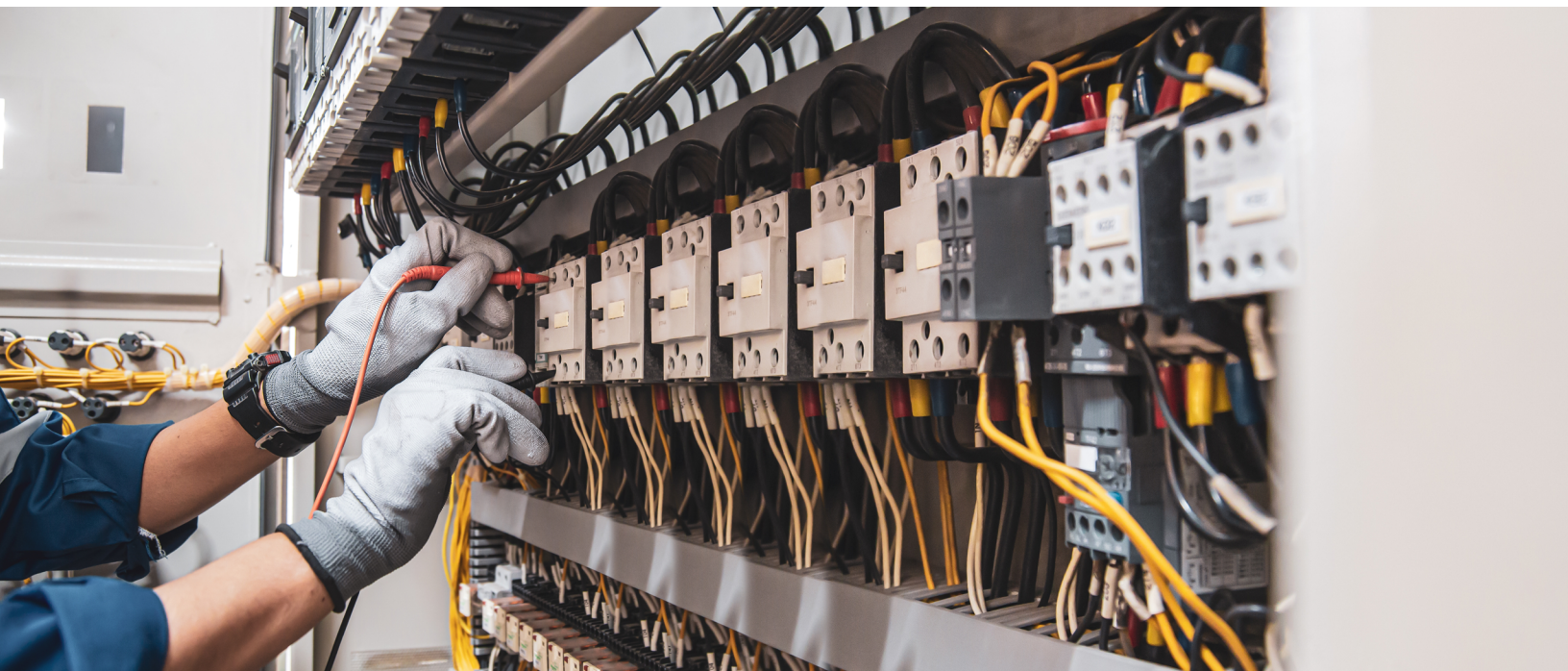


Hook-Up Wire Brochure



Everything You Need to Hook Up Anything

The broad range of hook-up wire from Alpha Wire means you will find the wire exactly suited to your application—whether it's as straightforward as a control cabinet in a protected environment or as specialized as a machine tool on the factory floor, a high temperature oven, or off-road construction equipment. Our hook-up wire is available in a variety of insulation to meet your needs for temperature, ability to withstand wear and abrasion, electrical properties, and resistance to oil, solvents, and chemicals.



- Stranded and solid copper conductors, bare or tinned, with other platings available for special application needs
- Broad range of insulations
- Color-coded insulation for easy circuit identification

Choice of Insulations to Meet Temperature Range and Mechanical and Environmental Requirements				
Insulation	Material	Temperature Range	Features	Page No.
mPPE	Modified polyphenylene ether	-40°C to +105°C	Modified polyphenylene ether insulation (mPPE) Lighter, tougher, and more durable than PVC Meets RoHS and WEEE requirements 45% smaller diameter, 40% lighter	4
mPPE*	Modified polyphenylene ether	-40°C to +110°C	All the environmental benefits and abrasion resistance characteristics of EcoWire Excellent resistance to oils, chemicals, solvents, and fuels Meets ISO 6722 for thin-wall and ultra-thin wall wire	4
PVC	Polyvinyl chloride	-55°C to +105°C	General-purpose insulation Good abrasion resistance Excellent flame resistance	5-7
IRR-PVC	Irradiated PVC	-55°C to +105°C	Better abrasion and cut-through resistance than standard PVC Improved temperature and solder iron resistance over standard PVC Used in high-density wiring	8-9
PTFE	Polytetrafluoroethylene	-55°C to +200°C	High temperature Chemically inert: excellent chemical and solvent resistance Excellent electrical properties	11-12
XLPE	Cross-linked polyethylene	-55°C to +125°C	Higher temperature rating than PVC	9-10
Silicone	Silicone	-40°C to +150°C	High-voltage material Excellent flexibility Excellent dielectric strength and resistance to radiation, corona, and ozone	13-15
PDVF	Polyvinylidene fluoride	-40°C to +125°C	Widely used in wire wrap applications	13
ETFE	Ethylene tetrafluoroethylene	-70°C to +150°C		13
MG	Mica glass	+450°C	High-temperature applications, such as heat-treating furnaces, kilns, and food service equipment Excellent thermal stability	15

*EcoWire® Plus

Choice of Features and Approvals by Application							
Voltage	Insulation	Wire Range (AWG)		Approvals		Temperature Range	Page No.
		Stranded	Solid	UL	CSA		
UL/CSA							
150	IRR-PVC	26 – 16	—	CSA AWM I A/B FT1		-55°C to +105°C	8
				UL AWM 1429		-55°C to +80°C	
	XLPE	22 – 18	—	UL AWM 3265	CSA AWM I A/B FT1	-55°C to +125°C	10
300	PVC	30 – 16	24 – 16	UL AWM 1569		-40°C to +105°C	5
				UL AWM 1007		-40°C to +80°C	
				CSA TR-64		-40°C to +90°C	
	SR-PVC	30 – 16	—	UL AWM 1061	CSA AWM I A/B FT1	-10°C to +80°C	5
	IRR-PVC	26 – 16	—	UL AWM 1430	CSA REW XL-PVC	-55°C to +105°C	9
	XLPE	22 – 18	—	UL AWM 3266	CSA CL 1252 XLPE	-55°C to +125°C	10
	PTFE	24 – 8	—	UL AWM 1180		-60°C to +200°C	12
600	PVC	24 – 10	26 – 10	UL AWM 1015, 1230 UL MTW, THW, TW	CSA TEW-105	-20°C to +105°C	7
		8 – 4/0	—	UL AWM 1242, 1284		-20°C to +105°C	
	XLPE	18 – 10	—	UL AWM 3271	CSA CL 1251 XLPE	-55°C to +125°C	9
	XLPE	20 – 2/0	—	UL AWM 3173, 3195, 3196, 3300 SIS Rated		-55°C to +125°C	10
	Silicone	22 – 4/0	—	UL AWM 3212, 3213, 3214	CSA AWM I A/B FT2	-40°C to +150°C	13
10,000+	Silicone	22 – 2	—	UL AWM 3239		-40°C to +150°C	14
Military							
250	PTFE	32 – 22	30 – 26	MIL-DTL-16787/6 (Type ET)		-60°C to +200°C	11
600	IRR-PVC	26 – 16	—	MIL-DTL-16878/1 (Type B)		-55°C to +105°C	8
600	PVC	32 – 14	—	MIL-DTL-16878/1 (Type B)		-55°C to +105°C	7
	PVC	14 – 8	—	MIL-W-76B Type HW		-20°C to +80°C	7
	PTFE	30 – 10	26 – 18	MIL-DTL-16878/4 (Type E)		-60°C to +200°C	11
1000	IRR-PVC	26 – 16	—	MIL-DTL-16878/1 (Type C)		-55°C to +105°C	9
	PVC	24 – 12	24 – 18	MIL-DTL-16878/1 (Type C)		-40°C to +80°C	9
	XLPE	22 – 18	—	MIL-DTL-16878/1 (Type C)		-55°C to +105°C	10
	PTFE	24 – 8	—	MIL-DTL-16878/5 (Type EE)		-60°C to +200°C	12
3000	XLPE	18 – 10	—	MIL-DTL-16878/1 (Type D)		-55°C to +105°C	9
Wire Wrap							
	PVDF	—	30 – 24	UL 1422, 1423		-40°C to +125°C	13
	ETFE	—	30 – 24	UL 1516, 1523		-70°C to +150°C	13
Ribbon Cable: 5 to 30 Conductors							
150/600	PVC	26 – 22	—	UL 2713, 2555		-55°C to +80°C	17
300/1000	PVC	26 – 22	—	MIL-W-16878/1 (Types B & C)		-55°C to +105°C	18
Bus Bar Wire							
	—	—	30 – 12	A-A59551			18

Bulk Hook-Up Wire

We support your high-volume needs with large put-ups for a wide range of both military and UL style PVC hook-up wire.

