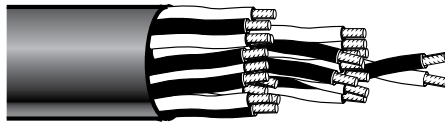


CABLED TWISTED PAIRS CONDUCTORS



Heavy Duty

- Twisted Pairs (NWP Series)
- Mil Spec, U.L. AWM

Recognized Style 2343 or 2344 and CSA Certified

AWM *II* A/B*

Identical to National's NW-Series Cables except offered as twisted pairs.

National Wire & Cable Corp. manufactures a complete line of multiple pair control cables. Conductors are of tinned copper strand with .015" vinyl primary insulation for use up to 105°C per MIL-W16878/2*. Insulated for 1000 volts working voltage. Conductors are color coded using 10 standard basic colors, plus spiral tracers on white. View Color Table in the National Wire Cable Designers Guide, page 7-13.

All pairs are planetary cabled and contra-helically laid with a Mylar tape serve over the cable bundle. Shielded cables have a tinned copper braid overall, of 85-90% coverage per MIL-C-7078, and braid angles below 40° for easy pushback.

The outer jacket is black, abrasion-resistant 105°C vinyl meeting MIL-I-631 Type F. This material is self-extinguishing and fungus resistant. Also available with Neoprene to MIL-R-6855 Class 2 Grade 60 specification, non-U.L. applications. Also available with Neoprene jacket as a custom product. Consult factory for details.

**Cables are U.L. STYLE 2343 or 2344, rated 80°C, and CSA CERTIFIED for 105°C as described below. U.L. and/or CSA certification furnished only when requested.

*Insulated wires also meet U.L. Style 1007 or 1569 as appropriate for gauge.

TECHNICAL DATA (ALL CABLES)

Insulation Breakdown Voltage:	Greater than 5000 volts AC RMS, 60cps.
U.L. Voltage Rating:	300 volts RMS AC (appliance use).
600 volts RMS AC (electronic use).	
CSA Voltage Rating:	300 volts RMS AC (appliance use).
Military Voltage Rating:	1000 volts RMS
Capacitance:	Nominal capacitance wire to wire for a pair ranges from 27 to 40 pF/ft Capacitance from both wires tied together measured to all else in common ranges from 35 to 60 mmfd/ft. dependent on gauge and position. Overall shield has negligible effect on W-W capacitance.
Insulation Leakage Res.:	200 megohms/1000 ft. min. at 500 VDC from any conductor to all else in cable.
Sheath Leakage Res.:	10 megohms/1000 ft. min. at 500 VDC form overall shield through sheath to outside world.
Usable Temp. Range:	Suitable for continuous use from +105°C to -40°C.
Cold Bending Capability:	All cables are suitable for flexing to a circle diameter of 6 cable diameters from +105°C to -20°C. Recommended flex diameter should be greater than 20 cable diameters for flexing at -40°C. For continuous flexing application consult the factory.

For color code of pairs, view the Color Table in the National Wire Cable Designers Guide, page 7-13.

MULTI-CONDUCTOR STOCK CABLES Conductor sizes 22 AWG is 7 stranded. All others are 19 strand.

NWP SERIES UNSHIELD - 22, 20 and 18 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	1000 ft.	KG/KM
NWP-722J	7	22	.064	1.6	.062	1.6	.454	11.5	103	154
NWP-1222J	12	22	.064	1.6	.062	1.6	.581	14.7	157	234
NWP-1922J	19	22	.064	1.6	.062	1.6	.672	17.1	221	329
NWP-2722J	27	22	.064	1.6	.062	1.6	.798	20.3	297	442
NWP-3722J	37	22	.064	1.6	.080	2.0	.926	23.5	418	621
NWP-4822J	48	22	.064	1.6	.080	2.0	1.045	26.6	520	773
NWP-6022J	60	22	.064	1.6	.080	2.0	1.143	29.0	625	930
NWP-720J	7	20	.072	1.8	.062	1.6	.495	12.6	135	201
NWP-1220J	12	20	.072	1.8	.062	1.6	.637	16.2	210	313
NWP-1920J	19	20	.072	1.8	.062	1.6	.740	18.8	302	450
NWP-2720J	27	20	.072	1.8	.080	2.0	.918	23.3	445	662
NWP-3720J	37	20	.072	1.8	.080	2.0	1.021	25.9	575	855
NWP-4820J	48	20	.072	1.8	.080	2.0	1.155	29.3	721	1073
NWP-6020J	60	20	.072	1.8	.080	2.0	1.266	32.1	874	1300
NWP-718J	7	18	.082	2.1	.062	1.6	.546	13.9	175	261
NWP-1218J	12	18	.082	2.1	.062	1.6	.708	18.0	277	412
NWP-1918J	19	18	.082	2.1	.080	2.0	.861	21.9	436	649
NWP-2718J	27	18	.082	2.1	.080	2.0	1.023	26.0	591	880
NWP-3718J	37	18	.082	2.1	.080	2.0	1.140	29.0	771	1147
NWP-4818J	48	18	.082	2.1	.080	2.0	1.293	32.8	973	1447

