



TFCrane R-(N)TSCGEWÖU

Based on: DIN VDE 0250-813

- Medium Voltage Flexible Cable for Reeling Applications
- Upon request, weights and diameters may be individually adjusted based on end-use applications or customer requirements.



Applications:

Specially designed flexible reeling cable with optimised dimensions for extremely high mechanical stresses occur in applications with monospiral reels and cylindrical reels, very high reeling speed, torsional stress. Also for connection of large material handling machines such as excavators, dumpers, crushers in open-cast mines. For use in wet or dry conditions, in industrial units, in underground and open-cast mining, in explosion-risk areas. Excellent tear, impact and abrasion resistant.

Construction

Conductors	Flexible stranded annealed tin coated or bare copper conductor class 5 to IEC 60228
Separator	Wrap of semi-conductive tape between the power conductor and insulation and between earth conductor and semi-conductive layer
Conductor screen	Semi-conductive layer of special rubber, developed by TFKable
Color of insulation	White
Insulation screen	Semi-conductive. special strippable layer over insulation of power cores. Maximum resistivity of semi-conductive layers -200 [$\Omega \times m$]
Earth conductor	Tin coated or bare copper conductor class 5 to IEC 60228 with extruded special semi-conductive rubber compound
Core arrangement	Power cores and earth conductor split into 3 parts laid up around conductive filler in the centre. Antiadhesion graphite over assembled cores
Inner sheath	A special synthetic thermosetting compound type 5GM3 acc. to DIN VDE 0207/21
Color of inner sheath	Red
Anti-torsion braid	Braid of polyamide threads between internal and outer layer of sheath
Outer sheath	Special designed by TFKable, synthetic thermosetting compound, 5GM5 quality acc. to DIN VDE 0207/21
Colour of outer jacket	Red

Characteristics

Rated Voltage U_0/U	3.6/6 kV	6/10 kV	8.7/15 kV	12/20 kV
Max. operating voltage U_m	7.2 kV	12 kV	18 kV	24 kV
AC test voltage	11 kV	17 kV	24 kV	29 kV
Partial discharge	1.25 U_0 /max 20 pC			

Characteristics

Current carrying capacity	DIN VDE 0298-4
Max. conductor operating temperature	+90°C
Max. conductor temperature during short circuit	+250°C
Minimum ambient temperature for fixed installation	-40°C
Minimum ambient temperature for mobile installation	-25°C

Minimum bending radius acc. to DIN VDE 0298-3:

Fixed installation	6xD
On drums	12xD
On deflection pulleys	15xD
Moving freely	10xD
Twist limits	100°/m
Travel speed up to	180m/min
Tensile load	20N/mm ²
Flame propagation	PN-EN 60332-1-2, IEC 60332-1-2
Oil resistant	PN-EN 60811-404, IEC 60811-404
UV resistant	UL 2556, ISO 4892-2
Ozone resistant	PN-ISO 1431-1

Example of standard sheath marking: TFKABLE 3 TFCrane R-(N)TSCGEWÖU 3x50+3x25/3 6/10 kV year + meter

Parameters

Number of cores x cross-section mm²	Conductor diameter mm	Overall diameter mm	Approx. weight kg/km	Max. tensile load N
3.6/6 kV				
3x25+3x25/3	6.6	39.9	2438	1500
3x35+3x25/3	7.8	42.5	2881	2100
3x50+3x25/3	9.4	46.0	3527	3000
3x70+3x35/3	11.2	51.7	4726	4200
3x95+3x50/3	12.9	55.4	5704	5700
3x120+3x70/3	14.7	59.3	6917	7200
3x150+3x70/3	16.4	64.7	8286	9000
3x185+3x95/3	18.0	68.2	9662	11100
6/10 kV				
3x25+3x25/3	6.6	41.6	2589	1500
3x35+3x25/3	7.8	44.2	3041	2100
3x50+3x25/3	9.4	47.7	3703	3000
3x70+3x35/3	11.2	53.4	4922	4200
3x95+3x50/3	12.9	57.1	5911	5700
3x120+3x70/3	14.7	61.0	7138	7200
3x150+3x70/3	16.4	66.4	8528	9000
3x185+3x95/3	18.0	69.9	9916	11100
8.7/15 kV				
3x25+3x25/3	6.6	45.1	2912	1500
3x35+3x25/3	7.8	47.7	3378	2100
3x50+3x25/3	9.4	52.9	4288	3000
3x70+3x35/3	11.2	56.9	5332	4200
3x95+3x50/3	12.9	60.6	6348	5700
3x120+3x70/3	14.7	66.2	7877	7200
3x150+3x70/3	16.4	69.9	9029	9000
3x185+3x95/3	18.0	75.1	10759	11100
12/20 kV				
3x25+3x25/3	6.6	48.1	3209	1500
3x35+3x25/3	7.8	52.5	3912	2100
3x50+3x25/3	9.4	55.9	4636	3000
3x70+3x35/3	11.2	59.9	5646	4200

Number of cores x cross-section mm²	Conductor diameter mm	Overall diameter mm	Approx. weight kg/km	Max. tensile load N
3x95+3x50/3	12.9	65.4	7020	5700
3x120+3x70/3	14.7	69.3	8316	7200
3x150+3x70/3	16.4	72.9	9486	9000

Standard length cable packing: 500 m on drums. Other forms of packing and delivery are available on request