Bulk PVC wire options include:

- Stranded and solid conductors
- Bare or tinned copper
- Standard and semirigid PVC
- Variety of temperature ranges

For additional information, visit www.alphawire.com

600 V, mPPE Wire

EcoWire®



Innovative EcoWire combines increased performance with a minimized environmental impact. Compared to PVC wire, EcoWire's modified polyphenylene ether (mPPE) insulation allows wire that are:

- Up to 45% smaller in diameter
- Up to 40% lighter
- Non-halogenated, with no heavy metal pigments

UL AWM 11028 VW-1

CSA AWM I A/B FT1

IEC 60332-2 Flame Behavior RoHS/RoHS2

Compliant REACH Compliant

Halogen-Free

CE compliant

- -40°C to +105°C
- Stranded or solid tinned copper conductors
- Modified polyphenylene ether insulation

Choice of Insulations to Meet Temperature Range and Mechanical and Environmental Requirements				
Insulation	Material	Temperature Range	Features	Page No.
mPPE	Modified polyphenylene ether	-40°C to +105°C	Modified polyphenylene ether insulation (mPPE) Lighter, tougher, and more durable than PVC Meets RoHS and WEEE requirements 45% smaller diameter, 40% lighter	4
mPPE*	Modified polyphenylene ether	-40°C to +110°C	All the environmental benefits and abrasion resistance characteristics of EcoWire Excellent resistance to oils, chemicals, solvents, and fuels Meets ISO 6722 for thin-wall and ultra-thin wall wire	4
PVC	Polyvinyl chloride	-55°C to +105°C	General-purpose insulation Good abrasion resistance Excellent flame resistance	5-7
IRR-PVC	Irradiated PVC	-55°C to +105°C	Better abrasion and cut-through resistance than standard PVC Improved temperature and solder iron resistance over standard PVC Used in high-density wiring	8-10
PTFE	Polytetrafluoroethylene	-55°C to +200°C	High temperature Chemically inert: excellent chemical and solvent resistance Excellent electrical properties	11-12
XLPE	Cross-linked polyethylene	-55°C to +125°C	Higher temperature rating than PVC	8
Silicone	Silicone	-40°C to +150°C	High-voltage material Excellent flexibility Excellent dielectric strength and resistance to radiation, corona, and ozone	9-10
PDVF	Polyvinylidene fluoride	-40°C to +125°C	Widely used in wire wrap applications	13
ETFE	Ethylene tetrafluoroethylene	-70°C to +150°C		13
MG	Mica glass	+450°C	High-temperature applications, such as heat-treating furnaces, kilns, and food service equipment Excellent thermal stability	15

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)
- 5000 ft (1524 m)
- 25,000 ft (7620 m) drum



EcoWire and EcoWire Plus are part of the EcoGen family of weight- and space-saving, environmentally friendly wires and cables.

300 V, mPPE Wire

EcoWire® Plus

All the benefits of EcoWire, plus higher temperature range and additional fluid resistance for demanding factory applications.

ISO 6722 Ultra Thin Wall

ISO 6722 Thin Wall

RoHS Compliant

REACH Compliant

Halogen-Free

CE compliant

- -40°C to +110°C
- Stranded bare copper conductors
- Modified polyphenylene ether insulation

Part No.	Conductor Size			Stranding		Insulation Thickness		Wire Diameter	
	AWG	mm²	ISO mm Equiv.	AWG	mm	Inch	mm	Inch	mm
6820	28	0.09	—	7/36	7 x 0.12	0.008	0.20	0.031	0.79
6821	26	0.14	0.13	7/34	7 x 0.16	0.008	0.20	0.035	0.89
6822	24	0.23	0.22	7/32	7 x 0.20	0.008	0.20	0.040	1.02
6823	22	0.35	0.35	7/30	7 x 0.25	0.008	0.20	0.046	1.17
6824	20	0.56	0.5	7/28	7 x 0.32	0.008	0.20	0.054	1.37
6825	18	0.81	0.75	19/0.0092	19 x 0.23	0.008	0.20	0.062	1.57
6826	17	0.96	1	19/30	19 x 0.25	0.008	0.20	0.066	1.68
6827	16	1.23	—	19/29	19 x 0.29	0.010	0.24	0.077	1.96
6828	15	1.53	1.5	19/28	19 x 0.32	0.010	0.24	0.083	2.11
6829	14	1.94	2	19/27	19 x 0.36	0.012	0.30	0.095	2.41
6830	12	3.08	3	19/25	19 x 0.46	0.015	0.38	0.120	3.05
6831	10	4.92	5	19/23	19 x 0.57	0.017	0.43	0.147	3.73

White, Black, Red, Green, Yellow, Blue, Brown, Orange, Green/Yellow

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

300 V, PVC Wire



UL AWM 1007, 1581, 1569
VW-1

CSA AWM I A/B FT1

CSA TR-64 FT1

- -40°C to +105°C
(AWM 1569, CSA AWM)
- -40°C to +90°C (CSA TR-64)
- -40°C to +80°C
(AWM 1007, 1581)
- Stranded or solid
tinned copper conductor
- PVC insulation

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		Colors
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
3047	30	0.06	7/38	7 x 0.10	0.016	0.41	0.044	1.12	Z1, 1 - 10
3048	28	0.09	7/36	7 x 0.13	0.016	0.41	0.047	1.19	Z1, 1 - 10
3049	26	0.14	7/34	7 x 0.16	0.016	0.41	0.051	1.30	Z1, 1 - 10
3050/1	24	0.20	Solid	1 x 0.51	0.016	0.41	0.052	1.32	Z1, 1 - 10
3050	24	0.23	7/32	7 x 0.20	0.016	0.41	0.056	1.42	Z1, 1 - 19, 28, 30
892419[†]	24	0.24	19/36	19 x 0.13	0.016	0.41	0.057	1.45	Z2, 0 - 9
3051/1	22	0.32	Solid	1 x 0.64	0.016	0.41	0.057	1.45	Z1, 1 - 10
3051	22	0.35	7/30	7 x 0.25	0.016	0.41	0.062	1.57	Z1, 1 - 19, 28, 30
892219[†]	22	0.38	19/34	19 x 0.16	0.016	0.41	0.064	1.63	Z2, 0 - 9
3053	20	0.51	10/30	10 x 0.25	0.016	0.41	0.069	1.75	Z1, 1 - 19, 28, 30
3053/1	20	0.52	Solid	1 x 0.81	0.016	0.41	0.064	1.63	Z1, 1 - 10
892007[†]	20	0.56	7/28	7 x 0.32	0.016	0.41	0.070	1.78	Z2, 0 - 9
892019[†]	20	0.62	19/32	19 x 0.20	0.016	0.41	0.072	1.83	Z2, 0 - 9
3055	18	0.81	16/30	16 x 0.25	0.016	0.41	0.079	2.01	Z1, 1 - 19, 28, 30
3055/1	18	0.82	Solid	1 x 1.02	0.016	0.41	0.072	1.83	Z1, 1 - 10
891819[†]	18	0.96	19/30	19 x 0.25	0.016	0.41	0.082	2.08	Z2, 0 - 9
3057/1	16	1.31	Solid	1 x 1.29	0.016	0.41	0.083	2.11	Z1, 1 - 10
3057	16	1.32	26/30	26 x 0.25	0.016	0.41	0.092	2.34	Z1, 1 - 19, 28, 30
891441[†]	14	2.08	41/30	41 x 0.25	0.016	0.41	0.106	2.69	Z2, 0 - 9
891265^{††}	12	3.30	65/30	65 x 0.25	0.016	0.41	0.125	3.18	Z2, 0 - 9
891000^{††}	10	5.32	105/30	105 x 0.25	0.016	0.41	0.150	3.81	Z2, 0 - 9

Z1 Insulation Colors: 1 White • 2 Black • 3 Red • 4 Green • 5 Yellow • 6 Blue • 7 Brown • 8 Orange • 9 Slate • 10 Violet • 11 White/Black • 12 White/Red • 13 White/Green • 14 White/Yellow • 15 White/Blue • 16 White/Brown • 17 White/Orange • 18 White/Slate • 19 White/Violet • 28 Green/Yellow • 29 Yellow/Green • 30 Pink

Z2 Insulation Colors: 0 Black • 1 Brown • 2 Red • 3 Orange • 4 Yellow • 5 Green • 6 Blue • 7 Violet • 8 Slate • 9 White

[†]These wires also available in 500 ft (152 m) put-ups.

