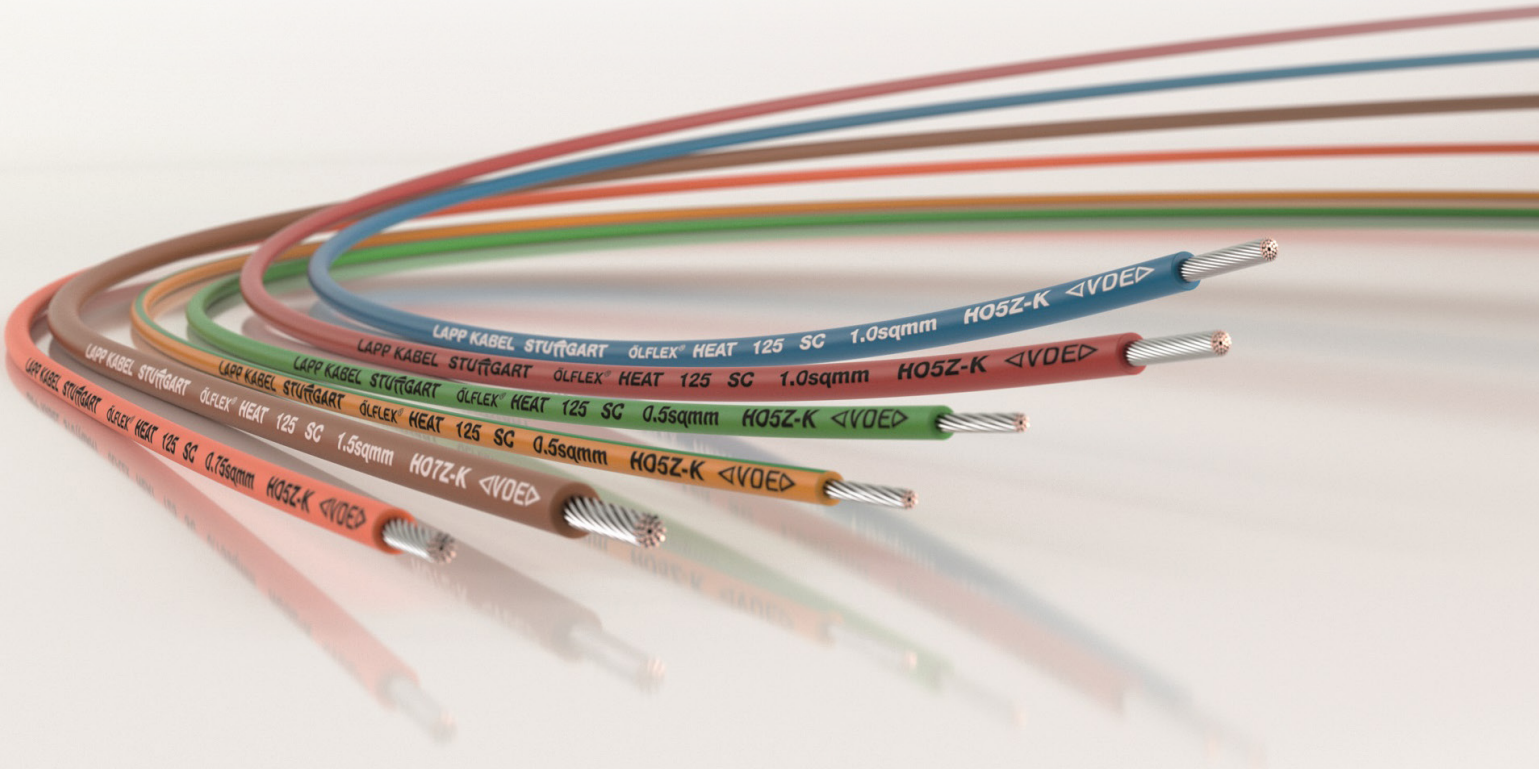
ÖLFLEX® HEAT

Cable Solutions for Extreme Temperature



LAPP GROUP

Reliable performance no matter how extreme the temperature.

Choosing the best cable for applications involving extreme temperatures is one of the most critical design decisions you can make. When it comes to withstanding extreme heat and cold, some cables have clear advantages over others. Cables from the ÖLFLEX® HEAT range maintain their electrical and mechanical properties, ensuring uninterrupted power no matter how severe the conditions.

As the lifeblood of your systems, cables and wires are vital to transmitting power and sending control signals and data in a timely and reliable manner. ÖLFLEX® HEAT cables are designed using the most reliable and rugged materials including cross-linked polymers, silicone, fluoropolymers and fiberglass. These components ensure durable performance time and time again—providing optimum uptime and productivity.

Advantages of silicone cable

- Hydrolysis resistance
- UV resistance
- Resistant to oils, alcohols, plants and animal fats
- Withstands temperature as low as -50°C

Advantages of cross-linked cable

- Increased thermal strength
- Improved corrosion and abrasion resistance
- Resistant to solvents, detergents and other operating fluids
- High-temperature resistance

Suitable for a wide range of applications

- Food and beverage
- Industrial ovens
- Steel and glass foundries
- Industrial furnaces
- Industrial machinery

Why Lapp Group

ÖLFLEX® cable is one of Lapp Group's eight durable brands that add up to one powerful choice for all your connection needs. Our business partners depend on the quality, performance, and reliability of our connectivity solutions even in the most demanding conditions, while our rich history of innovation and product development helps our customers improve the performance of their operations.

