

HOOK-UP WIRE

A STYLE TO SUIT ANY NEED

Alpha's commitment to quality and service starts at the beginning . . . with the manufacturing of single conductor hook-up wire, the most basic wiring component.

Used extensively for both electrical and electronic equipment, hook-up wires are required to perform in increasingly critical environments. Cost-effective production methods necessitate uniform wire handling characteristics: strippability, strand uniformity, precise dimensions, and permanent colors and markings. Industry trends such as miniaturization, plus new environmental and product liability considerations require improved insulating materials.

So Alpha offers the highest quality hook-up wires in a broader-than-ever range of insulating materials, sizes, colors and packaging to quickly and efficiently meet the new demands in the marketplace. All are available in ready-to-use form, from 100 feet to production requirements.

A STYLE TO SUIT ANY NEED

PVC Polyvinylchloride, sometimes referred to as PVC or vinyl, is the most widely used insulation for wiring electrical or electronic equipment. PVC is inherently flame-retardant and used in most normal environments and applications.

Irradiated PVC Special PVC treated with electron beam radiation to improve temperature and solder iron resistance. Used extensively in high density wiring.

Irradiated Polyolefin Special radiation cross-linked polyolefin insulation for 125°C wiring. Used as low-cost alternative to Teflon® where temperatures exceed the capabilities of PVC.

TFE Teflon® High-performance insulation with temperature range of -65° to 200°C. Teflon® is chemically inert and unaffected by solvents, making it the ideal insulation for extreme temperature or chemical environments.

It's easy to find the exact hook-up wire insulation you need - it's listed in the chart below.

This section contains a complete listing of Alpha hook-up wires, laid out by type of insulation materials. Within each type of insulation material, products are listed in the order of ascending temperature rating, and within temperature rating, ascending voltage. Simply find the product that fits your needs.

	100°C	125°C	150°C	175°C	200°C
PVC (105)	█				
POLYOLEFIN (125)	█	█			
KYNAR** (125)	█	█			
TEFZEL* (150)	█	█	█		
TFE TEFLON* (200)	█	█	█	█	█

*Teflon and Tefzel are a registered trademarks of E.I. DuPont
 **Kynar is a registered trademark of ELF Atochem, North America, Inc.

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HOOK-UP WIRE

PVC INSULATION

UL 1007/1569, CSA TR-64
80°C/105°C, RoHS COMPLAINT
300 VOLT

CHARACTERISTICS

OPERATING TEMPERATURE:

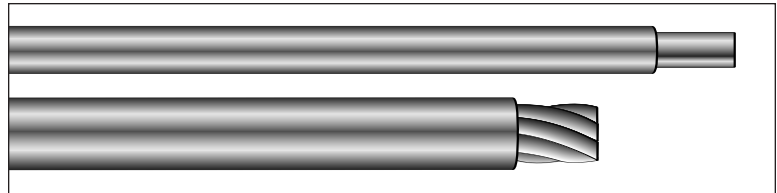
- -40°C to 105°C – UL AWM 1569
- -40°C to 90°C – CSA TR-64
- -40°C to 80°C – UL AWM 1007

VOLTAGE RATING:

- 300 Volt

PRODUCT DESCRIPTION:

- Conductor: Stranded or Solid Tinned Copper
- Insulation: Color-Coded PVC



Alpha Part No.	Conductor		Insul. Thickness		Diameter		Stock Colors*
	AWG	Strand	Inches	mm	Inches	mm	
3047	30	7/38	0.016	0,41	0.043	1,09	1-10
3048	28	7/36	0.016	0,41	0.047	1,19	1-10
3049	26	7/34	0.016	0,41	0.051	1,30	1-10
3050	24	7/32	0.016	0,41	0.057	1,45	1-19+28, 30
3051	22	7/30	0.016	0,41	0.065	1,65	1-19+28-30
3053	20	10/30	0.016	0,41	0.071	1,80	1-19+28-30
3055	18	16/30	0.016	0,41	0.080	2,03	1-19+28-30
3057	16	26/30	0.016	0,41	0.095	2,41	1-19+28-30

*See color chart below

SPECIFICATIONS

- UL AWM Styles 1007 and 1569
- CSA TR-64
- RoHS Compliant



SOLID CONDUCTOR

Alpha Part No.	Conductor		Insul. Thickness		Diameter		Stock Colors*
	AWG	Strand	Inches	mm	Inches	mm	
3050/1	24	Solid	0.016	0,41	0.057	1,45	1-10
3051/1	22	Solid	0.016	0,41	0.065	1,65	1-10
3053/1	20	Solid	0.016	0,41	0.071	1,80	1-10
3055/1	18	Solid	0.016	0,41	0.080	2,03	1-10
3057/1	16	Solid	0.016	0,41	0.095	2,41	1-10

*See color chart below

AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups

SEMI RIGID PVC INSULATION

UL 1061, CSA AWM I A/B FT1
80°C, RoHS COMPLAINT, 300 VOLT

CHARACTERISTICS

OPERATING TEMPERATURE:

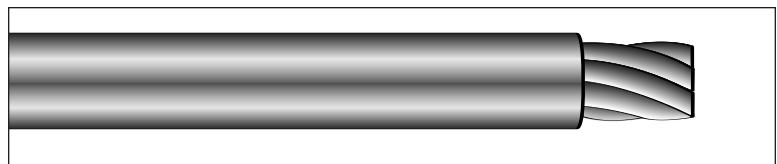
- -10°C to 80°C

VOLTAGE RATING:

- 300 Volt

PRODUCT DESCRIPTION:

- Conductor: Stranded Tinned Copper
- Insulation: Color-Coded, Semi Rigid PVC



Alpha Part No.	Conductor		Insul. Thickness		Diameter		Stock Colors*
	AWG	Strand	Inches	mm	Inches	mm	
3250	24	7/32	0.009	0,23	0.042	1,07	1-10
3251	22	7/30	0.009	0,23	0.048	1,22	1-10
3252	20	7/28	0.009	0,23	0.056	1,42	1-10
3253	18	7/26	0.009	0,23	0.066	1,68	1-10
3254	16	7/24	0.009	0,23	0.078	1,98	1-10

*See color chart below

SPECIFICATIONS

- UL AWM Style 1061
- CSA AWM I A/B FT1
- RoHS Compliant



AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups

*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray	11-White/Black	13-White/Green	15-White/Blue	17-White/Orange	19-White/Violet	29-Yellow/Green
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)	12-White/Red	14-White/Yellow	16-White/Brown	18-White/Gray	28-Green/Yellow	30-Pink



