BETAtherm® 145 UL/cUL/CSA 3271/3820

AWM 3271 600 V / 3820 1000 V 125°C
AWM I A/B 125°C 1000 V FT2
AWM I A/B 125°C 600 V FT2

Studer Cables

Application for BETAtherm® halogenfree, electron-beam cross-linked single core with best fire performance and very high resistance to temperature.

Typical applications are internal wiring in lamps, heating appliances, electric machines (thermal class B) switchboards and distribution boxes in apparatus, mechanical and plant engineering and inverters.
Used for laying in tubes, surface wiring, direct in plaster or underneath it, as well in conduits. May not be laid directly in cable trays, cable racks or cable troughs.

Material properties

Halogenfree	IEC 60754-1, EN 50267-2-1
No corrosive gases	IEC 60754-2, EN 50267-2-2
No toxic gases	NF X 70-100

Fire performance

Low smoke density	IEC 61034, DIN EN 61034-2, EN 50268-2
Flame retardant	EN/IEC 60332-1-2, FT2
Non-flame propagating	IEC 60332-3, DIN EN 60332-3, DIN EN 50266-2
Low fire load	DIN 51900

Construction

Conductor	Tinned fine copper strands VDE 0295 / IEC 60228 class 5
Insulation	Polyolefine copolymer, electron-beam cross-linked
Core colour	green-yellow, black, light blue, brown, red, white, grey, violett, orange, yellow, green, dark blue (further colours upon request)

Technical properties

Nominal voltage	Uo/U	1000 V
Testing voltage		3500 V
Temperature range	fixed installation	- 55 upon + 125°C
	occasionally moved	- 35 upon + 120°C
	short-circuit	+ 280°C
Bending radius		> 4 x outer-Ø fixed installation > 6 x outer-Ø occasionally moved

Approvals

UL AWM Style 3271, 125°C / 600 V, AWM Style 3820, 125 °C / 1000 V, File Nr. E146164
cUL AWM I A/B 125°C / 1000 V (cUL approbation is equivalent to CSA)
CSA AWM I A/B 125°C / 600 V

Cross-section mm²	Strand nom.-Ø mm	Outer-Ø mm	Weight kg/km	Cu-factor kg/km	Fireload kWh/m
0,25	0,66	2,30 +/-0,1	8	2,4	0,022
0,33	0,75	2,35 +/-0,1	10	3,2	0,024
0,50	0,90	2,50 +/-0,1	11	4,8	0,025
0,75	1,15	2,75 +/-0,1	14	7,2	0,029
1	1,25	2,85 +/-0,1	17	9,6	0,031
1,5	1,55	3,15 +/-0,2	22	14,4	0,036
2,5	2,05	3,65 +/-0,2	32	24,0	0,043
4	2,55	4,15 +/-0,2	46	38,4	0,051
6	3,10	4,70 +/-0,2	65	57,6	0,060
10	4,10	6,50 +/-0,3	114	96,0	0,120
16	5,0	8,20 +/-0,3	182	154	0,198
25	6,20	9,40 +/-0,3	264	240	0,234
35	7,70	10,90 +/-0,4	369	336	0,302
50	9,70	14,10 +/-0,4	558	480	0,543
70	11,20	15,60 +/-0,4	747	672	0,621
95	12,80	17,20 +/-0,4	959	912	0,682
120	14,60	19,0 +/-0,4	1190	1152	0,758
150	16,40	20,40 +/-0,4	1453	1440	0,835
185	17,90	22,30 +/-0,4	1746	1776	0,919
240	20,70	26,70 +/-0,6	2376	2304	1,423

Dimensional and weight deviations due to technical progress or changed manufacturing processes are reserved.