When you connect with Lapp Group, you connect with a company that combines international capabilities with domestic manufacturing; ensuring product quality and availability. And you connect with unrivaled customer support that is always there for you.

ÖLFLEX® HEAT 180 MS/180 C MS

High Temperature Silicone Control Cable; North American Approvals

ÖLFLEX® HEAT 180 MS is a high temperature silicone cable with North American approvals. It has a temperature rating of 180°C and is halogen-free. ÖLFLEX® HEAT 180 C MS is a shielded version available with an overall tinned copper braid. This is recommended when electrical interference needs to be suppressed.

Recommended Applications

Foundries; steel mills; glass factories; furnaces; commercial baking equipment; other high-temperature applications

Approvals

Unshielded Construction

Conductors: Finely stranded tinned copper

Insulation: Silicone; cores twisted together

Jacket: Silicone; black

Shielded Construction

Conductors: Finely stranded tinned copper

Insulation: Silicone; cores twisted together

Shielding: Tinned copper braid (85% coverage); plastic foil wrap

Jacket: Silicone; black

Application Advantage

- Rated for use up to 180°C and can handle rapid increases in heat
- Excellent low temperature rating of -50°C
- Passes FT1 vertical flame test
- Halogen-free & UV-resistant jacket
- Resistant to various oils, alcohols, vegetable & animal fats, and chemical substances

Cable Attributes				page 640
OIL	OR-02	FLAME	FR-02	
MOTION	FL-01	MECH.	MP-01	

Complete the Installation	
SKINTOP® CN High Temp.	EPIC® Connectors

Technical Data

Minimum Bend Radius:
- unshielded: 4 x cable diameter
- shielded: 6 x cable diameter

Temperature Range:
- UL: -50°C to +150°C
- VDE: -50°C to +180°C

Nominal Voltage: 600V

Test Voltage: 2000V

Conductor Stranding: Class 5 fine wire

Color Code:
- up to 5c: VDE 0293-308:
- 6c & higher: Black with white numbers, plus green/yellow ground

Approvals:
UL: AWM 4476
Attributes: NFPA 79
Canada: cRU AWM II A/B FT1
Additional: CE & RoHS

ÖLFLEX® HEAT 180 MS

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread
20 AWG (0.50 mm²)						
0046600*	2	0.292	7.4	7	45	52032520
0046601	3	0.307	7.8	10	52	52032520
00466023	4	0.335	8.5	14	62	52032520
00466033	5	0.362	9.2	17	74	52032525
0046604	7	0.390	9.9	24	88	52032525
18 AWG (1.00 mm²)						
0046612*	2	0.323	8.2	13	58	52032520
0046613	3	0.343	8.7	20	68	52032520
00466143	4	0.370	9.4	26	83	52032525
00466153	5	0.406	10.3	33	99	52032525
0046616	7	0.437	11.1	46	121	52032540
0046617	12	0.587	14.9	78	214	52032560
16 AWG (1.50 mm²)						
0046618*	2	0.347	8.8	20	70	52032520
0046619	3	0.366	9.3	30	84	52032525
00466203	4	0.398	10.1	39	103	52032525
00466213	5	0.437	11.1	49	124	52032540
0046622	7	0.473	12.0	69	153	52032540
0046623	12	0.634	16.1	117	272	52032560
0046625	18	0.741	18.8	175	381	52032560
0046626	25	0.902	22.9	242	562	52032570

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread
14 AWG (2.50 mm²)						
0046628*	2	0.378	9.6	33	91	52032525
0046629	3	0.402	10.2	49	111	52032525
00466303	4	0.437	11.1	65	137	52032540
00466313	5	0.481	12.2	81	167	52032540
12 AWG (4 mm²)						
0046633	3	0.453	11.5	78	165	52032540
00466343	4	0.496	12.6	104	206	52032540
00466353	5	0.559	14.2	130	261	52032560
10 AWG (6 mm²)						
0046636	3	0.587	14.9	116	246	52032560
00466373	4	0.646	16.4	155	308	52032560
00466383	5	0.709	18.0	194	378	52032560

* 2c cable does not include ground

ÖLFLEX® HEAT 180 C MS

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread
20 AWG (0.50 mm²)						
0046701	3	0.339	8.6	30	67	52032520
0046702	4	0.366	9.3	38	82	52032525
0046703	5	0.394	10.0	41	92	52032525
18 AWG (1.00 mm²)						
0046708*	2	0.355	9.0	33	70	52032520
0046709	3	0.374	9.5	44	88	52032525
0046710	4	0.402	10.2	51	102	52032525
0046711	5	0.433	11.0	62	122	52032525
0046712	7	0.469	11.9	80	153	52032540
16 AWG (1.50 mm²)						
0046716*	2	0.378	9.6	44	85	52032525
0046717	3	0.398	10.1	54	102	52032525
0046718	4	0.429	10.9	68	125	52032525
0046719	5	0.465	11.8	83	149	52032540
0046720	7	0.504	12.8	107	189	52032540
0046721	12	0.666	16.9	165	290	52032560
0076723	18	0.772	19.6	233	403	52032570
0046724	25	0.942	23.9	334	560	52032570