300 V, PVC Wire



UL AWM 1061 VW-1

CSA AWM I A/B FT1

- -10°C to +80°C
- Stranded or solid tinned
copper conductor
- Semirigid PVC insulation

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		Colors
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
422807	28	0.09	7/36	7 x 0.13	0.010	0.25	0.035	0.89	Z2
422801	28	0.08	Solid	1 x 0.32	0.010	0.25	0.033	0.84	Z2
422607	26	0.14	7/34	7 x 0.16	0.010	0.25	0.039	0.99	Z2
422601	26	0.13	Solid	1 x 0.40	0.010	0.25	0.036	0.91	Z2
3250	24	0.23	7/32	7 x 0.20	0.010	0.25	0.044	1.12	Z1
3251	22	0.35	7/30	7 x 0.25	0.010	0.25	0.050	1.27	Z1
422010	20	0.51	10/30	10 x 0.25	0.010	0.25	0.057	1.45	Z2
3252	20	0.56	7/28	7 x 0.32	0.010	0.25	0.058	1.47	Z1
422001	20	0.52	Solid	1 x 0.81	0.010	0.25	0.052	1.32	Z2
421816	18	0.81	16/30	16 x 0.25	0.010	0.25	0.067	1.70	Z2
3253	18	0.90	7/26	7 x 0.40	0.010	0.25	0.068	1.73	Z1
421626	16	1.32	26/30	26 x 0.25	0.010	0.25	0.080	2.03	Z2
3254	16	1.43	7/24	7 x 0.51	0.010	0.25	0.080	2.03	Z1

Z1 Insulation Colors: 1 White • 2 Black • 3 Red • 4 Green • 5 Yellow • 6 Blue • 7 Brown • 8 Orange • 9 Slate • 10 Violet

Z2 Insulation Colors: 0 Black • 1 Brown • 2 Red • 3 Orange • 4 Yellow • 5 Green • 6 Blue • 7 Violet • 8 Slate • 9 White

1000 V, PVC Wire



UL AWM 1015, 1028, 1230,
1231, 1232, 1283, 1284

UL MTW (22 to 1/0 AWG)

UL THW (6 to 1/0 AWG)

CSA AWM I A/B FT1
and TEW 105

UL VW-1

- -20°C to +105°C (AWM, TEW)
- -20°C to +90°C (MTW)
- -20°C to +75°C (THW)
- -20°C to +60°C (TW)

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		UL Style	Colors
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm		
782607*	26	0.14	7/34	7 x 0.16	0.032	0.81	0.083	2.11	1015, 1230	Z2, 0 - 9
782401*	24	0.20	Solid	1 x 0.51	0.032	0.81	0.084	2.13	1015, 1230	Z2, 0 - 9
3070*	24	0.23	7/32	7 x 0.20	0.032	0.81	0.088	2.24	1015, 1230	Z1, 1 - 10, 28
782201	22	0.32	Solid	1 x 0.64	0.032	0.81	0.089	2.26	1015, 1230	Z2, 0 - 9
3071	22	0.35	7/30	7 x 0.25	0.032	0.81	0.094	2.39	1015, 1230	Z1, 1 - 10, 28
782010T	20	0.51	10/30	10 x 0.25	0.032	0.81	0.101	2.57	1015, 1230	Z2, 0 - 9
3073	20	0.51	10/30	10 x 0.25	0.032	0.81	0.101	2.57	1015, 1230	Z1, 1 - 10, 28
782001	20	0.52	Solid	1 x 0.81	0.032	0.81	0.096	2.44	1015, 1230	Z2, 0 - 9
3075	18	0.81	16/30	16 x 0.25	0.032	0.81	0.111	2.82	1015, 1230	Z1, 1 - 10, 28
781801	18	0.82	Solid	1 x 1.02	0.032	0.81	0.104	2.64	1015, 1230	Z2, 0 - 9
781601	16	1.31	Solid	1 x 1.29	0.032	0.81	0.115	2.92	1015, 1230	Z2, 0 - 9
3077	16	1.32	26/30	26 x 0.25	0.032	0.81	0.124	3.15	1015, 1230	Z1, 1 - 10, 28
781401	14	2.08	Solid	1 x 1.63	0.032	0.81	0.128	3.25	1015, 1230	Z2, 0 - 9
3079	14	2.08	41/30	41 x 0.25	0.032	0.81	0.138	3.51	1015, 1230	Z1, 1 - 10, 28
3080	12	3.29	65/30	65 x 0.25	0.032	0.81	0.157	3.99	1015, 1230	Z1, 1 - 10
781201	12	3.31	Solid	1 x 2.06	0.032	0.81	0.145	3.68	1015, 1230	Z2, 0 - 9
781001	10	5.26	Solid	1 x 2.59	0.032	0.81	0.166	4.22	1015, 1230	Z2, 0 - 9
3081	10	5.32	105/30	105 x 0.25	0.032	0.81	0.184	4.67	1015, 1230	Z1, 1 - 4
788133	8	8.61	133/29	133 x 0.29	0.047	1.19	0.263	6.68	1028, 1231	Z2, 0 - 9
786133	6	13.57	133/27	133 x 0.36	0.063	1.60	0.336	8.53	1283, 1232	Z2, 0 - 9
784133	4	21.55	133/25	133 x 0.45	0.063	1.60	0.395	10.03	1283, 1232	Z2, 0 - 9
782665	2	33.72	665/30	665 x 0.25	0.063	1.60	0.461	11.71	1283, 1232	Z2, 0 - 9
782133	2	34.45	133/23	133 x 0.57	0.063	1.60	0.465	11.81	1283, 1232	Z2, 0 - 9
781259	1	41.96	259/25	259 x 0.45	0.082	2.08	0.540	13.72	1284, 1232	Z2, 0 - 9
781836	1	42.39	836/30	836 x 0.25	0.082	2.08	0.547	13.89	1284, 1232	Z2, 0 - 9
780001	1/0	52.98	1045/30	1045 x 0.25	0.082	2.08	0.592	15.04	1284, 1232	Z2, 0 - 9

*Not MTW

Z1 Insulation Colors: 1 White • 2 Black • 3 Red • 4 Green • 5 Yellow • 6 Blue • 7 Brown • 8 Orange • 9 Slate • 10 Violet • 28 Green/Yellow • 29 Yellow/Green

Z2 Insulation Colors: 0 Black • 1 Brown • 2 Red • 3 Orange • 4 Yellow • 5 Green • 6 Blue • 7 Violet • 8 Slate • 9 White

*These wires also available in 500 ft (152 m) put-ups.

UL AWM 1015, 1028, 1230,
1231, 1232, 1283, 1284 VW-1

UL MTW, TW

(14 to 8 AWG),

THW (6 to 1/0 AWG)

CSA AWM I A/B FT1 and
TEW-105

- -40°C to +105°C (AWM, TEW)
- -40°C to +90°C (MTW)
- -40°C to +75°C (THW)
- -40°C to +60°C (TW)

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		UL Style
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
461816	18	0.81	16/30	16 x 0.25	0.032	0.81	0.111	2.82	1015, 1230
461626	16	1.32	26/30	26 x 0.25	0.032	0.81	0.124	3.15	1015, 1230
461419	14	2.07	19/0.0147	19 x 0.37	0.032	0.81	0.138	3.51	1015, 1230
461219	12	3.29	19/0.0185	19 x 0.47	0.032	0.81	0.157	3.99	1015, 1230
461265	12	3.29	65/0.010	65 x 0.25	0.031	0.79	0.153	3.89	1015, 1230
461019	10	5.26	19/0.0234	19 x 0.59	0.032	0.81	0.181	4.60	1015, 1230
460819	8	8.38	19/0.0295	19 x 0.75	0.047	1.19	0.242	6.15	1028, 1231
460619	6	13.32	19/0.0372	19 x 0.94	0.063	1.59	0.311	7.90	1283, 1232
460419	4	21.09	19/0.0469	19 x 1.19	0.063	1.59	0.360	9.14	1283, 1232
460219	2	33.63	19/0.0591	19 x 1.50	0.063	1.59	0.421	10.69	1283, 1232

Insulation Colors: White • Black • Red • Green • Yellow • Blue • Brown • Orange • Slate • Violet

