

PROTOMONT Festoon 6kV: Underground Festoon Cable



Application

As power feeder cable in underground mines and in tunnel sites. The cables are used in underground festoon systems for the power supply of mobile transformer and shiftable units in underground mining applications.

Global data

Brand	PROTOMONT Festoon
Type designation	NTSKCGECWOEU
Standard	DIN VDE 0250-813
Certifications / Approvals	MA – China WUG - Poland Fire Certificate of Russian Federation GOST K GOST B

Design features

Conductor	Finely stranded copper conductor, tinned (Class 5)
Insulation	PROTOLON, Basic material: EPR, Compound type: 3GI3
Electrical field control	Inner semiconductive layer of semiconductive rubber, outer semiconductive layer of tapes
Core identification	Power cores: Natural color, Control cores: Blue
Arrangement of PE-conductor	Concentric spinning of copper wires over each control core element in the outer interstices
Inner sheath	Basic material: EPR, Compound type: GM1B
Monitoring conductor	Semi-conductive tape and open-lay spinning of steel/copper wires
Outer sheath	PROTOFIRM, Basic material: synthetic elastomer compound e.g. CR, Compound type: 5GM5, Color: Red

Electrical parameters

Rated voltage	3.6/6 kV
Maximum permissible operating voltage AC	4.2/7.2 kV
Maximum permissible operating voltage DC	5.4/10.8 kV
AC test voltage	11 kV

Chemical parameters

Resistance to fire	EN 60332-1-2; IEC 60332-1-2
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/mm ²
Bending radii min.	Acc. to DIN VDE 0298 part 3

Number of cores x cross section	Part number	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
3x 35 + 3x(1,5ST KON + 25/3KON) + 6UELKON	20005043	8.2	47.6	50.6	3750	1575	0.565	0.31	0.32	162	5.01
3x 50 + 3x(1,5ST KON + 25/3KON) + 6UELKON	20005040	9.8	50.6	54.6	4430	2250	0.393	0.35	0.31	202	7.15
3x 70 + 3x(1,5ST KON + 35/3KON) + 6UELKON	20005041	11.3	55	59	5500	3150	0.277	0.39	0.3	250	10.01
3x 95 + 3x(1,5ST KON + 50/3KON) + 6UELKON	20005042	13.4	60.3	64.3	6700	4275	0.21	0.45	0.28	301	13.59
3x 120+3x(1,5ST KON + 70/3KON) + 6UELKON	20007844	15.1	65.8	69.8	8150	5400	0.164	0.49	0.27	352	17.16
3x 150+3x(1,5ST KON + 70/3KON) + 6UELKON	20053570	16.8	69.7	73.7	9420	6750	0.132	0.54	0.27	404	21.45
3x 185+3x(1,5ST KON + 95/3KON) + 6UELKON	20080424	19	70	74	12770	8325	0.108	0.59	0.26	461	26.46