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread
14 AWG (2.50 mm²)						
0046728	3	0.433	11.0	78	132	52032525
0046729	4	0.469	11.9	99	164	52032540
0046730	5	0.508	12.9	120	196	52032540
12 AWG (4 mm²)						
0046734	3	0.485	12.3	112	175	52032540
0046735	4	0.528	13.4	143	218	52032540
0046736	5	0.587	14.9	173	261	52032560
10 AWG (6 mm²)						
0046740	4	0.678	17.2	204	324	52032560
0046741	5	0.737	18.7	248	390	52032560
8 AWG (10 mm²)						
0046742	4	0.898	22.8	342	539	52032570

* 2c cable does not include ground

Recommended SKINTOP® assumes minimal OD variance.
Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values. For current information go to our website.

ÖLFLEX® HEAT 180 SiHF

High Temperature Silicone Control Cable

ÖLFLEX® HEAT 180 SiHF is a high temperature silicone cable. It has a temperature rating of 180°C and is halogen-free.

Construction

Conductors: Finely stranded tinned copper

Insulation: Silicone; cores twisted in layers

Jacket: Silicone; red-brown

Recommended Applications

Foundries; steel mills; glass factories; furnaces; commercial baking equipment; other high-temperature applications

Application Advantage

- Rated for use up to 180°C and can handle rapid increases in heat
- Excellent low temperature rating of -50°C
- Halogen-free
- Fine stranding for improved flexibility

Approvals

CE RoHS

Cable Attributes			
OIL	OR-02	FLAME	FR-01
MOTION	FL-01	MECH.	MP-01

Complete the Installation


SKINTOP® CN High Temp.


EPIC® Connectors

Technical Data

Minimum Bend Radius: 4 x cable diameter

Temperature Range: -50°C to +180°C

Nominal Voltage: 300/500V

Test Voltage: 2000V

Conductor Stranding: Class 5 fine wire

Color Code:
- up to 5c: VDE 0293-308:
- 6c & higher: Black with white numbers, plus green/yellow ground

Approvals: CE & RoHS

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread
18 AWG (1.00 mm²)						
0046007*	2	0.260	6.6	13	44	52032520
0046008	3	0.276	7.0	20	53	52032520
00460093	4	0.311	7.9	26	68	52032520
00460103	5	0.347	8.8	33	85	52032520
0046012	7	0.374	9.5	46	105	52032525
16 AWG (1.50 mm²)						
0046013*	2	0.299	7.6	20	60	52032520
0046014	3	0.315	8.0	29	73	52032520
00460153	4	0.347	8.8	39	90	52032520
00460163	5	0.378	9.6	49	110	52032525
0046018	7	0.410	10.4	68	136	52032525
0046039	12	0.552	14.0	117	242	52032560
0046040	16	0.638	16.2	155	321	52032560
0046041	20	0.690	17.5	194	386	52032560
0046042	24	0.780	19.8	233	484	52032570
14 AWG (2.50 mm²)						
0046019*	2	0.347	8.8	33	86	52032520
0046020	3	0.382	9.7	49	112	52032525
00460213	4	0.418	10.6	65	138	52032525
00460223	5	0.457	11.6	81	169	52032540
0046024	7	0.496	12.6	113	210	52032540

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread
12 AWG (4 mm²)						
0046025*	2	0.426	10.8	52	132	52032525
0046026	3	0.453	11.5	78	162	52032540
00460273	4	0.496	12.6	104	202	52032540
00460283	5	0.552	14.0	130	251	52032560
0046030	7	0.615	15.6	181	327	52032560
10 AWG (6 mm²)						
0046031*	2	0.489	12.4	78	180	52032540
0046032	3	0.520	13.2	117	224	52032540
00460333	4	0.579	14.7	155	286	52032560
00460343	5	0.654	16.6	194	362	52032560
0046036	7	0.733	18.6	271	474	52032560
8 AWG (10 mm²)						
00460373	4	0.764	19.4	259	475	52032570
00460453	5	0.851	21.6	323	590	52032570
6 AWG (16 mm²)						
00460383	4	0.843	21.4	413	675	52032570

* 2c cable does not include ground

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question.
For current information go to our website.

ÖLFLEX® HEAT 180 H05SS-F EWKF

High Temperature Tear-Resistant Silicone Control Cable

ÖLFLEX® HEAT 180 H05SS-F EWKF is a high temperature tear-resistant silicone control cable with <HAR> approval. It has a high temperature rating of 180°C, is halogen-free, and is designed for applications where high temperatures and mechanical abuse can cause other cables to deteriorate.

