

UL/CSA RECOGNIZED WIRE

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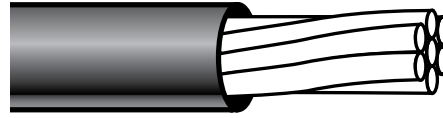
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UL/CSA RECOGNIZED WIRE

SYNOPOSIS OF POPULAR UNDERWRITERS & CANADIAN STANDARDS ASSN. ELECTRONIC HOOK UP WIRES UNDERWRITERS APPLIANCE WIRING MATERIAL (AWM) HOOKUP WIRES

U.L. STYLE NUMBER	UL RATING		WIRE INSULATION TYPE	SIZE RANGE (AWG)	USAGE	
	VOLTAGE	TEMP °C				
1004 1005 1006	none none none	80 90 105	.008" PVC + nylon .008" PVC + nylon .008" PVC + nylon	30 - 16 30 - 16 30 - 16	General purpose appliance wiring.	
1503	150	85	.010" PVC + shid + jkt	26 - 20		
1007	300	80	1/64" PVC	32 - 16	600 volt rating for electronic use. Rated 300 volts for appliance usage.	
1569	300	105	1/64" PVC	30 - 10		
1008	300	80	1/64" PVC + nylon	28 - 12		
1009 1010	300 300	90 105	1/64" PVC + nylon 1/64" PVC + nylon	28 - 12 28 - 12		
1195 1208	300 300	80 80	.015" PVC .013" PVC	30 - 14 30 - 16	Internal wiring in electric bookkeeping, accounting or time-recording machine.	
1011 1013 1015 1015 1015 1015	600 600 600 600 600 600	80 90 105 105 105 105	1/32" PVC 1/32" PVC 1/32" PVC 1/32" PVC 1/32" PVC 1/32" PVC	28 - 9 28 - 9 28 - 9 8 - 7 6 - 2 1 - 3/0	Rated 600 volts for general appliance use, 2500 volts for electronic use.	
1012 1014 1016	600 600 600	80 90 105	1/32" PVC + nylon 1/32" PVC + nylon 1/32" PVC + nylon	28 - 9 28 - 9 28 - 9	General purpose appliance wiring 2500 volt electronic use.	
1017 1018 1019	600 600 600	80 80 80	3/64" PVC 3/64" PVC 1/16" PVC	22 - 8 8 - 6 8 - 2	General purpose appliance wiring.	
1020 1021 1022 1023	600 600 600 600	80 80 80 80	5/64" PVC 3/32" PVC 7/64" PVC 1/8" PVC	1 - 4/0 225 - 500 MCM 525 - 1M, MCM 1.1 - 2M, MCM		
1024 1025 1026 1027	600 600 600 600	90 90 90 90	3/64" PVC 1/16" PVC 1/16" PVC 5/64" PVC	22 - 8 8 - 6 8 - 2 1 - 4/0		
1028 1029	600/2500 600/2500	105 105	3/64" PVC 3/64" PVC + nylon	22 - 8 8 - 6		General purpose appliance wiring 2500 volts electronic use.
1316 1317 1318 1319 1320 1321	600 600 600 600 600 600	105 105 105 105 105 105	.015" + nylon .020" + nylon .030" + nylon .040" + nylon .050" + nylon .060" + nylon	26 - 12 10 8 - 6 4 - 2 1 - 4/0 250 - 100 MCM		General purpose appliance wiring. Similar to THHN.
1731	300	105	.009" PVC (semi-rigid)	32 - 16		For further processing in cables for electronic equipment.
1061	300	80	.009" PVC (semi-rigid)	30 - 16		Business machine and electronic equipment
1354	30	80 - 60	.002" - .125" P.E.	40 AWG Min.	Coaxial cable.	
1434	30	60	.009" - .012" F.R.P.E. + nylon	30 - 20	Flame retardant coaxial cable	
10493 10493 10493	300 300 300	80 80 80	.008" PP .010" PP .012" PP	32 - 20 18 - 16 14 - 10	For further processing in cables for electronic equipment or appliances	
CANADIAN STANDARDS ASSOCIATION CERTIFIED HOOKUP WIRES						
U.L. STYLE NUMBER	UL RATING		WIRE INSULATION TYPE	SIZE RANGE (AWG)	USAGE	
	VOLTAGE	TEMP °C				
TR-64 Radio Wire	300	90	1/64" PVC	28 - 14	General radio and electronic usage. Wires having both CSA and U.L. approval are available.	
TR-32 Radio Wire and AWM	600	90	1/32" PVC	24 - 10		
1 A/B	300	90	.009" PVC	30 - 16	(Previously S-R PVC, T2) Internal wiring of process control computers and business machines	
TEW	600	105	various PVC, walls 1/32" min.	26 - 4/0	Thermoplastic equipment wire	
1722	600	125	.031 TPR	28 - 10	600V Appliance 2500V Electronic Use	

U/L RECOGNIZED WIRE



Wires recognized by the Underwriters' Laboratories, Inc for operation in an air environment, U.L. File #E35793.

Thermoplastic
Insulation

Tinned Copper
Stranded

U.L. AWM Style 1061

- U/L Recognized Appliance Wiring Material
- VW-1 Rated
- 80°C Service
- .009" Semi-Rigid Vinyl Insulation
- 300 Volt

Meets MIL-W-16878/1 and CSA AWM I A/B (previously S-R PVC, T2) for 80° Service, except where noted.

Agency Voltage Rating	300 volts.
Factory Spark-Test Voltage	3400 VAC. 100% of all wire is tested at this voltage.
Insulation Breakdown Voltage	> 5000 volts, peak.
IR: Insulation Resistance, wet	> 1500 megohm/100 mtr, metal to water bath at +20°C
Nominal Dielectric Constant value	4
Flame Properties	Self extinguishing. Meets UL VW-1
Fungus	Fungus resistant

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
30	N304-130U-X	1	30	.0100	.254	.030	.762	114.00	374	0.72	1.07
30	N304-738U	7	38	.0120	.305	.032	.813	108.00	354	0.75	1.12
28	N304-128U	1	28	.0126	.320	.033	.838	70.80	232	1.00	1.49
28	N304-736U	7	36	.0150	.381	.035	.889	68.20	224	1.00	1.49
28*	N304-1940U	19	40	.0150	.381	.035	.889	56.70	186	1.40	2.08
26	N304-126U	1	26	.0159	.404	.036	.914	44.50	146	1.35	2.01
26	N304-734U	7	34	.0190	.483	.039	.991	42.60	140	1.50	2.23
26	N304-1938U	19	38	.0190	.483	.039	.991	40.10	132	1.50	2.23
26	N304-6544U*	65	44	.0201	.511	.040	1.02	50.30	165	1.40	2.08
24	N304-124U	1	24	.0201	.511	.040	1.02	27.20	89	1.80	2.68
24	N304-732U	7	32	.0240	.610	.044	1.12	26.20	86	2.00	2.98
24	N304-1936U	19	36	.0240	.610	.044	1.12	25.40	83	2.00	2.98
24	N304-4140U*	41	40	.0245	.622	.045	1.14	25.60	84	1.90	2.83
22	N304-122U	1	22	.0253	.643	.046	1.17	17.20	56	2.60	3.87
22	N304-730U	7	30	.0300	.762	.050	1.27	16.70	55	3.00	4.46
22	N304-1934U	19	34	.0300	.762	.050	1.27	15.90	52	3.00	4.46
22	N304-4138U*	41	38	.0300	.762	.050	1.27	18.93	62	3.60	5.36
20	N304-120U	1	20	.0320	.813	.052	1.32	10.70	35	3.90	5.80
20	N304-728U	7	28	.0380	.965	.058	1.47	10.40	34	4.40	6.55
20	N304-1030U*	10	30	.0380	.965	.058	1.47	11.80	39	4.30	6.40
20	N304-1932U	19	32	.0380	.965	.058	1.47	9.76	32	4.50	6.70
20	N304-4136U*	41	36	.0380	.965	.058	1.47	11.99	39	4.10	6.10
18	N304-118U	1	18	.0403	1.02	.060	1.52	6.78	22	5.70	8.48
18	N304-726U	7	26	.0480	1.22	.068	1.73	6.54	21	6.10	9.08
18	N304-1630U*	16	30	.450	1.14	.066	1.68	6.48	21	6.40	9.52
18	N304-1930U	19	30	.0480	1.22	0.68	1.73	6.22	20	6.50	9.67
18	N304-6536U*	65	36	.0510	1.30	.071	1.80	6.40	21	6.30	9.37
16	N304-116U	1	16	.0508	1.29	.071	1.80	4.26	14	9.50	14.14
16	N304-2630U*	26	30	.0550	1.40	.076	1.93	4.59	15	9.50	14.14
16	N304-10536U*	105	36	.0650	1.65	.085	2.16	4.00	13	9.60	14.29

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, per MIL-STD-681, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "920". That color number, "920" is appended to the part number. Sample part number might be "xxxxxx-xxx-920"

* Non-Military

U/L RECOGNIZED WIRE



U.L. AWM Style 1061

RoHS COMPLIANT PRODUCTS:

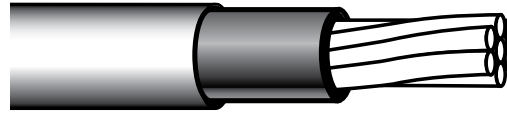
all RoHS products have the letter "R" written into the second position of the Part No.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
30	NR304-130U-X	1	30	.0100	.254	.030	.762	114.00	374	0.72	1.07
30	NR304-738U	7	38	.0120	.305	.032	.813	108.00	354	0.75	1.12
28	NR304-128U	1	28	.0126	.320	.033	.838	70.80	232	1.00	1.49
28	NR304-736U	7	36	.0150	.381	.035	.889	68.20	224	1.00	1.49
28*	NR304-1940U	19	40	.0150	.381	.035	.889	56.70	186	1.40	2.08
26	NR304-126U	1	26	.0159	.404	.036	.914	44.50	146	1.35	2.01
26	NR304-734U	7	34	.0190	.483	.039	.991	42.60	140	1.50	2.23
26	NR304-1938U	19	38	.0190	.483	.039	.991	40.10	132	1.50	2.23
26	NR304-6544U*	65	44	.0201	.511	.040	1.02	50.30	165	1.40	2.08
24	NR304-124U	1	24	.0201	.511	.040	1.02	27.20	89	1.80	2.68
24	NR304-732U	7	32	.0240	.610	.044	1.12	26.20	86	2.00	2.98
24	NR304-1936U	19	36	.0240	.610	.044	1.12	25.40	83	2.00	2.98
24	NR304-4140U*	41	40	.0245	.622	.045	1.14	25.60	84	1.90	2.83
22	NR304-122U	1	22	.0253	.643	.046	1.17	17.20	56	2.60	3.87
22	NR304-730U	7	30	.0300	.762	.050	1.27	16.70	55	3.00	4.46
22	NR304-1934U	19	34	.0300	.762	.050	1.27	15.90	52	3.00	4.46
22	NR304-4138U *	41	38	.0300	.762	.050	1.27	18.93	62	3.60	5.36
20	NR304-120U	1	20	.0320	.813	.052	1.32	10.70	35	3.90	5.80
20	NR304-728U	7	28	.0380	.965	.058	1.47	10.40	34	4.40	6.55
20	NR304-1030U*	10	30	.0380	.965	.058	1.47	11.80	39	4.30	6.40
20	NR304-1932U	19	32	.0380	.965	.058	1.47	9.76	32	4.50	6.70
20	NR304-4136U*	41	36	.0380	.965	.058	1.47	11.99	39	4.10	6.10
18	NR304-118U	1	18	.0403	1.02	.060	1.52	6.78	22	5.70	8.48
18	NR304-726U	7	26	.0480	1.22	.068	1.73	6.54	21	6.10	9.08
18	NR304-1630U*	16	30	.450	1.14	.066	1.68	6.48	21	6.40	9.52
18	NR304-1930U	19	30	.0480	1.22	0.68	1.73	6.22	20	6.50	9.67
18	NR304-6536U*	65	36	.0510	1.30	.071	1.80	6.40	21	6.30	9.37
16	NR304-116U	1	16	.0508	1.29	.071	1.80	4.26	14	9.50	14.14
16	NR304-2630U*	26	30	.0550	1.40	.076	1.93	4.59	15	9.50	14.14
16	NR304-10536U*	105	36	.0650	1.65	.085	2.16	4.00	13	9.60	14.29

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, per MIL-STD-681, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "920". That color number, "920" is appended to the part number. Sample part number might be "xxxxxx-xxx-920"

* Non-Military

U/L RECOGNIZED WIRE



Wires recognized by the Underwriters' Laboratories, Inc for operation in an air or an oil environment, U.L. File #E35793.