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MIL-W-76B TYPE MW
80°C, RoHS COMPLIANT
1000 VOLT

HOOK-UP WIRE

PVC INSULATION

CHARACTERISTICS

OPERATING TEMPERATURE:

- -40°C to 80°C

VOLTAGE RATING:

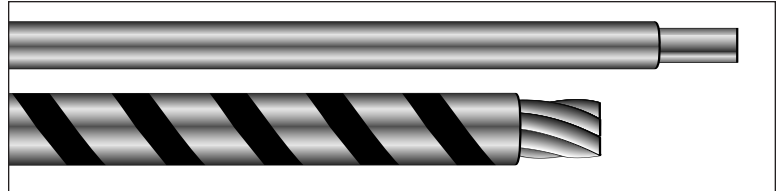
- 1000 Volt

PRODUCT DESCRIPTION:

- Conductor: Stranded or Solid Tinned Copper
- Insulation: Color-Coded PVC

SPECIFICATIONS

- MIL-W-76B Type MW
- RoHS Compliant



STRANDED CONDUCTOR

Alpha Part No.	Type Designation	Conductor AWG	Strand	Insul. Thickness		Diameter		Stock Colors*
				Inches	mm	Inches	mm	
1550	MW-C24(7)U	24	7/32	0.016	0,41	0.059	1,50	1-19
1551	MW-C22(7)U	22	7/30	0.016	0,41	0.064	1,63	1-19
1553	MW-C20(10)U	20	10/30	0.016	0,41	0.068	1,72	1-19
1555	MW-C18(16)U	18	16/30	0.016	0,41	0.078	1,98	1-19
1557	MW-C16(26)U	16	26/30	0.016	0,41	0.092	2,33	1-19
1559	MW-C14(41)U	14	41/30	0.016	0,41	0.101	2,56	1-10
1560	MW-C12(65)U	12	65/30	0.016	0,41	0.125	3,18	1-10

*See color chart below

SOLID CONDUCTOR

Alpha Part No.	Type Designation	Conductor AWG	Strand	Insul. Thickness		Diameter		Stock Colors*
				Inches	mm	Inches	mm	
1561/24	MW-C24(1)U	24	Solid	0.016	0,41	0.055	1,40	1-6
1561	MW-C22(1)U	22	Solid	0.016	0,41	0.060	1,52	1-6
1563	MW-C20(1)U	20	Solid	0.016	0,41	0.066	1,68	1-6
1565	MW-C18(1)U	18	Solid	0.016	0,41	0.074	1,88	1-6

*See color chart below

AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups

*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray	11-White/Black	13-White/Green	15-White/Blue	17-White/Orange	19-White/Violet	29-Yellow/Green
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)	12-White/Red	14-White/Yellow	16-White/Brown	18-White/Gray	28-Green/Yellow	30-Pink

HOOK-UP WIRE

PVC INSULATION

MIL-W-76B TYPE HW
80°C, RoHS COMPLIANT
600 VOLT

CHARACTERISTICS

OPERATING TEMPERATURE:

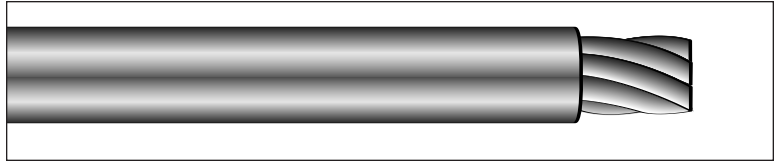
- -20°C to 80°C

VOLTAGE RATING:

- 600 Volt

PRODUCT DESCRIPTION:

- Conductor: Stranded Tinned Copper
- Insulation: Color-Coded PVC



Alpha Part No.	Type Designation	Conductor AWG	Strand	Insul. Thickness Inches	mm	Diameter Inches	mm	Stock Colors*
1579	HW-C14(41)U	14	41/30	0.045	1,14	0.163	4,14	1-3
1651	HW-C12(65)U	12	65/30	0.045	1,14	0.181	4,59	1-3
1653	HW-C10(105)U	10	105/30	0.045	1,14	0.220	5,58	1-3
1655	HW-C 8(133)U	8	133/29	0.045	1,14	0.260	6,60	1-3

*See color chart below

SPECIFICATIONS

- MIL-W-76B Type HW
- RoHS Compliant



AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups

*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray	11-White/Black	13-White/Green	15-White/Blue	17-White/Orange	19-White/Violet	29-Yellow/Green
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)	12-White/Red	14-White/Yellow	16-White/Brown	18-White/Gray	28-Green/Yellow	30-Pink



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HOOK-UP WIRE

PVC INSULATION

MIL-W-16878E TYPE B
105°C, RoHS COMPLIANT, 600 VOLT

CHARACTERISTICS

OPERATING TEMPERATURE:

- -55°C to 105°C

VOLTAGE RATING:

- 600 Volt

PRODUCT DESCRIPTION:

- Conductor: Stranded Tinned Copper
- Insulation: Color-Coded PVC

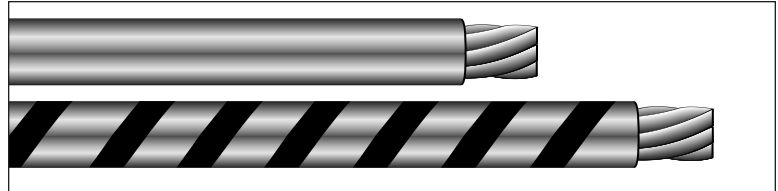
SPECIFICATIONS

- MIL-W-16878E Type B
- RoHS Compliant



AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups



Alpha Part No.	Type Designation	Conductor AWG	Strand	Insul. Thickness Inches	mm	Diameter Inches	mm	Stock Colors*
1850	B-32	32	7/40	0.010	0,25	0.028	0,71	1-6
1851†	B-30	30	7/38	0.010	0,25	0.032	0,81	1-6
1852†	B-28	28	7/36	0.010	0,25	0.034	0,86	1-10
1853†	B-26	26	7/34	0.010	0,25	0.038	0,96	1-19
1854†	B-24	24	7/32	0.010	0,25	0.043	1,09	1-19
1854/19	B-24	24	19/36	0.010	0,25	0.043	1,09	1-19
1855†	B-22	22	7/30	0.010	0,25	0.050	1,27	1-19
1855/19	B-22	22	19/34	0.010	0,25	0.050	1,27	1-19
1856†	B-20	20	7/28	0.010	0,25	0.058	1,47	1-19
1856/19	B-20	20	19/32	0.010	0,25	0.058	1,47	1-19
1857	B-18	18	7/26	0.010	0,25	0.068	1,73	1-19
1857/19	B-18	18	19/30	0.010	0,25	0.068	1,73	1-19
1858/19	B-16	16	19/29	0.010	0,25	0.077	1,96	1-19
1859/19	B-14	14	19/27	0.010	0,25	0.091	2,31	1-10