NWP SERIES OVERALL SHIELDED - 22, 20 and 18 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	1000 ft.	KG/KM
NWP-722SJ	7	22	.064	1.6	.062	1.6	.480	12.2	143	213
NWP-1222SJ	12	22	.064	1.6	.062	1.6	.606	15.4	211	314
NWP-1922SJ	19	22	.064	1.6	.062	1.6	.697	17.7	285	424
NWP-2722SJ	27	22	.064	1.6	.062	1.6	.823	20.9	375	558
NWP-3722SJ	37	22	.064	1.6	.080	2.0	.951	24.2	507	754
NWP-4822SJ	48	22	.064	1.6	.080	2.0	1.070	27.2	622	926
NWP-6022SJ	60	22	.064	1.6	.080	2.0	1.168	29.7	739	1099
NWP-720SJ	7	20	.072	1.8	.062	1.6	.520	13.2	180	267
NWP-1220SJ	12	20	.072	1.8	.062	1.6	.662	16.8	270	402
NWP-1920SJ	19	20	.072	1.8	.062	1.6	.765	19.4	374	556
NWP-2720SJ	27	20	.072	1.8	.080	2.0	.943	24.0	534	794
NWP-3720SJ	37	20	.072	1.8	.080	2.0	1.046	26.6	675	1004
NWP-4820SJ	48	20	.072	1.8	.080	2.0	1.181	30.0	836	1243
NWP-6020SJ	60	20	.072	1.8	.080	2.0	1.291	32.8	1001	1490
NWP-718SJ	7	18	.082	2.1	.062	1.6	.571	14.5	225	335
NWP-1218SJ	12	18	.082	2.1	.062	1.6	.733	18.6	345	513
NWP-1918SJ	19	18	.082	2.1	.080	2.0	.886	22.5	518	771
NWP-2718SJ	27	18	.082	2.1	.080	2.0	1.048	26.6	692	1029
NWP-3718SJ	37	18	.082	2.1	.080	2.0	1.165	29.6	884	1315
NWP-4818SJ	48	18	.082	2.1	.080	2.0	1.318	33.5	1103	1641

CABLED TWISTED PAIRS - NWP Series



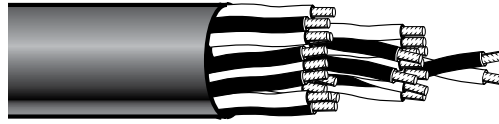
MULTI-CONDUCTOR STOCK CABLES Conductor sizes 22 AWG is 7 stranded. All others are 19 strand.

RoHS COMPLIANT PRODUCTS:

