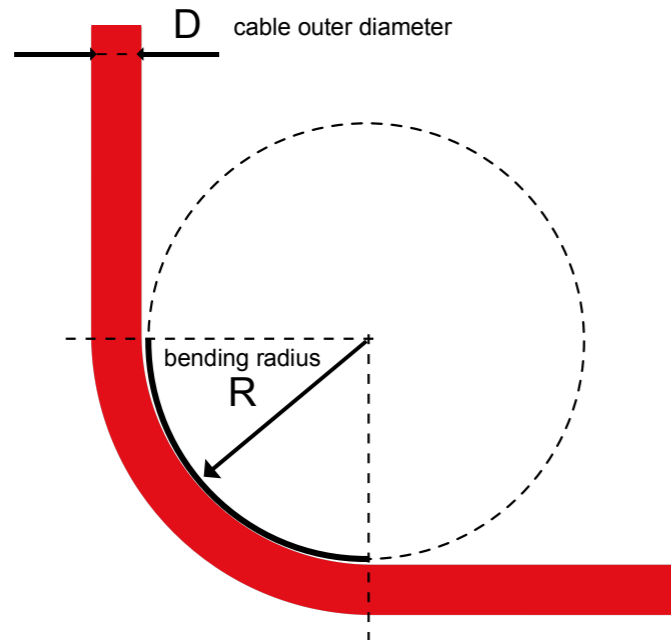


MECHANICAL PARAMETERS

According to VDE 0298-3



RATED VOLTAGE U0/U	UP TO 0,6/1KV				ABOVE 0,6/1KV
	Up to 8	from 8 to 12	from 12 to 20	above 20	
Cable diameter D mm					
Fixed installation	3xD	3xD	4xD	4xD	6xD
Freely flexing	3xD	4xD	5xD	5xD	10xD
For the entry e.g. at a center feed point	3xD	4xD	5xD	5xD	10xD
Forced guidance with reeling operation	5xD	5xD	5xD	6xD	12xD
Forced guidance with festoon operation	3xD	4xD	5xD	5xD	10xD
Forced guidance with power tracks	4xD	4xD	5xD	5xD	10xD
Forced guidance with sheaves and multiroller guides	7,5xD	7,5xD	7,5xD	7,5xD	15xD
Forced guidance with cable tenders	7,5xD	7,5xD	7,5xD	7,5xD	15xD

MAXIMUM TENSILE LOAD

The tensile load for flexible cables in fixed application can be considered 50 N/mm² referred to the cross section of the conductors. In case of mobile application the value would be 15 N/mm² (according to the Standard DIN VDE 0298 Part 3) but we took in consideration the static and dynamic load and we have improved the value according to the table beside. The load must be calculated with the power conductor cross sections without considering earth conductors, screens, etc... If a higher tensile load is required for a specific application we can add a reinforced central element in order to improve this performance.

CABLE	TENSILE LOAD (N/mm ²)
UTVFLEX®	20
UTVFLEX® - VS	30
UTVFLEX® - PUR HF	30
UTVFLEX® - SPR	see technical data sheet
UTVFLEX® - BASKET	see technical data sheet
UTVFLEX® - FESTOON	15
UTVFLEX® - FESTOON/FO	1200
UTVFLEX® - R MT	30
UTVFLEX® - R MT FO	30
UTVFLEX® - R MT FO/RF	see technical data sheet

MAXIMUM TENSILE LOAD

The construction of the families of this ca-talogue is designed in order to withstand to different mechanical stresses, during the operation the cables could be also un-der torsion stress but this is a parameter that must be evaluated with attention be-cause they're not specifically studied for it. Anyway in the table beside you can find the values of maximum torsional stress in stan-dard conditions, in case of unexpected pro-blems during the application these values can not be taken in consideration.

CABLE	TORSIONAL STRESS (°/m)
UTVFLEX®	±25
UTVFLEX® - VS	±50
UTVFLEX® - PUR HF	±25
UTVFLEX® - SPR	±50
UTVFLEX® - BASKET	N.A.
UTVFLEX® - FESTOON	±90
UTVFLEX® - FESTOON/FO	±50
UTVFLEX® - R MT	±25
UTVFLEX® - R MT/FO	±25
UTVFLEX® - RF/MT FO	±25

ELECTRICAL PARAMETERS

CURRENT CARRYING CAPACITY UP TO 6/10 kV (VDE 0298-4) ambient temperature 30°C

Application icons: Laying on the floor, Free in air, Reeled (1-7 layers).

mm ²	A	A	A	A	A	A	A	A	A
1	19	20	15	12	9	8	7	5	4
1,5	24	25	19	15	12	10	9	6	5
2,5	30	32	24	18	15	13	11	8	7
4	41	43	33	25	20	17	16	11	9
6	53	56	42	32	26	22	20	14	12
10	74	78	59	45	36	31	28	20	16
16	99	104	79	60	49	42	38	27	22
25	131	138	105	80	64	55	50	35	29
35	162	170	130	99	79	68	62	44	36
50	202	212	162	123	99	85	77	55	44
70	250	263	200	153	123	105	95	68	55
95	301	316	241	184	147	126	114	81	66
120	352	370	282	215	172	148	134	95	77
150	404	424	323	246	198	170	154	109	89
185	461	484	369	281	226	194	175	124	101
240	528	554	422	322	259	222	201	143	116
300	608	638	486	371	298	255	231	164	134

CURRENT CARRYING CAPACITY ABOVE 6/10 kV (VDE 0298-4) ambient temperature 30°C

Application icons: Laying on the floor, Reeled (1-7 layers).

mm ²	A	A	A	A	A	A	A	A
16	105	84	64	51	44	40	28	23
25	139	111	85	68	58	53	38	31
35	172	138	105	84	72	65	46	38
50	216	173	132	106	91	82	58	48
70	265	212	162	130	111	101	72	58
95	319	255	195	156	134	121	86	70
120	371	297	226	182	156	141	100	82
150	428	342	261	210	180	163	116	94
185	488	390	298	239	205	185	132	107
240	574	459	350	281	241	218	155	126
300	660	528	403	323	277	251	178	145

CORRECTION FACTORS (VDE 0298-4)

N° operating cores	5	7	10	14	19	24	40	61								
Factor	0,75	0,65	0,55	0,50	0,45	0,40	0,35	0,30								
Ambient temp. (C°)	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85
Factor	1,15	1,12	1,08	1,04	1	0,96	0,91	0,87	0,82	0,76	0,71	0,65	0,58	0,50	0,41	0,29

The maximum temperature allowed for rubber cables, during short circuit, is 250°C. The maximum thermal short circuit current allowed, for a time t, can be calculated by the following formulas, valid in adiabatic conditions:

$$I_{cc} = \frac{143 \cdot S}{\sqrt{t}}$$

Where:

I_{cc} = Short circuit current (A)

S = Conductor size (mm²)

t = Time period of short circuit (max 5 s)