† Also meets MIL-W-76B Type LW
 *See color chart below

UL 1015, CSA TEW-105
105°C, RoHS COMPLIANT, 600 VOLT

PVC INSULATION

CHARACTERISTICS

OPERATING TEMPERATURE:

- -20°C to 105°C

VOLTAGE RATING:

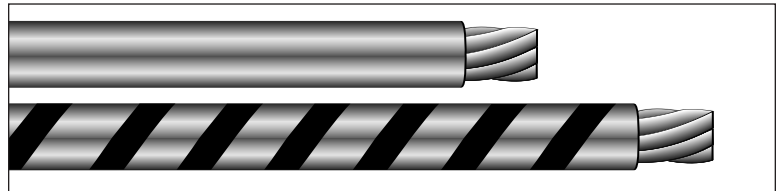
- 600 Volt

PRODUCT DESCRIPTION:

- Conductor: Stranded Tinned Copper
- Insulation: Color-Coded PVC

SPECIFICATIONS

- UL AWM Style 1015
- CSA TEW-105
- RoHS Compliant



Alpha Part No.	Conductor AWG	Strand	Insul. Thickness Inches	mm	Diameter Inches	mm	Stock Colors*
3070	24	7/32	0.032	0,81	0.088	2,24	1-10+28
3071	22	7/30	0.032	0,81	0.094	2,38	1-10+28,29
3073	20	10/30	0.032	0,81	0.100	2,54	1-10+28
3075	18	16/30	0.032	0,81	0.112	2,85	1-10+28,29
3077	16	26/30	0.032	0,81	0.124	3,14	1-10+28,29
3079	14	41/30	0.032	0,81	0.134	3,61	1-10+28,29
3080	12	65/30	0.032	0,81	0.162	3,93	1-4
3081	10	105/30	0.032	0,81	0.180	4,83	1-4

*See color chart below

AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups

*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray	11-White/Black	13-White/Green	15-White/Blue	17-White/Orange	19-White/Violet	29-Yellow/Green
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)	12-White/Red	14-White/Yellow	16-White/Brown	18-White/Gray	28-Green/Yellow	30-Pink

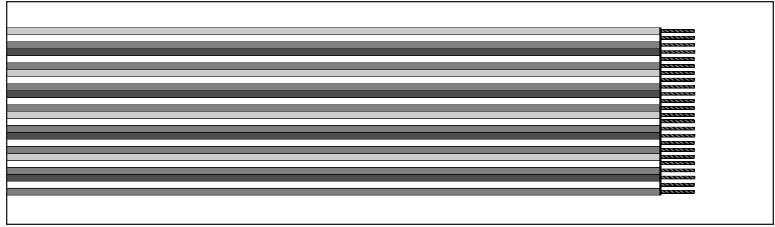
HOOK-UP WIRE

PVC RIBBON CABLE

MIL-W-16878E TYPE B: 105°C, 600 VOLT
 UL 2713: 80°C, 300 VOLT
 MIL-W-16878E TYPE C: 105°C, 1000 VOLT
 UL 2555: 80°C, 300 VOLT
RoHS COMPLIANT

RIBBON CABLE

Ribbon cable is a term that refers to a series of individually color-coded, insulated wires in a flat cable configuration. Bonded flat ribbon cables facilitate easier routing and termination and take up less space than wire harness bundles. Ribbon cable constructions are more flexible than round wire bundles. Ribbon cable constructions can safely carry more current than round harnesses of similar wire gauges and are easy to separate and route within circuits.



CHARACTERISTICS

OPERATING TEMPERATURE:

- -55°C to 105°C

VOLTAGE RATING:

- Type B 600 Volt
- UL 150 Volt
- Type C 1000 Volt
- UL 300 Volt

COLOR DESCRIPTION:

- Color Code: Brown, Red, Orange, Yellow, Green, Blue, Violet, Slate, White, Black (repeat)

PRODUCT DESCRIPTION:

- Conductor: Stranded Tinned Copper
- Insulation: Color-Coded PVC Conductors Bonded into a Flat Configuration

MIL-W-16878E TYPE B: 105°C, 600 VOLT

UL STYLE 2713: 80°C, 300 VOLT:

Insulation Thickness: **0.010"** (0,25mm)

Alpha Part No.	No. of Conductors	Conductor		Diameter (Width x Thickness)	
		AWG	Strand	Inches	mm
3530	10	22	19/34	0.510 x 0.051	12,95 x 1,30
3530/7	10	22	7/30	0.510 x 0.051	12,95 x 1,30
3531	15	22	19/34	0.765 x 0.051	19,43 x 1,30
3531/7	15	22	7/30	0.765 x 0.051	19,43 x 1,30
3532	20	22	19/34	1.020 x 0.051	25,91 x 1,30
3532/7	20	22	7/30	1.020 x 0.051	25,91 x 1,30
3533	30	22	19/34	1.530 x 0.051	38,86 x 1,30
3533/7	30	22	7/30	1.530 x 0.051	38,86 x 1,30
3540	10	24	19/36	0.440 x 0.044	11,18 x 1,12
3540/7	10	24	7/32	0.440 x 0.044	11,18 x 1,12
3541	15	24	19/36	0.660 x 0.044	16,76 x 1,12
3541/7	15	24	7/32	0.660 x 0.044	16,76 x 1,12
3542	20	24	19/36	0.880 x 0.044	22,35 x 1,12
3542/7	20	24	7/32	0.880 x 0.044	22,35 x 1,12
3543	30	24	19/36	1.320 x 0.044	33,53 x 1,12
3550	10	26	7/34	0.392 x 0.039	9,96 x 0,99
3550/14	14	26	7/34	0.546 x 0.039	13,87 x 0,99
3551	15	26	7/34	0.587 x 0.039	14,91 x 0,99
3551/16	16	26	7/34	0.624 x 0.039	15,85 x 0,99
3553	30	26	7/34	1.19 x 0.039	30,23 x 0,99

SPECIFICATIONS

- MIL-W-16878E Type B
- UL AWM Style 2713
- MIL-W-16878E Type C
- UL AWM Style 2555
- RoHS Compliant



