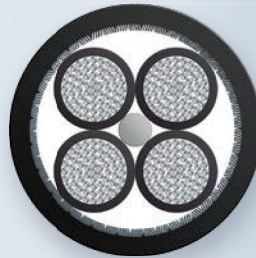


BETAflam® 145 C-flex 600 V/1000 V

Shielded connection and power cable – temperature resistant



Competitive advantage

- Very high resistance to temperature, service temperature up to +145 °C
- Resistance to cold up to –55 °C
- Best fire performance, halogen free
- EMC-optimised braided shield
- Good media resistance
- Electron-beam cross-linked
- Marine approval Class NK

BETAflam® 145 C-flex

Application

Fixed and flexible application in dry, humid and wet rooms. Good weather, ozone and UV resistance. Extensively oil resistant. Intended for installation outdoors. Typical areas of application are connections of:

- Lamps
- Heating units
- Electrical machinery (thermal class B)
- Switchboards / switch cabinets and distributors in apparatus, mechanical or plant engineering

Construction

- Conductor Tinned fine copper strands acc. to VDE 0295/IEC 60228, class 5
- Insulation Polyolefine copolymer electron-beam cross-linked, HF90
- Core identification ● black with white numbers
- Outer sheath Polyolefine copolymer electron-beam cross-linked, SHF2,
- Shield Tinned fine copper braid, min. 85 % coverage
- Colour of sheath ● black

Electrical properties

Nominal voltage	$U_0/U \leq 1 \text{ mm}^2$	300/500 V
	$U_0/U \geq 1.5 \text{ mm}^2$	450/750 V
fixed and protected installation	$U_0/U \geq 1.5 \text{ mm}^2$	600/1000 V
Testing voltage	Conductor / Conductor	3500 V
	Conductor / Shielding	2500 V

Thermal properties

Conductor temperature	fixed installation	+145 °C max.
	occasionally moved	+120 °C max.
Short-circuit temperature		+280 °C max.
Ambient temperature	fixed installation	–55 °C min.
	occasionally moved	–35 °C min.

Bending radius

Fixed installation	> 4 × outer Ø
Occasionally moved	> 8 × outer Ø

Standards / material properties

- Halogen free: IEC 60754-1, EN 50267-2-1
- No corrosive gases: IEC 60754-2, EN 50267-2-2
- No toxic gases: NF X 70-100
- Low smoke density: IEC 61034, DIN EN 61034-2, EN 50268-2
- Flame retardant: EN/IEC 60332-1-2
- Non-flame propagating: IEC 60332-3, DIN EN 60332-3, EN 50266-2, NF C 32-070
- Low fire load: DIN 51900
- Cross-linked insulation compound HF90: IEC 60092-360
- Cross-linked sheathing compound SHF2: IEC 60092-360

Approvals

- Germanischer Lloyd (GL)
- Lloyd's Register (LR)
- BUREAU VERITAS (BV)
- DET Norske Veritas (DNV)
- CHINA CLASSIFICATION SOCIETY (CCS)
- Class NK
- Gost R

