MAIN APPLICATION

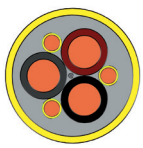
Power supply to mobile equipment with high risk of mechanical damage in mining and tunneling. TUNNELFLEX cable is suitable for application where it is deflected in one plane only.
Maximum speed 60 m/min

CONSTRUCTION

PHASE CORES	
Conductor:	Plain copper, flexible class 5 IEC 60228 special contruction for mobile application
Insulation:	XLPE special compound Brown - Black - Grey
EARTH CORES	
Conductor:	Plain copper, flexible class 5 according to IEC 60228
Insulation:	XLPE special compound colour: yellow/green
CABLE	
Cores arrangements	Phase cores laid up with earth cores in the interstices
INNER SHEATH	PVC flexible special compound
OUTER SHEATH	Polyurethane special compound abrasion and tear resistant, excellent hydrolysis resistant. Colour: YELLOW
Marking:	U.T.V. CAVI manufactured BY PALAZZO - TUNNELFLEX 0,6/1 kV 3x..+3x..

PARAMETERS

ELECTRICAL	Rated voltage Uo/U kV	0,6/1
	Max. oper. voltage kV	1,2
	Test voltage kV	3,5



FG7ORPu TUNNELFLEX - 0,6/1 kV

WITHOUT ANTITWISTING PROTECTION

CORRECTION FACTORS FOR AMBIENT TEMPERATURE OTHER THAN 30 °C

°C	20	25	35	40	45	50
K	1,1	1,05	0,95	0,89	0,84	0,77

MINIMUM BENDING RADIUS	
Fixed installation	6 x OD
On drums	10 x OD

TEMPERTURE LIMITS		
Ambient	fixed -30°C	flex -20 °C
Conductor	+90 °C	

TABLE 1 - FG7ORPu TUNNELFLEX - 0,6/1 kV

Without Antitwisting Protection

Cable size	Conductors diameter approx phase - earth mm	Overall diameter min. value mm	Overall diameter max. value mm	weight approx. kg/km	Max permissible tensile force Static	Max permissible tensile force Dynamic	Laid straight A	Current carrying capacity Spiral or 1 layer A	Current carrying capacity 2 layer A	Current carrying capacity 3 layer A
3x25+3G6	6,5-3,0	24,0	26,0	1200	1125	1500	131	105	80	65
3x35+3G6	7,5-3,0	25,5	28,0	1480	1575	2100	162	130	99	80
3x50+3G10	9,1-3,9	29,5	32,0	2070	2250	3000	202	162	123	99
3x70+3G16	10,8-5,1	34,0	37,0	2980	3150	4200	250	200	153	123
3x95+3G16	12,1-5,1	37,5	40,5	3610	4275	5700	301	241	184	147
3x120+3G25	14,3-6,5	42,0	45,0	4760	5400	7200	352	282	215	172
3x150+3G25	16,1-6,5	47,5	50,5	5800	6750	9000	404	323	246	198
3x185+3G35	17,5-7,5	52,0	55,0	7040	8325	11100	461	369	281	226
3x240+3G50	19,9-9,1	58,0	61,0	9150	10800	14400	540	432	329	265

Nominal cross Selection mm²	Max resistance D.C at 20 °C Ohm/km	Max resistance A.C at 90 °C Ohm/km	Reactance at 50 Hz for nominal voltage 0,6/1 Ohm/km	3,6/6 Ohm/km	6/10 Ohm/km	8,7/15 Ohm/km	12/20 Ohm/km
25	0,780	0,995	0,078	0,107	0,111	0,117	0,125
35	0,554	0,707	0,075	0,101	0,104	0,110	0,117
50	0,386	0,493	0,075	0,097	0,100	0,105	0,112
70	0,272	0,348	0,073	0,092	0,094	0,099	0,106
95	0,206	0,264	0,072	0,088	0,091	0,095	0,101
120	0,161	0,207	0,071	0,085	0,087	0,091	0,097
150	0,129	0,167	0,071	0,083	0,085	0,088	0,093
185	0,106	0,139	0,072	0,081	0,083	0,087	0,091
240	0,0801	0,107	0,072	0,080	0,082	0,084	0,089

Correction factors for ambient temperature other than 30 °C

°C	20	25	35	40	45	50	55
K	1,1	1,05	0,95	0,89	0,84	0,77	0,71

Rated Voltage	Minimum bending radius Fixed installation	On drums	On deflect. pulley	Moving freely
<=0,6/1 kV	5 xOD	10 xOD	12 xOD	10 xOD
> 0,6/1 kV	6 xOD	12 xOD	15 xOD	12 xOD

OD= Overall Diameter

Temperture limits Fixed	Fully flex.	Rated Voltage
-30 °C	-20 °C	**<=0,6/1 kV**
-40 °C	-30 °C	**> 0,6/1 kV**

Cable type	Maximum travel speed operating	rewinding with drum car
TUNNELFLEX / TUNNELFLEX-TX	up to 60 m/min.	100 m/min.
TUNNELFLEX-TTX	up to 180 m/min.	100 m/min.

Applicable only to TUNNELFLEX-TTX

Torsional stresses ± 25°/m	Minimum distance for change of direction 20 x OD