MIL-W-16878E TYPE C: 105°C, 1000 VOLT

UL STYLE 2555: 80°C, 300 VOLT

Insulation Thickness: **0.016"** (0,42mm)

Alpha Part No.	No. of Conductors	Conductor		Diameter (Width x Thickness)	
		AWG	Strand	Inches	mm
3505	5	22	7/30	0.320 x 0.065	8,13 x 1,65
3510	10	22	7/30	0.640 x 0.065	16,26 x 1,65
3515	15	22	7/30	0.960 x 0.065	24,38 x 1,65
3520	20	22	7/30	1.29 x 0.065	32,77 x 1,65

AVAILABILITY

- 100 ft (30,5m) put-ups



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MIL-W-16878E TYPE B: 105°C, 600 VOLT
UL 1429, CSA: 80°C, 150 VOLT
MIL-W-16878E TYPE C: 105°C, 1000 VOLT
UL 1430, CSA: 105°C, 300 VOLT
RoHS COMPLIANT

HOOK-UP WIRE

IRRADIATED PVC INSULATION

SOLDER IRON RESISTANT

Irradiated PVC Insulated Hook-Up Wire is exposed to controlled electron beam radiation which results in an insulation far superior to ordinary PVC.

Irradiated PVC withstands higher temperatures than ordinary PVC. Because of its ability to resist solder iron heat, it is the ideal material to use where high reliability is essential and particularly valuable in the wiring of tight, high-density systems.

Irradiated PVC insulation is tougher than ordinary PVC resulting in greatly improved abrasion and cut-through resistance.

CHARACTERISTICS

OPERATING TEMPERATURE:

- -55°C to 105°C – UL AWM 1430
- -55°C to 105°C – UL AWM 3317
- -55°C to 105°C – CSA AWM I A/B FT1
- -55°C to 105°C – MIL-W-16878E
- -55°C to 80°C – UL AWM 1429

VOLTAGE RATING:

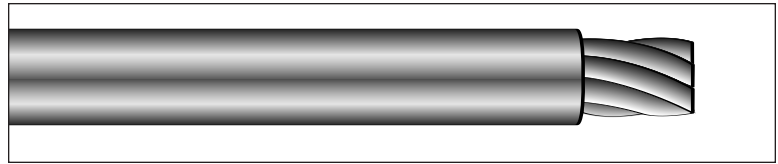
- 600 Volt (MIL), 150 Volt (UL, CSA)
- 1000 Volt (MIL), 300 Volt (UL, CSA)

PRODUCT DESCRIPTION:

- Conductor: Stranded Tinned Copper
- Insulation: Color-Coded, Irradiated PVC (XLPVC)

SPECIFICATIONS

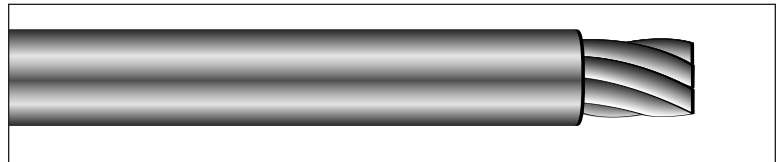
- UL AWM Style 1429
- UL AWM Style 1430
- UL AWM Style 3317
- CSA AWM I A/B FT1
- CSA REW XLPVC FT1
- MIL-W-16878E, Type B
- MIL-W-16878E, Type C
- RoHS Compliant



MIL-W-16878E TYPE B: 105°C, 600 VOLT
CSA AWM I A/B FT1: 105°C, 150 VOLT
UL 1429: 80°C, 150 VOLT

Alpha Part No.	Conductor		Insul. Thickness		Diameter		Stock Colors*
	AWG	Strand	Inches	mm	Inches	mm	
7053	26	7/34	0.010	0,25	0.040	1,02	1-10
7054	24	7/32	0.010	0,25	0.045	1,14	1-10
7054/19	24	19/36	0.010	0,25	0.045	1,14	1-10
7055	22	7/30	0.010	0,25	0.051	1,30	1-10
7055/19	22	19/34	0.010	0,25	0.052	1,32	1-10
7056	20	7/28	0.010	0,25	0.059	1,50	1-10
7056/19	20	19/32	0.010	0,25	0.060	1,52	1-10
7057	18	7/26	0.010	0,25	0.070	1,78	1-10
7057/19	18	19/30	0.010	0,25	0.070	1,78	1-10
7058/19	16	19/29	0.010	0,25	0.078	1,98	1-10

*See color chart below



MIL-W-16878E TYPE C: 105°C, 1000 VOLT
UL 1430, CSA REW XLPVC: 105°C, 300 VOLT

Alpha Part No.	Conductor		Insul. Thickness		Diameter		Stock Colors*
	AWG	Strand	Inches	mm	Inches	mm	
7130	24	7/32	0.016	0,41	0.056	1,42	1-10,29
7131	22	7/30	0.016	0,41	0.062	1,58	1-10
7132	20	7/28	0.016	0,41	0.070	1,78	1-10
7133	18	7/26	0.016	0,41	0.082	2,08	1-10,29
7134	16	19/29	0.016	0,41	0.092	2,34	1-10,29
7035†	14	19/27	0.016	0,41	0.107	2,72	1-10,29
7036†	12	19/25	0.016	0,41	0.124	3,15	1-10,29

† UL 3317

*See color chart below

AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups

*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray	29-Yellow/Green
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)	

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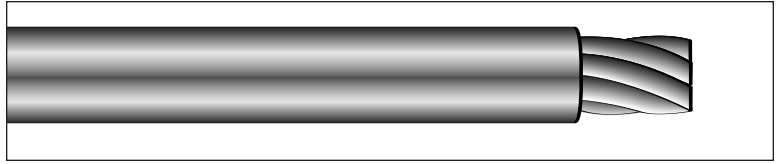
HOOK-UP WIRE

IRRADIATED POLYOLEFIN INSULATION

MIL-W-16878E:
105°C, 600, 1000, 3000 VOLT
UL, CSA: 125°C, 150, 300, 600 VOLT
RoHS COMPLIANT

FLAME RETARDANT

Alpha's irradiated polyolefin insulation provides an ideal solution to many design problems. It is especially suitable for applications where temperatures exceed the capability of PVC, which required the use of costly fluorocarbon insulations. The radiation crosslinking process also improves other environmental characteristics while retaining the excellent electrical properties of polyolefin. This material is highly flame retardant, with a UL VW-1 rating. It is non-meltable, minimizing damage from solder iron contact. There is also greater resistance to abrasion, cut-through, and chemical attack. Alpha irradiated polyolefin conforms to UL and Military standards. It is available in three different wall thickness constructions for a wide range of voltage capabilities.



