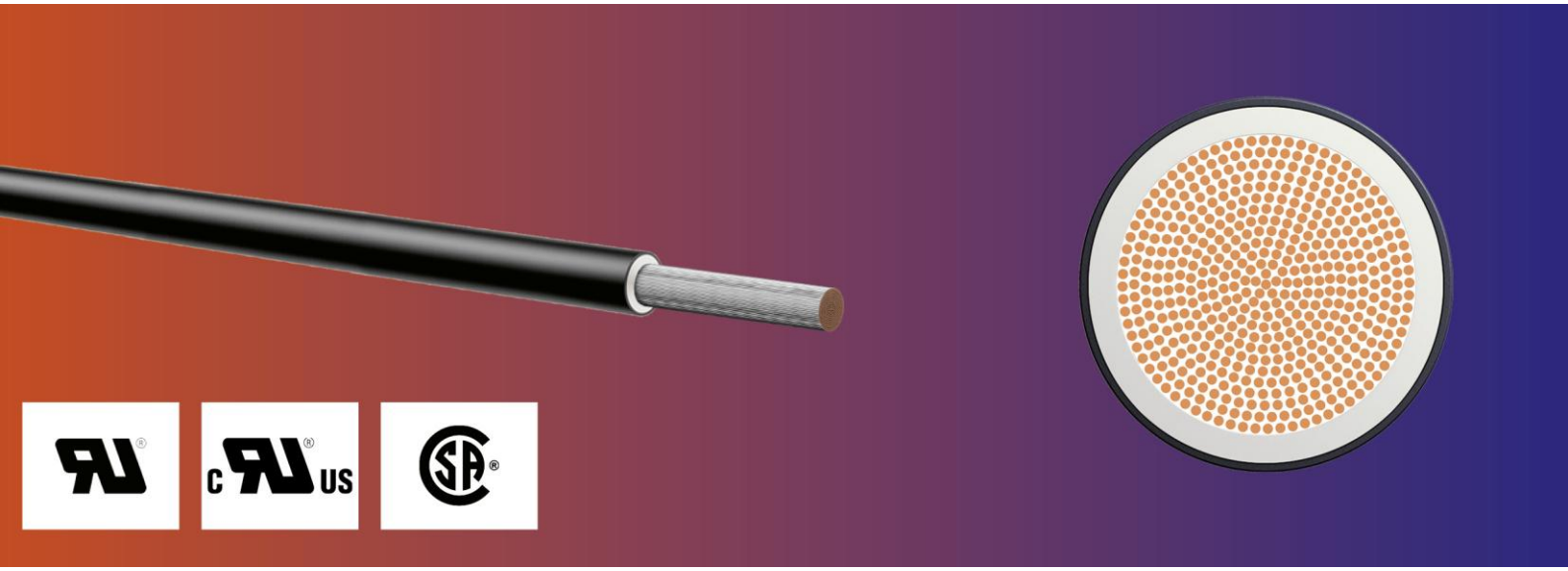
SINGLE-CORE CABLES

BETAtherm® 145 UL/cUL/CSA 3271/3820
Temperature resistant heat class B, 1000 V



Application

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.

Construction

Conductor	Tinned fine copper strand acc. to VDE 0295 / IEC 60228, class 5
Insulation	Polyolefin Copolymer, Comp. 752, electronbeam cross-linked
Core colour	green-yellow, black, light-blue, brown, red, white, grey, violet, orange, yellow, green, dark-blue. Other colours, also two-coloured upon request

Advantages

- Multi-Standard cable
- Very high resistance to temperature
- Resistance to cold down to –55 °C
- Best fire performance, halogenfree
- Electron-beam cross-linked
- Nominal voltage 600 + 1000 V

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Electrical properties

Rated value	U0/U	1000 / 1000 V AC
Test voltage		3.5 kV, 50 Hz / 5 min.

Thermal properties

Operating temperature	Fixed installation	-55 to + 125°C
Operating temperature	Occasionally moved	-35 to + 120°C
Max. short circuit temperature		+280°C (max. 5s)

Mechanical properties

Bending radius	Fixed installation	≥4 x Ø
Bending radius	Occasionally moved	≥6 x Ø

Material properties / Standards

Halogenfree	IEC 60754-1, EN 50267-2-1
No corrosive gases	IEC 60754-2, EN 50267-2-2

Material properties / Standards

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, FT2
Non-flame propagating	IEC 60332-3, DIN EN 60332-3, DIN EN 50266-2
Low fire load	DIN 51900

Approvals

UL AWM Style 3271, 125°C / 600 V, AWM Style 3820, 125 °C / 1000 V	File No. E146164
cUL AWM I A/B 125°C / 1000 V (cUL ist gleichberechtigt zur Approbation nach CSA)	File No. E146164
CSA AWM I A/B 125°C / 600 V	Zertifikat No. 1752635