600 V, PVC Wire



MIL-DTL-16878/1 (Type B) MIL-W-76 Type LW

- -55°C to +105°C
- Stranded or solid
tinned copper conductor
- PVC insulation

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		Colors
	AWG	mm ²	AWG	mm	h	mm	Inch	mm	
1850	32	0.03	7/40	7 x 0.08	0.010	0.25	0.029	0.74	Z1, 1 - 6
1851*	30	0.06	7/38	7 x 0.10	0.010	0.25	0.032	0.81	Z1, 1 - 6
1852*	28	0.09	7/36	7 x 0.12	0.010	0.25	0.035	0.89	Z1, 1 - 10
1853*	26	0.14	7/34	7 x 0.16	0.010	0.25	0.039	0.99	Z1, 1 - 19
172619	26	0.15	19/38	19 x 0.10	0.010	0.25	0.040	1.02	Z2, 0 - 9
1854*	24	0.23	7/32	7 x 0.20	0.010	0.25	0.044	1.12	Z1, 1 - 19
1854/19	24	0.24	19/36	19 x 0.13	0.010	0.25	0.045	1.14	Z1, 1 - 19
1855	22	0.35	7/30	7 x 0.25	0.010	0.25	0.050	1.27	Z1, 1 - 19
1855/19	22	0.38	19/34	19 x 0.16	0.010	0.25	0.052	1.32	Z1, 1 - 19
1856*	20	0.56	7/28	7 x 0.32	0.010	0.25	0.058	1.47	Z1, 1 - 19
1856/19	20	0.62	19/32	19 x 0.20	0.010	0.25	0.060	1.52	Z1, 1 - 19
1857	18	0.90	7/26	7 x 0.40	0.010	0.25	0.068	1.73	Z1, 1 - 19
1857/19	18	0.96	19/30	19 x 0.25	0.010	0.25	0.070	1.78	Z1, 1 - 19
1858/19	16	1.23	19/29	19 x 0.29	0.010	0.25	0.076	1.93	Z1, 1 - 19
1859/19	14	1.94	19/27	19 x 0.36	0.010	0.25	0.091	2.31	Z1, 1 - 10

Z1 Insulation Colors: 1 White • 2 Black • 3 Red • 4 Green • 5 Yellow • 6 Blue • 7 Brown • 8 Orange • 9 Slate • 10 Violet • 11 White/Black • 12 White/Red • 13 White/Green • 14 White/Yellow • 15 White/Blue • 16 White/Brown • 17 White/Orange • 18 White/Slate • 19 White/Violet

Z2 Insulation Colors: 0 Black • 1 Brown • 2 Red • 3 Orange • 4 Yellow • 5 Green • 6 Blue • 7 Violet • 8 Slate • 9 White

MIL-W-76 Type HW

- -20°C to +80°C
- Stranded tinned
copper conductor

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
1579	14	2.08	41/30	41 x 0.25	0.045	1.14	0.164	4.17
1651	12	3.29	65/30	65 x 0.25	0.045	1.14	0.183	4.65
1653	10	5.32	105/30	105 x 0.25	0.045	1.14	0.210	5.33
1655	8	8.61	133/29	133 x 0.28	0.045	1.14	0.259	6.58

Insulation Colors: White • Black • Red

600 V, PVC/Nylon Wire



UL THHN, THWN, TFN, TFFN

- -40°C to +90°C
(THHN, TFN, TFFN)
- -40°C to +75°C (THWN)
- Stranded or solid bare
copper conductor
- PVC/nylon insulation

Availability

- 100 ft (30.5 m)
- 500 ft (152 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		UL Type
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
541816	18	0.81	16/30	16 x 0.25	0.016	0.41	0.089	2.26	TFFN
541801	18	0.82	Solid	1 x 1.02	0.016	0.41	0.082	2.08	TFN
541626	16	1.32	26/30	26 x 0.25	0.016	0.41	0.102	2.59	TFFN
541419	14	2.07	19/0.0147	19 x 0.37	0.016	0.41	0.116	2.95	THHN, THWN
541401	14	2.08	Solid	1 x 1.63	0.016	0.41	0.106	2.69	THHN, THWN
541219	12	3.29	19/0.0185	19 x 0.47	0.016	0.41	0.135	3.43	THHN, THWN
541201	12	3.31	Solid	1 x 2.06	0.016	0.41	0.123	3.12	THHN, THWN
541019	10	5.26	19/0.0234	19 x 0.59	0.022	0.56	0.166	4.22	THHN, THWN
541001	10	5.26	Solid	1 x 2.59	0.022	0.56	0.156	3.96	THHN, THWN
540819	8	8.38	19/0.0295	19 x 0.75	0.032	0.81	0.224	5.69	THHN, THWN
540619	6	13.32	19/0.0372	19 x 0.94	0.032	0.81	0.262	6.65	THHN, THWN
540419	4	21.09	19/0.0469	19 x 1.19	0.042	1.07	0.333	8.46	THHN, THWN
540219	2	33.63	19/0.0591	19 x 1.50	0.042	1.07	0.383	9.73	THHN, THWN

Insulation Colors: White • Black • Red • Green • Yellow • Blue • Brown • Orange • Slate • Violet

1000 V, PVC Wire



MIL-W-76 Type MWP

- 55°C to +90°C
- Stranded or solid tinned copper conductor
- PVC insulation

Availability

- 1000 ft (305 m)

MIL-W-76 B Type MW

- -40°C to +80°C
- Stranded or solid tinned copper conductor
- PVC insulation

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
302407	24	0.23	7/32	7 x 0.20	0.016	0.41	0.056	1.42
302207	22	0.35	7/30	7 x 0.25	0.016	0.41	0.064	1.63
302010	20	0.51	10/30	10 x 0.25	0.016	0.41	0.069	1.75
301816	18	0.81	16/30	16 x 0.25	0.016	0.41	0.079	2.01
301626	16	1.32	26/30	26 x 0.25	0.016	0.41	0.092	2.34
301619	16	1.23	19/29	19 x 0.29	0.016	0.41	0.088	2.24
301441	14	2.08	41/30	41 x 0.25	0.016	0.41	0.106	2.69

Insulation Colors: White • Black • Red • Green • Yellow • Blue • Brown • Orange • Slate • Violet

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		Colors*
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
1550	24	0.23	7/32	7 x 0.20	0.016	0.41	0.056	1.42	1 - 19
1561/24	24	0.20	Solid	1 x 0.51	0.016	0.41	0.052	1.32	1 - 6
1551	22	0.35	7/30	7 x 0.25	0.016	0.41	0.062	1.57	1 - 19
1561	22	0.32	Solid	1 x 0.64	0.016	0.41	0.057	1.45	1 - 6
1553	20	0.51	10/30	10 x 0.25	0.016	0.41	0.069	1.75	1 - 19
1563	20	0.52	Solid	1 x 0.81	0.016	0.41	0.064	1.63	1 - 6
1555	18	0.81	16/30	16 x 0.25	0.016	0.41	0.079	2.01	1 - 19
1565	18	0.82	Solid	1 x 1.02	0.016	0.41	0.072	1.83	1 - 6
1557	16	1.32	26/30	26 x 0.25	0.016	0.41	0.092	2.34	1 - 19
1559	14	2.08	41/30	41 x 0.25	0.016	0.41	0.106	2.69	1 - 10
1560	12	3.29	65/30	65 x 0.25	0.016	0.41	0.125	3.18	1 - 10

Insulation Colors: 1 White • 2 Black • 3 Red • 4 Green • 5 Yellow • 6 Blue • 7 Brown • 8 Orange • 9 Slate • 10 Violet • 11 White/Black • 12 White/Red • 13 White/Green • 14 White/Yellow • 15 White/Blue • 16 White/Brown • 17 White/Orange • 18 White/Slate • 19 White/Violet

600/150 V, Irradiated PVC Wire



Soldering Iron Resistant

MIL-DTL-16878/1 (Type B)
(600 V)

UL AWM 1429 (150 V)

CSA AWM I A/B FT1 (150 V)

- -55°C to +105°C (MIL)
- -55°C to +80°C (AWM, CSA)
- -40°C to +60°C (TW)
- Stranded tinned copper conductor
- Irradiated PVC insulation

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
7053	26	0.14	7/34	7 x 0.16	0.010	0.25	0.039	0.99
7054	24	0.23	7/32	7 x 0.20	0.010	0.25	0.044	1.12
7054/19	24	0.24	19/36	19 x 0.13	0.010	0.25	0.045	1.14
7055	22	0.35	7/30	7 x 0.25	0.010	0.25	0.050	1.27
7055/19	22	0.38	19/34	19 x 0.16	0.010	0.25	0.052	1.32
7056	20	0.56	7/28	7 x 0.32	0.010	0.25	0.058	1.47
7056/19	20	0.62	19/32	19 x 0.20	0.010	0.25	0.060	1.52
7057	18	0.90	7/26	7 x 0.40	0.010	0.25	0.068	1.73
7057/19	18	0.96	19/30	19 x 0.25	0.010	0.25	0.070	1.78
7058/19	16	1.32	19/0.0117	19 x 0.30	0.010	0.25	0.076	1.93

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

1000/300 V, Irradiated PVC Wire

Soldering Iron Resistant



MIL-DTL-16878/2 (Type C)
(1000 V)

UL AWM 1430 (300 V)

CSA REW XLPVC FT1 (300 V)

- -55°C to +105°C
- -55°C to +105°C
- Stranded tinned copper conductor
- Irradiated PVC insulation