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

NRWP SERIES UNSHIELD - 22, 20 and 18 AWG																					
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight		Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM				Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM
NRWP-722J	7	22	.064	1.6	.062	1.6	.454	11.5	103	154	NRWP-722SJ	7	22	.064	1.6	.062	1.6	.480	12.2	143	213
NRWP-1222J	12	22	.064	1.6	.062	1.6	.581	14.7	157	234	NRWP-1222SJ	12	22	.064	1.6	.062	1.6	.606	15.4	211	314
NRWP-1922J	19	22	.064	1.6	.062	1.6	.672	17.1	221	329	NRWP-1922SJ	19	22	.064	1.6	.062	1.6	.697	17.7	285	424
NRWP-2722J	27	22	.064	1.6	.062	1.6	.798	20.3	297	442	NRWP-2722SJ	27	22	.064	1.6	.062	1.6	.823	20.9	375	558
NRWP-3722J	37	22	.064	1.6	.080	2.0	.926	23.5	418	621	NRWP-3722SJ	37	22	.064	1.6	.080	2.0	.951	24.2	507	754
NRWP-4822J	48	22	.064	1.6	.080	2.0	1.045	26.6	520	773	NRWP-4822SJ	48	22	.064	1.6	.080	2.0	1.070	27.2	622	926
NRWP-6022J	60	22	.064	1.6	.080	2.0	1.143	29.0	625	930	NRWP-6022SJ	60	22	.064	1.6	.080	2.0	1.168	29.7	739	1099
NRWP-720J	7	20	.072	1.8	.062	1.6	.495	12.6	135	201	NRWP-720SJ	7	20	.072	1.8	.062	1.6	.520	13.2	180	267
NRWP-1220J	12	20	.072	1.8	.062	1.6	.637	16.2	210	313	NRWP-1220SJ	12	20	.072	1.8	.062	1.6	.662	16.8	270	402
NRWP-1920J	19	20	.072	1.8	.062	1.6	.740	18.8	302	450	NRWP-1920SJ	19	20	.072	1.8	.062	1.6	.765	19.4	374	556
NRWP-2720J	27	20	.072	1.8	.080	2.0	.918	23.3	445	662	NRWP-2720SJ	27	20	.072	1.8	.080	2.0	.943	24.0	534	794
NRWP-3720J	37	20	.072	1.8	.080	2.0	1.021	25.9	575	855	NRWP-3720SJ	37	20	.072	1.8	.080	2.0	1.046	26.6	675	1004
NRWP-4820J	48	20	.072	1.8	.080	2.0	1.155	29.3	721	1073	NRWP-4820SJ	48	20	.072	1.8	.080	2.0	1.181	30.0	836	1243
NRWP-6020J	60	20	.072	1.8	.080	2.0	1.266	32.1	874	1300	NRWP-6020SJ	60	20	.072	1.8	.080	2.0	1.291	32.8	1001	1490
NRWP-718J	7	18	.082	2.1	.062	1.6	.546	13.9	175	261	NRWP-718SJ	7	18	.082	2.1	.062	1.6	.571	14.5	225	335
NRWP-1218J	12	18	.082	2.1	.062	1.6	.708	18.0	277	412	NRWP-1218SJ	12	18	.082	2.1	.062	1.6	.733	18.6	345	513
NRWP-1918J	19	18	.082	2.1	.080	2.0	.861	21.9	436	649	NRWP-1918SJ	19	18	.082	2.1	.080	2.0	.886	22.5	518	771
NRWP-2718J	27	18	.082	2.1	.080	2.0	1.023	26.0	591	880	NRWP-2718SJ	27	18	.082	2.1	.080	2.0	1.048	26.6	692	1029
NRWP-3718J	37	18	.082	2.1	.080	2.0	1.140	29.0	771	1147	NRWP-3718SJ	37	18	.082	2.1	.080	2.0	1.165	29.6	884	1315
NRWP-4818J	48	18	.082	2.1	.080	2.0	1.293	32.8	973	1447	NRWP-4818SJ	48	18	.082	2.1	.080	2.0	1.318	33.5	1103	1641

CABLED TWISTED PAIRS CONDUCTORS



Heavy Duty

- Twisted Pairs (NWP Series)
- Mil Spec, U.L. AWM

Recognized Style 2343 or 2344 and CSA Certified
AWM *II* A/B*

For color code of pairs, view the Color Table in the National Wire Cable Designers Guide, page 7-13.

The products shown in the following tables are MIL-SPEC only. UL and CSA do not recognize 19 strand conductors in this gauge. See the NWPC table below for UL/CSA.

NWP SERIES UNSHIELDED - 16 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM
NWP-716J	7	16	.091	2.3	.062	1.6	.592	15.0	209	310
NWP-1216J	12	16	.091	2.3	.062	1.6	.772	19.6	332	493
NWP-1916J	19	16	.091	2.3	.080	2.0	.938	23.8	523	777
NWP-2716J	27	16	.091	2.3	.080	2.0	1.117	28.4	712	1059
NWP-3716J	37	16	.091	2.3	.080	2.0	1.247	31.7	932	1387

NWP SERIES OVERALL SHIELDED - 16 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM
NWP-716SJ	7	16	.091	2.3	.062	1.6	.617	15.7	264	392
NWP-1216SJ	12	16	.091	2.3	.062	1.6	.797	20.2	407	605
NWP-1916SJ	19	16	.091	2.3	.080	2.0	.963	24.5	613	912
NWP-2716SJ	27	16	.091	2.3	.080	2.0	1.142	29.0	823	1224
NWP-3716SJ	37	16	.091	2.3	.080	2.0	1.272	32.3	1057	1573

The following cables in 16 gauge are similar to NWP series but utilize materials to qualify for CSA certification for AWM *II* A/B 105°C service at 300 volts as well as styles 2343 and 2344. Items below are not stocked and are subject to minimum run quantities.