Special features

Special types upon request

Con- struction	Core function	Core Ø	Outer Ø	Weight	Fire load	Order no.
n × mm ²		mm	mm	kg/km	kWh/m	
2 × 0.5	NR	1.9	5.6	45	0.09	217371
3 × 0.5	NR	1.9	5.9	55	0.11	∅
4 × 0.5	NR	1.9	6.5	65	0.13	221012
5 × 0.5	NR	1.9	7.1	82	0.17	∅
6 × 0.5	NR	1.9	7.7	97	0.19	∅
7 × 0.5	NR	1.9	8.2	112	0.23	∅
8 × 0.5	NR	1.9	8.8	127	0.27	∅
10 × 0.5	NR	1.9	9.8	150	0.31	∅
12 × 0.5	NR	1.9	9.8	156	0.30	∅
1 × 0.75	L	2.2	3.8	28	0.06	∅
2 × 0.75	LN	2.2	6.4	59	0.15	217638
2 × 0.75	NR	2.2	6.4	59	0.15	211367
3 × 0.75	NR	2.2	6.7	70	0.14	211368
3 G 0.75	NRPE	2.2	6.7	70	0.14	304100
4 × 0.75	NR	2.2	7.4	86	0.18	211369
4 G 0.75	NRPE	2.2	7.4	86	0.18	304645
5 × 0.75	NR	2.2	8.1	104	0.21	211370
5 G 0.75	NRPE	2.2	8.1	104	0.21	304101
6 × 0.75	NR	2.2	8.7	122	0.25	211371
7 × 0.75	NR	2.2	9.7	148	0.32	211372
7 G 0.75	NRPE	2.2	9.7	148	0.32	304102
8 × 0.75	NR	2.2	10.4	172	0.37	∅
10 × 0.75	NR	2.2	11.3	197	0.41	218891
12 × 0.75	NR	2.2	11.3	208	0.40	214971
14 × 0.75	NR	2.2	12.0	240	0.46	∅
16 × 0.75	NR	2.2	12.7	267	0.52	218512
19 × 0.75	NR	2.2	14.3	331	0.69	304932
21 × 0.75	NR	2.2	15.1	366	0.74	∅
1 × 1	L	2.4	4.0	33	0.07	∅
2 × 1	NR	2.4	6.8	71	0.15	212661
3 × 1	NR	2.4	7.2	81	0.16	218841
3 G 1	NRPE	2.4	7.2	81	0.16	300812
4 × 1	NR	2.4	7.9	103	0.20	221126
4 G 1	NRPE	2.4	7.9	103	0.20	218185
5 × 1	NR	2.4	8.7	124	0.25	218790
5 G 1	NRPE	2.4	8.7	124	0.25	218852
6 × 1	NR	2.4	9.3	145	0.28	225248
7 × 1	NR	2.4	10.3	175	0.36	218786
7 G 1	NRPE	2.4	10.3	175	0.36	218868
8 × 1	NR	2.4	11.2	207	0.43	∅
10 × 1	NR	2.4	12.3	240	0.48	∅
12 × 1	NR	2.4	12.3	253	0.47	224022
1 × 1.5	L	3.0	4.6	43	0.09	∅
2 × 1.5	NR	3.0	8.0	94	0.21	211373
3 × 1.5	NR	3.0	8.5	94	0.21	211374
3 G 1.5	NRPE	3.0	8.5	110	0.22	221809
4 × 1.5	NR	3.0	9.2	136	0.27	211375
4 G 1.5	2LNPE	3.0	9.2	136	0.27	213934
4 G 1.5	NRPE	3.0	9.2	136	0.27	219673
5 × 1.5	NR	3.0	10.3	171	0.34	211376
5 G 1.5	NRPE	3.0	10.3	171	0.34	221047