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m) Stranded

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		Colors
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
7130	24	0.23	7/32	7 x 0.20	0.016	0.41	0.056	1.42	1 - 10, 29
7131	22	0.35	7/30	7 x 0.25	0.016	0.41	0.062	1.57	1 - 10
7132	20	0.56	7/28	7 x 0.32	0.016	0.41	0.070	1.78	1 - 10
7133	18	0.89	7/26	7 x 0.40	0.016	0.41	0.080	2.03	1 - 10, 29
7134	16	1.32	19/0.0117	19 x 0.30	0.016	0.41	0.088	2.24	1 - 10, 29
7035*	14	2.07	19/0.0147	19 x 0.37	0.016	0.41	0.103	2.62	1 - 10, 29
7036*	12	3.29	19/0.0185	19 x 0.47	0.016	0.41	0.122	3.10	1 - 10, 29

Insulation Colors: 1 White • 2 Black • 3 Red • 4 Green • 5 Yellow • 6 Blue • 7 Brown • 8 Orange • 9 Slate • 10 Violet • 29 Yellow/Green

3000/600 V, XLPE Wire



MIL-DTL-16878/3 (Type D)
(3000 V)

UL AWM 3271 (600 V)

VW-1

- CSA CL 1251 XLPE (600 V)
- 55°C to +105°C (MIL)
- 55°C to +125°C (UL, CSA)
- Stranded tinned copper conductor
- Cross-linked polyolefin insulation

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		UL Type
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
541816	18	0.81	16/30	16 x 0.25	0.016	0.41	0.089	2.26	TFFN
541801	18	0.82	Solid	1 x 1.02	0.016	0.41	0.082	2.08	TFN
541626	16	1.32	26/30	26 x 0.25	0.016	0.41	0.102	2.59	TFFN
541419	14	2.07	19/0.0147	19 x 0.37	0.016	0.41	0.116	2.95	THHN, THWN
541401	14	2.08	Solid	1 x 1.63	0.016	0.41	0.106	2.69	THHN, THWN
541219	12	3.29	19/0.0185	19 x 0.47	0.016	0.41	0.135	3.43	THHN, THWN
541201	12	3.31	Solid	1 x 2.06	0.016	0.41	0.123	3.12	THHN, THWN
541019	10	5.26	19/0.0234	19 x 0.59	0.022	0.56	0.166	4.22	THHN, THWN
541001	10	5.26	Solid	1 x 2.59	0.022	0.56	0.156	3.96	THHN, THWN
540819	8	8.38	19/0.0295	19 x 0.75	0.032	0.81	0.224	5.69	THHN, THWN
540619	6	13.32	19/0.0372	19 x 0.94	0.032	0.81	0.262	6.65	THHN, THWN
540419	4	21.09	19/0.0469	19 x 1.19	0.042	1.07	0.333	8.46	THHN, THWN
540219	2	33.63	19/0.0591	19 x 1.50	0.042	1.07	0.383	9.73	THHN, THWN

Insulation Colors: White • Black • Red • Green • Yellow • Blue • Brown • Orange • Slate • Violet

1000/300 V, XLPE



MIL-DTL-16878/2 (Type C)
(1000 V)

UL AWM 3266 (300 V)

VW-1 CSA CL 1252 XLPE
(300 V)

- 55°C to +105°C (MIL)
- 55°C to +125°C (UL, CSA)
- Stranded tinned copper conductor
- Cross-linked polyolefin insulation

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
7024	22	0.38	19/34	19 x 0.16	0.016	0.41	0.064	1.63
7025	20	0.62	19/32	19 x 0.20	0.016	0.41	0.072	1.83
7026	18	0.96	19/30	19 x 0.25	0.016	0.41	0.080	2.03

Insulation Colors: White • Black • Red

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

600/150 V, XLPE

MIL-DTL-16878/1 (Type B)
(600 V)

UL AWM 3265 (150 V) VW-1

CSA AWM I A/B FT1 (150 V)

- 55°C to +105°C (MIL)
- 55°C to +125°C (UL, CSA)
- Stranded tinned copper conductor
- Cross-linked polyolefin insulation

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
7024	22	0.38	19/34	19 x 0.16	0.016	0.41	0.064	1.63
7025	20	0.62	19/32	19 x 0.20	0.016	0.41	0.072	1.83
7026	18	0.96	19/30	19 x 0.25	0.016	0.41	0.080	2.03

Insulation Colors: White • Black • Red

Availability

- 1000 ft (305 m)

1000/300 V, XLPE



UL AWM 3173

UL SIS

CSA AWM I A/B FT2

CSA CL1251 XLPE

- 40°C to +125°C (AWM)
- 40°C to +150°C (CSA CL)
- 40°C to +90°C (SIS)
- Stranded tinned copper conductor
- Cross-linked polyethylene insulation

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
752010	20	0.51	10/30	10 x 0.25	0.031	0.79	0.099	2.51
751816	18	0.81	16/30	16 x 0.25	0.031	0.79	0.109	2.77
751626	16	1.32	26/30	26 x 0.25	0.031	0.79	0.122	3.10
751441*	14	2.08	41/30	41 x 0.25	0.031	0.79	0.136	3.45
751265*	12	3.29	65/30	65 x 0.25	0.031	0.79	0.155	3.94
751000*	10	5.32	105/30	105 x 0.25	0.031	0.79	0.180	4.57
758133**	8	8.63	133/29	133 x 0.29	0.047	1.19	0.263	6.68

Insulation Colors: White • Black • Red • Green • Yellow • Blue • Brown • Orange • Slate • Violet

Availability

- 1000 ft (305 m)

250 V, PTFE Wire



MIL-DTL-16878/6 (Type ET)

UL VW-1

NEMA HP3

- -60°C to +200°C
- Stranded or solid silver-plated copper conductor
- PTFE insulation

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)*

*May contain multiple lengths

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		NEMA HP3 Type	Colors
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm		
33201	32	0.03	Solid	1 x 0.20	0.006	0.15	0.019	0.48	—	Z2
2840/7*	32	0.03	7/40	7 x 0.08	0.006	0.15	0.022	0.56	ETXBAB	Z1
2841/7*	30	0.06	7/38	7 x 0.10	0.006	0.15	0.024	0.61	ETXBBB	Z1
2841/1*	30	0.05	Solid	1 x 0.25	0.006	0.15	0.022	0.56	ETXBBA	Z1
2842/7*	28	0.09	7/36	7 x 0.12	0.006	0.15	0.027	0.69	ETXBCB	Z1
2842/19*	28	0.09	19/40	19 x 0.08	0.006	0.15	0.027	0.69	ETXBCE	Z1
2842/1*	28	0.08	Solid	1 x 0.32	0.006	0.15	0.025	0.64	ETXBCA	Z1
2843/7*	26	0.14	7/34	7 x 0.16	0.006	0.15	0.031	0.79	ETXBDB	Z1
2843/19*	26	0.15	19/38	19 x 0.10	0.006	0.15	0.031	0.79	ETXBDE	Z1
2843/1*	26	0.13	Solid	1 x 0.40	0.006	0.15	0.028	0.71	ETXBDA	Z1
2844/7*	24	0.23	7/32	7 x 0.20	0.006	0.15	0.036	0.91	ETXBEB	Z1
2844/19*	24	0.24	19/36	19 x 0.13	0.006	0.15	0.036	0.91	ETXBEE	Z1
2845/7	22	0.35	7/30	7 x 0.25	0.006	0.15	0.042	1.07	ETXBFB	Z1
2845/19	22	0.38	19/34	19 x 0.16	0.005	0.13	0.042	1.07	ETXBFE	Z1

*Not VW-1

Z1 Insulation Colors: 1 White • 2 Black • 3 Red • 4 Green • 5 Yellow • 6 Blue • 7 Brown • 8 Orange • 9 Slate • 10 Violet

Z2 Insulation Colors: 0 Black • 1 Brown • 2 Red • 3 Orange • 4 Yellow • 5 Green • 6 Blue • 7 Violet • 8 Slate • 9 White

*These wires also available in 500 ft (152 m) put-ups.

