3×2.5ST + ÜL	3.6/6	7.2	49.0	54.0	4,610	1,575	0.554	–	–	172	5.01	540
☐ 3×50 + 3×25/3E + 3×2.5ST + ÜL	3.6/6	9.1	49.5	53.5	4,730	2,250	0.386	0.47	0.29	202	7.15	535
☐ 3×70 + 3×35/3E + 3×2.5ST + ÜL	3.6/6	10.8	53.2	57.2	5,720	3,150	0.272	0.53	0.28	250	10.01	572
☐ 3×95 + 3×50/3E + 3×2.5ST + ÜL	3.6/6	12.7	58.2	62.2	7,010	4,275	0.206	0.61	0.27	301	13.59	622
☐ 3×120 + 3×70/3E + 3×2.5ST + ÜL	3.6/6	14.3	62.7	66.7	8,311	5,400	0.161	0.67	0.26	352	17.16	667
☐ 3×150 + 3×70/3E + 3×2.5ST + ÜL	3.6/6	16.0	67.6	71.6	9,634	6,750	0.129	0.74	0.25	404	21.45	716
☐ 3×185 + 3×120/3E + 3×2.5ST + ÜL	3.6/6	17.7	71.7	75.7	11,202	8,325	0.106	0.80	0.25	461	26.46	757
6/10 kV (Um 12 kV) 10 sizes												
☐ 3×25 + 3×16/3E + 3×2.5ST + ÜL	6/10	6.4	45.7	48.7	3,580	1,125	0.780	0.32	0.33	131	3.58	487
☐ 3×25 + 3×25/3E + 3×2.5ST + ÜL	6/10	6.1	47.2	52.7	4,200	1,125	0.780	–	–	139	3.58	527
☐ 3×35 + 3×16/3E + 3×2.5ST + ÜL	6/10	7.6	47.8	50.8	4,130	1,575	0.554	0.36	0.31	162	5.01	508
☐ 3×35 + 3×25/3E + 3×2.5ST + ÜL	6/10	7.2	49.0	54.6	4,650	1,575	0.554	–	–	172	5.01	546
☐ 3×50 + 3×25/3E + 3×2.5ST + ÜL	6/10	9.1	50.8	54.8	4,890	2,250	0.386	0.42	0.30	202	7.15	548
☐ 3×70 + 3×35/3E + 3×2.5ST + ÜL	6/10	10.8	55.1	59.1	5,680	3,150	0.272	0.47	0.28	250	10.01	591
☐ 3×95 + 3×50/3E + 3×2.5ST + ÜL	6/10	12.7	60.0	64.0	7,130	4,275	0.206	0.54	0.27	301	13.59	640
☐ 3×120 + 3×70/3E + 3×2.5ST + ÜL	6/10	14.3	63.9	67.9	8,450	5,400	0.161	0.59	0.26	352	17.16	679
☐ 3×150 + 3×70/3E + 3×2.5ST + ÜL	6/10	16.0	68.9	72.9	9,840	6,750	0.129	0.66	0.25	404	21.45	729
☐ 3×185 + 3×120/3E + 3×2.5ST + ÜL	6/10	17.7	73.0	77.0	11,408	8,325	0.106	0.74	0.25	461	26.46	770
8.7/15 kV (Um 18 kV) 8 sizes												
☐ 3×25 + 3×16/3E + 3×2.5ST + ÜL	8.7/15	6.4	49.1	53.1	3,985	1,125	0.780	0.22	0.36	139	3.58	531
☐ 3×35 + 3×16/3E + 3×2.5ST + ÜL	8.7/15	7.6	50.4	54.4	4,481	1,575	0.554	0.29	0.33	172	5.01	544
☐ 3×50 + 3×25/3E + 3×2.5ST + ÜL	8.7/15	9.1	53.9	57.9	5,300	2,250	0.386	0.33	0.31	215	7.15	579
☐ 3×70 + 3×35/3E + 3×2.5ST + ÜL	8.7/15	10.8	57.6	61.6	6,380	3,150	0.272	0.38	0.30	265	10.01	616
☐ 3×95 + 3×50/3E + 3×2.5ST + ÜL	8.7/15	12.7	63.1	67.1	7,652	4,275	0.206	0.43	0.29	319	13.59	671

