



**National Wire & Cable**  
Custom Cable Manufacturing

# **Multi-Conductor Cables Catalog**

Visit us online at:  
[www.NationalWire.com](http://www.NationalWire.com)

# CUSTOM-MADE & MULTICONDUCTOR CABLES

## COMPLETE WIRE AND CABLE FACILITIES TO MEET YOUR NEEDS

If the standard cables shown on the following pages do not meet your application requirements, Custom-Made Cables to your own applications are available promptly -- and at lower cost than you may suppose.

We invite your inquiries on fiber optic cables. National Wire & Cable can manufacture multi-color fiber optic cables as well as hybrid cables consisting of fiber and copper conductors.

### BECAUSE NATIONAL HAS:

1. The organization & experience to handle short-runs or rush schedules with consistent quality.
2. All types of mill machinery for fabricating cable and all intermediate operations.
3. An enormous wire inventory to draw from for material for your cable. Over 160 million feet in stock.
4. Technical consultants to aid you in properly specifying your cable needs.

### DESIGNERS: May We Suggest

- A. See section 7 (Cable Designers Guide) for technical details regarding custom cables.
- B. Call our engineering department (323-225-5611) and discuss your needs with our technical consultants. They will speak your language and may have just the answers you need.
- C. Our consultants will assist you in design, obtain cost and delivery information, provide quotations and drawings and assist with sales & procurement liaison.
- D. On most custom cables, we can print your company name and part number at regular intervals on the outside jacket at no extra cost. This will make your packaging truly "Custom."
- E. Custom color your outer jacket to match your equipment.

# Multiconductor Cables

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-40C TO +105°C 600 VOLT. ALL MEMBERS HAVE INDIVIDUAL PVC JACKETS

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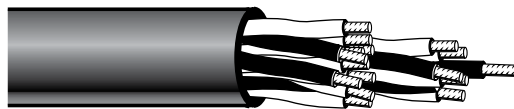
## UNDERWRITERS-RECOGNIZED MULTI-CONDUCTOR BUSINESS MACHINE AND COMPUTER CONTROL CABLE

UL STYLE #	U.L. RATING		U.L.	WIRE INSULATION TYPE	SIZE RANGE (AWG)	CONSTRUCTION
	Voltage	Temp°C				
1503	150	80	1	.010" PVC	26-20	Shielded and jacketed single, like coax
1533	-	80	1	.009" PVC	30-16	Double shielded, double jacketed single, like triax
1185	300	80	2	.009" PVC	30-16	Shielded single
2547	300 **	80	1	.009" PVC	30-16	2x3 conductor flexible jacketed cable per UL 62 for Flexible Cord and Fixture Wires, shield optional
1777	300	80	4	.009" PVC	30-16	Multi-conductor flexible jacketed cable per UL 62 Flexible Cord and Fixture Wires, shield optional
2343	same as wire ins.	80	4	Any AWM 300 or 600 volt	30 AWG min.	Multi-conductor flexible jacketed cable. shield optional, body OD to 700"; .060" jkt
2344	same as wire ins.	80	4	Any AWM 300 or 600 volt	30 AWG min.	Multi-conductor flexible jacketed cable, shield optional, body OD .701 to 1.5", with .080" jkt wall
2384- 2388	30	60	5	Any AWM	40 AWG min.	Multi-conductor, flexible low voltage, jacketed cable, shield optional. Jacket wall depends on cable diameter and style.
2464	300	60	6	Any AWM for 80C or better	30 AWG min.	Multi-conductor flexible jacketed cable, shield optional. Body OD less than .700" allows .031" jkt wall .701" to 1.5" - .080" wall
2560	30	60	7	Any AWM	40 AWG min.	Multi-conductor flexible low voltage jacketed cable, shield optional. Body OD up to .425" requires .035" min jkt wall.
2448	30	60	5	Not Specified	40 AWG min.	Multi-conductor flexible low voltage jacketed cable, shield optional. Body OD up to .425" requires .035" min jkt wall. Jkt UL ID printing is required.
2835	30	60	8	Not Specified	40 AWG min.	Multi-conductor flexible low voltage jacketed cable, shield optional. Body OD up to .425" requires .035" min jkt wall.
20197	30	60	9	36-16 AWG	.010"PP insulation .035" PU jkt.	Straight or coiled cable
2661	300	105	10	+105oC rated PVC, .010" wall	40 AWG minimum, to 6 AWG, solid or stranded	Multi-conductor flexible PVC-jacketed cable. Shield optional.
20233	300	80	10	Polypropylene is standard on .010" wall, or any AWM rated for 300V, 80°C.	36 AWG minimum, solid or stranded	Multi-conductor flexible cable with tough <b>PU-jacket</b> . Shield optional. Low weight. Suitable for Rough Usage.

Abbreviations: AWM is UL's 'Appliance Wiring Material', "PVC" is Polyvinylchloride, "PP" is Polypropylene, "PU" is Polyurethane.  
(\*\*300 Volt as produced by NWC)Multi-conductor flexible low voltage jacketed cable, shield optional. Body OD up to .425" requires .035" min jkt wall.

UL "INTENDED USE" STATEMENTS FOR EACH UL STYLE	
1	"Internal wiring of electronic equipment where not exposed to movement or mechanical abuse."
2	"Internal wiring of appliances and electronic equipment."
3	"External or internal wiring of electrical equipment."
4	"External interconnection of computers and electronic equipment."
5	"As internal wiring or external interconnection in Class II circuits of electronic equipment."
6	"Internal wiring or external interconnection of electronic equipment (such as desk-type calculators, dictating machines or x-ray equipment.)"
7	"Interconnecting cable for use with EDP equipment where terminated in connectors and located entirely exterior to the equipment, Class II wiring systems only."
8	"Internal wiring in Class II circuits of electronic equipment where each end is terminated in connectors. Or CABLES using 30 mils or greater jacket thickness only: External interconnection or internal wiring in Class II circuits of electronic equipment where each end is terminated in connectors."
9	"For internal or external interconnection of electronic equipment."
10	"External interconnection of electronic equipment"

# CABLED SINGLE CONDUCTORS



## NQ SERIES

- Single Conductors
- Mil Spec, U.L. AWM

Recognized Style 2464 and CSA Certified AWM II A/B

### GRAY PVC JACKET

National Wire & Cable Corporation manufactures a complete line of highly flexible micro-miniature low-voltage instrument control cable. These are available as cabled pairs or singles, with optional overall shield of either foil with drain or a braided shield.