Extruded Nylon
Armor Layer Thermoplastic
Insulation Tinned Copper
Stranded

U.L. AWM Style 1006

- U/L Recognized Appliance Wiring Material
- Available as VW-1 Rated
- 105°C Service
- .008" Vinyl Plus Nylon Jacket
- Voltage Not Specified

Agency Voltage Rating	Not specified by UL; depends on intended use.
Factory Spark-Test Voltage	3400 VAC. 100% of all wire is tested at this voltage.
Insulation Breakdown Voltage	> 5000 volts, peak.
IR: Insulation Resistance, wet	> 1500 megohm/100 mtr, metal to water bath at +20°C
Nominal Dielectric Constant value	4
Flame Properties	Self extinguishing. Meets UL VW-1
Fungus	Fungus resistant

Meets MIL-W-16878/17 UL Style 1004 for 80°C Service, and UL Style 1005 for 90°C Service, except where noted.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
30	N305-130N	1	30	.0100	.254	.036	.914	114.00	374	0.77	1.15
30	N305-738N	7	38	.0120	.305	.038	.965	108.00	354	1.00	1.49
28	N305-128N	1	28	.0126	.320	.039	.991	70.80	232	1.15	1.71
28	N305-736N	7	36	.0150	.381	.041	1.04	68.20	224	1.22	1.82
28	N305-1940N*	19	40	.0150	.381	.041	1.04	56.70	186	1.88	2.80
26	N305-126N	1	26	.0159	.404	.042	1.07	44.50	146	1.52	2.26
26	N305-734N	7	34	.0190	.483	.045	1.14	42.60	140	1.65	2.46
26	N305-1938N	19	38	.0190	.483	.045	1.14	40.10	132	1.75	2.60
24	N305-124N	1	24	.0201	.511	.046	1.17	27.20	89	2.00	2.97
24	N305-732N	7	32	.0240	.610	.050	1.27	26.20	86	2.15	3.20
24	N305-1936N	19	36	.0240	.610	.050	1.27	25.40	83	2.25	3.85
22	N305-122N	1	22	.0253	.643	.052	1.32	17.20	56	3.00	4.46
22	N305-730N	7	30	.0300	.762	.056	1.42	16.70	55	3.15	4.69
22	N305-1934N	19	34	.0300	.762	.056	1.42	15.90	52	3.25	4.84
20	N305-120N	1	20	.0320	.813	.056	1.42	10.70	35	4.50	6.70
20	N305-728N	7	28	.0380	.965	.064	1.63	10.40	34	4.60	6.85
20	N305-1030N	10	30	.0380	.965	.064	1.63	11.80	39	4.70	7.00
20	N305-1932N	19	32	.0380	.965	.064	1.63	9.76	32	4.75	7.10
18	N305-118N	1	18	.0430	1.02	.066	1.68	6.78	22	6.20	9.23
18	N305-726N	7	26	.0480	1.22	.074	1.88	6.54	21	6.60	9.82
18	N305-1630N*	16	30	.0450	1.14	.071	1.80	6.48	21	7.00	6.70
18	N305-1930N	19	30	.0480	1.22	.074	1.88	6.22	20	7.00	10.42
16	N305-116N	1	16	.0508	1.29	.079	2.01	4.26	14	8.40	12.50
16	N305-2630N	26	30	.0550	1.40	.085	2.16	4.59	15	9.50	14.14

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

U/L RECOGNIZED WIRE



U.L. AWM Style 1006

RoHS COMPLIANT PRODUCTS:

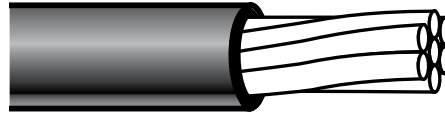
all RoHS products have the letter "R" written into the second position of the Part No.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
30	NR305-130N	1	30	.0100	.254	.036	.914	114.00	374	0.77	1.15
30	NR305-738N	7	38	.0120	.305	.038	.965	108.00	354	1.00	1.49
28	NR305-128N	1	28	.0126	.320	.039	.991	70.80	232	1.15	1.71
28	NR305-736N	7	36	.0150	.381	.041	1.04	68.20	224	1.22	1.82
28	NR305-1940N*	19	40	.0150	.381	.041	1.04	56.70	186	1.88	2.80
26	NR305-126N	1	26	.0159	.404	.042	1.07	44.50	146	1.52	2.26
26	NR305-734N	7	34	.0190	.483	.045	1.14	42.60	140	1.65	2.46
26	NR305-1938N	19	38	.0190	.483	.045	1.14	40.10	132	1.75	2.60
24	NR305-124N	1	24	.0201	.511	.046	1.17	27.20	89	2.00	2.97
24	NR305-732N	7	32	.0240	.610	.050	1.27	26.20	86	2.15	3.20
24	NR305-1936N	19	36	.0240	.610	.050	1.27	25.40	83	2.25	3.85
22	NR305-122N	1	22	.0253	.643	.052	1.32	17.20	56	3.00	4.46
22	NR305-730N	7	30	.0300	.762	.056	1.42	16.70	55	3.15	4.69
22	NR305-1934N	19	34	.0300	.762	.056	1.42	15.90	52	3.25	4.84
20	NR305-120N	1	20	.0320	.813	.056	1.42	10.70	35	4.50	6.70
20	NR305-728N	7	28	.0380	.965	.064	1.63	10.40	34	4.60	6.85
20	NR305-1030N	10	30	.0380	.965	.064	1.63	11.80	39	4.70	7.00
20	NR305-1932N	19	32	.0380	.965	.064	1.63	9.76	32	4.75	7.10
18	NR305-118N	1	18	.0430	1.02	.066	1.68	6.78	22	6.20	9.23
18	NR305-726N	7	26	.0480	1.22	.074	1.88	6.54	21	6.60	9.82
18	NR305-1630N*	16	30	.0450	1.14	.071	1.80	6.48	21	7.00	6.70
18	NR305-1930N	19	30	.0480	1.22	.074	1.88	6.22	20	7.00	10.42
16	NR305-116N	1	16	.0508	1.29	.079	2.01	4.26	14	8.40	12.50
16	NR305-2630N	26	30	.0550	1.40	.085	2.16	4.59	15	9.50	14.14

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

U/L RECOGNIZED WIRE



Thermoplastic
Insulation

Tinned Copper
Stranded

Wires recognized by the Underwriters' Laboratories, Inc for operation in an air or an oil environment, U.L. File #E35793.

U.L. AWM Style 1007

- U/L Recognized Appliance Wiring Material
- Available as VW-1 Rated - 80°C Service
- 1/64" Vinyl Insulation U.L. Rated
- 300 Volt Appliance 600 Volt Electronic

Meets MIL-W-16878/2 and UL Style 1569 for 80°C, 90°C, 105°C, 300V, except where noted.

Agency Voltage Rating	300 V for appliance use, 600 V peak, for electronic use.
Factory Spark-Test Voltage	5000 VAC. 100% of all wire is tested at this voltage.
Insulation Breakdown Voltage	> 7000 volts, peak.
IR: Insulation Resistance, wet	> 2000 megohm/100 mtr, metal to water bath at +20°C
Nominal Dielectric Constant value	4
Flame Properties	Self extinguishing. Meets UL VW-1
Fungus	Fungus resistant

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
28	N303-736U	7	36	.0150	.381	.047	1.19	68.2	224	1.56	2.32
26	N303-126U	1	26	.0159	.404	.050	1.27	44.5	146	2.00	2.98
26	N303-734U	7	34	.0190	.483	.053	1.35	42.6	140	2.10	3.1
26	N303-1938U	19	38	.0190	.483	.053	1.35	40.1	132	2.20	3.3
24	N303-124U	1	24	.0201	.511	.054	1.37	27.2	89	2.50	3.7
24	N303-732U	7	32	.0240	.610	.058	1.47	26.2	86	2.60	3.9
24	N303-1936U	19	36	.0240	.610	.058	1.47	25.4	83	2.75	4.1
22	N303-122U	1	22	.0253	.643	.059	1.50	17.2	56	3.50	5.2
22	N303-730U	7	30	.0300	.762	.064	1.63	16.7	55	3.65	5.4
22	N303-1934U	19	34	.0300	.762	.064	1.63	15.9	52	3.75	5.6
20	N303-120U	1	20	.0320	.813	.066	1.68	10.7	35	5.30	7.9
20	N303-728U	7	28	.0380	.965	.072	1.83	10.4	34	5.40	8.0
20	N303-1030U	10	30	.0380	.965	.072	1.83	11.8	39	5.45	8.1
20	N303-1932U	19	32	.0380	.965	.072	1.83	9.76	32	5.50	8.2
18	N303-118U	1	18	.0403	1.02	.075	1.91	6.78	22	7.80	11.6
18	N303-726U	7	26	.0480	1.22	.082	2.08	6.54	21	7.90	11.8
18	N303-1630U*	16	30	.0450	1.14	.077	1.96	6.48	21	7.90	11.8
18	N303-1930U	19	30	.0480	1.22	.082	2.08	6.22	20	8.00	11.9
16	N303-116U	1	16	.0508	1.29	.085	2.16	4.26	14	8.50	12.7
16	N303-2630U	26	30	.0550	1.40	.094	2.39	4.59	15	10.50	15.6

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, per MIL-STD-681, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "920". That color number, "920" is appended to the part number. Sample part number might be "xxxxxx-xxx-920"

* Non-Military

U/L RECOGNIZED WIRE



U.L. AWM Style 1007

RoHS COMPLIANT PRODUCTS:

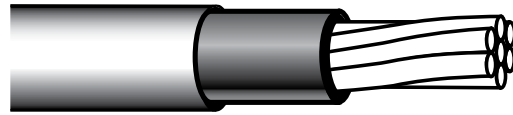
all RoHS products have the letter "R" written into the second position of the Part No.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
28	NR303-736U	7	36	.0150	.381	.047	1.19	68.2	224	1.56	2.32
26	NR303-126U	1	26	.0159	.404	.050	1.27	44.5	146	2.00	2.98
26	NR303-734U	7	34	.0190	.483	.053	1.35	42.6	140	2.10	3.1
26	NR303-1938U	19	38	.0190	.483	.053	1.35	40.1	132	2.20	3.3
24	NR303-124U	1	24	.0201	.511	.054	1.37	27.2	89	2.50	3.7
24	NR303-732U	7	32	.0240	.610	.058	1.47	26.2	86	2.60	3.9
24	NR303-1936U	19	36	.0240	.610	.058	1.47	25.4	83	2.75	4.1
22	NR303-122U	1	22	.0253	.643	.059	1.50	17.2	56	3.50	5.2
22	NR303-730U	7	30	.0300	.762	.064	1.63	16.7	55	3.65	5.4
22	NR303-1934U	19	34	.0300	.762	.064	1.63	15.9	52	3.75	5.6
20	NR303-120U	1	20	.0320	.813	.066	1.68	10.7	35	5.30	7.9
20	NR303-728U	7	28	.0380	.965	.072	1.83	10.4	34	5.40	8.0
20	NR303-1030U	10	30	.0380	.965	.072	1.83	11.8	39	5.45	8.1
20	NR303-1932U	19	32	.0380	.965	.072	1.83	9.76	32	5.50	8.2
18	NR303-118U	1	18	.0403	1.02	.075	1.91	6.78	22	7.80	11.6
18	NR303-726U	7	26	.0480	1.22	.082	2.08	6.54	21	7.90	11.8
18	NR303-1630U*	16	30	.0450	1.14	.077	1.96	6.48	21	7.90	11.8
18	NR303-1930U	19	30	.0480	1.22	.082	2.08	6.22	20	8.00	11.9
16	NR303-116U	1	16	.0508	1.29	.085	2.16	4.26	14	8.50	12.7
16	NR303-2630U	26	30	.0550	1.40	.094	2.39	4.59	15	10.50	15.6

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, per MIL-STD-681, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "920". That color number, "920" is appended to the part number. Sample part number might be "xxxxxx-xxx-920"

* Non-Military

U/L RECOGNIZED WIRE



Wires recognized by the Underwriters' Laboratories, Inc for operation in an air or an oil environment, U.L. File #E35793.

Extruded Nylon
Armor Layer Thermoplastic
Insulation Tinned Copper
Stranded

U.L. AWM Style 1010

- U/L Recognized Appliance Wiring Material
- VW-1 Rated
- 1/64" Vinyl Plus Nylon Jacket
- 105°C Service** - U.L. Rated
- 300 Volt Appliance 600 Volt Electronic

Meets MIL-W-16878/18 UL Style 1008 for 80°C Service, and UL Style 1009 for 90°C Service, except where noted.

Agency Voltage Rating	300 V for appliance use, 600 V peak, for electronic use.
Factory Spark-Test Voltage	5000 VAC. 100% of all wire is tested at this voltage.
Insulation Breakdown Voltage	> 7000 volts, peak.
IR: Insulation Resistance, wet	> 2000 megohm/100 mtr, metal to water bath at +20°C
Nominal Dielectric Constant value	4
Flame Properties	Self extinguishing. Meets UL VW-1
Fungus	Fungus resistant

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
26	N300-126N	1	26	.0159	.404	.056	1.42	44.50	146	2.00	3.0
26	N300-734N	7	34	.0190	.483	.059	1.50	42.60	140	2.60	3.9
26	N300-1938N	19	38	.0190	.483	.059	1.50	40.10	132	2.70	4.0
24	N300-124N	1	24	.0201	.511	.060	1.52	27.2	89	3.15	4.7
24	N300-732N	7	32	.0240	.610	.064	1.63	26.20	86	3.25	4.8
24	N300-1936N	19	36	.0240	.610	.064	1.63	25.40	83	3.25	4.8
22	N300-122N	1	22	.0253	.643	.065	1.65	17.20	56	3.70	5.5
22	N300-730N	7	30	.0300	.762	.070	1.78	16.70	55	3.90	5.8
22	N300-1934N	19	34	.0300	.762	.070	1.78	15.90	52	4.00	6.0
20	N300-120N	1	20	.0320	.813	.072	1.83	10.70	35	5.50	8.2
20	N300-728N	7	28	.0380	.965	.078	1.98	10.40	34	6.00	8.9
20	N300-1030N	10	30	.0380	.965	.078	1.98	11.80	39	5.70	8.5
20	N300-1932N	19	32	.0380	.965	.078	1.98	9.76	32	6.00	8.9
18	N300-118N	1	18	.0403	1.02	.083	2.11	6.78	22	7.90	11.8
18	N300-726N	7	26	.0480	1.22	.090	2.29	6.54	21	8.30	12.4
18	N300-1630N*	16	30	.0450	1.14	.082	2.08	6.48	21	8.37	12.5
18	N300-1930N	19	30	.0480	1.22	.090	2.29	6.22	20	8.50	12.7
16	N300-116N	1	16	.0508	1.29	.093	2.36	4.26	14	11.25	16.7
16	N300-2630N	26	30	.0550	1.40	.102	2.60	4.59	15	11.25	16.7
14	N300-114N	1	14	.0641	1.63	.106	2.70	2.68	9.0	16.50	24.6
14	N300-4130N	41	30	.0710	1.80	.120	3.05	2.94	9.7	16.40	24.4
12	N300-3728N	37	28	.0890	2.26	.132	3.53	2.01	6.6	25.00	37.2
12	N300-6530N	65	30	.0890	2.26	.141	3.58	1.85	6.1	26.50	39.4

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

** Suitable for operation at +105°C in air or up to 80°C in oil

U/L RECOGNIZED WIRE



U.L. AWM Style 1010

RoHS COMPLIANT PRODUCTS:

all RoHS products have the letter "R" written into the second position of the Part No.

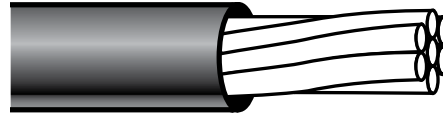
GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
26	NR300-126N	1	26	.0159	.404	.056	1.42	44.50	146	2.00	3.0
26	NR300-734N	7	34	.0190	.483	.059	1.50	42.60	140	2.60	3.9
26	NR300-1938N	19	38	.0190	.483	.059	1.50	40.10	132	2.70	4.0
24	NR300-124N	1	24	.0201	.511	.060	1.52	27.2	89	3.15	4.7
24	NR300-732N	7	32	.0240	.610	.064	1.63	26.20	86	3.25	4.8
24	NR300-1936N	19	36	.0240	.610	.064	1.63	25.40	83	3.25	4.8
22	NR300-122N	1	22	.0253	.643	.065	1.65	17.20	56	3.70	5.5
22	NR300-730N	7	30	.0300	.762	.070	1.78	16.70	55	3.90	5.8
22	NR300-1934N	19	34	.0300	.762	.070	1.78	15.90	52	4.00	6.0
20	NR300-120N	1	20	.0320	.813	.072	1.83	10.70	35	5.50	8.2
20	NR300-728N	7	28	.0380	.965	.078	1.98	10.40	34	6.00	8.9
20	NR300-1030N	10	30	.0380	.965	.078	1.98	11.80	39	5.70	8.5
20	NR300-1932N	19	32	.0380	.965	.078	1.98	9.76	32	6.00	8.9
18	NR300-118N	1	18	.0403	1.02	.083	2.11	6.78	22	7.90	11.8
18	NR300-726N	7	26	.0480	1.22	.090	2.29	6.54	21	8.30	12.4
18	NR300-1630N*	16	30	.0450	1.14	.082	2.08	6.48	21	8.37	12.5
18	NR300-1930N	19	30	.0480	1.22	.090	2.29	6.22	20	8.50	12.7
16	NR300-116N	1	16	.0508	1.29	.093	2.36	4.26	14	11.25	16.7
16	NR300-2630N	26	30	.0550	1.40	.102	2.60	4.59	15	11.25	16.7
14	NR300-114N	1	14	.0641	1.63	.106	2.70	2.68	9.0	16.50	24.6
14	NR300-4130N	41	30	.0710	1.80	.120	3.05	2.94	9.7	16.40	24.4
12	NR300-3728N	37	28	.0890	2.26	.132	3.53	2.01	6.6	25.00	37.2
12	NR300-6530N	65	30	.0890	2.26	.141	3.58	1.85	6.1	26.50	39.4

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

** Suitable for operation at +105°C in air or up to 80°C in oil

U/L RECOGNIZED WIRE



Thermoplastic
Insulation

Tinned Copper
Stranded

Wires recognized by the Underwriters' Laboratories, Inc for operation in an air environment, U.L. File #E35793. Intended use: for further processing in cables for electronic equipment.

U.L. AWM Style 1731

- U/L Recognized Appliance Wiring Material
- 105°C Service
- .009" Semi-Rigid Vinyl Insulation
- U.L. Rated: 300 Volt Service

Meets MIL-W-16878/1 and CSA Type I A/B (previously S-R PVC) for 80° Service, except where noted

Agency Voltage Rating	300 volts.
Factory Spark-Test Voltage	3400 VAC. 100% of all wire is tested at this voltage.
Insulation Breakdown Voltage	> 5000 volts, peak.
IR: Insulation Resistance, wet	> 1500 megohm/100 mtr, metal to water bath at +20°C
Nominal Dielectric Constant value	4
Flame Properties	Self extinguishing. Meets UL VW-1
Fungus	Fungus resistant

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
30	N304-31-130U	1	30	.0100	.254	.030	.762	114.00	374	0.72	1.07
30	N304-31-738U	7	38	.0120	.305	.032	.813	108.00	354	0.75	1.12
28	N304-31-128U	1	28	.0126	.320	.033	.838	70.80	232	1.00	1.49
28	N304-31-736U	7	36	.0150	.381	.035	.889	68.20	224	1.00	1.49
28	N304-31-1940U*	19	40	.0150	.381	.036	.914	56.70	186	1.40	2.08
26	N304-31-126U	1	26	.0159	.404	.036	.914	44.50	146	1.35	2.00
26	N304-31-734U	7	34	.0190	.483	.039	.991	42.60	140	1.50	2.23
26	N304-31-1938U	19	38	.0190	.483	.039	.991	40.10	132	1.50	2.23
24	N304-31-124U	1	24	.0201	.511	.040	1.02	27.20	89	1.80	2.67
24	N304-31-732U	7	32	.0240	.610	.044	1.12	26.20	86	2.00	2.97
24	N304-31-1936U	19	36	.0240	.610	.044	1.12	25.40	83	2.00	2.97
22	N301-31-122U	1	22	.0253	.643	.046	1.17	17.20	56	2.60	3.87
22	N304-31-730U	7	30	.0300	.762	.050	1.27	16.70	55	3.00	4.46
22	N304-31-1934U	19	34	.0300	.762	.050	1.27	15.90	52	3.00	4.46
20	N304-31-120U	1	20	.0320	.813	.052	1.32	10.70	35	3.90	5.80
20	N304-31-728U	7	28	.0380	.965	.058	1.47	10.40	34	4.40	6.55
20	N304-31-1030U*	10	30	.0380	.965	.058	1.47	11.80	39	4.30	6.40
20	N304-31-1932U	19	32	.0380	.965	.058	1.47	9.76	32	4.50	6.70
18	N304-31-118U	1	18	.0403	1.02	.060	1.52	6.78	22	5.70	8.48
18	N304-31-726U	7	26	.0480	1.22	.068	1.73	6.54	21	6.10	9.08
18	N304-31-1630U*	16	30	.0450	1.14	.066	1.68	6.48	21	6.40	9.52
18	N304-31-1930U	19	30	.0480	1.22	.068	1.73	6.22	20	6.50	9.67
16	N304-31-116U	1	16	.0508	1.29	.071	1.80	4.26	14	9.50	14.10
16	N304-31-2630U*	26	30	.0550	1.40	.076	1.93	4.59	15	9.50	14.10