600 V, PTFE Wire

MIL-DTL-16878/4 (Type E)
(600 V)

UL AWM 1213

* NEMA HP3

- 60°C to +200°C (MIL)
- 60°C to +105°C (UL)
- Stranded or solid silver-plated copper conductor
- PTFE insulation

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)†

†May contain multiple lengths

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		NEMA HP3 Type
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
5851	30	0.06	7/38	7 x 0.10	0.010	0.25	0.032	0.81	EXBBB
5852	28	0.09	7/36	7 x 0.13	0.010	0.25	0.035	0.89	EXBCB
5853	26	0.14	7/34	7 x 0.16	0.010	0.25	0.039	0.99	EXBDB
5853/19	26	0.15	19/38	19 x 0.10	0.010	0.25	0.039	0.99	EXBDE
2853/1	26	0.13	Solid	1 x 0.40	0.010	0.25	0.036	0.91	EXBDA
5854	24	0.24	19/36	19 x 0.13	0.010	0.25	0.044	1.12	EXBEE
5854/7	24	0.23	7/32	7 x 0.20	0.010	0.25	0.044	1.12	EXBEB
2854/1	24	0.20	Solid	1 x 0.51	0.010	0.25	0.040	1.02	EXBEA
5855	22	0.38	19/34	19 x 0.16	0.010	0.25	0.050	1.27	EXBFE
5855/7	22	0.35	7/30	7 x 0.25	0.010	0.25	0.050	1.27	EXBFB
2855/1	22	0.32	Solid	1 x 0.64	0.010	0.25	0.045	1.14	EXBFA
5856	20	0.62	19/32	19 x 0.20	0.010	0.25	0.058	1.47	EXBGE
5856/7	20	0.56	7/28	7 x 0.32	0.010	0.25	0.058	1.47	EXBGB
2856/1***	20	0.52	Solid	1 x 0.81	0.010	0.25	0.052	1.32	EXBGA
5857	18	0.96	19/30	19 x 0.25	0.010	0.25	0.069	1.75	EXBHE
2857/1***	18	0.82	Solid	1 x 1.02	0.011	0.27	0.061	1.55	EXBHA
5858	16	1.23	19/29	19 x 0.29	0.012	0.30	0.080	2.03	EXBJE
5859†	14	1.94	19/27	19 x 0.36	0.012	0.30	0.095	2.41	EXBKE
5859/12†	12	3.08	19/25	19 x 0.45	0.012	0.30	0.114	2.90	EXBLE
5859/10†	10	4.74	37/26	37 x 0.40	0.012	0.30	0.134	3.40	EXBMG

*Voltage rating not specified.

***White, black, red only.

†Colors 1-5 only, not UL AWM 1213.

Insulation Colors: White • Black • Red • Green • Yellow • Blue • Brown • Orange • Slate • Violet

1000/300 V, PTFE Wire



MIL-DTL-16878/5 (TYPE EE) (1000V)

UL AWM 1180 (300V)

NEMA HP3

- -60°C to +200°C
- Stranded or solid silver-plated copper conductor
- PTFE insulation

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)*

*May contain multiple lengths

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		NEMA HP3 Type
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
5874	24	0.24	19/36	19 x 0.13	0.015	0.37	0.054	1.37	EEXBEE
5875	22	0.38	19/34	19 x 0.16	0.014	0.36	0.060	1.52	EEXBFE
5876	20	0.62	19/32	19 x 0.20	0.014	0.36	0.068	1.73	EEXBGE
5877	18	0.96	19/30	19 x 0.25	0.015	0.37	0.079	2.01	EEXBHE
5878	16	1.23	19/29	19 x 0.29	0.016	0.41	0.089	2.26	EEXBJE
5879	14	1.94	19/27	19 x 0.36	0.017	0.43	0.106	2.69	EEXBKE
5879/10	10	4.74	37/26	37 x 0.40	0.017	0.43	0.145	3.68	EEXBMG
5879/12	12	3.08	19/25	19 x 0.45	0.017	0.43	0.125	3.18	EEXBLE
5879/8*	8	8.61	133/29	133 x 0.29	0.020	0.51	0.209	5.31	EEXBNL

*Not UL AWM 1180.

Insulation Colors: White • Black • Red • Green • Yellow • Blue • Brown • Orange • Slate • Violet

Parts 5878, 5879, 5879/8, 5879/10, 5879/12: white only.

600 V, ETFE or PTFE Wire



SAE AS22759/11
(MIL-DTL-22759/11)

SAE AS22759/16
(MIL-DTL-22759/16)

- -55°C to +200°C (PTFE)
- -55°C to +150°C (ETFE)
- Stranded silver-plated copper conductors (SAE AS22759/11)
- ETFE or PTFE insulation

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)*

*May contain multiple lengths

PTFE, SAE AS22759/11, -55°C to +200°C, Silver-Plated Copper Conductors

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
AT261938	26	0.15	19/38	19 x 0.10	0.010	0.25	0.038	0.97
AT241936	24	0.24	19/36	19 x 0.13	0.009	0.23	0.043	1.09
AT221934	22	0.38	19/34	19 x 0.16	0.009	0.23	0.049	1.24
AT201932	20	0.62	19/32	19 x 0.20	0.011	0.28	0.058	1.47
AT181930	18	0.96	19/30	19 x 0.25	0.010	0.25	0.068	1.73
AT161929	16	1.23	19/29	19 x 0.29	0.010	0.25	0.075	1.90
AT141927	14	1.94	19/27	19 x 0.36	0.011	0.27	0.090	2.29
AT121925	12	3.08	19/25	19 x 0.45	0.013	0.32	0.111	2.82

ETFE, SAE AS22759/16, -55°C to +150°C, Tinned Copper Conductors

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
AZ241936	24	0.24	19/36	19 x 0.13	0.011	0.27	0.045	1.14
AZ221934	22	0.38	19/34	19 x 0.16	0.011	0.28	0.052	1.32
AZ201932	20	0.62	19/32	19 x 0.20	0.011	0.28	0.060	1.52
AZ181930	18	0.96	19/30	19 x 0.25	0.012	0.29	0.071	1.80
AZ161929	16	1.23	19/29	19 x 0.29	0.013	0.33	0.079	2.01
AZ141927	14	1.94	19/27	19 x 0.36	0.013	0.33	0.093	2.36
AZ123728	12	2.97	37/28	37 x 0.32	0.014	0.34	0.114	2.90

Insulation Colors: White • Black • Red • Green • Yellow • Blue • Brown • Orange • Slate • Violet

Wire Wrap, PVDF or ETFE Wire



UL 1422, 1423, 1516, 1523
VW-1

- 40°C to +125°C (PVDF)
- 70°C to +150°C (ETFE)
+105°C (UL)
- Silver-plated solid copper conductors
- PVDF or ETFE insulation

Availability

- 100 ft (30.5 m) (ETFE)
- 1000 ft (305 m)
(PVDF or ETFE)

PVDF Insulation

Part No.	Wire Size		Insulation Thickness		Nominal Diameter		UL Style
	AWG	mm ²	Inch	mm	Inch	mm	
5951	30	0.05	0.005	0.11	0.019	0.51	1423
5952	28	0.08	0.006	0.14	0.024	0.61	1422
5953	26	0.13	0.006	0.14	0.027	0.69	1422
5954	24	0.20	0.005	0.11	0.030	0.76	1423

ETFE Insulation

Part No.	Wire Size		Insulation Thickness		Nominal Diameter		UL Style
	AWG	mm ²	Inch	mm	Inch	mm	
1805	30	0.05	0.005	0.11	0.020	0.51	1516
1806	28	0.08	0.006	0.14	0.024	0.61	1523
1807	26	0.13	0.006	0.14	0.027	0.69	1523
1808	24	0.20	0.005	0.11	0.030	0.76	1516

Insulation Colors: White • Black • Red • Green • Yellow • Blue • Brown • Orange • Slate • Violet

Test Lead, EPR Rubber Wire



- 30°C to +90°C
- See table for voltage rating
- Stranded tinned copper conductors
- EPR rubber insulation

Availability

- 100 ft (30.5 m)
- 500 ft (152 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		Breakdown Voltage (RMS)	Working Voltage (RMS)
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm		
1632	20	0.52	41/36	41 x 0.13	0.040	1.02	0.118	3.00	6000	1500
1635	20	0.52	41/36	41 x 0.13	0.047	1.19	0.132	3.35	12,000	3000
1636	18	0.83	65/36	65 x 0.13	0.045	1.14	0.137	3.48	20,000	5000

Insulation Colors: Black • Red

600 V, Silicone Rubber Wire



UL AWM 3212, 3213, 3214
CSA AWM I A/B FT2

- 40°C to +150°C
- Stranded tinned copper conductor
- Silicone rubber insulation

Availability

- 100 ft (30.5 m)
- 500 ft (152 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		UL AWM
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
392207	22	0.35	7/30	7 x 0.25	0.047	1.19	0.124	3.15	3212
392010	20	0.51	10/30	10 x 0.25	0.047	1.19	0.131	3.33	3212
391816	18	0.81	16/30	16 x 0.25	0.047	1.19	0.141	3.58	3212
391626	16	1.32	26/30	26 x 0.25	0.047	1.19	0.154	3.91	3212
391441	14	2.08	41/30	41 x 0.25	0.047	1.19	0.168	4.27	3212
391265	12	3.29	65/30	65 x 0.25	0.047	1.19	0.187	4.75	3212
391000	10	5.32	105/30	105 x 0.25	0.047	1.19	0.212	5.38	3212
398133	8	8.61	133/29	133 x 0.29	0.063	1.60	0.295	7.49	3213
396133	6	13.57	133/27	133 x 0.36	0.063	1.60	0.339	8.61	3213
394133	4	21.55	133/25	133 x 0.45	0.063	1.60	0.395	10.03	3213
392259	2	33.15	259/26	259 x 0.40	0.063	1.60	0.460	11.68	3213
391259	1	41.96	259/25	259 x 0.45	0.078	1.98	0.532	13.51	3214

Insulation Colors: White • Black

High Voltage, Silicone Rubber Wire



UL AWM 3239

- -40°C to +150°C
- Stranded tinned copper conductor
- Silicone rubber insulation