Conductors are stranded tinned copper with .010" wall of tough extruded polyvinyl chloride primary insulation, rated for 300 volt use at +80°C under U.L. style 1061\*. All are color coded using ten standard colors plus white with stripes per MIL-STD-681. View Color Table in the National Wire Cable Designers Guide, page 7-13.

Conductors are planetary cabled and helically laid for optimum flexibility, with a barrier under braids. Shielded cables have a tinned copper braid of 90% coverage per MIL-C-7078, with braid angles below 40° for easy pushback; or have 100% coverage foil shield in intimate contact with a drain wire for easy termination.

The outer jacket is highly flexible abrasion-resistant gray polyvinyl chloride thermoplastic, meeting the requirements of U.L. style 2464. The jacket material is military rated for 105°C; meets MIL-I-631, Type F. Meets EIA for RS-232, 18-24 gauges.

Military certification furnished only when requested. All materials are flame retardant and fungus resistant. Standard Putups: 500 and 1000 ft. No-deposit reels. For shorter quantities or specific lengths, consult factory.

\*Wire also meets MIL-W-16878, rated 600 volts, +105°C.

TECHNICAL DATA (ALL CABLES)	
<b>Insulation Breakdown Voltage:</b>	Greater than 3400 volts AC RMS, 60cps.
<b>Capacitance:</b>	Nominal capacitance from a wire to all else in a cable ranges from 25 to 45 pf/ft at 1 kc, depending on gauge and position.
<b>Insulation Leakage:</b>	200 megohms/1000 feet minimum @ 500 VDC from conductor to all else in cable.
<b>Sheath Leakage:</b>	10 megohms/1000 feet minimum @ 500 VDC from shield or conductor group through sheath to ground.
<b>Temperature Range:</b>	U.L. rating: +80°C per U.L. style 2464. Military: Continuous use from -40°C to +105°C.
<b>Bending Characteristics:</b>	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 applications consult the factory.
<b>Foil Shielded Cables:</b>	The nominal over-all diameter of foil shielded cables will be .006" greater than the non-shielded cables of the same conductor count and wire size.
<b>Characteristic Impedance (NQ Paired Cables)</b>	Ranges from 150 ohms to 45 ohms, dependent on wire size (AWG), geometry and drive method. Consult our technical staff for data on specific cable types.

## MULTI-CONDUCTOR STOCK CABLED SINGLES Conductor sizes 28, 26, 24, 22 are 7 strand. All others are 19 strand.

NQ SERIES UNSHIELDED - 28 and 26 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NQ-228J	2	28	.035	.9	.032	.8	.138	3.5	8	12
NQ-328J	3	28	.035	.9	.032	.8	.144	3.6	10	14
NQ-428J	4	28	.035	.9	.032	.8	.152	3.9	11	17
NQ-528J	5	28	.035	.9	.032	.8	.163	4.1	13	19
NQ-628J	6	28	.035	.9	.032	.8	.173	4.4	14	21
NQ-728J	7	28	.035	.9	.032	.8	.173	4.4	15	23
NQ-828J	8	28	.035	.9	.032	.8	.198	5.0	18	27
NQ-928J	9	28	.035	.9	.032	.8	.208	5.3	20	29
NQ-1028J	10	28	.035	.9	.032	.8	.208	5.3	21	31
NQ-1228J	12	28	.035	.9	.032	.8	.214	5.4	23	34
NQ-1528J	15	28	.035	.9	.032	.8	.233	5.9	27	40
NQ-1928J	19	28	.035	.9	.032	.8	.243	6.2	32	47
NQ-2728J	27	28	.035	.9	.032	.8	.284	7.2	42	63
NQ-3728J	37	28	.035	.9	.032	.8	.313	8.0	54	81
NQ-226J	2	26	.039	1.0	.032	.8	.146	3.7	10	14
NQ-326J	3	26	.039	1.0	.032	.8	.152	3.9	11	17
NQ-426J	4	26	.039	1.0	.032	.8	.162	4.1	13	20
NQ-526J	5	26	.039	1.0	.032	.8	.173	4.4	15	23
NQ-626J	6	26	.039	1.0	.032	.8	.185	4.7	18	26
NQ-726J	7	26	.039	1.0	.032	.8	.185	4.7	19	28
NQ-826J	8	26	.039	1.0	.032	.8	.212	5.4	22	33
NQ-926J	9	26	.039	1.0	.032	.8	.224	5.7	24	36
NQ-1026J	10	26	.039	1.0	.032	.8	.224	5.7	25	38
NQ-1226J	12	26	.039	1.0	.032	.8	.230	5.8	29	43
NQ-1526J	15	26	.039	1.0	.032	.8	.251	6.4	34	51
NQ-1926J	19	26	.039	1.0	.032	.8	.263	6.7	40	60
NQ-2726J	27	26	.039	1.0	.032	.8	.308	7.8	54	81
NQ-3726J	37	26	.039	1.0	.032	.8	.341	8.7	71	105
NQ-4826J	48	26	.039	1.0	.032	.8	.039	9.8	89	132