Construction

Conductors: Finely stranded tinned copper

Insulation: Silicone

Jacket: Silicone; black

Recommended Applications

Foundries; steel mills; glass factories; furnaces; commercial baking equipment; other high-temperature applications with mechanical abuse

Application Advantage

- Rated for use up to 180°C and can handle rapid increases in temperature
- Tear-resistant jacket
- Excellent low temperature rating of -50°C
- Halogen-free and UV resistant

Approvals

<HAR> CE RoHS

Cable Attributes			
OIL	OR-02	FLAME	FR-01
MOTION	FL-01	MECH.	MP-01

Complete the Installation			
	SKINTOP® CN High Temp.		EPIC® Connectors

Technical Data

Minimum Bend Radius:	4 x cable diameter	**Conductor Stranding:**	Class 5 fine wire
Temperature Range:	-50°C to +180°C	**Color Code:**	VDE 0293-308:
Nominal Voltage:	300/500V	**Approvals:**	<HAR> H05SS-F CE & RoHS
Test Voltage:	2000V		

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread
18 AWG (1.00 mm²)							**14 AWG (2.50 mm²)**						
0046904*	2	0.268	6.8	13	42	52032520	0046912*	2	0.386	9.8	33	95	52032525
0046905	3	0.284	7.2	20	54	52032520	0046913	3	0.410	10.4	49	106	52032525
00469063	4	0.311	7.9	26	66	52032520	00469143	4	0.457	11.6	65	131	52032540
00469073	5	0.347	8.8	33	81	52032520	00469153	5	0.508	12.9	81	162	52032540
16 AWG (1.50 mm²)							**12 AWG (4 mm²)**						
0046908*	2	0.331	8.4	20	56	52032520	0046916	3	0.485	12.3	78	161	52032540
0046909	3	0.351	8.9	29	69	52032520	00469173	4	0.540	13.7	104	210	52032540
00469103	4	0.390	9.9	39	86	52032525	**10 AWG (6 mm²)**						
00469113	5	0.429	10.9	49	103	52032525	0046919	3	0.552	14.0	117	232	52032560
							00469203	4	0.615	15.6	155	303	52032560

* 2c cable does not include ground

Recommended SKINTOP® assumes minimal OD variance.
Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values. For current information go to our website.

ÖLFLEX® HEAT 125 MC/125 C MC

Highly Flame Retardant High Temperature Multi-Conductor Control Cable

The ÖLFLEX® HEAT 125 MC series are heat resistant, highly flame retardant, halogen-free multi-conductor cables with a cross-linked polyolefin copolymer compound. Cables are available in both shielded and non-shielded versions.

Unshielded Construction

Conductors: Finely stranded tinned copper

Insulation: Cross-linked polyolefin copolymer

Jacket: Cross-linked polyolefin copolymer; black

Shielded Construction

Conductors: Finely stranded tinned copper

Insulation: Crossed-linked polyolefin copolymer

Shielding: Tinned copper braid

Jacket: Cross-linked polyolefin copolymer; black

Recommended Applications

Lighting equipment; heating appliances; switch gear cabinets; other high-temperature and outdoor appliances

Application Advantage

- Resistant to humidity, ozone & UV
- Highly flame retardant
- Abrasion and notch resistant
- Halogen-free
- GL (Germanischer Lloyd) approved

Approvals

CE RoHS

Cable Attributes			
OIL	OR-01	FLAME	FR-03
MOTION	FL-01	MECH.	MP-01

Complete the Installation	
 SKINTOP® CN High Temp.	 EPIC® Connectors

Technical Data

Minimum Bend Radius:
- for stationary use: 4 x cable diameter
- shielded: 5 x cable diameter

Temperature Range: -55°C to +125C
short term up to 145°C

Nominal Voltage:
- up to 16 AWG: 300/500V
- 16 AWG & larger: 450/750V

Test Voltage: 4000V

Conductor Stranding: Class 5 fine wire

Color Code:
- ÖLFLEX® HEAT 125 MC:
  - up to 5c: VDE 0293-308:
  - 6c & higher: Black with white numbers, plus green/yellow ground
- ÖLFLEX® HEAT C 125 MC: VDE 0293-308: Black with white numbers, plus green/yellow ground, see part number table