Additional information

Special types upon request

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Construction Cross-sec. [mm2]	Conductor-Ø [mm]	R_{20} [mΩ/m]	Outer-Ø [mm]	Weight [kg/km]	Fire load [kWh/m]	Part no. Black	Part no. White	Part no. Red	Part no. Light blue	Part no. Green-yellow	Part no. Brown	Part no. Orange	Part no. Grey
0.25	0.65	77.5	2.30 ±0.1	8	0.022	311364	311870	311871	311872	*	311923	*	311869
0.33	0.75	57.2	2.35 ±0.1	10	0.024	317471	317477	*	317474	*	317472	317473	317476
0.5	0.90	40.1	2.50 ±0.1	11	0.025	310661	311366	310662	312175	313459	311994	310676	311365
0.75	1.15	26.7	2.75 ±0.1	14	0.029	310663	313461	313462	310887	308305	310886	*	310885
1	1.25	20	2.85 ±0.1	17	0.031	310664	313451	313452	313450	313449	316808	316770	316859
1.5	1.55	13.7	3.15 ±0.2	22	0.036	310665	313453	310941	310942	311868	311302	311303	317379
2.5	2.05	8.21	3.65 ±0.2	32	0.043	310646	311605	311604	310814	310647	311106	310677	311111
4	2.55	5.09	4.15 ±0.2	46	0.051	310648	310679	310817	310815	310888	310701	310680	310700
6	3.10	3.39	4.70 ±0.2	65	0.060	310649	310820	310800	312235	310650	315222	315010	313686
10	4.10	1.95	6.50 ±0.3	114	0.120	310651	315011	318056	313611	313817	317053	315012	317052
16	5.00	1.24	8.20 ±0.3	182	0.198	310652	*	317777	310943	310653	313697	*	313696
25	6.20	0.795	9.40 ±0.3	264	0.234	310654	*	*	*	310655	317755	*	*
35	7.70	0.565	10.90 ±0.4	369	0.302	310656	*	317778	*	310657	317366	*	317365
50	9.70	0.393	14.10 ±0.4	558	0.543	310658	*	317909	*	310659	317368	*	311614
70	11.20	0.277	15.60 ±0.4	747	0.621	310675	*	317779	*	317142	*	*	*
95	12.80	0.21	17.20 ±0.4	959	0.682	310723	*	*	*	310681	*	*	*
120	14.60	0.164	19.0 ±0.4	1190	0.758	311107	*	*	*	*	*	*	*
150	16.40	0.132	20.40 ±0.4	1453	0.835	313434	*	*	*	*	*	*	*
185	17.90	0.108	22.30 ±0.4	1746	0.919	315871	*	*	*	*	*	*	*
240	20.70	0.0817	25.10 ±0.4	2278	1.043	317802	*	*	*	*	*	*	*

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Construction Cross-sec.	Conductor-Ø	R_{20}	Outer-Ø	Weight	Fire load	Part no.	Part no.	Part no.	Part no.				
[mm2]	[mm]	[mΩ/m]	[mm]	[kg/km]	[kWh/m]	Green	Yellow	Purple	Dark blue				
0.25	0.65	77.5	2.30 ±0.1	8	0.022	*	*	*	316637				
0.33	0.75	57.2	2.35 ±0.1	10	0.024	*	*	317475	*				
0.5	0.90	40.1	2.50 ±0.1	11	0.025	317293	310785	317367	311367				
0.75	1.15	26.7	2.75 ±0.1	14	0.029	*	*	*	*				
1	1.25	20	2.85 ±0.1	17	0.031	*	*	*	*				
1.5	1.55	13.7	3.15 ±0.2	22	0.036	*	*	315214	*				
2.5	2.05	8.21	3.65 ±0.2	32	0.043	318100	*	310678	*				
4	2.55	5.09	4.15 ±0.2	46	0.051	310819	310818	310699	*				
6	3.10	3.39	4.70 ±0.2	65	0.060	312072	*	313687	*				
10	4.10	1.95	6.50 ±0.3	114	0.120	*	*	*	*				
16	5.00	1.24	8.20 ±0.3	182	0.198	*	*	*	*				
25	6.20	0.795	9.40 ±0.3	264	0.234	*	*	*	*				
35	7.70	0.565	10.90 ±0.4	369	0.302	*	*	*	*				
50	9.70	0.393	14.10 ±0.4	558	0.543	*	*	*	*				
70	11.20	0.277	15.60 ±0.4	747	0.621	*	*	*	*				
95	12.80	0.21	17.20 ±0.4	959	0.682	*	*	*	*				
120	14.60	0.164	19.0 ±0.4	1190	0.758	*	*	*	*				
150	16.40	0.132	20.40 ±0.4	1453	0.835	*	*	*	*				
185	17.90	0.108	22.30 ±0.4	1746	0.919	*	*	*	*				
240	20.70	0.0817	25.10 ±0.4	2278	1.043	*	*	*	*				

Note:

*: Upon request

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