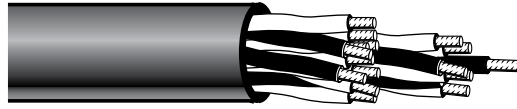
NQ SERIES OVERALL BRAIDED SHIELD - 28 and 26 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NQ-228SJ	2	28	.035	.9	.032	.8	.158	4.0	15	22
NQ-328SJ	3	28	.035	.9	.032	.8	.164	4.2	16	24
NQ-428SJ	4	28	.035	.9	.032	.8	.172	4.4	18	27
NQ-528SJ	5	28	.035	.9	.032	.8	.183	4.6	21	31
NQ-628SJ	6	28	.035	.9	.032	.8	.193	4.9	23	34
NQ-728SJ	7	28	.035	.9	.032	.8	.193	4.9	24	36
NQ-828SJ	8	28	.035	.9	.032	.8	.218	5.5	28	42
NQ-928SJ	9	28	.035	.9	.032	.8	.228	5.8	31	45
NQ-1028SJ	10	28	.035	.9	.032	.8	.228	5.8	32	47
NQ-1228SJ	12	28	.035	.9	.032	.8	.234	5.9	34	51
NQ-1528SJ	15	28	.035	.9	.032	.8	.253	6.4	40	59
NQ-1928SJ	19	28	.035	.9	.032	.8	.263	6.7	45	67
NQ-2728SJ	27	28	.035	.9	.032	.8	.304	7.7	50	87
NQ-3728SJ	37	28	.035	.9	.032	.8	.333	8.5	72	108
NQ-226SJ	2	26	.039	1.0	.032	.8	.166	4.2	16	24
NQ-326SJ	3	26	.039	1.0	.032	.8	.172	4.4	19	28
NQ-426SJ	4	26	.039	1.0	.032	.8	.182	4.6	21	32
NQ-526SJ	5	26	.039	1.0	.032	.8	.193	4.9	24	36
NQ-626SJ	6	26	.039	1.0	.032	.8	.205	5.2	27	40
NQ-726SJ	7	26	.039	1.0	.032	.8	.205	5.2	28	42
NQ-826SJ	8	26	.039	1.0	.032	.8	.232	5.9	33	50
NQ-926SJ	9	26	.039	1.0	.032	.8	.244	6.2	36	54
NQ-1026SJ	10	26	.039	1.0	.032	.8	.244	6.2	38	56
NQ-1226SJ	12	26	.039	1.0	.032	.8	.250	6.4	41	61
NQ-1526SJ	15	26	.039	1.0	.032	.8	.271	6.9	48	72
NQ-1926SJ	19	26	.039	1.0	.032	.8	.283	7.2	55	82
NQ-2726SJ	27	26	.039	1.0	.032	.8	.320	8.3	72	108
NQ-3726SJ	37	26	.039	1.0	.032	.8	.361	9.2	91	135
NQ-4826SJ	48	26	.039	1.0	.032	.8	.409	10.4	120	179

**RoHS COMPLIANT PRODUCTS:**

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

NRQ SERIES UNSHIELDED - 28 and 26 AWG											NRQ SERIES OVERALL BRAIDED SHIELD - 28 and 26 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NRQ-228J	2	28	.035	.9	.032	.8	.138	3.5	8	12	NRQ-228SJ	2	28	.035	.9	.032	.8	.158	4.0	15	22
NRQ-328J	3	28	.035	.9	.032	.8	.144	3.6	10	14	NRQ-328SJ	3	28	.035	.9	.032	.8	.164	4.2	16	24
NRQ-428J	4	28	.035	.9	.032	.8	.152	3.9	11	17	NRQ-428SJ	4	28	.035	.9	.032	.8	.172	4.4	18	27
NRQ-528J	5	28	.035	.9	.032	.8	.163	4.1	13	19	NRQ-528SJ	5	28	.035	.9	.032	.8	.183	4.6	21	31
NRQ-628J	6	28	.035	.9	.032	.8	.173	4.4	14	21	NRQ-628SJ	6	28	.035	.9	.032	.8	.193	4.9	23	34
NRQ-728J	7	28	.035	.9	.032	.8	.173	4.4	15	23	NRQ-728SJ	7	28	.035	.9	.032	.8	.193	4.9	24	36
NRQ-828J	8	28	.035	.9	.032	.8	.198	5.0	18	27	NRQ-828SJ	8	28	.035	.9	.032	.8	.218	5.5	28	42
NRQ-928J	9	28	.035	.9	.032	.8	.208	5.3	20	29	NRQ-928SJ	9	28	.035	.9	.032	.8	.228	5.8	31	45
NRQ-1028J	10	28	.035	.9	.032	.8	.208	5.3	21	31	NRQ1028SJ	10	28	.035	.9	.032	.8	.228	5.8	32	47
NRQ-1228J	12	28	.035	.9	.032	.8	.214	5.4	23	34	NRQ1228SJ	12	28	.035	.9	.032	.8	.234	5.9	34	51
NRQ-1528J	15	28	.035	.9	.032	.8	.233	5.9	27	40	NRQ1528SJ	15	28	.035	.9	.032	.8	.253	6.4	40	59
NRQ-1928J	19	28	.035	.9	.032	.8	.243	6.2	32	47	NRQ1928SJ	19	28	.035	.9	.032	.8	.263	6.7	45	67
NRQ-2728J	27	28	.035	.9	.032	.8	.284	7.2	42	63	NRQ2728SJ	27	28	.035	.9	.032	.8	.304	7.7	50	87
NRQ-3728J	37	28	.035	.9	.032	.8	.313	8.0	54	81	NRQ3728SJ	37	28	.035	.9	.032	.8	.333	8.5	72	108
NRQ-226J	2	26	.039	1.0	.032	.8	.146	3.7	10	14	NRQ-226SJ	2	26	.039	1.0	.032	.8	.166	4.2	16	24
NRQ-326J	3	26	.039	1.0	.032	.8	.152	3.9	11	17	NRQ-326SJ	3	26	.039	1.0	.032	.8	.172	4.4	19	28
NRQ-426J	4	26	.039	1.0	.032	.8	.162	4.1	13	20	NRQ-426SJ	4	26	.039	1.0	.032	.8	.182	4.6	21	32
NRQ-526J	5	26	.039	1.0	.032	.8	.173	4.4	15	23	NRQ-526SJ	5	26	.039	1.0	.032	.8	.193	4.9	24	36
NRQ-626J	6	26	.039	1.0	.032	.8	.185	4.7	18	26	NRQ-626SJ	6	26	.039	1.0	.032	.8	.205	5.2	27	40
NRQ-726J	7	26	.039	1.0	.032	.8	.185	4.7	19	28	NRQ-726SJ	7	26	.039	1.0	.032	.8	.205	5.2	28	42
NRQ-826J	8	26	.039	1.0	.032	.8	.212	5.4	22	33	NRQ-826SJ	8	26	.039	1.0	.032	.8	.232	5.9	33	50
NRQ-926J	9	26	.039	1.0	.032	.8	.224	5.7	24	36	NRQ-926SJ	9	26	.039	1.0	.032	.8	.244	6.2	36	54
NRQ-1026J	10	26	.039	1.0	.032	.8	.224	5.7	25	38	NRQ1026SJ	10	26	.039	1.0	.032	.8	.244	6.2	38	56
NRQ-1226J	12	26	.039	1.0	.032	.8	.230	5.8	29	43	NRQ1226SJ	12	26	.039	1.0	.032	.8	.250	6.4	41	61
NRQ-1526J	15	26	.039	1.0	.032	.8	.251	6.4	34	51	NRQ1526SJ	15	26	.039	1.0	.032	.8	.271	6.9	48	72
NRQ-1926J	19	26	.039	1.0	.032	.8	.263	6.7	40	60	NRQ1926SJ	19	26	.039	1.0	.032	.8	.283	7.2	55	82
NRQ-2726J	27	26	.039	1.0	.032	.8	.308	7.8	54	81	NRQ2726SJ	27	26	.039	1.0	.032	.8	.320	8.3	72	108
NRQ-3726J	37	26	.039	1.0	.032	.8	.341	8.7	71	105	NRQ-3726SJ	37	26	.039	1.0	.032	.8	.361	9.2	91	135
NRQ-4826J	48	26	.039	1.0	.032	.8	.039	9.8	89	132	NRQ4826SJ	48	26	.039	1.0	.032	.8	.409	10.4	120	179