Con- struction	Core function	Core Ø	Outer Ø	Weight	Fire load	Order no.
n × mm ²		mm	mm	kg/km	kWh/m	
6 × 1,5	NR	3.0	11.3	209	0.42	∅
7 × 1,5	NR	3.0	12.4	245	0.51	211378
7 G 1,5	NRPE	3.0	12.4	245	0.51	214030
8 × 1,5	NR	3.0	13.5	288	0.62	304226
10 × 1,5	NR	3.0	14.8	294	0.60	∅
12 × 1,5	NR	3.0	14.8	352	0.64	222149
14 × 1,5	NR	3.0	15.8	415	0.77	216957
16 × 1,5	NR	3.0	16.8	477	0.85	∅
19 × 1,5	NR	3.0	19.0	592	1.17	226401
21 × 1,5	NR	3.0	20.0	655	1.30	215657
25 G 1,5	NRPE	3.0	21.5	748	1.42	214031
1 × 2,5	L	3.7	5.6	61	0.11	∅
2 × 2,5	NR	3.7	9.4	132	0.28	211379
3 × 2,5	NR	3.7	10.2	160	0.29	211380
3 G 2,5	LNPE	3.7	10.2	160	0.29	217068
3 G 2,5	NRPE	3.7	10.2	160	0.29	218770
4 × 2,5	NR	3.7	11.3	205	0.38	211381
4 G 2,5	2LNPE	3.7	11.3	205	0.38	214028
4 G 2,5	NRPE	3.7	11.3	205	0.38	225386
5 × 2,5	NR	3.7	12.4	252	0.47	211382
5 G 2,5	NRPE	3.7	12.4	252	0.47	221810
6 × 2,5	NR	3.7	13.6	309	0.57	∅
7 G 2,5	NRPE	3.7	15.0	364	0.71	217278
8 × 2,5	NR	3.7	16.2	438	0.84	∅
10 × 2,5	NR	3.7	18.0	507	0.93	∅
12 × 2,5	NR	3.7	18.0	540	0.92	304333
14 × 2,5	NR	3.7	19.3	630	1.10	∅
16 × 2,5	NR	3.7	20.4	716	1.23	∅
19 × 2,5	NR	3.7	23.3	906	1.67	226045
21 × 2,5	NR	3.7	24.2	990	1.82	304334
1 × 4	L	4.2	6.1	84	0.12	∅
2 × 4	NR	4.2	10.6	176	0.34	217057
3 × 4	NR	4.2	11.2	214	0.34	∅
3 G 4	NRPE	4.2	11.3	214	0.34	226128
4 × 4	NR	4.2	12.6	276	0.45	214029
5 G 4	NRPE	4.2	13.9	342	0.56	221811
6 × 4	NR	4.2	15.4	415	0.70	∅
7 × 4	NR	4.2	16.7	503	0.85	304726
8 × 4	NR	4.2	18.0	580	1.0	304335
10 × 4	NR	4.2	20.5	701	1.17	∅
12 × 4	NR	4.2	20.4	754	1.13	304228
14 × 4	NR	4.2	21.9	884	1.33	304727
1 × 6	L	4.7	6.7	109	0.14	∅
2 × 6	NR	4.7	11.8	228	0.41	217828
3 × 6	NR	4.7	12.6	300	0.49	215519
4 × 6	NR	4.7	14.0	382	0.60	213135
4 G 6	2LNPE	4.7	14.0	382	0.60	214972
5 × 6	NR	4.7	15.7	493	0.67	∅
6 × 6	NR	4.7	17.1	565	0.82	∅
7 × 6	NR	4.7	19.0	680	1.06	∅

Con- struction	Core function	Core Ø	Outer Ø	Weight	Fire load	Order no.
n × mm ²			mm	kg / km	kWh / m	
1 × 10	L	6.1	8.2	165	0.21	∅
2 × 10	NR	6.1	14.9	366	0.64	305813
3 × 10	NR	6.1	16.0	486	0.75	221677
4 × 10	NR	6.1	17.8	623	0.93	222976
5 × 10	NR	6.1	19.9	782	1.20	301723
6 × 10	NR	6.1	22.0	905	1.36	∅
7 × 10	NR	6.1	24.0	1054	1.59	∅
1 × 16	L	7.2	9.2	229	0.26	∅
2 × 16	NR	7.2	17.4	531	0.84	224005
3 × 16	NR	7.2	18.9	715	1.03	221678
4 × 16	NR	7.2	21.1	928	1.28	226254
5 G 16	NRPE	7.2	23.4	1151	1.60	304166
1 × 25	L	8.6	11.2	331	0.35	∅
2 × 25	NR	8.6	21.2	824	1.21	∅
3 × 25	NR	8.6	22.4	1064	1.33	∅
4 × 25	NR	8.6	25.0	1369	1.68	∅
5 G 25	NRPE	8.6	27.8	1713	2.16	∅
1 × 35	L	10.1	12.8	448	0.45	∅
2 × 35	NR	10.1	24.3	1101	1.55	∅
3 × 35	NR	10.1	26.1	1459	1.76	∅
4 × 35	NR	10.1	28.8	1852	2.22	∅
5 G 35	NRPE	10.1	32.4	2377	2.77	∅