Approvals: CE & RoHS
Germanischer Lloyd

ÖLFLEX® HEAT 125 MC

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread
20 AWG (0.5 mm²)							**16 AWG (1.50 mm²)**						
1024300*	2	0.236	6.0	6	26	52032525	1024323*	2	0.299	7.6	19	48	52032525
1024301	3	0.248	6.3	10	31	52032525	1024324	3	0.327	8.3	29	65	52032525
19 AWG (0.75 mm²)							1024325	4	0.355	9.0	39	83	52032525
1024307*	2	0.252	6.4	10	27	52032525	1024326	5	0.398	10.1	48	105	52032525
1024308	3	0.268	6.8	15	36	52032525	1024327	7	0.441	11.2	68	151	52032525
1024309	4	0.292	7.4	19	46	52032525	1024328	12	0.595	15.1	116	212	52032525
1024310	5	0.327	8.3	24	58	52032525	**14 AWG (2.50 mm²)**						
1024311	7	0.355	9.0	34	85	52032525	1024333*	2	0.355	9.0	32	69	52032525
18 AWG (1.00 mm²)							1024334	3	0.386	9.8	48	97	52032525
1024315*	2	0.260	6.6	13	34	52032525	1024335	4	0.426	10.8	65	127	52032525
1024316	3	0.276	7.0	19	45	52032525	1024336	5	0.469	11.9	81	158	52032540
1024317	4	0.307	7.8	26	58	52032525	1024337	7	0.520	13.2	113	231	52032540
1024318	5	0.339	8.6	32	72	52032525	**12 AWG (4 mm²)**						
1024319	7	0.374	9.5	45	102	52032525	1024341	4	0.500	12.7	103	185	52032540
1024320	12	0.504	12.8	77	149	52032540	1024342	5	0.552	14.0	129	224	52032540
							10 AWG (6 mm²)						
							1024346	4	0.556	14.1	155	229	52032540
							1024347	5	0.623	15.8	194	290	52032560

* 2c cable does not include ground

ÖLFLEX® HEAT 125 C MC: Color-coded

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread
20 AWG (0.5 mm²)							**16 AWG (1.50 mm²)**						
1024400*	2	0.268	6.8	28	30	52032525	1024423*	2	0.339	8.6	44	77	52032525
1024401	3	0.280	7.1	31	40	52032525	1024424	3	0.359	9.1	56	89	52032525
19 AWG (0.75 mm²)							1024425	4	0.394	10.0	67	110	52032525
1024407*	2	0.284	7.2	31	53	52032525	1024426	5	0.437	11.1	84	134	52032525
1024408	3	0.299	7.6	39	65	52032525	**14 AWG (2.50 mm²)**						
1024409	4	0.331	8.4	43	78	52032525	1024433*	2	0.394	10.0	75	106	52032525
1024410	5	0.359	9.1	52	93	52032525	1024434	3	0.422	10.7	98	133	52032525
18 AWG (1.00 mm²)							1024435	4	0.457	11.6	112	159	52032525
1024415*	2	0.292	7.4	38	60	52032525	1024436	5	0.508	12.9	134	193	52032540
1024416	3	0.315	8.0	44	70	52032525	**12 AWG (4 mm²)**						
1024417	4	0.339	8.6	52	87	52032525	1024441	4	0.540	13.7	159	213	52032540
1024418	5	0.378	9.6	60	103	52032525	**10 AWG (6 mm²)**						
							1024446	4	0.595	15.1	214	271	52032560
							8 AWG (10 mm²)						
							1024451	4	0.760	19.3	375	450	52032560

* 2c cable does not include ground

ÖLFLEX® HEAT 125 C MC: Black with white numbers

Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread	Part Number	Number of Conductors (incl. ground)	Nominal Outer Diameter (in)	(mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	SKINDICHT® CN PG Thread
19 AWG (0.75 mm²)							**16 AWG (1.50 mm²)**						
1024480*	2	0.284	7.2	31	53	52032525	1024486*	2	0.339	8.6	44	77	52032525
1024481*	3	0.299	7.6	39	65	52032525	1024487*	4	0.394	10.0	67	110	52032525
1024482*	4	0.331	8.4	43	78	52032525	1024427	7	0.473	12.0	100	183	52032540
1024411	7	0.394	10.0	69	125	52032525	1024488*	7	0.473	12.0	100	183	52032540
1024483*	7	0.394	10.0	69	125	52032525	1024428	12	0.642	16.3	121	249	52032560
1024412	12	0.528	13.4	119	147	52032540	**14 AWG (2.50 mm²)**						
18 AWG (1.00 mm²)							1024489*	3	0.422	10.7	98	133	52032525
1024484*	2	0.292	7.4	38	60	52032525	1024490*	4	0.457	11.6	112	159	52032525
1024485*	3	0.315	8.0	44	70	52032525	1024437	7	0.567	14.4	194	259	52032540
1024419	7	0.406	10.3	76	142	52032525	1024438	12	0.760	19.3	321	382	52032560
1024420	12	0.552	14.0	126	179	52032540							

* Cable does not include ground

Recommended SKINTOP® assumes minimal OD variance.
Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values. For current information go to our website.

ÖLFLEX® HEAT 180 SiF A

High Temperature Single-Conductor Silicone Cable; North American Approvals

ÖLFLEX® HEAT 180 SiF A is a silicone single-core cable for extended temperatures with North American approvals. It has a temperature rating of 180°C and is halogen-free.