MIL-W-16878E TYPE B: 105°C, 600 VOLT UL 3265, CSA AWM I A/B FT1: 125°C, 150 VOLT

Alpha Part No.	Conductor		Insul. Thickness		Diameter		Stock Colors*
	AWG	Strand	Inches	mm	Inches	mm	
7012	22	19/34	0.010	0,25	0.054	1,37	1,2
7013	20	19/32	0.010	0,25	0.062	1,57	1,2
7014	18	19/30	0.010	0,25	0.072	1,83	1,2

*See color chart below

MIL-W-16878E TYPE C: 105°C, 1000 VOLT UL 3266, CSA CL 1252 XLPE: 125°C, 300 VOLT

Alpha Part No.	Conductor		Insul. Thickness		Diameter		Stock Colors*
	AWG	Strand	Inches	mm	Inches	mm	
7024	22	19/34	0.015	0,38	0.061	1,54	1-3
7025	20	19/32	0.015	0,38	0.069	1,75	1-3
7026	18	19/30	0.015	0,38	0.080	2,03	1-3

*See color chart below

MIL-W-16878E TYPE D: 105°C, 3000 VOLT UL 3271, CSA CL 1251 XLPE: 125°C, 600 VOLT

Alpha Part No.	Conductor		Insul. Thickness		Diameter		Stock Colors*
	AWG	Strand	Inches	mm	Inches	mm	
7044	18	16/30	0.030	0,76	0.109	2,77	1-3
7045	16	26/30	0.030	0,76	0.122	3,10	1-3
7046	14	41/30	0.030	0,76	0.135	3,42	1-3
7047	12	65/30	0.030	0,76	0.153	3,88	1-3
7048	10	105/30	0.030	0,76	0.178	4,52	1-3

*See color chart below

CHARACTERISTICS

OPERATING TEMPERATURE:

- -55°C to 105°C – MIL-W-16878E
- -55°C to 125°C – (UL, CSA 125°C)

VOLTAGE RATING:

- MIL-W-16878E Type B: 600 Volt
UL 3265, CSA AWM I A/B FT1: 150 Volt
- MIL-W-16878E Type C: 1000 Volt
UL 3266, CSA CL 1252 XLPE: 300 Volt
- MIL-W-16878E Type D: 3000 Volt
UL 3271, CSA CL 1251 XLPE: 600 Volt

PRODUCT DESCRIPTION:

- Conductor: Stranded Tinned Copper
- Insulation: Radiation Crosslinked Polyolefin (XLPE)

SPECIFICATIONS

- UL AWM Style 3265
- UL AWM Style 3266
- UL AWM Style 3271
- CSA AWM I A/B FT1
- CSA CL 1252 XLPE
- CSA CL 1251 XLPE
- MIL-W-16878E, Types B, C and D
- RoHS Compliant



AVAILABILITY

- 7012–7014, 7024–7026
1000 ft (30,5m) put-ups
- 7044–7048
100 ft (30,5m), 1000 ft (305m) put-ups

*STOCK COLOR CHART

1–White 2–Black 3–Red



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Web Site: www.alphawire.com
Email: info@alphawire.com

MIL-W-3861 TYPE S
QQ-W-343 TYPE S
RoHS COMPLIANT

HOOK-UP WIRE

BUS BAR WIRE

CHARACTERISTICS

PRODUCT DESCRIPTION:

- Conductor: Electrolytic Soft Drawn and Annealed Solid Tin Plated Copper



SPECIFICATIONS

- MIL-W-3861 Type S (Inactive Military Specification)
- QQ-W-343 Type S
- RoHS Compliant



AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups

Alpha Part No.	Conductor AWG	Nom. Circular MIL Area, CM	Diameter	
			Inches	mm
299/3	30	100	0.010	0,25
299/2	28	159	0.013	0,33
299/1	26	253	0.016	0,41
299	24	404	0.020	0,51
298	22	640	0.025	0,64
297	20	1020	0.032	0,81
296	18	1620	0.040	1,02
295	16	2580	0.051	1,30
286	14	4110	0.064	1,62
289	12	6530	0.081	2,06

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RoHS COMPLIANT

TEST LEAD WIRE

CHARACTERISTICS

OPERATING TEMPERATURE:

- -30°C to 90°C

VOLTAGE RATING:

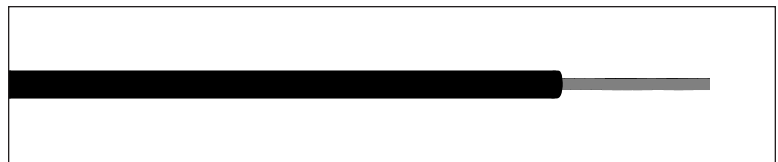
- 1500 Volt to 10,000 Volt as noted

COLOR DESCRIPTION:

- Stock Colors: Black and Red

PRODUCT DESCRIPTION:

- Conductor: Stranded Tinned Copper
- Insulation: Color-Coded Rubber



Alpha Part No.	Conductor		Insul. Thickness		Diameter		Voltage Breakdown	Sugg. Working Voltage
	AWG	Strand	Inches	mm	Inches	mm		
1632	20	41/36	0.040	1,02	0.125	3,18	6,000	1500V
1635	20	41/36	0.047	1,19	0.140	3,56	12,000	3000V
1636	18	65/36	0.045	1,14	0.140	3,56	20,000	5000V
1638	18	65/36	0.090	2,29	0.230	5,84	29,000	10000V

SPECIFICATIONS

- RoHS Compliant



AVAILABILITY

- 100 ft (30,5m), 500 ft (152m), 1000 ft (305m) put-ups



HOOK-UP WIRE

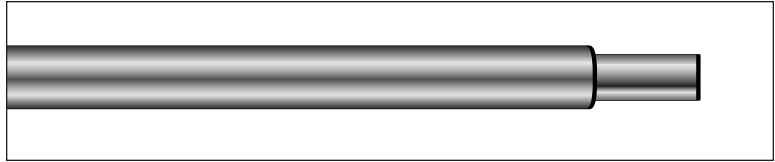
KYNAR* WIRE WRAP
TEFZEL WIRE WRAP**

UL 1422, UL 1423: 105°C
UL 1516, UL 1523: 105°C
RoHS COMPLIANT

WIRE WRAP

Wire wrapping is an automatic or semi-automatic termination method generally used in large scale wiring of computer backpanels. It involves the helical wrapping of a solid conductor around a rectangular post under controlled tension. Alpha Kynar and Tefzel wire wrap wires are manufactured with silver-plated OFHC† conductors. The presence of even minute amounts of oxygen in copper can reduce conductivity and cause embrittlement when the copper is subjected to physical stress. OFHC copper retains its mechanical and electrical integrity even after subject to the high forces of the wire wrapping process.

