

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
- UL, CSA, and mil-spec compliance
- Convenient put-ups as short as 100 feet
- Excellent uniformity for easy handling, stripping, and termination



Choice of Insulations to Meet Temperature Range and Mechanical and Environmental Requirements				
Insulation	Material	Temperature Range	Features	Page No.
PVC	Polyvinyl chloride	-55°C to +105°C	General-purpose insulation Good abrasion resistance Excellent flame resistance	4
XL-PVC	Cross-linked 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	7, 8
PTFE	Polytetrafluoroethylene	-55°C to +200°C	High temperature Chemically inert: excellent chemical and solvent resistance Excellent electrical properties	10
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	12
PDVF	Polyvinylidene fluoride	-40°C to +125°C	Widely used in wire wrap applications	12
ETFE	Ethylene tetrafluoroethylene	-70°C to +150°C		11
MG	Mica glass	+450°C	High-temperature applications, such as heat-treating furnaces, kilns, and food service equipment Excellent thermal stability	14
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, 100% recyclable 45% smaller diameter, 40% lighter	16
mPPE*	Modified polyphenylene ether	-40°C to +110°C	All the environmental benefits and abrasion resistance characteristics of EcoWire; 100% recyclable Excellent resistance to oils, chemicals, solvents, and fuels Meets ISO 6722 for thin-wall and ultra-thin wall wire	16

*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	XL-PVC	26 - 16	—	UL AWM 1429	CSA AWM I A/B FT1	-55°C to +105°C	7
	XLPE	22 - 18	—	UL AWM 3265	CSA AWM I A/B FT1	-55°C to +125°C	9
300	PVC	30 - 16	24 - 16	UL AWM 1569		-40°C to +105°C	4
				UL AWM 1007		-40°C to +80°C	
	SR-PVC	30 - 16	—	UL AWM 1061	CSA TR-64	-40°C to +90°C	4
	XL-PVC	26 - 16	—	UL AWM 1430	CSA AWM I A/B FT1	-10°C to +80°C	4
600	XLPE	22 - 18	—	UL AWM 3266	CSA REW XL-PVC	-55°C to +105°C	8
	PTFE	24 - 8	—	UL AWM 1180	CSA CL 1252 XLPE	-55°C to +125°C	9
10,000+	PVC	24 - 10	26 - 10	UL AWM 1015, 1230 UL MTW, THW, TW	CSA TEW-105	-20°C to +105°C	5
		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	8
	XLPE	20 - 2/0	—	UL AWM 3173, 3195, 3196, 3300 SIS Rated		-55°C to +125°C	9
	Silicone	22 - 4/0	—	UL AWM 3212, 3213, 3214	CSA AWM I A/B FT2	-40°C to +150°C	12
	Silicone	22 - 2	—	UL AWM 3239		-40°C to +150°C	13
Military							
250	PTFE	32 - 22	30 - 26	MIL-DTL-16787/6 (Type ET)		-60°C to +200°C	10
600	XL-PVC	26 - 16	—	MIL-DTL-16878/1 (Type B)		-55°C to +105°C	7
600	PVC	32 - 14	—	MIL-DTL-16878/1 (Type B)		-55°C to +105°C	6
	PVC	14 - 8	—	MIL-W-76B Type HW		-20°C to +80°C	6
	PTFE	30 - 10	26 - 18	MIL-DTL-16878/4 (Type E)		-60°C to +200°C	10
1000	XL-PVC	26 - 16	—	MIL-DTL-16878/1 (Type C)		-55°C to +105°C	8
	PVC	24 - 12	24 - 18	MIL-DTL-16878/1 (Type C)		-40°C to +80°C	8
	XLPE	22 - 18	—	MIL-DTL-16878/1 (Type C)		-55°C to +105°C	9
	PTFE	24 - 8	—	MIL-DTL-16878/5 (Type EE)		-60°C to +200°C	11
3000	XLPE	18 - 10	—	MIL-DTL-16878/1 (Type D)		-55°C to +105°C	8
Wire Wrap							
	PVDF	—	30 - 24	UL 1422, 1423		-40°C to +125°C	12
	ETFE	—	30 - 24	UL 1516, 1523		-70°C to +150°C	12
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

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