Construction

Conductors: Finely stranded tinned copper

Insulation: Silicone

Recommended Applications

Thermal and heating elements; lighting technology; switchboards and cabinets; other high-temperature appliances

Application Advantage

- Resistant to a multitude of oils, alcohols, and vegetable & animal fats
- Halogen-free and flame retardant

Approvals

Cable Attributes			
OIL	OR-01	FLAME	FR-02
MOTION	FL-01	MECH.	MP-01

Complete the Installation	
SKINTOP® CN High Temp.	EPIC® Connectors

Technical Data

Minimum Bend Radius: 6 x cable diameter

Temperature Range:
- UL: -50°C to +150°C
- IEC: -50°C to +180°C

Nominal Voltage:
- UL: 1000V
- IEC: 600/1000V

Test Voltage: 3000V

Conductor Stranding: Class 5 fine wire

Color Code:

50:	Green/yellow*	62:	Gray
52:	Black*	64:	Violet
54:	Blue*	66:	Dark blue
56:	Brown*	68:	Orange
58:	Red*	70:	Yellow
60:	White*	72:	Green

* color codes are different for 6 AWG & larger: see below

Approvals:
UL: AWM 3644
Canada: cRU AWM FT2
Additional: CE & RoHS

Part Number	Nominal Outer Diameter (in)	Nominal Outer Diameter (mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)	Part Number	Nominal Outer Diameter (in)	Nominal Outer Diameter (mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)
24 AWG (0.25 mm²)					**8 AWG (10 mm²)**				
1249..0	0.087	2.2	2	5	1249..9	0.299	7.6	65	89
20 AWG (0.50 mm²)					**6 AWG (16 mm²)**				
1249..2	0.095	2.4	3	7	1249..0*	0.331	8.4	103	129
19 AWG (0.75 mm²)					**4 AWG (25 mm²)**				
1249..3	0.106	2.7	5	9	1249..1*	0.386	9.8	161	194
18 AWG (1.00 mm²)					**2 AWG (35 mm²)**				
1249..4	0.110	2.8	6	12	1249..2*	0.429	10.9	226	259
16 AWG (1.50 mm²)					**1 AWG (50 mm²)**				
1249..5	0.122	3.1	10	15	1249..3*	0.532	13.5	323	375
14 AWG (2.50 mm²)					**2/0 AWG (70 mm²)**				
1249..6	0.138	3.5	16	22	1249..4*	0.611	15.5	452	521
12 AWG (4 mm²)					**3/0 AWG (95 mm²)**				
1249..7	0.162	4.1	26	33	1249..5*	0.690	17.5	613	675
10 AWG (6 mm²)									
1249..8	0.217	5.5	39	53					

For Lapp part number, add the double digit color code (see above) to the part number in the table, e.g.: 16 AWG green/yellow = 4726501

* Color codes are different for cables 6 AWG & larger: 51 – green/yellow; 53 – black; 55 – blue; 57 – brown; 59 – red; 61 – white.

Violet, dark blue, orange, yellow & green are only available up to 14 AWG; gray to 10 AWG; brown to 6 AWG; green/yellow, blue & white to 4 AWG; red to 1 AWG

ÖLFLEX® HEAT 125 SC

Highly Flame Retardant High Temperature Single-Conductor Control Cable

ÖLFLEX® HEAT 125 SC are heat-resistant halogen-free single conductors, insulated with a cross-linked LSZH polyolefin copolymer compound with excellent fire characteristics and a wide temperature range.

Construction

Conductors: Finely stranded tinned copper

Insulation: Cross-linked polyolefin copolymer

Recommended Applications

Internal wiring of lamps; heating appliances; switchboards and cabinets; other high temperature appliances

Application Advantage

- Highly flame retardant
- Halogen-free
- Minimizes damage to equipment caused by the formation of toxic acid fumes in fires
- Abrasion and notch-resistant
- GL (Germanischer Lloyd) approved

Approvals

Cable Attributes					
OIL	OR-01		FLAME	FR-03	
MOTION	FL-01		MECH.	MP-01	

Complete the Installation			
High Temp. Strain Relief		EPIC® Connectors	

Technical Data

Minimum Bend Radius: 4 x cable diameter

Temperature Range: -55°C to +125°C
short form up to 145°C

Nominal Voltage:
- H05Z-K: 300/500V
- H07Z-K: 450/750V

Test Voltage: 3500V

Conductor Stranding: Class 5 fine wire

Color Code:

000:	Green/yellow	007:	Violet
001:	Black	009:	Orange
002:	Blue	104:	Red
003:	Brown	105:	White
005:	Yellow	106:	Grey
006:	Green	114:	Dark blue

Approvals: Based on VDE specifications
CE & RoHS
Germanischer Lloyd approved

Part Number	Nominal Outer Diameter (in)	Nominal Outer Diameter (mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)
H05Z-K				
20 AWG (0.50 mm²)				
1232..	0.087	2.2	3	5
19 AWG (0.75 mm²)				
1233..	0.095	2.4	11	7
18 AWG (1.00 mm²)				
1234..	0.099	2.5	6	9
H07Z-K				
16 AWG (1.50 mm²)				
1235..	0.118	3.0	10	14
14 AWG (2.50 mm²)				
1236..	0.142	3.6	16	22
12 AWG (4 mm²)				
1237..	0.169	4.3	26	33
10 AWG (6 mm²)				
1238..	0.189	4.8	39	45
8 AWG (10 mm²)				
1239..	0.244	6.2	65	75
6 AWG (16 mm²)				
1240..	0.284	7.2	103	116