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

U/L RECOGNIZED WIRE

U.L. AWM Style 1731



RoHS COMPLIANT PRODUCTS:

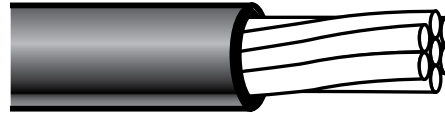
all RoHS products have the letter "R" written into the second position of the Part No.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
30	NR304-31-130U	1	30	.0100	.254	.030	.762	114.00	374	0.72	1.07
30	NR304-31-738U	7	38	.0120	.305	.032	.813	108.00	354	0.75	1.12
28	NR304-31-128U	1	28	.0126	.320	.033	.838	70.80	232	1.00	1.49
28	NR304-31-736U	7	36	.0150	.381	.035	.889	68.20	224	1.00	1.49
28	NR304-31-1940U*	19	40	.0150	.381	.036	.914	56.70	186	1.40	2.08
26	NR304-31-126U	1	26	.0159	.404	.036	.914	44.50	146	1.35	2.00
26	NR304-31-734U	7	34	.0190	.483	.039	.991	42.60	140	1.50	2.23
26	NR304-31-1938U	19	38	.0190	.483	.039	.991	40.10	132	1.50	2.23
24	NR304-31-124U	1	24	.0201	.511	.040	1.02	27.20	89	1.80	2.67
24	NR304-31-732U	7	32	.0240	.610	.044	1.12	26.20	86	2.00	2.97
24	NR304-31-1936U	19	36	.0240	.610	.044	1.12	25.40	83	2.00	2.97
22	NR301-31-122U	1	22	.0253	.643	.046	1.17	17.20	56	2.60	3.87
22	NR304-31-730U	7	30	.0300	.762	.050	1.27	16.70	55	3.00	4.46
22	NR304-31-1934U	19	34	.0300	.762	.050	1.27	15.90	52	3.00	4.46
20	NR304-31-120U	1	20	.0320	.813	.052	1.32	10.70	35	3.90	5.80
20	NR304-31-728U	7	28	.0380	.965	.058	1.47	10.40	34	4.40	6.55
20	NR304-31-1030U*	10	30	.0380	.965	.058	1.47	11.80	39	4.30	6.40
20	NR304-31-1932U	19	32	.0380	.965	.058	1.47	9.76	32	4.50	6.70
18	NR304-31-118U	1	18	.0403	1.02	.060	1.52	6.78	22	5.70	8.48
18	NR304-31-726U	7	26	.0480	1.22	.068	1.73	6.54	21	6.10	9.08
18	NR304-31-1630U*	16	30	.0450	1.14	.066	1.68	6.48	21	6.40	9.52
18	NR304-31-1930U	19	30	.0480	1.22	.068	1.73	6.22	20	6.50	9.67
16	NR304-31-116U	1	16	.0508	1.29	.071	1.80	4.26	14	9.50	14.10
16	NR304-31-2630U*	26	30	.0550	1.40	.076	1.93	4.59	15	9.50	14.10

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

U/L RECOGNIZED WIRE



Thermoplastic
Insulation

Tinned Copper
Stranded

Wires recognized by the Underwriters' Laboratories, Inc for operation in an air or an oil environment, U.L. File #E35793.

U.L. AWM Style 1569

- U/L Recognized Appliance Wiring Material
- VW-1 Rated
- 80°C, 90°C or 105°C
- 1/64" Vinyl Insulation UL Rated
- 300 Volt Appliance 600 Volt Electronic

Meets MIL-W-16878/2 unless noted.
Also meets UL Style 1007, 80°C 300V

Agency Voltage Rating	300 V for appliance use, 600 V peak, for electronic use.
Factory Spark-Test Voltage	5000 VAC. 100% of all wire is tested at this voltage.
Insulation Breakdown Voltage	> 7000 volts, peak.
IR: Insulation Resistance, wet	> 2000 megohm/100 mtr, metal to water bath at +20°C
Nominal Dielectric Constant value	4
Flame Properties	Self extinguishing. Meets UL VW-1
Fungus	Fungus resistant

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω/per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
28	N303-69-736U	7	36	.0150	.300	.047	1.19	64.90	213	1.56	2.3
26	N303-69-126U	1	26	.0159	.404	.050	1.27	44.50	146	3.00	2.6
26	N303-69-734U	7	34	.0190	.483	.053	1.35	42.60	140	2.10	3.1
26	N303-69-1938U	19	38	.0190	.483	.053	1.35	40.10	132	2.20	3.3
24	N303-69-124U	1	24	.0201	.511	.054	1.37	27.20	89	2.50	3.7
24	N303-69-732U	7	32	.0240	.610	.058	1.47	26.20	86	2.60	3.9
24	N303-69-1936U	19	36	.0240	.610	.058	1.47	25.40	83	2.75	4.1
22	N303-69-122U	1	22	.0253	.643	.059	1.50	17.20	56	3.50	5.2
22	N303-69-730U	7	30	.0300	.762	.064	1.63	16.70	55	3.65	5.4
22	N303-69-1934U	19	34	.0300	.762	.064	1.63	15.90	52	3.75	5.6
20	N303-69-120U	1	20	.0320	.813	.066	1.68	10.70	35	5.30	7.9
20	N303-69-728U	7	28	.0380	.965	.072	1.83	10.40	34	5.40	8.0
20	N303-69-1030U	10	30	.0380	.965	.072	1.83	11.80	39	5.45	8.1
20	N303-69-1932U	19	32	.0380	.965	.072	1.83	9.76	32	5.50	8.2
18	N303-69-118U	1	18	.0403	1.02	.075	1.91	6.78	22	7.80	11.6
18	N303-69-726U	7	26	.0480	1.22	.082	2.00	6.54	21	7.90	11.8
18	N303-69-1630U*	16	30	.0450	1.14	.077	1.96	6.48	21	7.90	11.8
18	N303-69-1930U	19	30	.0480	1.22	.082	2.08	6.22	20	8.00	11.9
16	N303-69-116U	1	16	.0508	1.29	.085	2.16	4.26	14	8.50	12.7
16	N303-69-2630U	26	30	.0550	1.40	.094	2.39	4.59	15	10.50	15.6
14	N303-69-114U	1	14	.0641	1.63	.098	2.49	2.68	9.0	15.50	23.1
14	N303-69-4130U†	41	30	.0710	1.80	.112	2.84	2.94	9.7	14.50	21.5
12	N303-69-3728U‡	37	28	.0890	2.26	.124	3.15	2.01	6.6	25.00	37.2
12	N303-69-6530U‡	65	30	.0890	2.26	.132	3.35	1.85	6.1	25.30	37.7
10	N303-69-3726U‡	37	26	.1070	2.72	.139	3.53	1.26	4.1	32.00	47.26
10	N303-69-4927U‡	49	27	.1100	2.79	.142	3.61	1.09	3.6	33.70	50.0
10	N303-69-1053U‡	105	30	.1150	2.92	.149	3.79	.98	3.2	35.70	53.1

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "920". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military † Non-UL1007
‡ UL 1569 Only

U/L RECOGNIZED WIRE



U.L. AWM Style 1569

RoHS COMPLIANT PRODUCTS:

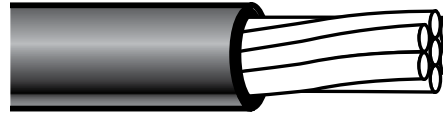
all RoHS products have the letter "R" written into the second position of the Part No.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
28	NR303-69-736U	7	36	.0150	.300	.047	1.19	64.90	213	1.56	2.3
26	NR303-69-126U	1	26	.0159	.404	.050	1.27	44.50	146	3.00	2.6
26	NR303-69-734U	7	34	.0190	.483	.053	1.35	42.60	140	2.10	3.1
26	NR303-69-1938U	19	38	.0190	.483	.053	1.35	40.10	132	2.20	3.3
24	NR303-69-124U	1	24	.0201	.511	.054	1.37	27.20	89	2.50	3.7
24	NR303-69-732U	7	32	.0240	.610	.058	1.47	26.20	86	2.60	3.9
24	NR303-69-1936U	19	36	.0240	.610	.058	1.47	25.40	83	2.75	4.1
22	NR303-69-122U	1	22	.0253	.643	.059	1.50	17.20	56	3.50	5.2
22	NR303-69-730U	7	30	.0300	.762	.064	1.63	16.70	55	3.65	5.4
22	NR303-69-1934U	19	34	.0300	.762	.064	1.63	15.90	52	3.75	5.6
20	NR303-69-120U	1	20	.0320	.813	.066	1.68	10.70	35	5.30	7.9
20	NR303-69-728U	7	28	.0380	.965	.072	1.83	10.40	34	5.40	8.0
20	NR303-69-1030U	10	30	.0380	.965	.072	1.83	11.80	39	5.45	8.1
20	NR303-69-1932U	19	32	.0380	.965	.072	1.83	9.76	32	5.50	8.2
18	NR303-69-118U	1	18	.0403	1.02	.075	1.91	6.78	22	7.80	11.6
18	NR303-69-726U	7	26	.0480	1.22	.082	2.00	6.54	21	7.90	11.8
18	NR303-69-1630U*	16	30	.0450	1.14	.077	1.96	6.48	21	7.90	11.8
18	NR303-69-1930U	19	30	.0480	1.22	.082	2.08	6.22	20	8.00	11.9
16	NR303-69-116U	1	16	.0508	1.29	.085	2.16	4.26	14	8.50	12.7
16	NR303-69-2630U	26	30	.0550	1.40	.094	2.39	4.59	15	10.50	15.6
14	NR303-69-114U	1	14	.0641	1.63	.098	2.49	2.68	9.0	15.50	23.1
14	NR303-69-4130U†	41	30	.0710	1.80	.112	2.84	2.94	9.7	14.50	21.5
12	NR303-69-3728U†	37	28	.0890	2.26	.124	3.15	2.01	6.6	25.00	37.2
12	NR303-69-6530U†	65	30	.0890	2.26	.132	3.35	1.85	6.1	25.30	37.7
10	NR303-69-3726U‡	37	26	.1070	2.72	.139	3.53	1.26	4.1	32.00	47.26
10	NR303-69-4927U‡	49	27	.1100	2.79	.142	3.61	1.09	3.6	33.70	50.0
10	NR303-69-1053U‡	105	30	.1150	2.92	.149	3.79	.98	3.2	35.70	53.1

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "920". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military † Non-UL1007
‡ UL 1569 Only

U/L RECOGNIZED WIRE



Thermoplastic
Insulation

Tinned Copper
Stranded

Wires recognized by the Underwriters' Laboratories, Inc for operation in an air or an oil environment, U.L. File #E35793.

