

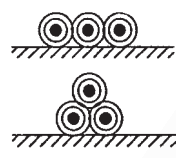
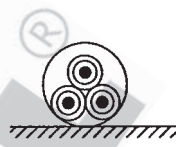


# ■ CURRENT RATINGS FOR HELUTHERM® 145

Operating temperature at conductor 120° C

For permanent operating to the ambient temperature of 30° C. Conversion factors for the deviating site operation conditions – see tables below.

Sufficiently large or ventilated rooms in which the ambient temperature is not noticeably increased by the heat losses from the cables. Protection should be taken from the solar radiation etc.

Installation				
	in open air	on face without inter-contact	on surface with inter-contact	in tubes, conduites, cabinets
Conversion factors for grouping	–	to table 1	to table 2	to table 3
Cross-section, mm <sup>2</sup>	Current ratings in Ampere (A) up to 30° C ambient temperature			
0,25	13	12	9	7
0,33	17	15	11	9
0,50	19	18	12	10
0,75	24	23	17	13
1,0	31	30	20	17
1,5	39	36	25	20
2,5	51	48	33	26
4	68	65	45	36
6	88	84	58	46
10	121	116	80	64
16	160	152	106	85
25	211	200	140	111
35	261	248	172	138
50	320	304	211	169
70	411	391	272	217
95	502	476	331	265
120	587	558	387	310
150	680	646	449	359
185	781	743	516	413
240	931	884	614	492

## Conversion factors for grouping

Number of single core cables for 2-phase or 3-phase systems		1	2	3	4	5	6	7	8	9	10	12
Table 1	Factor	1,00	0,94	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90	0,90
Table 2	Factor	1,00	0,85	0,79	0,75	0,73	0,72	0,72	0,71	0,70	–	–
Table 3	Factor	1,00	0,80	0,70	0,65	0,60	0,57	0,54	0,52	0,50	0,48	0,45

## Conversion factors for deviating ambient temperatures

Temperature in °C	20	30	40	50	60	70	80	90	95	100	105	110	115
Factor	1,05	1,00	0,94	0,88	0,82	0,75	0,67	0,58	0,53	0,47	0,41	0,33	0,24

# ■ CURRENT RATINGS FOR SILICONE CABLES AND WIRES

The indicated values stated in the following table are considered as guiding values. These are to be selected each particularly for the individual application.

Heat-resistance at an ambient **temperature up to 150°C**

	<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>
Nominal-cross-section	current-carrying capacity A	current-carrying capacity A	current-carrying capacity A
0,25	2,8	–	5
0,5	6	7	10
0,75	9	12	15
1,0	12	15	19
1,5	16	18	24
2,5	21	26	32
4	28	34	42
6	36	44	54
10	49	61	73
16	65	82	98
25	85	108	129
35	105	135	158
50	140	168	198
70	175	207	245
95	210	250	292
120	250	292	344
150	–	335	391
185	–	382	448
240	–	453	528
300	–	523	608

**Group 1:** One or more single core cables laid in duct.

**Group 2:** Multicore cables, flexible cables laid in open or ventilated conduits.

**Group 3:** Single core cables laid in open air with a spacing at least equal to cable diameter.

Power ratings for

**ambient temperature over 150°C**

The following conversion factors are valid:

Temperature °C	current-carrying capacity values in %
up to 150	100
over 150 to 155	91
over 155 to 160	82
over 160 to 165	71
over 165 to 170	58
over 170 to 175	41