# CABLED SINGLE CONDUCTORS



**MULTI-CONDUCTOR STOCK CABLED SINGLES** Conductor sizes 28, 26, 24, 22 are 7 strand. All others are 19 strand.

NQ SERIES UNSHEILD - 24, 22, 20 and 18 AWG											NQ SERIES OVERALL BRAIDED SHIELD - 24, 22, 20 and 18 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NQ-224J	2	24	.044	1.1	.032	.8	.156	4.0	11	17	NQ-224SJ	2	24	.044	1.1	.032	.8	.176	4.5	19	28
NQ-324J	3	24	.044	1.1	.032	.8	.163	34.1	14	21	NQ-324SJ	3	24	.044	1.1	.032	.8	.183	4.6	22	32
NQ-424J	4	24	.044	1.1	.032	.8	.174	4.4	17	25	NQ-424SJ	4	24	.044	1.1	.032	.8	.194	4.9	25	37
NQ-524J	5	24	.044	1.1	.032	.8	.187	4.7	19	29	NQ-524SJ	5	24	.044	1.1	.032	.8	.207	5.3	29	43
NQ-624J	6	24	.044	1.1	.032	.8	.200	5.1	22	33	NQ-624SJ	6	24	.044	1.1	.032	.8	.220	5.6	33	49
NQ-724J	7	24	.044	1.1	.032	.8	.200	5.1	24	36	NQ-724SJ	7	24	.044	1.1	.032	.8	.220	5.6	35	52
NQ-824J	8	24	.044	1.1	.032	.8	.231	5.9	28	42	NQ-824SJ	8	24	.044	1.1	.032	.8	.251	6.4	41	60
NQ-924J	9	24	.044	1.1	.032	.8	.244	6.2	31	46	NQ-924SJ	9	24	.044	1.1	.032	.8	.264	6.7	44	66
NQ-1024J	10	24	.044	1.1	.032	.8	.244	6.2	33	49	NQ-1024SJ	10	24	.044	1.1	.032	.8	.264	6.7	46	69
NQ-1224J	12	24	.044	1.1	.032	.8	.251	6.4	37	56	NQ-1224SJ	12	24	.044	1.1	.032	.8	.271	6.9	51	76
NQ-1524J	15	24	.044	1.1	.032	.8	.275	7.0	45	67	NQ-1524SJ	15	24	.044	1.1	.032	.8	.295	7.5	61	90
NQ-1924J	19	24	.044	1.1	.032	.8	.288	7.3	54	80	NQ-1924SJ	19	24	.044	1.1	.032	.8	.308	7.8	70	105
NQ-2724J	27	24	.044	1.1	.032	.8	.339	8.6	73	109	NQ-2724SJ	27	24	.044	1.1	.032	.8	.359	9.1	93	139
NQ-3724J	37	24	.044	1.1	.032	.8	.376	9.6	96	142	NQ-3724SJ	37	24	.044	1.1	.032	.8	.401	10.2	127	189
NQ-4824J	48	24	.044	1.1	.032	.8	.424	10.8	121	180	NQ-4824SJ	48	24	.044	1.1	.032	.8	.450	11.4	157	233
NQ-6024J	60	24	.044	1.1	.032	.8	.464	11.8	148	220	NQ-6024SJ	60	24	.044	1.1	.032	.8	.489	12.4	187	278
NQ-222J	2	22	.050	1.3	.032	.8	.168	4.3	14	21	NQ-222SJ	2	22	.050	1.3	.032	.8	.188	4.8	22	33
NQ-322J	3	22	.050	1.3	.032	.8	.176	4.5	17	26	NQ-322SJ	3	22	.050	1.3	.032	.8	.196	5.0	26	39
NQ-422J	4	22	.050	1.3	.032	.8	.188	4.8	21	31	NQ-422SJ	4	22	.050	1.3	.032	.8	.208	5.3	31	46
NQ-522J	5	22	.050	1.3	.032	.8	.203	5.2	25	37	NQ-522SJ	5	22	.050	1.3	.032	.8	.223	5.7	35	53
NQ-622J	6	22	.050	1.3	.032	.8	.218	5.5	29	43	NQ-622SJ	6	22	.050	1.3	.032	.8	.238	6.0	40	60
NQ-722J	7	22	.050	1.3	.032	.8	.218	5.5	32	47	NQ-722SJ	7	22	.050	1.3	.032	.8	.238	6.0	43	64
NQ-822J	8	22	.050	1.3	.032	.8	.253	6.4	37	54	NQ-822SJ	8	22	.050	1.3	.032	.8	.273	6.9	51	75
NQ-922J	9	22	.050	1.3	.032	.8	.268	6.8	40	60	NQ-922SJ	9	22	.050	1.3	.032	.8	.288	7.3	56	83
NQ-1022J	10	22	.050	1.3	.032	.8	.268	6.8	43	64	NQ-1022SJ	10	22	.050	1.3	.032	.8	.288	7.3	58	87
NQ-1222J	12	22	.050	1.3	.032	.8	.276	7.0	50	74	NQ-1222SJ	12	22	.050	1.3	.032	.8	.296	7.5	65	97
NQ-1522J	15	22	.050	1.3	.032	.8	.303	7.7	60	89	NQ-1522SJ	15	22	.050	1.3	.032	.8	.323	8.2	78	115
NQ-1922J	19	22	.050	1.3	.032	.8	.318	8.1	73	108	NQ-1922SJ	19	22	.050	1.3	.032	.8	.338	8.6	91	136