U.L. AWM Style 1015

- U/L Recognized Appliance Wiring Material
- VW-1 Rated
- 1/32" Vinyl Insulation for 24 - 10 gauge
- 105°C Service** UL Rated
- 2500 Volts Electronic 600 Volts Appliance

Meets MIL-W-16878/3, UL Style 1011 for 80°C Service and UL Style 1013 for 90°C Service except where noted.

Agency Voltage Rating	600 V for appliance use, 2500 V peak, for electronic use.
Factory Spark-Test Voltage	6000 VAC. 100% of all wire is tested at this voltage.
Insulation Breakdown Voltage	> 8000 volts, peak.
IR: Insulation Resistance, wet	> 2900 megohm/100 mtr, metal to water bath at +20°C
Nominal Dielectric Constant value	4
Flame Properties	Self extinguishing. Meets UL VW-1
Fungus	Fungus resistant

****Suitable for operation at +105°C in air or up to 80°C in oil.**

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
24	N600-124U	1	24	.0201	.511	.082	2.08	27.20	89	4.2	6.25
24	N600-732U	7	32	.0240	.610	.086	2.18	26.20	86	4.0	5.95
24	N600-1936	19	36	.0240	.610	.086	2.18	25.40	83	4.1	6.10
22	N600-122U	1	22	.0253	.643	.088	2.24	17.20	56	5.0	7.44
22	N600-730U	7	30	.0300	.762	.092	2.34	16.70	55	5.2	7.74
22	N600-1934U	19	34	.0300	.762	.092	2.34	15.90	52	5.3	7.88
20	N600-120U	1	20	.0320	.813	.094	2.39	10.70	35	6.8	10.11
20	N600-728U	7	28	.0380	.965	.100	2.54	10.40	34	7.3	10.86
20	N600-1030U*	10	30	.0380	.965	.100	2.54	11.80	39	7.3	10.86
20	N600-1932U	19	32	.0380	.965	.100	2.54	9.76	32	7.3	10.86
18	N600-118U	1	18	.0403	1.02	.102	2.59	6.78	22	9.3	13.84
18	N600-726U	7	28	.0480	1.22	.110	2.79	6.54	21	9.7	14.43
18	N600-1630U*	16	30	.0450	1.14	.107	2.72	6.48	21	9.8	14.58
18	N600-1930U	19	30	.0480	1.22	.110	2.79	6.22	20	10.0	14.88
16	N600-116U	1	16	.0508	1.29	.113	2.87	4.26	14	12.6	18.75
16	N600-2630U	26	30	.0550	1.40	.117	2.97	4.59	15	12.5	18.60
14	N600-114U	1	14	.0641	1.63	.126	3.20	2.68	9	16.9	25.15
14	N600-4130U	41	30	.0710	1.80	.134	3.40	2.94	9.6	17.9	26.64
12	N600-3728U	37	28	.0890	2.26	.156	3.96	2.01	6.6	28.9	43.00
12	N600-6530U	65	30	.0890	2.26	.165	4.19	1.85	6.1	28.5	42.41
10	N600-3726U	37	26	.1070	2.72	.178	4.52	1.26	4.1	38.6	57.44
10	N600-4927U*	49	27	.1100	2.79	.174	4.42	1.09	3.6	40.6	60.41
10	N600-10530U*	105	30	.1150	2.92	.179	4.55	.98	3.2	41.5	61.75
8	N600-13329U	133	29	.167	4.24	.257	6.52	.710	2.328	70.8	106
6	N600-13327U	133	27	.210	5.3	.330	8.38	.444	1.456	110	165

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

U/L RECOGNIZED WIRE



U.L. AWM Style 1015

RoHS COMPLIANT PRODUCTS:

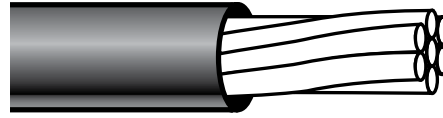
all RoHS products have the letter "R" written into the second position of the Part No.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
24	NR600-124U	1	24	.0201	.511	.082	2.08	27.20	89	4.2	6.25
24	NR600-732U	7	32	.0240	.610	.086	2.18	26.20	86	4.0	5.95
24	NR600-1936	19	36	.0240	.610	.086	2.18	25.40	83	4.1	6.10
22	NR600-122U	1	22	.0253	.643	.088	2.24	17.20	56	5.0	7.44
22	NR600-730U	7	30	.0300	.762	.092	2.34	16.70	55	5.2	7.74
22	NR600-1934U	19	34	.0300	.762	.092	2.34	15.90	52	5.3	7.88
20	NR600-120U	1	20	.0320	.813	.094	2.39	10.70	35	6.8	10.11
20	NR600-728U	7	28	.0380	.965	.100	2.54	10.40	34	7.3	10.86
20	NR600-1030U*	10	30	.0380	.965	.100	2.54	11.80	39	7.3	10.86
20	NR600-1932U	19	32	.0380	.965	.100	2.54	9.76	32	7.3	10.86
18	NR600-118U	1	18	.0403	1.02	.102	2.59	6.78	22	9.3	13.84
18	NR600-726U	7	28	.0480	1.22	.110	2.79	6.54	21	9.7	14.43
18	NR600-1630U*	16	30	.0450	1.14	.107	2.72	6.48	21	9.8	14.58
18	NR600-1930U	19	30	.0480	1.22	.110	2.79	6.22	20	10.0	14.88
16	NR600-116U	1	16	.0508	1.29	.113	2.87	4.26	14	12.6	18.75
16	NR600-2630U	26	30	.0550	1.40	.117	2.97	4.59	15	12.5	18.60
14	NR600-114U	1	14	.0641	1.63	.126	3.20	2.68	9	16.9	25.15
14	NR600-4130U	41	30	.0710	1.80	.134	3.40	2.94	9.6	17.9	26.64
12	NR600-3728U	37	28	.0890	2.26	.156	3.96	2.01	6.6	28.9	43.00
12	NR600-6530U	65	30	.0890	2.26	.165	4.19	1.85	6.1	28.5	42.41
10	NR600-3726U	37	26	.1070	2.72	.178	4.52	1.26	4.1	38.6	57.44
10	NR600-4927U*	49	27	.1100	2.79	.174	4.42	1.09	3.6	40.6	60.41
10	NR600-10530U*	105	30	.1150	2.92	.179	4.55	.98	3.2	41.5	61.75
8	NR600-13329U	133	29	.167	4.24	.257	6.52	.710	2.328	70.8	106
6	NR600-13327U	133	27	.210	5.3	.330	8.38	.444	1.456	110	165

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

CSA CERTIFIED WIRE



Wires certified by the Canadian Standards Association for radio or electronic use. Case File No. LL-32511.

Thermoplastic
Insulation

Tinned Copper
Stranded

CSA-Certified

- Business Machine Wire
- AWM I A/B (previously S-R PVC, T2)
- Rated: 80°C or 300 Volt
- .009" Semi-Rigid Vinyl Insulation

Meets UL Style 1061 and MIL-W-16878/1, except where noted.

Agency Voltage Rating	300 volts.
Factory Spark-Test Voltage	3400 VAC. 100% of all wire is tested at this voltage.
Insulation Breakdown Voltage	> 5000 volts, peak.
IR: Insulation Resistance, wet	> 1500 megohm/100 mtr, metal to water bath at +20°C
Nominal Dielectric Constant value	4
Flame Properties	Self extinguishing. Meets UL VW-1
Fungus	Fungus resistant

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
30	N309-130U	1	30	.0100	.254	.030	.762	114.00	374	.072	1.07
30	N309-738U	7	38	.0120	.305	.032	.813	108.00	354	.075	1.12
28	N309-128U	1	28	.0126	.320	.033	.838	70.80	232	1.00	1.49
28	N309-736U	7	36	.0150	.381	.035	.889	68.20	224	1.00	1.49
28	N309-1940U*	19	40	.0150	.381	.036	.914	56.70	186	1.40	2.08
26	N309-126U	1	26	.0159	.404	.036	.914	44.50	146	1.35	2.00
26	N309-734U	7	34	.0190	.483	.039	.991	42.60	140	1.50	2.23
26	N309-1938U	19	38	.0190	.483	.039	.991	40.10	132	1.50	2.23
24	N309-124U	1	24	.0201	.511	.040	1.02	27.20	89	1.80	2.67
24	N309-732U	7	32	.0240	.610	.044	1.12	26.20	86	2.00	2.97
24	N309-1936U	19	36	.0240	.610	.044	1.12	25.40	83	2.00	2.97
22	N309-122U	1	22	.0253	.643	.046	1.17	17.20	56	2.60	3.87
22	N309-730U	7	30	.0300	.762	.050	1.27	16.70	55	3.00	4.46
22	N309-1934U	19	34	.0300	.762	.050	1.27	15.90	52	3.00	4.46
20	N309-120U	1	20	.0320	.813	.052	1.32	10.70	35	3.90	5.80
20	N309-728U	7	28	.0380	.965	.058	1.47	10.40	34	4.40	6.55
20	N309-1030U*	10	30	.0380	.965	.058	1.47	11.80	39	4.30	6.40
20	N309-1932U	19	32	.0380	.965	.058	1.47	9.76	32	4.50	6.70
18	N309-118U	1	18	.0403	1.02	.060	1.52	6.78	22	5.70	8.48
18	N309-726U	7	26	.0480	1.22	.068	1.73	6.54	21	6.10	9.08
18	N309-1630U*	16	30	.0450	1.22	.066	1.68	6.48	21	6.40	9.52
18	N309-1930U	19	30	.0480	1.22	.068	1.73	6.22	20	6.50	9.67
16	N309-116U	1	16	.0508	1.29	.071	1.80	4.26	14	9.50	14.10
16	N309-2630U*	26	30	.0550	1.40	.076	1.93	4.59	15	9.20	14.10

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

CSA CERTIFIED WIRE



Business Machine Wire

RoHS COMPLIANT PRODUCTS:

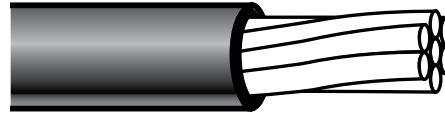
all RoHS products have the letter "R" written into the second position of the Part No.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
30	NR309-130U	1	30	.0100	.254	.030	.762	114.00	374	.072	1.07
30	NR309-738U	7	38	.0120	.305	.032	.813	108.00	354	.075	1.12
28	NR309-128U	1	28	.0126	.320	.033	.838	70.80	232	1.00	1.49
28	NR309-736U	7	36	.0150	.381	.035	.889	68.20	224	1.00	1.49
28	NR309-1940U*	19	40	.0150	.381	.036	.914	56.70	186	1.40	2.08
26	NR309-126U	1	26	.0159	.404	.036	.914	44.50	146	1.35	2.00
26	NR309-734U	7	34	.0190	.483	.039	.991	42.60	140	1.50	2.23
26	NR309-1938U	19	38	.0190	.483	.039	.991	40.10	132	1.50	2.23
24	NR309-124U	1	24	.0201	.511	.040	1.02	27.20	89	1.80	2.67
24	NR309-732U	7	32	.0240	.610	.044	1.12	26.20	86	2.00	2.97
24	NR309-1936U	19	36	.0240	.610	.044	1.12	25.40	83	2.00	2.97
22	NR309-122U	1	22	.0253	.643	.046	1.17	17.20	56	2.60	3.87
22	NR309-730U	7	30	.0300	.762	.050	1.27	16.70	55	3.00	4.46
22	NR309-1934U	19	34	.0300	.762	.050	1.27	15.90	52	3.00	4.46
20	NR309-120U	1	20	.0320	.813	.052	1.32	10.70	35	3.90	5.80
20	NR309-728U	7	28	.0380	.965	.058	1.47	10.40	34	4.40	6.55
20	NR309-1030U*	10	30	.0380	.965	.058	1.47	11.80	39	4.30	6.40
20	NR309-1932U	19	32	.0380	.965	.058	1.47	9.76	32	4.50	6.70
18	NR309-118U	1	18	.0403	1.02	.060	1.52	6.78	22	5.70	8.48
18	NR309-726U	7	26	.0480	1.22	.068	1.73	6.54	21	6.10	9.08
18	NR309-1630U*	16	30	.0450	1.22	.066	1.68	6.48	21	6.40	9.52
18	NR309-1930U	19	30	.0480	1.22	.068	1.73	6.22	20	6.50	9.67
16	NR309-116U	1	16	.0508	1.29	.071	1.80	4.26	14	9.50	14.10
16	NR309-2630U*	26	30	.0550	1.40	.076	1.93	4.59	15	9.20	14.10

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

CSA CERTIFIED WIRE



Wires certified by the Canadian Standards Association for radio or electronic use.