Part Number	Nominal Outer Diameter (in)	Nominal Outer Diameter (mm)	Copper Weight (lbs/mft)	Approx. Weight (lbs/mft)
4 AWG (25 mm²)				
1241..	0.351	8.9	161	176
2 AWG (35 mm²)				
1242..	0.398	10.1	226	243
1 AWG (50 mm²)				
1243..	0.493	12.5	226	243
2/0 AWG (70 mm²)				
1244..	0.559	14.2	452	477
3/0 AWG (95 mm²)				
1245..	0.654	16.6	613	630
4/0 AWG (120 mm²)				
1246..	0.717	18.2	774	779
250 KCMIL (150 mm²)				
1247..	0.812	20.6	968	972
350 KCMIL (185 mm²)				
1248..	0.887	22.5	1193	1203
450 KCMIL (240 mm²)				
1249..	1.040	26.4	1548	1558

For Lapp part number, add the double digit color code (see above) to the part number in the table, e.g.: 16 AWG H07Z-K green/yellow = 1235000
Violet, yellow & green are only available up to 14 AWG; white to 12 AWG; orange to 12 AWG (but not 18 AWG); grey & dark blue to 10 AWG; brown to 8 AWG; blue to 6 AWG; green/yellow to 2/0 AWG and 250 KCMIL

Recommended SKINTOP® assumes minimal OD variance.
Additional configurations are available; please see our SKINTOP® section.
If not otherwise specified, all values relating to the product are nominal values. For current information go to our website.

Components

SKINDICHT® FKM

- up to +200°C
- Nickel-plated brass
  Sealing cone: FKM
  O-ring: FKM
- Resistant to oils, solvents, acids and chemicals
- High strain relief
- Watertight

SKINDICHT® CN

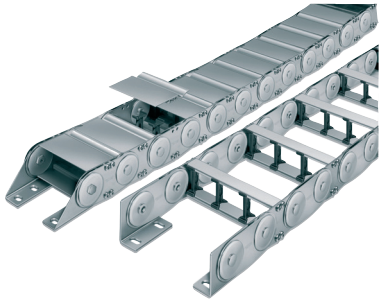
- up to +200°C
- Chrome-nickel steel
  Sealing cone: FPM
  O-ring: FPM
- Resistant to oils, solvents, acids and chemicals
- High corrosion and seawater resistant
- For high mechanical stress

SILVYN® HIPROJACKET

- up to +260°C
  up to +1090°C for approx. 20 minutes
- Fiber glass with iron oxide silicone coat
- Flexible design

SILVYN® SSUE

- up to +400°C
- Stainless steel AISI 316
- Corrosion resistant
- High-tensile
- For high mechanical stress



SILVYN® STEEL CABLE CHAIN

- Rugged
- Heavy duty
- Scalable to extreme size and load applications
- Mechanical and corrosion resistant for the harshest environments

Power and Control for Expanded Ambient Temperatures

	HALOGEN-FREE	FLAME RETARDANT	NO FLAME PROPAGATION	LOW SMOKE DENSITY	LOW TOXICITY	VDE/HAR CERTIFICATION	UL/CSA CERTIFICATION	GL CERTIFICATION	300/500 V	450/750 V	600/1000 V	10000 V	600 V ACC. TO UL	1000 V ACC. TO UL
Multi-conductor cables														
Cross-linked cables (-55 °C up to +125 °C)														
ÖLFLEX® HEAT 125 MC	✔	✔	✔	✔	✔			✔	✔	✔	✔			
ÖLFLEX® HEAT 125 C MC	✔	✔	✔	✔	✔			✔	✔	✔	✔			
Silicone cables (-50 °C up to +180 °C)														
ÖLFLEX® HEAT 180 SiHF	✔	✔		✔					✔					
ÖLFLEX® HEAT 180 H05SS-F EWKF	✔	✔		✔		✔			✔					
ÖLFLEX® HEAT 180 MS	✔	✔		✔			✔		✔				✔	
ÖLFLEX® HEAT 180 C MS	✔	✔		✔			✔		✔				✔	

Single conductor cables														
Cross-linked cables (-55 °C up to +125 °C)														
ÖLFLEX® HEAT 125 SC	✔	✔	✔	✔	✔	✔		✔	✔	✔	✔			
Silicone cables (-50 °C up to +180 °C)														
ÖLFLEX® HEAT 180 SiF A	✔	✔		✔			✔				✔			✔