Construction Phase+Earth+Control+ÜL	U0/U	Cond. Ø max	Outer Ø min	Outer Ø max	Weight ≈	Max tensile	R20 max	Capacitance	Inductance	Ampacity 30 °C	Isc 1s	Min. bend R
☐ 3×120 + 3×70/3E + 3×2.5ST + ÜL	8.7/15	14.3	67.4	71.4	8,940	5,400	0.161	0.47	0.28	371	17.16	714
☐ 3×150 + 3×70/3E + 3×2.5ST + ÜL	8.7/15	16.0	72.0	76.0	10,400	6,750	0.129	0.54	0.27	428	21.45	760
☐ 3×185 + 3×120/3E + 3×2.5ST + ÜL	8.7/15	17.7	75.6	79.6	11,865	8,325	0.106	0.58	0.26	488	26.46	796
12/20 kV (Um 24 kV) 8 sizes												
☐ 3×25 + 3×16/3E + 3×2.5ST + ÜL	12/20	6.4	52.6	56.6	3,900	1,125	0.780	0.20	0.37	139	3.58	566
☐ 3×35 + 3×16/3E + 3×2.5ST + ÜL	12/20	7.6	53.6	57.6	5,090	1,575	0.554	0.25	0.35	172	5.01	576
☐ 3×50 + 3×25/3E + 3×2.5ST + ÜL	12/20	9.1	56.8	60.8	5,730	2,250	0.386	0.28	0.33	215	7.15	608
☐ 3×70 + 3×35/3E + 3×2.5ST + ÜL	12/20	10.8	61.0	65.0	6,840	3,150	0.272	0.32	0.31	265	10.01	650
☐ 3×95 + 3×50/3E + 3×2.5ST + ÜL	12/20	12.7	66.0	70.0	8,080	4,275	0.206	0.36	0.30	319	13.59	700
☐ 3×120 + 3×70/3E + 3×2.5ST + ÜL	12/20	14.3	69.9	73.9	9,650	5,400	0.161	0.39	0.29	371	17.16	739
☐ 3×150 + 3×70/3E + 3×2.5ST + ÜL	12/20	16.0	71.0	75.0	10,932	6,750	0.129	0.43	0.28	428	21.45	750
☐ 3×185 + 3×120/3E + 3×2.5ST + ÜL	12/20	17.7	78.7	82.7	12,417	8,325	0.106	0.47	0.27	488	26.46	827
14/25 kV (Um 30 kV) 7 sizes												
☐ 3×35 + 3×16/3E + 3×2.5ST + ÜL	14/25	7.6	57.6	61.6	5,502	1,575	0.554	0.21	0.37	172	5.01	616
☐ 3×50 + 3×25/3E + 3×2.5ST + ÜL	14/25	9.1	61.4	65.4	6,517	2,250	0.386	0.24	0.35	215	7.15	654
☐ 3×70 + 3×35/3E + 3×2.5ST + ÜL	14/25	10.8	65.0	69.0	7,526	3,150	0.272	0.27	0.33	265	10.01	690
☐ 3×95 + 3×50/3E + 3×2.5ST + ÜL	14/25	12.7	70.0	73.9	8,790	4,275	0.206	0.30	0.32	319	13.59	739
☐ 3×120 + 3×70/3E + 3×2.5ST + ÜL	14/25	14.3	73.9	77.8	10,137	5,400	0.161	0.33	0.30	371	17.16	778
☐ 3×150 + 3×70/3E + 3×2.5ST + ÜL	14/25	16.0	78.9	82.8	11,679	6,750	0.129	0.36	0.29	428	21.45	828
☐ 3×185 + 3×95/3E + 3×2.5ST + ÜL	14/25	17.7	82.5	86.4	13,095	8,325	0.106	0.39	0.29	488	26.46	864
18/30 kV (Um 36 kV) 5 sizes												
☐ 3×50 + 3×25/3E + 3×2.5ST + ÜL	18/30	9.1	67.4	71.4	7,487	2,250	0.386	0.20	0.37	215	7.15	714
☐ 3×70 + 3×35/3E + 3×2.5ST + ÜL	18/30	10.8	71.1	75.1	8,549	3,150	0.272	0.22	0.35	265	10.01	751
☐ 3×95 + 3×50/3E + 3×2.5ST + ÜL	18/30	12.7	76.5	80.4	10,091	4,275	0.206	0.25	0.34	319	13.59	804
☐ 3×120 + 3×70/3E + 3×2.5ST + ÜL	18/30	14.3	79.9	83.8	11,268	5,400	0.161	0.27	0.33	371	17.16	838
☐ 3×150 + 3×70/3E + 3×2.5ST + ÜL	18/30	16.0	84.4	89.3	12,887	6,750	0.129	0.29	0.31	428	21.45	893

– Ampacity for cables laid on the floor at 30 °C ambient temperature (DIN VDE 0298-4 Table 15): 131–461 A at 3.6/6 & 6/10 kV; 139–488 A at 8.7/15 to 18/30 kV.

– Ambient temperature derating factors (DIN VDE 0298-4, 90 °C conductor): 10 °C: 1.15 · 20 °C: 1.08 · 30 °C: 1.00 · 40 °C: 0.91 · 50 °C: 0.82 · 60 °C: 0.71 · 70 °C: 0.58 · 80 °C: 0.41.

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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Email

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Web

tebaoflex.com/cables/n-3ghssycy-cable



Typical values for this cable type, based on DIN VDE 0250-605. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.