NQ-2722J	27	22	.050	1.3	.032	.8	.376	9.6	100	148	NQ-2722SJ	27	22	.050	1.3	.032	.8	.401	10.2	131	194
NQ-3722J	37	22	.050	1.3	.032	.8	.418	10.6	131	196	NQ-3722SJ	37	22	.050	1.3	.032	.8	.443	11.3	167	248
NQ-4822J	48	22	.050	1.3	.032	.8	.473	12.0	167	248	NQ-4822SJ	48	22	.050	1.3	.032	.8	.498	12.7	207	308
NQ-6022J	60	22	.050	1.3	.032	.8	.518	13.2	205	305	NQ-6022SJ	60	22	.050	1.3	.032	.8	.543	13.8	249	371
NQ-220J	2	20	.058	1.5	.032	.8	.184	4.7	18	27	NQ-220SJ	2	20	.058	1.5	.032	.8	.204	5.2	28	41
NQ-320J	3	20	.058	1.5	.032	.8	.193	4.9	24	35	NQ-320SJ	3	20	.058	1.5	.032	.8	.213	5.4	34	50
NQ-420J	4	20	.058	1.5	.032	.8	.207	5.3	29	44	NQ-420SJ	4	20	.058	1.5	.032	.8	.227	5.8	40	60
NQ-520J	5	20	.058	1.5	.032	.8	.225	5.7	35	52	NQ-520SJ	5	20	.058	1.5	.032	.8	.245	6.2	47	70
NQ-620J	6	20	.058	1.5	.032	.8	.242	6.1	41	61	NQ-620SJ	6	20	.058	1.5	.032	.8	.262	6.7	54	81
NQ-720J	7	20	.058	1.5	.032	.8	.242	6.1	46	68	NQ-720SJ	7	20	.058	1.5	.032	.8	.262	6.7	59	88
NQ-820J	8	20	.058	1.5	.032	.8	.283	7.2	53	78	NQ-820SJ	8	20	.058	1.5	.032	.8	.303	7.7	69	102
NQ-920J	9	20	.058	1.5	.032	.8	.300	7.6	63	94	NQ-920SJ	9	20	.058	1.5	.032	.8	.320	8.1	76	113
NQ-1020J	10	20	.058	1.5	.032	.8	.300	7.6	63	94	NQ-1020SJ	10	20	.058	1.5	.032	.8	.329	8.1	80	120
NQ-1220J	12	20	.058	1.5	.032	.8	.309	7.9	73	109	NQ-1220SJ	12	20	.058	1.5	.032	.8	.329	8.4	91	136
NQ-1520J	15	20	.058	1.5	.032	.8	.341	8.7	89	133	NQ-1520SJ	15	20	.058	1.5	.032	.8	.361	9.2	109	163
NQ-1920J	19	20	.058	1.5	.032	.8	.358	9.1	109	162	NQ-1920SJ	19	20	.058	1.5	.032	.8	.378	9.6	130	194
NQ-2720J	27	20	.058	1.5	.032	.8	.425	10.8	151	225	NQ-2720SJ	27	20	.058	1.5	.032	.8	.450	11.4	187	278
NQ-3720J	37	20	.058	1.5	.032	.8	.474	12.0	201	299	NQ-3720SJ	37	20	.058	1.5	.032	.8	.499	12.7	242	359
NQ-218J	2	18	.068	1.7	.032	.8	.204	5.2	24	36	NQ-218SJ	2	18	.068	1.7	.032	.8	.224	5.7	35	52
NQ-318J	3	18	.068	1.7	.032	.8	.215	5.5	32	47	NQ-318SJ	3	18	.068	1.7	.032	.8	.235	6.0	43	64
NQ-418J	4	18	.068	1.7	.032	.8	.231	5.9	40	59	NQ-418SJ	4	18	.068	1.7	.032	.8	.251	6.4	52	78
NQ-518J	5	18	.068	1.7	.032	.8	.252	6.4	48	71	NQ-518SJ	5	18	.068	1.7	.032	.8	.272	6.9	62	92
NQ-618J	6	18	.068	1.7	.032	.8	.272	6.9	56	83	NQ-618SJ	6	18	.068	1.7	.032	.8	.292	7.4	71	106
NQ-718J	7	18	.068	1.7	.032	.8	.272	6.9	63	94	NQ-718SJ	7	18	.068	1.7	.032	.8	.292	7.4	78	117
NQ-818J	8	18	.068	1.7	.032	.8	.320	8.1	73	108	NQ-818SJ	8	18	.068	1.7	.032	.8	.340	8.6	91	136
NQ-918J	9	18	.068	1.7	.032	.8	.340	8.6	81	120	NQ-918SJ	9	18	.068	1.7	.032	.8	.360	9.1	101	150
NQ-1018J	10	18	.068	1.7	.032	.8	.340	8.6	88	131	NQ-1018SJ	10	18	.068	1.7	.032	.8	.360	9.1	100	161
NQ-1218J	12	18	.068	1.7	.032	.8	.351	8.9	102	152	NQ-1218SJ	12	18	.068	1.7	.032	.8	.371	9.4	123	183
NQ-1518J	15	18	.068	1.7	.032	.8	.388	9.8	126	187	NQ-1518SJ	15	18	.068	1.7	.032	.8	.413	10.5	158	235
NQ-1918J	19	18	.068	1.7	.032	.8	.408	10.4	155	230	NQ-1918SJ	19	18	.068	1.7	.032	.8	.433	11.0	189	281
NQ-2718J	27	18	.068	1.7	.032	.8	.487	12.4	215	320	NQ-2718SJ	27	18	.068	1.7	.032	.8	.512	13.0	257	382