Both Kynar and Tefzel exhibit high abrasion, heat and cut-through resistance.



UL 1422, UL 1423: KYNAR WIRE WRAP, 125°C

Alpha Part No.	Conductor AWG	Insul. Thickness		Diameter		UL Style	Stock Colors*
		Inches	mm	Inches	mm		
5951	30	0.0045	0,11	0.020	0,51	1423	1-10
5952	28	0.0055	0,14	0.024	0,58	1422	1-10
5953	26	0.0055	0,14	0.027	0,68	1422	1-10
5954	24	0.0045	0,11	0.030	0,76	1423	1-10

*See color chart below

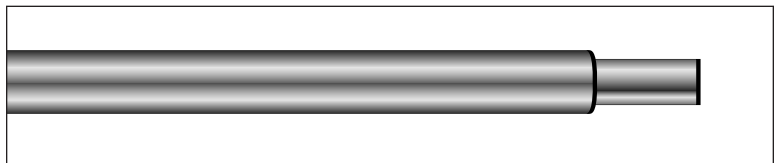
CHARACTERISTICS

OPERATING TEMPERATURE:

- Kynar Wire Wrap: -40°C to 125°C (UL 105°C)
- Tefzel Wire Wrap: -70°C to 150°C (UL 105°C)

PRODUCT DESCRIPTION:

- Conductor: Solid Silver-Plated OFHC‡ Copper
- Insulation:
 - Color-Coded Kynar (Polyvinylidene Fluoride)
 - Color-Coded Tefzel (Ethylene-Tetrafluoroethylene Copolymer)



UL 1516, UL 1523: TEFZEL WIRE WRAP, 150°C

Alpha Part No.	Conductor AWG	Insul. Thickness		Diameter		UL Style	Stock Colors*
		Inches	mm	Inches	mm		
1805	30	0.0045	0,11	0.020	0,51	1516	1-10
1806	28	0.0055	0,14	0.024	0,58	1523	1-10
1807	26	0.0055	0,14	0.027	0,69	1523	1-10
1808	24	0.0045	0,11	0.030	0,76	1516	1-10

*See color chart below

*Kynar is a registered trademark of ELF Atochem, North America, Inc.

**Registered trademark of E.I. DuPont

‡OFHC-(Oxygen-Free High Conductivity) is a registered trademark of Amax, Inc.

SPECIFICATIONS

- UL AWM Style 1422
- UL AWM Style 1423
- UL AWM Style 1516
- UL AWM Style 1523
- RoHS Compliant

Recognized Component
 Underwriters Laboratories Inc.

Passes UL VW-1 Flame Test
 Underwriters Laboratories Inc.

RoHS Compliant

AVAILABILITY

- Kynar Wire Wrap: 1000 ft (305m) putups
- Tefzel Wire Wrap: 100 ft (30,5m), 1000 ft (305m) put-ups

*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)



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MIL-W-16878E (TYPE ET)†
200°C, RoHS COMPLIANT
250 VOLT

HOOK-UP WIRE

TFE TEFLON® INSULATION

CERTIFIED PERFORMANCE — HIGH-RELIABILITY TFE TEFLON® INSULATION

Alpha's TFE Teflon wire family includes a full range of sizes, colors, conductor types and voltage ratings for both commercial (UL styles) and high reliability military OEM products.

Alpha's TFE Teflon is rated for continuous operation in temperatures from -60°C to 200°C and retains its exceptional toughness and flexibility within this range. TFE Teflon is not degraded by chemicals which makes it ideal for use in harsh environments. Teflon is widely regarded as the ultimate high performance wire insulation material for environments characterized by extreme thermal or chemical conditions.

CHOOSE TFE TEFLON® FOR:

- Resistance To All Chemicals
- High Temperature Use Up To 200°C
- Low Coefficient of Friction
- Outstanding Electrical Properties

TFE TEFLON® APPLICATIONS:

- Military Harnessing
- Medical Electronics
- Power Supply Lead Wire
- Appliance Wiring

CHARACTERISTICS

OPERATING TEMPERATURE:

- -60°C to 200°C

VOLTAGE RATING:

- 250 Volt

PRODUCT DESCRIPTION:

- Conductor: Stranded or Solid Silver Plated Copper
- Insulation: Color-Coded, Extruded TFE Teflon

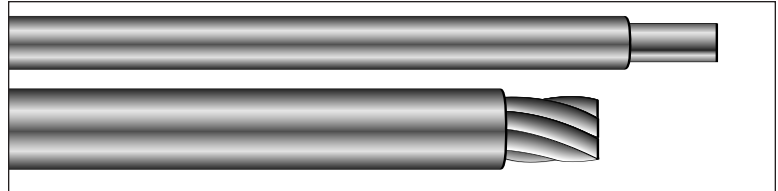
SPECIFICATIONS

- MIL-W-16878E Type ET
- RoHS Compliant



AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups
- 1000 ft put-ups may contain multiple lengths



STRANDED CONDUCTOR

Alpha Part No.	Type Designation	Conductor AWG	Strand	Insul. Thickness		Diameter		Stock Colors*
				Inches	mm	Inches	mm	
2840/7	ET-32	32	7/40	0.006	0,15	0.021	0,53	1-10
2841/7	ET-30	30	7/38	0.006	0,15	0.024	0,61	1-10
2842/7	ET-28	28	7/36	0.006	0,15	0.027	0,68	1-10
2842/19	ET-28	28	19/40	0.006	0,15	0.027	0,68	1-10
2843/7	ET-26	26	7/34	0.006	0,15	0.031	0,78	1-10
2843/19	ET-26	26	19/38	0.006	0,15	0.032	0,81	1-10
2844/7	ET-24	24	7/32	0.006	0,15	0.036	0,91	1-10
2844/19	ET-24	24	19/36	0.006	0,15	0.037	0,94	1-10
2845/7	ET-22	22	7/30	0.006	0,15	0.042	1,07	1-10
2845/19	ET-22	22	19/34	0.006	0,15	0.044	1,12	1-10

*See color chart below

SOLID CONDUCTOR

Alpha Part No.	Conductor AWG	Insul. Thickness		Diameter		Stock Colors*
		Inches	mm	Inches	mm	
2841/1	30	0.006	0,15	0.022	0,55	1-10
2842/1	28	0.006	0,15	0.025	0,63	1-10
2843/1	26	0.006	0,15	0.028	0,71	1-10

*See color chart below

†All product supplied is to the MIL-W-16878 E revision. Revision F product can be supplied upon request, subject to minimum order quantity and lead time requirements.