Oil Resistance

Level	USA	CSA*	Europe*
OR-00	Minimal oil resistance characteristics	–	–
OR-01	UL 758 In oil for 7 days @ 60°C 75% Unaged Tensile Strength 75% Unaged Elongation	C22.2 No. 49 In oil for 7 days @ 60°C 75% Unaged Tensile Strength 75% Unaged Elongation	VDE 0281 Part 1 In oil for 7 days @ 60°C ± 30% Unaged Tensile Strength ± 30% Unaged Elongation
OR-02	UL Oil Res. I In oil for 4 days @ 100°C 50% Unaged Tensile Strength 50% Unaged Elongation	C22.2 No. 230 In oil for 4 days @ 100°C 50% Unaged Tensile Strength 50% Unaged Elongation	VDE 0472 Sect. 803A In oil for 1 day @ 100°C ± 25% Unaged Tensile Strength ± 25% Unaged Elongation
OR-03	UL Oil Res. II In oil for 60 days @ 75°C 65% Unaged Tensile Strength 65% Unaged Elongation	C22.2 No. 210.2 In oil for 4 days @ 100°C 65% Unaged Tensile Strength 65% Unaged Elongation	SEV TP 20 B In oil for 30 days @ 70°C No cracking after bending
OR-04	UL AWM 21098 In oil for 60 days @ 80°C 65% Unaged Tensile Strength 65% Unaged Elongation	C22.2 No 0.3 In oil for 60 days @ 80°C 65% Unaged Tensile Strength 65% Unaged Elongation	VDE 0472 Sect. 803B In oil for 7 days @ 90°C ± 25% Unaged Tensile Strength ± 25% Unaged Elongation
OR-05	In oil for 4 weeks @ 100°C 40% Unaged Tensile Strength 40% Unaged Elongation	–	–

*These oil immersion standards are mentioned for purposes of reference only. Some Canadian and European test standards are not necessarily represented here as complete equivalents to the US Standards but have been referenced due to similarities in requirements. Refer to the individual standards for detailed test procedures and any comparable evaluations.

Flame Resistance

Level	USA	CSA*	Europe*
FR-01	UL 62: Horizontal Flame Test One 30-second flame application. Cable must not emit flame or glowing particles.	FT2: One 30-second flame application. Cable must not emit flame or glowing particles.	VDE 0472 Part 804 One 1-minute flame application. Cable must not ignite or emit flames.
FR-02	UL VW-1 (UL 1581): Vertical Flame Test Five 15-second flame applications. Cable must not emit flame or glowing particles.	FT1: Vertical Flame Test Five 15-second flame applications. Cable must not emit flame or glowing particles.	IEC 60332-1 Flame application time varies by cable diameter. Cable must self-extinguish.
FR-03	UL 1581: Vertical Tray Test Exposed to flame (70,000 BTU) for 20 min. Damage cannot exceed 8 feet.	FT4: Vertical Tray Test Exposed to flame for 20 min. Damage cannot exceed 5 feet.	IEC 60332-3-24 Exposed to flame for 20 min. Damage cannot exceed 8.2 feet.

*These flame standards are mentioned for purposes of reference only. Some Canadian and European test standards are not necessarily represented here as complete equivalents to the US Standards but have been referenced due to some similarities in requirements. Refer to the individual standards for detailed test procedures and any comparable evaluations.

Motion Type

Level	Description	Definition	Cycle Life Range
FL-01	Flexible	Can be easily installed in machines, conduit, and cable tray when applicable	—
FL-02	Highly Flexible	High flexibility with continuous flexing design attributes	—
WT-02	Wind Turbine Torsion -40°C	Designed for basic wind torsion to an angle of ± 150°/m Application temperature: -40°C	up to 2,000 cycles
CF-01	Continuous Flexing: Basic	Designed for basis continuous flexing and cable track applications Distance: chain length up to 15 feet	1 - 2 million cycles
CF-02*	Continuous Flexing: Moderate	Designed for continuous flexing and cable track applications Distance: chain length up to 30 feet	2 - 8 million cycles
CF-03*	Continuous Flexing: High	Designed for high cycle continuous flexing and cable track applications Distance: chain length up to 30 feet	8 - 20 million cycles
CF-04*	Continuous Flexing: High-Extended	Designed for high cycle continuous flexing and long cable track applications Distance: chain length up to 300 feet	8 - 20 million cycles
CF-04A*	Continuous Flexing: High-Extended High Acceleration (A) applications	Designed for high cycle continuous flexing and long cable track applications Distance: chain length up to 300 feet; Acceleration: up to 50m/s^2 for chain length up to 15 feet	8 - 20 million cycles

* When comparing cycle life data between cables, the following critical variables must be evaluated: bend radius, distance, acceleration, speed & weight.

Mechanical Properties

Level	Description	Impact	Crush	Cold Impact	Cold Bend	Tensile	Elongation	Standard
MP-01	Average	–	*	*	–	1,500 psi	100%	ASTM D-412
MP-02	Good: Independent lab-tested for crush & impact	10/50 lb	1,000/ 2,000 lbf	–	-25°C	1,700 psi	175%	UL 1277 ASTM D-412
MP-03	Very Good: Rated for Exposed Run use (-ER)	10/50 lb	2,500/ 4,200 lbf	-25°C (CSA-TC)	-40°C (UL 62)	2,300 psi	275%	UL 1277 ASTM D-412
MP-05	Excellent	**	**	–	–	3,400 psi	325%	ASTM D-1457

* Impact and crush tests not applicable for intended end use of product.
** Testing is not required. If tested, these groups would meet or exceed UL 1277 impact and crush requirements by virtue of their superior mechanical properties.
*** Lapp standard.

Note: Lapp mechanical protection test values for each level meet or exceed the requirements of the standards referenced.

ÖLFLEX®

UNITRONIC®

EPIC®

SKINTOP®

ETHERLINE®

HITRONIC®

SILVYN®

FLEXIMARK®

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