Availability

- 100 ft (30.5 m)
- 500 ft (152 m)
- 1000 ft (305 m)

UL 3239

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		Voltage
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
392297	22	0.35	7/30	7 x 0.25	0.097	2.46	0.224	5.69	40 kV
392275	22	0.35	7/30	7 x 0.25	0.075	1.90	0.180	4.57	30 kV
392262	22	0.35	7/30	7 x 0.25	0.062	1.57	0.154	3.91	25 kV
392250	22	0.35	7/30	7 x 0.25	0.050	1.27	0.131	3.33	20 kV
392245	22	0.35	7/30	7 x 0.25	0.045	1.14	0.120	3.05	15 kV
392240	22	0.35	7/30	7 x 0.25	0.040	1.02	0.11	2.79	10 kV
392097	20	0.51	10/30	10 x 0.25	0.097	2.46	0.231	5.87	40 kV
392075	20	0.51	10/30	10 x 0.25	0.075	1.90	0.187	4.75	30 kV
392062	20	0.51	10/30	10 x 0.25	0.062	1.57	0.161	4.09	25 kV
392050	20	0.51	10/30	10 x 0.25	0.050	1.27	0.137	3.48	20 kV
392045	20	0.51	10/30	10 x 0.25	0.045	1.14	0.127	3.23	15 kV
392040	20	0.51	10/30	10 x 0.25	0.040	1.02	0.117	2.97	10 kV
391897	18	0.81	16/30	16 x 0.25	0.097	2.46	0.241	6.12	40 kV
391875	18	0.81	16/30	16 x 0.25	0.075	1.90	0.197	5.00	30 kV
391862	18	0.81	16/30	16 x 0.25	0.062	1.57	0.171	4.34	25 kV
391850	18	0.81	16/30	16 x 0.25	0.050	1.27	0.147	3.73	20 kV
391845	18	0.81	16/30	16 x 0.25	0.045	1.14	0.137	3.48	15 kV
391840	18	0.81	16/30	16 x 0.25	0.040	1.02	0.127	3.23	10 kV
391699	16	1.32	26/30	26 x 0.25	0.150	3.81	0.360	9.14	50 kV
391697	16	1.32	26/30	26 x 0.25	0.097	2.46	0.254	6.45	40 kV
391675	16	1.32	26/30	26 x 0.25	0.075	1.90	0.210	5.33	30 kV
391662	16	1.32	26/30	26 x 0.25	0.062	1.57	0.184	4.67	25 kV
391650	16	1.32	26/30	26 x 0.25	0.050	1.27	0.160	4.06	20 kV
391645	16	1.32	26/30	26 x 0.25	0.045	1.14	0.150	3.81	15 kV
391640	16	1.32	26/30	26 x 0.25	0.040	1.02	0.140	3.56	10 kV
391499	14	2.08	41/30	41 x 0.25	0.150	3.81	0.374	9.50	50 kV
391497	14	2.08	41/30	41 x 0.25	0.097	2.46	0.268	6.81	40 kV
391475	14	2.08	41/30	41 x 0.25	0.075	1.90	0.224	5.69	30 kV
391462	14	2.08	41/30	41 x 0.25	0.062	1.57	0.198	5.03	25 kV
391450	14	2.08	41/30	41 x 0.25	0.050	1.27	0.174	4.42	20 kV
391445	14	2.08	41/30	41 x 0.25	0.045	1.14	0.164	4.17	15 kV
391440	14	2.08	41/30	41 x 0.25	0.040	1.02	0.154	3.91	10 kV

Insulation Colors: White • Black • Red

UL AWM 3239

- -40°C to +150°C
- Finely stranded tinned copper conductor
- Silicone rubber insulation

Availability

- 100 ft (30.5 m)
- 500 ft (152 m)
- 1000 ft (305 m)

UL 3239

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		Voltage
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
391297	12	3.29	65/30	65 x 0.25	0.097	2.46	0.287	7.29	40 kV
391275	12	3.29	65/30	65 x 0.25	0.075	1.90	0.243	6.17	30 kV
391262	12	3.29	65/30	65 x 0.25	0.062	1.57	0.217	5.51	25 kV
391250	12	3.29	65/30	65 x 0.25	0.050	1.27	0.193	4.90	20 kV
391245	12	3.29	65/30	65 x 0.25	0.045	1.14	0.183	4.65	15 kV
391099	10	5.32	105/30	105 x 0.25	0.150	3.81	0.418	10.62	50 kV
391097	10	5.32	105/30	105 x 0.25	0.097	2.46	0.312	7.92	40 kV
391045	10	5.32	105/30	105 x 0.25	0.045	1.14	0.208	5.28	15 kV
391040	10	5.32	105/30	105 x 0.25	0.040	1.02	0.198	5.03	10 kV
390897	8	8.61	133/29	133 x 0.28	0.097	2.46	0.363	9.22	40 kV
390862*	8	8.61	133/29	133 x 0.28	0.062	1.57	0.293	7.44	25 kV
390845	8	8.61	133/29	133 x 0.28	0.045	1.14	0.259	6.58	15 kV
390662*	6	13.57	133/27	133 x 0.36	0.062	1.57	0.337	8.56	25 kV
390645	6	13.57	133/27	133 x 0.36	0.045	1.14	0.303	7.70	15 kV
390462*	4	21.55	133/25	133 x 0.45	0.062	1.57	0.393	9.98	25 kV
390262*	2	34.45	259/26	259 x 0.40	0.062	1.57	0.463	11.76	25 kV

*Not UL Recognized.

Insulation Colors: White • Black

High Voltage, Silicone Rubber Wire



UL VW-1

- -40°C to +200°C
- Stranded silver-plated copper conductor
- White silicone rubber insulation

Availability

- 100 ft (30.5 m)
- 500 ft (152 m)
- 1000 ft (305 m)

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter		Voltage
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm	
39X2220	22	0.35	7/30	7 x 0.25	0.050	1.27	0.130	3.30	20 kV
39X2215	22	0.35	7/30	7 x 0.25	0.040	1.02	0.110	2.79	15 kV
39X2205	22	0.35	7/30	7 x 0.25	0.020	0.51	0.070	1.78	5 kV
39X2025	20	0.62	19/32	19 x 0.20	0.063	1.60	0.166	4.22	25 kV
39X2020	20	0.62	19/32	19 x 0.20	0.055	1.40	0.150	3.81	20 kV
39X2015	20	0.62	19/32	19 x 0.20	0.040	1.02	0.120	3.05	15 kV
39X1825	18	0.96	19/30	19 x 0.25	0.055	1.40	0.160	4.06	25 kV
39X1660	16	1.32	26/30	26 x 0.25	0.162	4.11	0.384	9.75	60 kV
39X1645	16	1.23	19/29	19 x 0.28	0.125	3.18	0.306	7.77	45 kV
39X1635	16	1.23	41/32	41 x 0.20	0.105	2.67	0.269	6.83	35 kV
39X1620	16	1.33	41/32	41 x 0.20	0.053	1.33	0.164	4.17	20 kV
39X1460	14	1.94	19/27	19 x 0.36	0.157	3.99	0.385	9.78	60 kV
39X1260	12	3.08	19/25	19 x 0.45	0.178	4.51	0.445	11.30	60 kV

600 V, Mica-Glass, PTFE Wire

High-Temperature



UL AWM 5107

CSA AWM I A/B

- -55°C to +538°C
- -55°C to +450°C (UL, CSA)
- Stranded nickel-plated copper conductor
- Mica-glass tape insulation
- Tan PTFE-impregnated fiberglass jacket

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
3112010	20	0.51	10/30	10 x 0.25	0.025	0.64	0.101	2.57
3111816	18	0.81	16/30	16 x 0.25	0.025	0.64	0.111	2.82
3111626	16	1.32	26/30	26 x 0.25	0.025	0.64	0.124	3.15
3111441	14	2.08	41/30	41 x 0.25	0.025	0.64	0.138	3.51
3111265	12	3.29	65/30	65 x 0.25	0.025	0.64	0.157	3.99
3111000	10	5.32	105/30	105 x 0.25	0.030	0.76	0.206	5.23
3118133	8	8.63	133/29	133 x 0.28	0.030	0.76	0.260	6.60
3116133	6	13.6	133/27	133 x 0.36	0.030	0.76	0.304	7.72
3114133	4	21.6	133/25	133 x 0.36	0.030	0.76	0.361	9.17
3112133	2	34.4	133/23	133 x 0.57	0.035	0.89	0.444	11.28

Availability

- 100 ft (30.5 m)
- 500 ft (152 m)
- 1000 ft (305 m)
- Bulk, cut to length

600 V, PTFE/Glass Braid Wire

High-temperature



UL AWM 5196

CSA AWM I A/B

- -55°C to +250°C
- Stranded nickel-plated copper conductor
- White PTFE tape insulation
- Double fiberglass serve
- Tan PTFE-impregnated fiberglass jacket