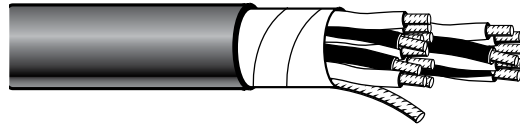
**RoHS COMPLIANT PRODUCTS:**

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

NRQ SERIES UNSHEILD - 24, 22, 20 and 18 AWG											NRQ SERIES OVERALL BRAIDED SHIELD - 24, 22, 20 and 18 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NRQ-224J	2	24	.044	1.1	.032	.8	.156	4.0	11	17	NRQ-224SJ	2	24	.044	1.1	.032	.8	.176	4.5	19	28
NRQ-324J	3	24	.044	1.1	.032	.8	.163	34.1	14	21	NRQ-324SJ	3	24	.044	1.1	.032	.8	.183	4.6	22	32
NRQ-424J	4	24	.044	1.1	.032	.8	.174	4.4	17	25	NRQ-424SJ	4	24	.044	1.1	.032	.8	.194	4.9	25	37
NRQ-524J	5	24	.044	1.1	.032	.8	.187	4.7	19	29	NRQ-524SJ	5	24	.044	1.1	.032	.8	.207	5.3	29	43
NRQ-624J	6	24	.044	1.1	.032	.8	.200	5.1	22	33	NRQ-624SJ	6	24	.044	1.1	.032	.8	.220	5.6	33	49
NRQ-724J	7	24	.044	1.1	.032	.8	.200	5.1	24	36	NRQ-724SJ	7	24	.044	1.1	.032	.8	.220	5.6	35	52
NRQ-824J	8	24	.044	1.1	.032	.8	.231	5.9	28	42	NRQ-824SJ	8	24	.044	1.1	.032	.8	.251	6.4	41	60
NRQ-924J	9	24	.044	1.1	.032	.8	.244	6.2	31	46	NRQ-924SJ	9	24	.044	1.1	.032	.8	.264	6.7	44	66
NRQ-1024J	10	24	.044	1.1	.032	.8	.244	6.2	33	49	NRQ-1024SJ	10	24	.044	1.1	.032	.8	.264	6.7	46	69
NRQ-1224J	12	24	.044	1.1	.032	.8	.251	6.4	37	56	NRQ-1224SJ	12	24	.044	1.1	.032	.8	.271	6.9	51	76
NRQ-1524J	15	24	.044	1.1	.032	.8	.275	7.0	45	67	NRQ-1524SJ	15	24	.044	1.1	.032	.8	.295	7.5	61	90
NRQ-1924J	19	24	.044	1.1	.032	.8	.288	7.3	54	80	NRQ-1924SJ	19	24	.044	1.1	.032	.8	.308	7.8	70	105
NRQ-2724J	27	24	.044	1.1	.032	.8	.339	8.6	73	109	NRQ-2724SJ	27	24	.044	1.1	.032	.8	.359	9.1	93	139
NRQ-3724J	37	24	.044	1.1	.032	.8	.376	9.6	96	142	NRQ-3724SJ	37	24	.044	1.1	.032	.8	.401	10.2	127	189
NRQ-4824J	48	24	.044	1.1	.032	.8	.424	10.8	121	180	NRQ-4824SJ	48	24	.044	1.1	.032	.8	.450	11.4	157	233
NRQ-6024J	60	24	.044	1.1	.032	.8	.464	11.8	148	220	NRQ-6024SJ	60	24	.044	1.1	.032	.8	.489	12.4	187	278
NRQ-222J	2	22	.050	1.3	.032	.8	.168	4.3	14	21	NRQ-222SJ	2	22	.050	1.3	.032	.8	.188	4.8	22	33
NRQ-322J	3	22	.050	1.3	.032	.8	.176	4.5	17	26	NRQ-322SJ	3	22	.050	1.3	.032	.8	.196	5.0	26	39
NRQ-422J	4	22	.050	1.3	.032	.8	.188	4.8	21	31	NRQ-422SJ	4	22	.050	1.3	.032	.8	.208	5.3	31	46
NRQ-522J	5	22	.050	1.3	.032	.8	.203	5.2	25	37	NRQ-522SJ	5	22	.050	1.3	.032	.8	.223	5.7	35	53
NRQ-622J	6	22	.050	1.3	.032	.8	.218	5.5	29	43	NRQ-622SJ	6	22	.050	1.3	.032	.8	.238	6.0	40	60
NRQ-722J	7	22	.050	1.3	.032	.8	.218	5.5	32	47	NRQ-722SJ	7	22	.050	1.3	.032	.8	.238	6.0	43	64
NRQ-822J	8	22	.050	1.3	.032	.8	.253	6.4	37	54	NRQ-822SJ	8	22	.050	1.3	.032	.8	.273	6.9	51	75
NRQ-922J	9	22	.050	1.3	.032	.8	.268	6.8	40	60	NRQ-922SJ	9	22	.050	1.3	.032	.8	.288	7.3	56	83
NRQ-1022J	10	22	.050	1.3	.032	.8	.268	6.8	43	64	NRQ-1022SJ	10	22	.050	1.3	.032	.8	.288	7.3	58	87
NRQ-1222J	12	22	.050	1.3	.032	.8	.276	7.0	50	74	NRQ-1222SJ	12	22	.050	1.3	.032	.8	.296	7.5	65	97
NRQ-1522J	15	22	.050	1.3	.032	.8	.303	7.7	60	89	NRQ-1522SJ	15	22	.050	1.3	.032	.8	.323	8.2	78	115
NRQ-1922J	19	22	.050	1.3	.032	.8	.318	8.1	73	108	NRQ-1922SJ	19	22	.050	1.3	.032	.8	.338	8.6	91	136