NWPC SERIES UNSHIELDED - 16 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM
NWPC-716J	7	16	.091	2.3	.062	1.6	.614	15.0	209	310
NWPC-1216J	12	16	.091	2.3	.062	1.6	.772	19.6	332	493
NWPC-1916J	19	16	.091	2.3	.062	1.6	.938	23.8	523	777
NWPC-2716J	27	16	.091	2.3	.062	1.6	1.117	28.4	712	1059
NWPC-3716J	37	16	.091	2.3	.062	1.6	1.247	31.7	932	1387

NWPC SERIES OVERALL SHIELDED - 16 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM
NWPC-716SJ	7	16	.091	2.3	.062	1.6	.617	15.7	264	392
NWPC-1216SJ	12	16	.091	2.3	.062	1.6	.797	20.2	407	605
NWPC-1916SJ	19	16	.091	2.3	.062	1.6	.963	24.5	613	912
NWPC-2716SJ	27	16	.091	2.3	.062	1.6	1.142	29.0	823	1224
NWPC-3716SJ	37	16	.091	2.3	.062	1.6	1.272	32.3	1057	1573

UL/CSA -- CONDUCTOR SIZE & STRANDING
16 AWG (26 x 30)

CABLED TWISTED PAIRS - NWP Series



RoHS COMPLIANT PRODUCTS:

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

NRWP SERIES UNSHIELDED - 16 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM
NRWP-716J	7	16	.091	2.3	.062	1.6	.592	15.0	209	310
NRWP-1216J	12	16	.091	2.3	.062	1.6	.772	19.6	332	493
NRWP-1916J	19	16	.091	2.3	.080	2.0	.938	23.8	523	777
NRWP-2716J	27	16	.091	2.3	.080	2.0	1.117	28.4	712	1059
NRWP-3716J	37	16	.091	2.3	.080	2.0	1.247	31.7	932	1387

NRWP SERIES OVERALL SHIELDED - 16 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM
NRWP-716SJ	7	16	.091	2.3	.062	1.6	.617	15.7	264	392
NRWP-1216SJ	12	16	.091	2.3	.062	1.6	.797	20.2	407	605
NRWP-1916SJ	19	16	.091	2.3	.080	2.0	.963	24.5	613	912
NRWP-2716SJ	27	16	.091	2.3	.080	2.0	1.142	29.0	823	1224
NRWP-3716SJ	37	16	.091	2.3	.080	2.0	1.272	32.3	1057	1573

NRWPC SERIES UNSHIELDED - 16 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM
NRWPC-716J	7	16	.091	2.3	.062	1.6	.614	15.0	209	310
NRWPC-1216J	12	16	.091	2.3	.062	1.6	.772	19.6	332	493
NRWPC-1916J	19	16	.091	2.3	.062	1.6	.938	23.8	523	777
NRWPC-2716J	27	16	.091	2.3	.062	1.6	1.117	28.4	712	1059
NRWPC-3716J	37	16	.091	2.3	.062	1.6	1.247	31.7	932	1387

NRWPC SERIES OVERALL SHIELDED - 16 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM
NRWPC-716SJ	7	16	.091	2.3	.062	1.6	.617	15.7	264	392
NRWPC-1216SJ	12	16	.091	2.3	.062	1.6	.797	20.2	407	605
NRWPC-1916SJ	19	16	.091	2.3	.062	1.6	.963	24.5	613	912
NRWPC-2716SJ	27	16	.091	2.3	.062	1.6	1.142	29.0	823	1224
NRWPC-3716SJ	37	16	.091	2.3	.062	1.6	1.272	32.3	1057	1573

UL/CSA -- CONDUCTOR SIZE & STRANDING
16 AWG (26 x 30)