Case File No. LR20482/LL-32511

Thermoplastic Insulation

Tinned Copper Stranded

CSA-Certified

- Radio Wire
- Type TR-64
- Rated: 90°C, 300 Volt
- 1/64" Vinyl Insulation
- Also certified as AWM I A/B at 105°C 300 Volt

Agency Voltage Rating	300 Volts
Factory Spark-Test Voltage	5000 VAC. 100% of all wire is tested at this voltage.
Insulation Breakdown Voltage	> 7000 volts, peak.
IR: Insulation Resistance, wet	> 2000 megohm/100 mtr, metal to water bath at +20°C
Nominal Dielectric Constant value	4
Flame Properties	Self extinguishing. Meets UL VW-1
Fungus	Fungus resistant

Meets UL Style 1007, 1569 and MIL-W-16878/2 except where noted.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
24	N308-124U	1	24	.0201	.511	.054	1.37	27.20	89	2.50	3.7
24	N308-732U	7	32	.0204	.610	.058	1.47	26.20	86	2.60	3.9
24	N308-1936U	19	36	.0240	.610	.058	1.47	25.40	83	2.75	4.1
22	N308-122U	1	22	.0253	.643	.059	1.50	17.20	56	3.50	5.2
22	N308-730U	7	30	.0300	.762	.064	1.63	16.70	55	3.65	5.4
22	N308-1934U	19	34	.0300	.762	.064	1.63	15.90	52	3.75	5.6
20	N308-120U	1	20	.0320	.813	.066	1.68	10.70	35	5.30	7.9
20	N308-728U	7	28	.0380	.965	.072	1.83	10.40	34	5.40	8.0
20	N308-1030U	20	30	.0380	.965	.072	1.83	11.80	39	5.45	8.1
20	N308-1932U	19	32	.0380	.965	.072	1.83	9.76	32	5.50	8.2
18	N308-118U	1	18	.0403	1.02	.075	1.91	6.78	22	7.80	11.6
18	N308-726U	7	26	.0480	1.22	.082	2.08	6.54	21	7.90	11.8
18	N308-1630U*	16	30	.0450	1.22	.077	1.96	6.48	21	7.90	11.8
18	N308-1930U	19	30	.0480	1.22	.082	2.08	6.22	20	8.00	11.9
16	N308-116U	1	16	.0508	1.29	.085	2.16	4.26	14	8.50	12.7
16	N308-2630U	26	30	.0550	1.40	.094	2.39	4.59	15	10.50	15.6
14	N308-114U†	1	14	.0641	1.63	.098	2.49	2.68	9.0	15.50	23.1
14	N308-4130U†	41	30	.0710	1.80	.112	2.84	2.94	9.7	14.50	21.5

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military
† Non-UL 1007

CSA CERTIFIED WIRE

Radio Wire



RoHS COMPLIANT PRODUCTS:

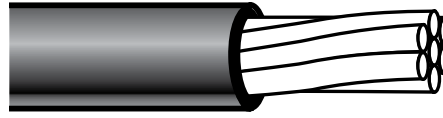
all RoHS products have the letter "R" written into the second position of the Part No.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
24	NR308-124U	1	24	.0201	.511	.054	1.37	27.20	89	2.50	3.7
24	NR308-732U	7	32	.0204	.610	.058	1.47	26.20	86	2.60	3.9
24	NR308-1936U	19	36	.0240	.610	.058	1.47	25.40	83	2.75	4.1
22	NR308-122U	1	22	.0253	.643	.059	1.50	17.20	56	3.50	5.2
22	NR308-730U	7	30	.0300	.762	.064	1.63	16.70	55	3.65	5.4
22	NR308-1934U	19	34	.0300	.762	.064	1.63	15.90	52	3.75	5.6
20	NR308-120U	1	20	.0320	.813	.066	1.68	10.70	35	5.30	7.9
20	NR308-728U	7	28	.0380	.965	.072	1.83	10.40	34	5.40	8.0
20	NR308-1030U	20	30	.0380	.965	.072	1.83	11.80	39	5.45	8.1
20	NR308-1932U	19	32	.0380	.965	.072	1.83	9.76	32	5.50	8.2
18	NR308-118U	1	18	.0403	1.02	.075	1.91	6.78	22	7.80	11.6
18	NR308-726U	7	26	.0480	1.22	.082	2.08	6.54	21	7.90	11.8
18	NR308-1630U*	16	30	.0450	1.22	.077	1.96	6.48	21	7.90	11.8
18	NR308-1930U	19	30	.0480	1.22	.082	2.08	6.22	20	8.00	11.9
16	NR308-116U	1	16	.0508	1.29	.085	2.16	4.26	14	8.50	12.7
16	NR308-2630U	26	30	.0550	1.40	.094	2.39	4.59	15	10.50	15.6
14	NR308-114U†	1	14	.0641	1.63	.098	2.49	2.68	9.0	15.50	23.1
14	NR308-4130U†	41	30	.0710	1.80	.112	2.84	2.94	9.7	14.50	21.5

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military
† Non-UL 1007

CSA CERTIFIED WIRE



Thermoplastic
Insulation

Tinned Copper
Stranded

Wires certified by the Canadian Standards Association for radio or electronic use. Case File No. LL-32511, LR-39099.

CSA-Certified

- Type TEW Thermoplastic Equipment Wire
- 105°C, 600 Volt
- 1/32" Vinyl Insulation
- Also certified as CSA Type TR-32 Radio Wire 90°C, 600 Volt and AWM I A/B 105°C, 600 Volt

Agency Voltage Rating	600 Volts
Factory Spark-Test Voltage	8000 VAC. 100% of all wire is tested at this voltage.
Insulation Breakdown Voltage	> 11000 volts, peak.
IR: Insulation Resistance, wet	> 2900 megohm/100 mtr, metal to water bath at +20°C
Nominal Dielectric Constant value	4
Flame Properties	Self extinguishing. Meets UL VW-1
Fungus	Fungus resistant

Meets UL AWM style 1015 and MIL-W-16878/3, except where noted.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
24	N307-124U	1	24	.0201	.511	.082	2.08	27.20	89	4.2	6.25
24	N307-732U	7	32	.0204	.610	.086	2.18	26.20	86	4.0	5.95
24	N307-1936U	19	36	.0240	.610	.086	2.18	25.40	83	4.1	6.10
22	N307-122U	1	22	.0253	.643	.088	2.24	17.20	56	5.0	7.44
22	N307-730U	7	30	.0300	.762	.092	2.34	16.70	55	5.2	7.74
22	N307-1934U	19	34	.0300	.762	.092	2.34	15.90	52	5.3	7.88
20	N307-120U	1	20	.0320	.813	.094	2.39	10.70	35	6.8	10.11
20	N307-728U	7	28	.0380	.965	.100	2.54	10.40	34	7.3	10.86
20	N307-1030U*	10	30	.0380	.965	.100	2.54	11.80	39	7.4	11.01
20	N307-1932U	19	32	.0380	.965	.100	2.54	9.76	32	7.3	10.86
18	N307-118U	1	18	.0403	1.02	.102	2.59	6.78	22	9.3	13.64
18	N307-726U	7	26	.0480	1.22	.110	2.79	6.54	21	9.7	14.43
18	N307-1630U*	16	30	.0450	1.22	.107	2.99	6.48	21	9.8	14.58
18	N307-1930U	19	30	.0480	1.22	.110	2.79	6.22	20	10.0	14.88
16	N307-116U	1	16	.0508	1.29	.113	2.87	4.26	14	12.6	18.75
16	N307-2630U	26	30	.0550	1.40	.117	2.97	4.59	15	12.5	18.60
14	N307-114U*	1	14	.0641	1.63	.126	3.20	2.68	9.0	16.9	25.15
14	N307-4130U	41	30	.0710	1.80	.134	3.40	2.94	9.7	17.9	26.64
12	N307-6530U	65	30	.0890	2.26	.165	4.19	1.85	6.1	28.5	42.41
10	N307-1053U*	105	30	.1150	2.92	.179	4.55	0.98	3.2	41.5	61.75

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

CSA CERTIFIED WIRE



Type TEW Thermoplastic Equipment Wire

RoHS COMPLIANT PRODUCTS:

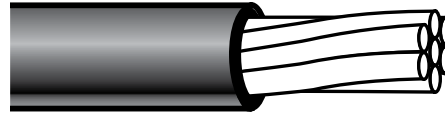
all RoHS products have the letter "R" written into the second position of the Part No.

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
24	NR307-124U	1	24	.0201	.511	.082	2.08	27.20	89	4.2	6.25
24	NR307-732U	7	32	.0204	.610	.086	2.18	26.20	86	4.0	5.95
24	NR307-1936U	19	36	.0240	.610	.086	2.18	25.40	83	4.1	6.10
22	NR307-122U	1	22	.0253	.643	.088	2.24	17.20	56	5.0	7.44
22	NR307-730U	7	30	.0300	.762	.092	2.34	16.70	55	5.2	7.74
22	NR307-1934U	19	34	.0300	.762	.092	2.34	15.90	52	5.3	7.88
20	NR307-120U	1	20	.0320	.813	.094	2.39	10.70	35	6.8	10.11
20	NR307-728U	7	28	.0380	.965	.100	2.54	10.40	34	7.3	10.86
20	NR307-1030U*	10	30	.0380	.965	.100	2.54	11.80	39	7.4	11.01
20	NR307-1932U	19	32	.0380	.965	.100	2.54	9.76	32	7.3	10.86
18	NR307-118U	1	18	.0403	1.02	.102	2.59	6.78	22	9.3	13.64
18	NR307-726U	7	26	.0480	1.22	.110	2.79	6.54	21	9.7	14.43
18	NR307-1630U*	16	30	.0450	1.22	.107	2.99	6.48	21	9.8	14.58
18	NR307-1930U	19	30	.0480	1.22	.110	2.79	6.22	20	10.0	14.88
16	NR307-116U	1	16	.0508	1.29	.113	2.87	4.26	14	12.6	18.75
16	NR307-2630U	26	30	.0550	1.40	.117	2.97	4.59	15	12.5	18.60
14	NR307-114U*	1	14	.0641	1.63	.126	3.20	2.68	9.0	16.9	25.15
14	NR307-4130U	41	30	.0710	1.80	.134	3.40	2.94	9.7	17.9	26.64
12	NR307-6530U	65	30	.0890	2.26	.165	4.19	1.85	6.1	28.5	42.41
10	NR307-1053U*	105	30	.1150	2.92	.179	4.55	0.98	3.2	41.5	61.75

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

* Non-Military

NABOND™ BONDED WIRE



Thermoplastic Insulation Tinned Copper Stranded & Bonded

NABOND™ is a special bonding technique used on the tinned stranded copper conductors in an insulated wire.