NRQ-2722J	27	22	.050	1.3	.032	.8	.376	9.6	100	148	NRQ-2722SJ	27	22	.050	1.3	.032	.8	.401	10.2	131	194
NRQ-3722J	37	22	.050	1.3	.032	.8	.418	10.6	131	196	NRQ-3722SJ	37	22	.050	1.3	.032	.8	.443	11.3	167	248
NRQ-4822J	48	22	.050	1.3	.032	.8	.473	12.0	167	248	NRQ-4822SJ	48	22	.050	1.3	.032	.8	.498	12.7	207	308
NRQ-6022J	60	22	.050	1.3	.032	.8	.518	13.2	205	305	NRQ-6022SJ	60	22	.050	1.3	.032	.8	.543	13.8	249	371
NRQ-220J	2	20	.058	1.5	.032	.8	.184	4.7	18	27	NRQ-220SJ	2	20	.058	1.5	.032	.8	.204	5.2	28	41
NRQ-320J	3	20	.058	1.5	.032	.8	.193	4.9	24	35	NRQ-320SJ	3	20	.058	1.5	.032	.8	.213	5.4	34	50
NRQ-420J	4	20	.058	1.5	.032	.8	.207	5.3	29	44	NRQ-420SJ	4	20	.058	1.5	.032	.8	.227	5.8	40	60
NRQ-520J	5	20	.058	1.5	.032	.8	.225	5.7	35	52	NRQ-520SJ	5	20	.058	1.5	.032	.8	.245	6.2	47	70
NRQ-620J	6	20	.058	1.5	.032	.8	.242	6.1	41	61	NRQ-620SJ	6	20	.058	1.5	.032	.8	.262	6.7	54	81
NRQ-720J	7	20	.058	1.5	.032	.8	.242	6.1	46	68	NRQ-720SJ	7	20	.058	1.5	.032	.8	.262	6.7	59	88
NRQ-820J	8	20	.058	1.5	.032	.8	.283	7.2	53	78	NRQ-820SJ	8	20	.058	1.5	.032	.8	.303	7.7	69	102
NRQ-920J	9	20	.058	1.5	.032	.8	.300	7.6	63	94	NRQ-920SJ	9	20	.058	1.5	.032	.8	.320	8.1	76	113
NRQ-1020J	10	20	.058	1.5	.032	.8	.300	7.6	63	94	NRQ-1020SJ	10	20	.058	1.5	.032	.8	.329	8.1	80	120
NRQ-1220J	12	20	.058	1.5	.032	.8	.309	7.9	73	109	NRQ-1220SJ	12	20	.058	1.5	.032	.8	.329	8.4	91	136
NRQ-1520J	15	20	.058	1.5	.032	.8	.341	8.7	89	133	NRQ-1520SJ	15	20	.058	1.5	.032	.8	.361	9.2	109	163
NRQ-1920J	19	20	.058	1.5	.032	.8	.358	9.1	109	162	NRQ-1920SJ	19	20	.058	1.5	.032	.8	.378	9.6	130	194
NRQ-2720J	27	20	.058	1.5	.032	.8	.425	10.8	151	225	NRQ-2720SJ	27	20	.058	1.5	.032	.8	.450	11.4	187	278
NRQ-3720J	37	20	.058	1.5	.032	.8	.474	12.0	201	299	NRQ-3720SJ	37	20	.058	1.5	.032	.8	.499	12.7	242	359
NRQ-218J	2	18	.068	1.7	.032	.8	.204	5.2	24	36	NRQ-218SJ	2	18	.068	1.7	.032	.8	.224	5.7	35	52
NRQ-318J	3	18	.068	1.7	.032	.8	.215	5.5	32	47	NRQ-318SJ	3	18	.068	1.7	.032	.8	.235	6.0	43	64
NRQ-418J	4	18	.068	1.7	.032	.8	.231	5.9	40	59	NRQ-418SJ	4	18	.068	1.7	.032	.8	.251	6.4	52	78
NRQ-518J	5	18	.068	1.7	.032	.8	.252	6.4	48	71	NRQ-518SJ	5	18	.068	1.7	.032	.8	.272	6.9	62	92
NRQ-618J	6	18	.068	1.7	.032	.8	.272	6.9	56	83	NRQ-618SJ	6	18	.068	1.7	.032	.8	.292	7.4	71	106
NRQ-718J	7	18	.068	1.7	.032	.8	.272	6.9	63	94	NRQ-718SJ	7	18	.068	1.7	.032	.8	.292	7.4	78	117
NRQ-818J	8	18	.068	1.7	.032	.8	.320	8.1	73	108	NRQ-818SJ	8	18	.068	1.7	.032	.8	.340	8.6	91	136
NRQ-918J	9	18	.068	1.7	.032	.8	.340	8.6	81	120	NRQ-918SJ	9	18	.068	1.7	.032	.8	.360	9.1	101	150
NRQ-1018J	10	18	.068	1.7	.032	.8	.340	8.6	88	131	NRQ-1018SJ	10	18	.068	1.7	.032	.8	.360	9.1	100	161
NRQ-1218J	12	18	.068	1.7	.032	.8	.351	8.9	102	152	NRQ-1218SJ	12	18	.068	1.7	.032	.8	.371	9.4	123	183
NRQ-1518J	15	18	.068	1.7	.032	.8	.388	9.8	126	187	NRQ-1518SJ	15	18	.068	1.7	.032	.8	.413	10.5	158	235
NRQ-1918J	19	18	.068	1.7	.032	.8	.408	10.4	155	230	NRQ-1918SJ	19	18	.068	1.7	.032	.8	.433	11.0	189	281
NRQ-2718J	27	18	.068	1.7	.032	.8	.487	12.4	215	320	NRQ-2718SJ	27	18	.068	1.7	.032	.8	.512	13.0	257	382