Part No.	Wire Size		Stranding		Insulation Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
3131816	18	0.81	19/30	16 x 0.25	0.016	0.41	0.109	2.77
3131626	16	1.32	26/30	26 x 0.25	0.016	0.41	0.122	3.10
3131441	14	2.08	41/30	41 x 0.25	0.016	0.41	0.136	3.45
3131265	12	3.29	65/30	65 x 0.25	0.016	0.41	0.155	3.94
3131000	10	5.32	105/30	105 x 0.25	0.016	0.41	0.180	4.57
3138133	8	8.61	133/29	133 x 0.29	0.016	0.41	0.232	5.89
3136133	6	13.6	133/27	133 x 0.36	0.016	0.41	0.315	8.00

Availability

- 100 ft (30.5 m)
- 500 ft (152 m)
- 1000 ft (305 m)
- Bulk, cut to length

1000/2000 V, XLPE, PVC

Photovoltaic Wire



UL 4703 PV VW-1 (2000 V)

UL Sunlight Resistant

- -40°C to +90°C
- Stranded tinned copper conductor
- Black cross-linked polyethylene insulation
- Black PVC jacket

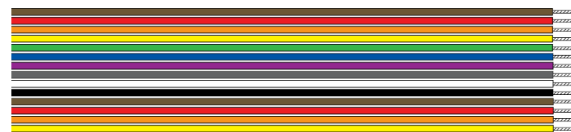
Part No.	Wire Size		Stranding		Insulation/Jacket Thickness		Nominal Diameter	
	AWG	mm ²	AWG	mm	Inch	mm	Inch	mm
PV0830	8	8.51	168/30	168 x 0.25	0.078/0.032	1.98/0.81	0.390	9.91
PV0630	6	13.5	266/30	266 x 0.25	0.078/0.032	1.98/0.81	0.433	11.00
PV0430	4	21.3	420/30	420 x 0.25	0.078/0.032	1.98/0.81	0.491	12.47
PV0230	2	33.7	665/30	665 x 0.25	0.078/0.032	1.98/0.81	0.558	14.17

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

150/600 V, PVC

Ribbon Cable



MIL-DTL-16878/1 (Type B)
(600 V)

UL AWM 2713 (150 V) VW-1

- -20°C to +105°C (MIL)
- -20°C to +80°C (AWM)
- Brown, red, orange, yellow, green, blue, violet, slate, white black ... repeats
- Stranded tinned copper conductors
- Color-coded PVC insulation bonded into a flat configuration

Availability

- 100 ft (30.5 m)

26 AWG (0.14 mm²)

Stranding: 7/34 (7 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)
Cable height: 0.039 (0.99 mm)

Part No.	Conductors	Width	
		Inch	mm
3550	10	0.392	9.96
3550/14	14	0.546	13.87
3551	15	0.585	14.68
3551/16	16	0.624	15.85
3553	30	1.170	29.72

24 AWG (0.23 mm²)

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)
Cable height: 0.044 (1.12 mm)

Part No.	Conductors	Width	
		Inch	mm
3540/7	10	0.440	11.18
3541/7	15	0.660	16.76
3542/7	20	0.880	22.35

24 AWG (0.24 mm²)

Stranding: 19/36 (19 x 0.12 mm)
Insulation thickness: 0.010 (0.25 mm)
Cable height: 0.044 (1.12 mm)

Part No.	Conductors	Width	
		Inch	mm
3540	10	0.440	11.18
3541	15	0.660	16.76
3542	20	0.880	22.35
3543	30	1.320	33.53

22 AWG (0.35 mm²)

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)
Cable height: 0.050 (1.27 mm)

Part No.	Conductors	Width	
		Inch	mm
3530/7	10	0.500	12.70
3531/7	15	0.750	19.05
3532/7	20	1.000	25.40
3533/7	30	1.500	38.10

22 AWG (0.38 mm²)

Stranding: 19/34 (19 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)
Cable height: 0.051 (1.29 mm)

Part No.	Conductors	Width	
		Inch	mm
3530	10	0.510	12.95
3531	15	0.765	19.43
3532	20	1.020	25.91
3533	30	1.530	38.86

300/1000 V, PVC

Ribbon Cable



MIL-DTL-16878/2 (Type C)
(1000 V)

UL AWM 2555 (300 V)

- 20°C to +105°C (MIL)
- 20°C to +80°C (AWM)
- Brown, red, orange, yellow, green, blue, violet, slate, white, black . . . repeats
- Stranded tinned copper conductors
- Color-coded PVC insulation bonded into a flat configuration

Availability

- 100 ft (30.5 m)

22 AWG (0.35 mm²)			
Stranding: 7/30 (7 x 0.25 mm) Insulation thickness: 0.016 (0.41 mm) Cable height: 0.065 (1.65 mm)			
Part No.	Conductors	Width	
		Inch	mm
3505	5	0.310	7.87
3510	10	0.620	15.75
3515	15	0.930	23.62
3520	20	1.240	31.50

Bus Bar Wire



CID AA-59551 Type S
ASTM B33

- Electrolytic soft-drawn and annealed solid tin-plated copper conductor

Availability

- 100 ft (30.5 m)
- 1000 ft (305 m)

Part No	Wire Size			Diameter	
	AWG	CMA	mm²	Inch	mm
936	36	25	0.01	0.005	0.13
932	32	64	0.03	0.008	0.20
299/3	30	100	0.05	0.010	0.25
299/2	28	159	0.08	0.013	0.33
299/1	26	253	0.12	0.016	0.41
299	24	404	0.20	0.020	0.51
298	22	640	0.32	0.025	0.64
297	20	1020	0.51	0.032	0.81
296	18	1620	0.82	0.040	1.02
295	16	2580	1.31	0.051	1.30
286	14	4110	2.08	0.064	1.63
289	12	6530	3.31	0.081	2.06
910	10	10380	5.26	0.102	2.59
908	8	16510	8.37	0.129	3.28
906	6	26250	13.3	0.162	4.11

Hook-Up Wire Kits

Alpha's hook-up wire kits contain an assortment of 100 ft (30.5 m) spools of hook-up wire suitable for military or UL/CSA applications. These kits have been designed for use by technicians, engineers, and designers in the R&D lab or maintenance shop. Each kit contains a stripping tool and five spools of hook-up wire in a unique, rack-mounted, transparent dispensing tube. The tube and rack system keeps hook-up wire neat, clean, and conveniently at hand.

- -40°C to +80°C (HU-KIT-10, 30)
- -40°C to +105°C (HU-KIT-20, 40)

1. Start with the base part number for the product.

2. Add the insulation color code. The most common choices are:

BK Black	GY Green/Yellow	SL Slate	YL Yellow
BL Blue	OR Orange	VI Violet	
BR Brown	PK Pink	WH White	
GR Green	RD Red	YG Yellow/Green	

3. Add the put-up code for the desire length. The most common choices are:

005 100 ft
001 1000 ft
013 5000 ft

Example:

3070 BK001 = Part No. 3070 with black insulation in a 100-foot put-up.
Note: See the wire's Product Specification for complete range of color choices. Product Specifications are available at www.alphawire.com.

1000 V (HU-KIT-10, 30) 300 V (HU-KIT-20, 40)

- Stranded tinned copper conductor
- Color-coded PVC insulation

Availability

- 1 box

How to Order Alpha Hook-Up Wire

The following applies to our most popular hook-up wires.

1. Start with the base part number for the product.

2. Add the insulation color code. The most common choices are:

BK Black	GY Green/Yellow	SL Slate	YL Yellow
BL Blue	OR Orange	VI Violet	
BR Brown	PK Pink	WH White	
GR Green	RD Red	YG Yellow/Green	

3. Add the put-up code for the desire length. The most common choices are:

005 100 ft
001 1000 ft
013 5000 ft

Example:

3070 BK001 = Part No. 3070 with black insulation in a 100-foot put-up.
Note: See the wire's Product Specification for complete range of color choices. Product Specifications are available at www.alphawire.com.

The cables you trust. The service you deserve.

Every application is critical and wire failure is not an option when the safety of your equipment and personnel is paramount. Specify Alpha hook-up wire for harsh environments and crucial applications; since the integrity of your system is only as robust as the products you use. Alpha Wire is the intricate solution for your most complex problems.

Superior availability

Alpha offers hook-up wire from stock in most sizes and constructions, in both small and large put-ups, so you can order it when you need it.

Service and support, second-to-none

Selecting the correct wire for your critical application is essential to overall system reliability, performance, and safety. So we make it easy for you select the right Alpha hook-up wire for your specific application.

Our online resources include a wire and cable selection guide, technical information, full product catalog, and a distributor locator to make it easy to select and get the cable you need. Can't find what you're looking for? Design the cable to your specification, it's easy, just visit www.alphawire.com!

Global Headquarters

1320 City Center Drive
Suite 100
Carmel, IN 46032
Toll Free: 1-800-52 ALPHA
Tel: 1-908-925-8000
Fax: 1-908-925-5411
E-mail: info@alphawire.com