Teflon® is a registered trademark of E.I. DuPont

*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)

HOOK-UP WIRE

TFE TEFLON® INSULATION

MIL-W-16878E (TYPE E)††, 200°C/600V
 UL 1213, 105°C/VOLTAGE NOT SPECIFIED
 RoHS COMPLIANT

CERTIFIED PERFORMANCE — HIGH-RELIABILITY TFE TEFLON® INSULATION

Alpha's TFE Teflon wire family includes a full range of sizes, colors, conductor types and voltage ratings for both commercial (UL styles) and high reliability military OEM products.

Alpha's TFE Teflon is rated for continuous operation in temperatures from -60°C to 200°C (UL: 105°C) and retains its exceptional toughness and flexibility within this range. TFE Teflon is not degraded by chemicals which makes it ideal for use in harsh environments. Teflon is widely regarded as the ultimate high performance wire insulation material for environments characterized by extreme thermal or chemical conditions.

CHOOSE TFE TEFLON® FOR:

- Resistance To All Chemicals
- High Temperature Use Up To 200°C (UL: 105°C)
- Low Coefficient of Friction
- Outstanding Electrical Properties

TFE TEFLON® APPLICATIONS:

- Military Harnessing
- Medical Electronics
- Power Supply Lead Wire
- Appliance Wiring

CHARACTERISTICS

OPERATING TEMPERATURE:

- -60°C to 200°C (UL: 105°C)

VOLTAGE RATING:

- 600 Volt (UL: Voltage Not Specified)

PRODUCT DESCRIPTION:

- Conductor: Stranded or Solid Silver-Plated Copper
- Insulation: Color-Coded, Extruded TFE Teflon

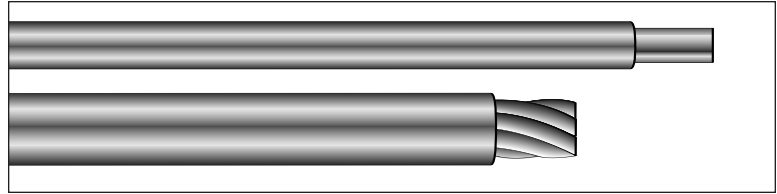
SPECIFICATIONS

- UL AWM Style 1213
- MIL-W-16878E Type E
- RoHS Compliant



AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups
 1000 ft put-ups may contain multiple lengths



STRANDED CONDUCTOR

Alpha Part No.	Type Designation	Conductor AWG	Strand	Insul. Thickness		Diameter		Stock Color*
				Inches	mm	Inches	mm	
5851	E-30	30	7/38	0.010	0,25	0.032	0,81	1-10
5852	E-28	28	7/36	0.010	0,25	0.036	0,91	1-10
5853	E-26	26	7/34	0.010	0,25	0.040	1,02	1-10
5853/19	E-26	26	19/38	0.010	0,25	0.041	1,04	1-10
5854	E-24	24	19/36	0.010	0,25	0.045	1,14	1-10
5854/7	E-24	24	7/32	0.010	0,25	0.044	1,12	1-10
5855	E-22	22	19/34	0.010	0,25	0.051	1,30	1-10
5855/7	E-22	22	7/30	0.010	0,25	0.055	1,27	1-10
5856	E-20	20	19/32	0.010	0,25	0.059	1,50	1-10
5856/7	E-20	20	7/28	0.010	0,25	0.058	1,47	1-10
5857	E-18	18	19/30	0.010	0,25	0.070	1,78	1-10
5858	E-16	16	19/29	0.010	0,25	0.077	1,96	1-10
5859†	E-14	14	19/27	0.012	0,30	0.094	2,39	1
5859/12†	E-12	12	19/25	0.012	0,30	0.113	2,87	1
5859/10†	E-10	10	37/26	0.012	0,30	0.134	3,40	1

*See color chart below

SOLID CONDUCTOR

Alpha Part No.	Conductor AWG	Insul. Thickness		Diameter		Stock Color*
		Inches	mm	Inches	mm	
2853/1	26	0.010	0,25	0.036	0,91	1-10
2854/1	24	0.010	0,25	0.040	1,02	1-10
2855/1	22	0.010	0,25	0.045	1,14	1-10
2856/1	20	0.010	0,25	0.052	1,32	1-3
2857/1	18	0.010	0,25	0.060	1,52	1-3

*See color chart below

†Not UL AWM Style 1213

††All product supplied is to the MIL-W-16878 E revision. Revision F product can be supplied upon request, subject to minimum order quantity and lead time requirements.

Teflon® is a registered trademark of E.I. DuPont

*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)



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 Email: info@alphawire.com

MIL-W-16878E (TYPE EE)^{††}, 200°C, 1000V
 UL 1180, 200°C, 300V
 RoHS COMPLIANT

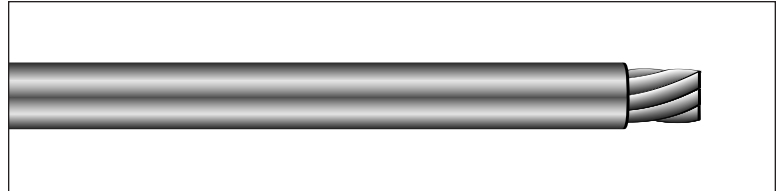
HOOK-UP WIRE

TFE TEFLON[®] INSULATION

CERTIFIED PERFORMANCE — HIGH-RELIABILITY TFE TEFLON[®] INSULATION

Alpha's TFE Teflon wire family includes a full range of sizes, colors, conductor types and voltage ratings for both commercial (UL styles) and high reliability military OEM products.

Alpha's TFE Teflon is rated for continuous operation in temperatures from -60°C to 200°C and retains its exceptional toughness and flexibility within this range. TFE Teflon is not degraded by chemicals which makes it ideal for use in harsh environments. Teflon is widely regarded as the ultimate high performance wire insulation material for environments characterized by extreme thermal or chemical conditions.