Bonded Stranded Conductor

- Forms just like a solid wire - no loose strands
- Absolutely smooth & round - NOT just a tin copper coating
- Conductor conforms to ASTM B470, Type II, "Light Bonding"

The Nabond bonded strand can be used with almost any type of insulation

U.L. AWM STYLE 1061 WITH NABOND VW-1 RATED											
										ALSO AVAILABLE AS CSA T-2	
GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
26	N304-734UB	7	34	.019	.483	.039	.991	42.50	140	1.50	2.23
24	N304-732UB	7	32	.024	.610	.044	1.12	26.20	86	3.0	4.46
22	N304-730UB	7	30	.030	.762	.050	1.27	16.70	55	3.8	5.65
20	N304-728UB	7	28	.038	.965	.058	1.47	11.80	39	5.7	8.48
18	N304-1630UB	16	30	.048	1.22	.068	1.73	7.68	25	8.0	11.9
U.L. AWM STYLE 1007 WITH NABOND VW-1 RATED											
										ALSO AVAILABLE AS CSA TR-64	
26	N303-734UB	7	34	.019	.483	.053	1.35	42.60	140	1.8	2.68
24	N303-732UB	7	32	.024	.610	.058	1.47	26.20	86	3.2	4.76
22	N303-730UB	7	30	.030	.762	.064	1.63	16.70	55	4.0	5.95
20	N303-728UB	7	28	.038	.965	.072	1.83	11.80	39	6.0	8.93
18	N303-1630UB	16	30	.048	1.22	.082	2.08	7.68	25	8.5	12.70
U.L. AWM STYLE 1015 WITH NABOND VW-1 RATED											
										ALSO AVAILABLE AS CSA TR-32 and TYPE TEW	
26	N600-734UB	7	34	.019	.483	.081	2.06	42.50	140	3.7	5.51
24	N600-732UB	7	32	.024	.610	.086	2.18	26.20	86	5.3	7.89
22	N600-730UB	7	30	.030	.762	.092	2.34	16.70	55	6.3	9.37
20	N600-728UB	7	28	.038	.965	.100	2.54	11.80	39	8.5	12.70
18	N600-1630UB	16	30	.048	1.22	.110	2.79	7.68	25	11.3	16.80

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

NABOND™ BONDED WIRE



RoHS COMPLIANT PRODUCTS:

all RoHS products have the letter "R" written into the second position of the Part No.

U.L. AWM STYLE 1061 WITH NABOND VW-1 RATED

ALSO AVAILABLE AS CSA T-2

GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		NOM. FIN. WIRE DIAM.		MAX. RESISTANCE (dc at 20° C) Ω /per		NOM. WT.	
				IN.	mm	IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
26	NR304-734UB	7	34	.019	.483	.039	.991	42.50	140	1.50	2.23
24	NR304-732UB	7	32	.024	.610	.044	1.12	26.20	86	3.0	4.46
22	NR304-730UB	7	30	.030	.762	.050	1.27	16.70	55	3.8	5.65
20	NR304-728UB	7	28	.038	.965	.058	1.47	11.80	39	5.7	8.48
18	NR304-1630UB	16	30	.048	1.22	.068	1.73	7.68	25	8.0	11.9

U.L. AWM STYLE 1007 WITH NABOND VW-1 RATED

ALSO AVAILABLE AS CSA TR-64

26	NR303-734UB	7	34	.019	.483	.053	1.35	42.60	140	1.8	2.68
24	NR303-732UB	7	32	.024	.610	.058	1.47	26.20	86	3.2	4.76
22	NR303-730UB	7	30	.030	.762	.064	1.63	16.70	55	4.0	5.95
20	NR303-728UB	7	28	.038	.965	.072	1.83	11.80	39	6.0	8.93
18	NR303-1630UB	16	30	.048	1.22	.082	2.08	7.68	25	8.5	12.70

U.L. AWM STYLE 1015 WITH NABOND VW-1 RATED

ALSO AVAILABLE AS CSA TR-32 and TYPE TEW

26	NR600-734UB	7	34	.019	.483	.081	2.06	42.50	140	3.7	5.51
24	NR600-732UB	7	32	.024	.610	.086	2.18	26.20	86	5.3	7.89
22	NR600-730UB	7	30	.030	.762	.092	2.34	16.70	55	6.3	9.37
20	NR600-728UB	7	28	.038	.965	.100	2.54	11.80	39	8.5	12.70
18	NR600-1630UB	16	30	.048	1.22	.110	2.79	7.68	25	11.3	16.80

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

ASTM-B-33

Solid Tinned Copper Conductor

SIZES: All gauges, 30 through 12

Solid Tinned Copper

• Part Number

N1000-XX

XX = Gauge

Part No.	Gauge	Dia. (Inches)	Circular Mil Area	Pounds/MFT
N1000-30	30	.0100	101	.301
N1000-28	28	.0126	160	.484
N1000-26	26	.0159	254	.769
N1000-24	24	.0201	404	1.220
N1000-22	22	.0253	642	1.940
N1000-20	20	.0320	1020	3.090
N1000-18	18	.0403	1620	4.920
N1000-16	16	.0508	2580	7.820
N1000-14	14	.0641	4110	12.400
N1000-12	12	.0808	6530	19.800

HIGH-FLEX CONDUCTORS

National manufactures special high-flex insulated wires using an unusually large number of fine tinned copper single wires to form the stranded conductors.

The processes for forming the stranding are handled in a novel manner to provide low bending torque.

Additionally, the insulations are specially chosen for limp properties and are applied using methods to permit maximum flex life.

Some items are also agency-listed although slight sacrifice of limpness may occur due to the requirements of the listing agency as to insulation hardness and other properties.

The tables below list some of our regular high-flexibility conductor sizes. We provide many other wires on a custom order basis and are equipped to do small extrusion runs of special colors or diameters.

We also offer ultra-limp conductors in our custom cables.

GAUGE (AWG)	NUMBER OF STRANDS	NUMBER OF STRANDS	NOM. DIAM. OF CONDUCTOR		MAX. OHMS (dc at 20° C)		WEIGHT	
			IN.	mm	1000-ft	Km	LBS per 1000-ft	Kg/Km
24	41	40	.0245	.622	25.60	84	1.200	1.79
22	41	38	.0300	.762	18.93	62	2.800	4.16
20	41	36	.0380	.965	11.99	39	3.200	4.76
18	65	36	.0510	1.30	6.40	21	4.000	5.95
16	105	36	.0650	1.65	4.00	13	8.100	12.05

ASTM-B-33

Solid Tinned Copper

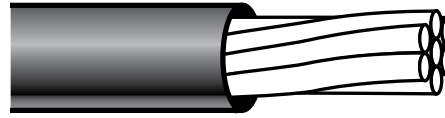


RoHS COMPLIANT PRODUCTS:

all RoHS products have the letter "R" written into the second position of the Part No.

Part No.	Gauge	Dia. (Inches)	Circular Mil Area	Pounds/MFT
NR1000-30	30	.0100	101	.301
NR1000-28	28	.0126	160	.484
NR1000-26	26	.0159	254	.769
NR1000-24	24	.0201	404	1.220
NR1000-22	22	.0253	642	1.940
NR1000-20	20	.0320	1020	3.090
NR1000-18	18	.0403	1620	4.920
NR1000-16	16	.0508	2580	7.820
NR1000-14	14	.0641	4110	12.400
NR1000-12	12	.0808	6530	19.800

SILICONE RUBBER LEADWIRE



Extruded Silicone
Rubber Insulation

Tinned
Copper Stranded



Recommended for internal use in television receivers or other uses where the acceptability has been determined by UL.

UL Style 3239

High Voltage

Stranded tin coated copper conductor insulated with extruded flame-retardant (VW-1) 150°C Silicone Rubber. Available in DC voltage ratings of 10, 20, 30, and 40KV. Non-UL grades with similar performance characteristics are available for general high voltage use.

CONDUCTOR				NOMINAL FINISHED DIAMETER									
GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		10 KVDC .036 WALL		20 KVDC .045 WALL		30 KVDC .055 WALL		40 KVDC .090 WALL	
				IN.	mm	IN.	mm	IN.	mm	IN.	mm	IN.	mm
24	NHVSRRXX0732	7	30	.024	.610	.099	2.52	.117	2.97	.137	3.48	.208	5.28
22	NHVSRRXX0730	7	30	.030	.762	.109	2.77	.123	3.12	.143	3.63	.215	5.46
22	NHVSRRXX1934	19	34	.030	.762	.109	2.77	.123	3.12	.143	3.63	.215	5.46
20	NHVSRRXX1030	10	30	.038	.965	.112	2.85	.130	3.30	.150	3.81	.227	5.77
20	NHVSRRXX1932	19	32	.038	.965	.112	2.85	.130	3.30	.150	3.81	.227	5.77
18	NHVSRRXX1630	16	30	.045	1.14	.122	3.10	.141	3.58	.161	4.10	.232	5.89
16	NHVSRRXX2630	26	30	.055	1.40	.137	3.48	.155	3.94	.175	4.45	.246	6.25
14	NHVSRRXX4130	41	30	.077	1.80	.150	3.81	.168	4.27	.188	4.78	.250	6.35
12	NHVSRRXX6530	65	30	.095	2.41	.170	4.32	.188	4.78	.210	5.33	.280	7.11
10	NHVSRRXX6528	65	28	.119	3.02	.195	4.95	.215	5.46	.235	5.97	.305	7.75

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

*Optional conductor considerations such as nickel or silver coated available subject to minimum quantities
XX Denotes voltage rating

SILICONE RUBBER LEADWIRE



RoHS COMPLIANT PRODUCTS:

all RoHS products have the letter "R" written into the second position of the Part No.

