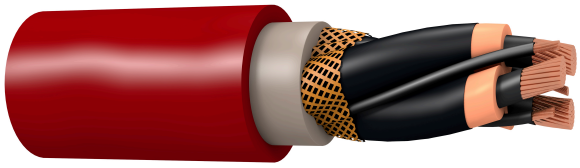
TENAX-M 15kV: Medium Voltage Reeling Cable



Application

Medium voltage reeling cable as power feeder cable for large mobile equipment such as excavators and spreaders, construction machines, etc.The cable design is specialized for reeling applications with mono-spiral reels and cylindrical reels with single plane guiding systems.

Global data

Brand	TENAX-M
Type designation	(N)TSCGEWOEU
Standard	Based on DIN VDE 0250-813

Design features

Conductor	Plain copper, finely stranded, class 5 according to DIN EN 60228 / VDE 0295
Insulation	Rubber, Compound type: 3GI3
Electrical field control	Inner and outer layer of semiconductive rubber compound
Core arrangement	Cores layed up around conductive filler with aramid rope in the center
Inner sheath	Rubber, special compound, mechanical properties acc. to 5GM3
Outer sheath	Abrasion and tear proof special rubber compound, quality better 5GM3 acc. to DIN VDE 0207 part 21, resistance to ozone, UV and oil. Sheath color: Red or Black

Electrical parameters

Rated voltage	8.7/15 kV
Maximum permissible operating voltage AC	10.4/18 kV
Maximum permissible operating voltage DC	13.5/27 kV
AC test voltage	24 kV

Chemical parameters

Resistance to fire	EN 60332-1, IEC 60332-1
Resistance to oil	EN 60811-404, IEC 60811-404
Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture

Thermal parameters

Max. permissible temperature at conductor	90 °C
Max. short circuit temperature of the conductor	250 °C
Ambient temperature for fix installation min.	-40 °C
Ambient temperature for fix installation max.	80 °C
Ambient temp. in fully flex. operation min.	-25 °C
Ambient temp. in fully flex. operation max.	60 °C

Mechanical parameters

Max. tensile load of cable	15 N/mm²
Torsional stress	50 °/m
Bending radii min.	Acc. to DIN VDE 0298 part 3
Minimum distance with S-type directional changes	20 X D
Travel speed	Up to 30 m/min

Number of cores x cross section	Conductor diameter max. mm	Outer diameter min. mm	Outer diameter max. mm	Net weight approx. kg/km	Permissible tensile force max. N	Conductor resistance at 20°C max. Ω/km	Nom. operating capacitance µF/km	Inductance nom. mH/km	Current carrying capacity (1) A	Short Circuit Current (conductor) kA
3x25+3x25/3	6.21	39.3	41.8	2400	1125	0.78	0.23	0.37	135	3.58
3x25+3x50/3	6.21	39.3	41.8	2450	1125	0.78	0.23	0.37	135	3.58
3x35+3x25/3	7.8	42.7	45.2	2900	1575	0.55	0.27	0.34	172	5.01
3x35+3x50/3	7.8	42.7	45.2	2950	1575	0.55	0.27	0.34	172	5.01
3x50+3x25/3	9.56	46.5	49	3600	2250	0.39	0.31	0.32	216	7.15
3x50+3x50/3	9.56	46.5	49	3600	2250	0.39	0.31	0.32	216	7.15
3x70+3x35/3	11.06	51.2	53.7	4550	3150	0.27	0.35	0.31	265	10.01
3x70+3x50/3	11.06	51.2	53.7	4750	3150	0.27	0.35	0.31	265	10.01
3x95+3x50/3	12.6	54.5	58	5500	4275	0.21	0.38	0.29	319	13.59
3x120+3x70/3	14.8	59.2	62.7	6650	5400	0.16	0.44	0.28	371	17.16
3x150+3x95/3	15.95	63.5	67	7850	6750	0.13	0.46	0.28	428	21.45
3x185+3x95/3	17.7	67.2	70.7	9250	8325	0.11	0.5	0.27	488	26.46
3x240+3x120/3	20.2	74.4	77.9	11400	10800	0.08	0.56	0.26	575	34.32
3x300+3x150/3	22.68	79.7	83.2	13900	13500	0.06	0.62	0.25	662	42.9

(1) Nominal current carrying capacity for rubber cables laid on a surface, at 30°C ambient temperature (see also VDE 0298-4, Table 15).