Alpha Part No.	Type Designation	Conductor		Insul. Thickness		Diameter		Stock Color*
		AWG	Strand	Inches	mm	Inches	mm	
5874	EE-24	24	19/36	0.014	0,35	0.052	1,32	1-10
5875	EE-22	22	19/34	0.014	0,35	0.059	1,49	1-10
5876	EE-20	20	19/32	0.014	0,35	0.067	1,70	1-10
5877	EE-18	18	19/30	0.014	0,35	0.078	1,98	1-10
5878	EE-16	16	19/29	0.014	0,35	0.086	2,18	1
5879	EE-14	14	19/27	0.017	0,43	0.105	2,67	1
5879/12	EE-12	12	19/25	0.017	0,43	0.124	3,15	1
5879/10	EE-10	10	37/26	0.017	0,43	0.146	3,70	1
5879/8†	EE-8	8	133/29	0.020	0,50	0.206	5,23	1

*See color chart below

†Not UL AWM 1180 – AWM 1180 requires that 18AWG thru 10AWG have a temperature marker.

††All product supplied is to the MIL-W-16878 E revision. Revision F product can be supplied upon request, subject to minimum order quantity and lead time requirements.

Teflon[®] is a registered trademark of E.I. DuPont

CHOOSE TFE TEFLON[®] FOR:

- Resistance To All Chemicals
- High Temperature Use Up To 200°C
- Low Coefficient of Friction
- Outstanding Electrical Properties

TFE TEFLON[®] APPLICATIONS:

- Military Harnessing
- Medical Electronics
- Power Supply Lead Wire
- Appliance Wiring

CHARACTERISTICS

OPERATING TEMPERATURE:

- -60°C to 200°C

VOLTAGE RATING:

- 1000 Volt (MIL), 300 Volt (UL)

PRODUCT DESCRIPTION:

- Conductor: Stranded Silver-Plated Copper
- Insulation: Color-Coded, Extruded TFE Teflon

SPECIFICATIONS

- UL AWM Style 1180
- MIL-W-16878E Type EE
- RoHS Compliant



Recognized Component
 Underwriters Laboratories Inc.



Passes
 UL VW-1 Flame Test
 Underwriters Laboratories Inc.



RoHS Compliant

AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups
 1000 ft put-ups may contain multiple lengths

*STOCK COLOR CHART

1—White	3—Red	5—Yellow	7—Brown	9—Gray
2—Black	4—Green	6—Blue	8—Orange	10—Violet (purple)

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HOOK-UP WIRE

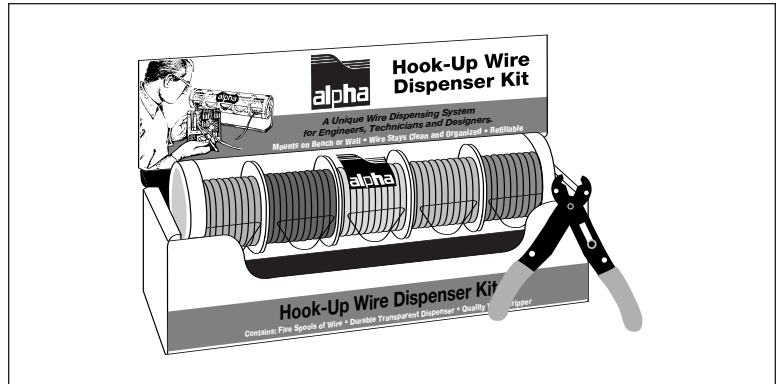
HOOK-UP WIRE KITS

UL 1007/1569
CSA TR-64
MIL-W-76B, TYPE MW
RoHS COMPLIANT

HOOK-UP WIRE KITS

Alpha's Hook-Up Wire Kits contain an assortment of 100 ft (30,5m) 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 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.



CHOOSE HOOK-UP WIRE KITS FOR:

- Convenient, Wire Dispensing System
- Five Assorted Hook-Up Wire Colors
- Includes Cut and Strip Tool
- Uses Standard Alpha Hook-Up Wire Spools When Refills Are Required

CHARACTERISTICS

OPERATING TEMPERATURE:

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

VOLTAGE RATING:

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

PRODUCT DESCRIPTION:

- Conductor:
Stranded Tinned Copper
- Insulation:
Color-Coded PVC
- AWG Size:
22 AWG (HU-KIT-10, 20)
24 AWG (HU-KIT-30, 40)

SPECIFICATIONS

- UL AWM Styles 1007 and 1569
- CSA TR-64
- MIL-W-76B, Type MW
- RoHS Compliant

 Recognized Component
 Passes UL VW-1 Flame Test
 Certified
 Underwriters Laboratories Inc. Underwriters Laboratories Inc. Canadian Standards Association



Alpha Part No.	Contents	Quantity		Reorder No.
		Ft.	m	
HU-KIT-10 (22 AWG)	MIL-W-76B Type MW / White	100	30,5	1551
	MIL-W-76B Type MW / Black	100	30,5	1551
	MIL-W-76B Type MW / Red	100	30,5	1551
	MIL-W-76B Type MW / Green	100	30,5	1551
	MIL-W-76B Type MW / Blue	100	30,5	1551
	Cut and Strip Tool			

Alpha Part No.	Contents	Quantity		Reorder No.
		Ft.	m	
HU-KIT-20 (22 AWG)	UL 1007/1569, CSA TR-64 / White	100	30,5	3051
	UL 1007/1569, CSA TR-64 / Black	100	30,5	3051
	UL 1007/1569, CSA TR-64 / Red	100	30,5	3051
	UL 1007/1569, CSA TR-64 / Green	100	30,5	3051
	UL 1007/1569, CSA TR-64 / Blue	100	30,5	3051
	Cut and Strip Tool			

Alpha Part No.	Contents	Quantity		Reorder No.
		Ft.	m	
HU-KIT-30 (24 AWG)	MIL-W-76B Type MW / White	100	30,5	1550
	MIL-W-76B Type MW / Black	100	30,5	1550
	MIL-W-76B Type MW / Red	100	30,5	1550
	MIL-W-76B Type MW / Green	100	30,5	1550
	MIL-W-76B Type MW / Blue	100	30,5	1550
	Cut and Strip Tool			

Alpha Part No.	Contents	Quantity		Reorder No.
		Ft.	m	
HU-KIT-40 (24 AWG)	UL 1007/1569, CSA TR-64 / White	100	30,5	3050
	UL 1007/1569, CSA TR-64 / Black	100	30,5	3050
	UL 1007/1569, CSA TR-64 / Red	100	30,5	3050
	UL 1007/1569, CSA TR-64 / Green	100	30,5	3050
	UL 1007/1569, CSA TR-64 / Blue	100	30,5	3050
	Cut and Strip Tool			



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