CONDUCTOR				NOMINAL FINISHED DIAMETER									
GAUGE (AWG)	PART NO.	NUMBER OF STRANDS (AWG)	GAUGE OF STRANDS (AWG)	NOM. DIAM. OF STRANDED CONDUCTOR		10 KVDC .036 WALL		20 KVDC .045 WALL		30 KVDC .055 WALL		40 KVDC .090 WALL	
				IN.	mm	IN.	mm	IN.	mm	IN.	mm		
24	NRHVSRRXX0732	7	30	.024	.610	.099	2.52	.117	2.97	.137	3.48	.208	5.28
22	NRHVSRRXX0730	7	30	.030	.762	.109	2.77	.123	3.12	.143	3.63	.215	5.46
22	NRHVSRRXX1934	19	34	.030	.762	.109	2.77	.123	3.12	.143	3.63	.215	5.46
20	NRHVSRRXX1030	10	30	.038	.965	.112	2.85	.130	3.30	.150	3.81	.227	5.77
20	NRHVSRRXX1932	19	32	.038	.965	.112	2.85	.130	3.30	.150	3.81	.227	5.77
18	NRHVSRRXX1630	16	30	.045	1.14	.122	3.10	.141	3.58	.161	4.10	.232	5.89
16	NRHVSRRXX2630	26	30	.055	1.40	.137	3.48	.155	3.94	.175	4.45	.246	6.25
14	NRHVSRRXX4130	41	30	.077	1.80	.150	3.81	.168	4.27	.188	4.78	.250	6.35
12	NRHVSRRXX6530	65	30	.095	2.41	.170	4.32	.188	4.78	.210	5.33	.280	7.11
10	NRHVSRRXX6528	65	28	.119	3.02	.195	4.95	.215	5.46	.235	5.97	.305	7.75

Standard basic insulation color numbers are: Black: 0, Brown: 1, Red: 2, Orange: 3, Yellow: 4, Green: 5, Blue: 6, Violet: 7, Gray: 8, White: 9. The insulation color code number, may be 1, 2 or 3 digits depending on the number or absence of stripes. The 1st number is color of Insulation, 2nd number is color of first stripe; 3rd number is color of the second stripe. Example: White wire(9) + Red stripe(2) + Black stripe(0) makes a color code number of "9-2-0". That color number, "9-2-0" is appended to the part number. Sample part number might be "xxxxxx-xxx-9-2-0"

*Optional conductor considerations such as nickel or silver coated available subject to minimum quantities
XX Denotes voltage rating

WIRE PROCESSING



National carries a full line of wire and cordage metering equipment. Contact us for a detailed separate brochure.

Wire Cordage and Length Meters

Manufactured by Olympic Instruments, Inc.
Vashon Washington, U.S.A.

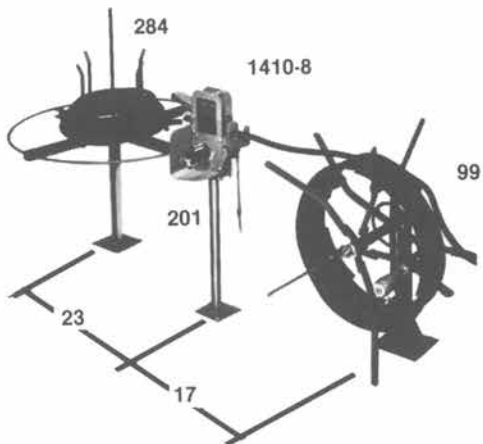
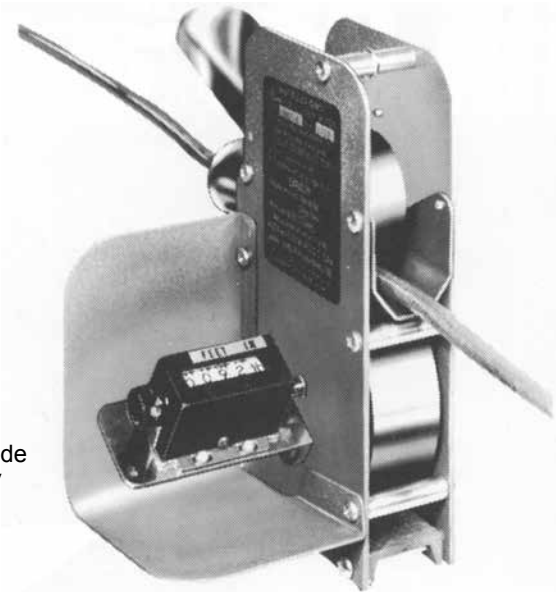
NO. 1410 OLYMPIC METER

Combines superior accuracy with the reading ease afforded by a Veeder-Root counter. Ideal for merchandising or rapid, repetitive measuring where fast, accurate delivery of a variety of materials is necessary. Quickly interchangeable guide tubes accommodate many hard to measure materials such as nylon fishing line, TV ribbon as well as wire and flexible electric cable. Numerals indicating length can be read from either side of the meter by customer or operator.

Approved by weights and Measures Authorities, U.S. and Canada.

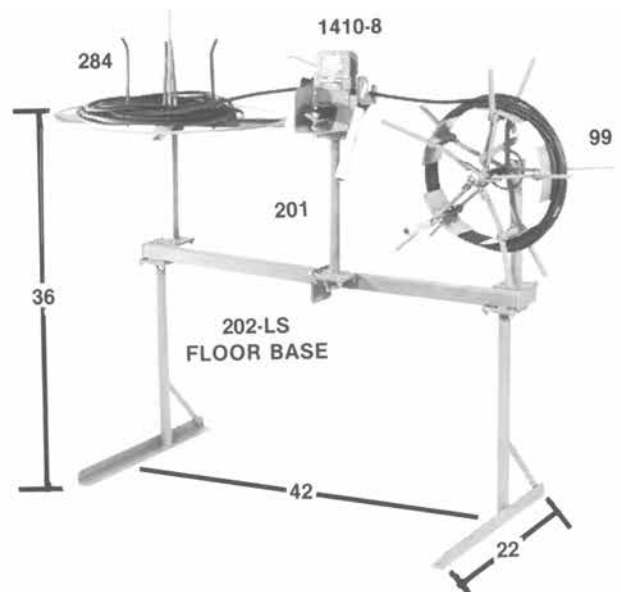
SPECIFICATIONS:

Wire Measurer 1410 accommodates a wide variety of flexible materials from 1/16" (.4mm) to 7/8" (24mm) diameter. Measures wire rope and stiff materials to 1/2" (13mm) diameter. Quickly interchangeable Guide Tubes with I.D.'s of 1/4" (6.3mm) and 1" (25mm) afford accurate guiding of many hard-to-measure materials, Stainless and heat treated steels used for all shafts and surfaces subject to wear by materials passage. Digital counter indicates FEET and INCHES to 9,000' - 11" and continues, Subtracts, Resets to ZERO with one turn of Knob. Mechanical Cutter available (See Accessories) adds 2" (51mm) to width of Measurer. Order Stand or Bracket separately. (See Accessories). Optimum accuracy and convenience obtained with Measurer is used in complete SET. Shipping weight is 5 lbs.



1-18 COUNTER SET

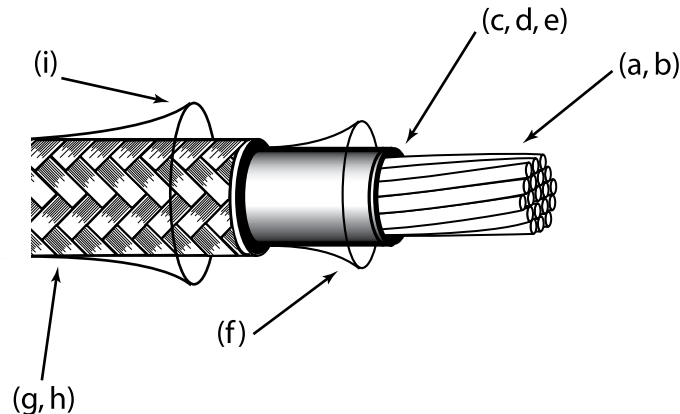
Illustrated above are two typical SET combinations of Olympic equipment. The components may be mounted on a counter top as shown at the left. The addition of the 202-LS Floor Base Adapter (shown at right) frees valuable counter space and creates a Set which may be portable or lagged down. requires only 2' x 5' of space. 202-LS also accommodates Light Duty components. Contact National Wire for other meters and accessories.



2-18 FLOOR SET

HOW TO SPECIFY WIRE

IF NOT IDENTIFIED BY THE MANUFACTURER'S PART NUMBER
WIRE IS SPECIFIED BY THE FOLLOWING CHARACTERISTICS:



- a. Gauge (awg)
- b. Standing (bare or tinned) Number of strands
- c. Type of primary insulation material. PVC, Polytetrafluoroethylene (PTFE), etc.
- d. Thickness of primary insulation or working voltage for which the wire is to be used.
- e. Color or coding of primary insulation**
- f. Type and thickness of covering over primary insulation when required (i.e., nylon)
- g. Type of shielding, braided or foil, if required
- h. If braided, shield strand size, % of coverage, bare or tinned wire strands
- i Overall jacket material, temperature range, thickness, color**, marking or coding

HOW NATIONAL WIRE PART NUMBERS ARE DERIVED

EXAMPLE		BASIC COLOR CODE			
N	C	1936U	9 - 0 - 2	0 - Black	5 - Green
				1 - Brown	6 - Blue
				2 - Red	7 - Violet (Purple)
				3 - Orange	8 - Slate (Grey)
				4 - Yellow	9 - White

N..... stands for National Wire and Cable Corporation.

C..... stands for Type "C" (as previously referred to in the spec).

1936..... means 19 strands of #36 copper which is equivalent to 24 gauge

U..... means "uncovered." That is, no jacket over the primary insulation.

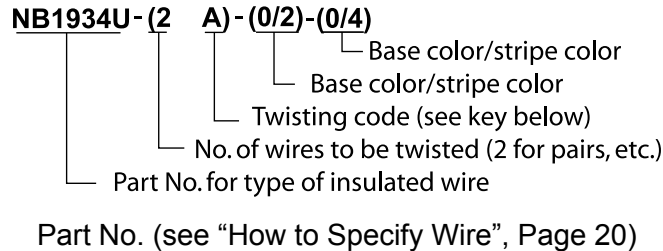
902..... refers to primary insulation base color and tracer colors as shown in the chart above. Tracers are numbered according to standard color code.

**Color limitation of tints is specified in MIL-STD-104, which comes supplied with a set of colored tabs for color comparison and identification.

HOW TO SPECIFY PAIRS

WE RECOMMEND THE FOLLOWING FORMAT WHEN SPECIFYING TWISTED PAIRS AND TRIOS:

EXAMPLE



KEY TO TWISTING CODE

- A = SHORT TWINNER LAY
- B = STANDARD TWINNER LAY
- C = SHORT PLANETARY LAY
- D = STANDARD PLANETARY LAY

THE "SHORT" LAY IS DEFINED AS EQUAL TO $5 \times D \times N$ AND THE "STANDARD" LAY IS DEFINED AS $10 \times D \times N$ WHERE D = CONDUCTOR DIAMETER, N = NO. OF CONDUCTORS

DIFFERENCES IN PAIR TWISTING

THE MOST COMMON COMMERCIAL PAIR-FORMING MACHINES ARE CALLED "TWINNERS." THIS TYPE OF PAIR-FORMING IS THE LEAST EXPENSIVE WAY TO FORM TWISTED PAIRS. HOWEVER, PAIRS FORMED ON THIS TYPE OF EQUIPMENT HAVE BEEN KNOWN TO EXPERIENCE DEFORMATION OF THE STRANDED COPPER, STRAIN IN THE INSULATION AND POOR ELECTRICAL BALANCE.

THE SUPERIOR METHOD OF PAIR-FORMING IS BY USE OF A PLANETARY OR TUBULAR CABLING MACHINE IN SUCH A MANNER THAT NO RESIDUAL TWIST IS IMPARTED TO THE INDIVIDUAL WIRES FORMING THE TWISTED GROUP. THIS RESULTS IN BETTER ELECTRICAL BALANCE AND IMPROVES FLEXIBILITY.

NATIONAL IS EQUIPPED FOR ALL OF THE ABOVE DESCRIBED TECHNIQUES. CHOOSE THE METHOD BEST SUITED FOR YOUR PARTICULAR APPLICATION.