# CABLED SINGLE CONDUCTORS



## NQ SERIES

- Single Conductors
  - Overall Foil Shield with Drain
- U.L. and CSA certification furnished

NQ SERIES OVERALL FOIL SHIELD WITH DRAIN - 28, 26 and 24 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NQ-228FSJ	2	28	.035	.9	.032	.8	.140	3.6	9	13
NQ-328FSJ	3	28	.035	.9	.032	.8	.146	3.7	10	15
NQ-428FSJ	4	28	.035	.9	.032	.8	.154	3.9	12	18
NQ-528FSJ	5	28	.035	.9	.032	.8	.165	4.2	13	20
NQ-628FSJ	6	28	.035	.9	.032	.8	.175	4.4	15	22
NQ-728FSJ	7	28	.035	.9	.032	.8	.175	4.4	16	24
NQ-828FSJ	8	28	.035	.9	.032	.8	.200	5.1	19	28
NQ-928FSJ	9	28	.035	.9	.032	.8	.210	5.3	20	30
NQ-1028FSJ	10	28	.035	.9	.032	.8	.210	5.3	21	32
NQ-1228FSJ	12	28	.035	.9	.032	.8	.216	5.5	24	35
NQ-1528FSJ	15	28	.035	.9	.032	.8	.235	6.0	28	41
NQ-1928FSJ	19	28	.035	.9	.032	.8	.245	6.2	32	48
NQ-2728FSJ	27	28	.035	.9	.032	.8	.286	7.3	43	64
NQ-3728FSJ	37	28	.035	.9	.032	.8	.315	8.0	55	82
NQ-226FSJ	2	26	.039	1.0	.032	.8	.148	3.8	11	16
NQ-326FSJ	3	26	.039	1.0	.032	.8	.154	3.9	12	18
NQ-426FSJ	4	26	.039	1.0	.032	.8	.164	4.2	14	21
NQ-526FSJ	5	26	.039	1.0	.032	.8	.175	4.5	16	24
NQ-626FSJ	6	26	.039	1.0	.032	.8	.187	4.7	18	28
NQ-726FSJ	7	26	.039	1.0	.032	.8	.187	4.7	20	30
NQ-826FSJ	8	26	.039	1.0	.032	.8	.214	5.4	23	34
NQ-926FSJ	9	26	.039	1.0	.032	.8	.226	5.7	25	37
NQ-1026FSJ	10	26	.039	1.0	.032	.8	.226	5.7	26	39
NQ-1226FSJ	12	26	.039	1.0	.032	.8	.232	5.9	30	44
NQ-1526FSJ	15	26	.039	1.0	.032	.8	.253	6.4	35	52
NQ-1926FSJ	19	26	.039	1.0	.032	.8	.265	6.7	41	62
NQ-2726FSJ	27	26	.039	1.0	.032	.8	.310	7.9	55	82
NQ-3726FSJ	37	26	.039	1.0	.032	.8	.343	8.7	71	106
NQ-4826FSJ	48	26	.039	1.0	.032	.8	.386	9.8	90	133
NQ-224FSJ	2	24	.044	1.1	.032	.8	.158	4.0	13	19
NQ-524FSJ	5	24	.044	1.1	.032	.8	.189	4.8	21	31
NQ-324FSJ	3	24	.044	1.1	.032	.8	.165	4.2	15	23
NQ-424FSJ	4	24	.044	1.1	.032	.8	.176	4.5	18	27
NQ-624FSJ	6	24	.044	1.1	.032	.8	.202	5.1	24	35
NQ-724FSJ	7	24	.044	1.1	.032	.8	.202	5.1	26	38
NQ-824FSJ	8	24	.044	1.1	.032	.8	.233	5.9	30	44
NQ-924FSJ	9	24	.044	1.1	.032	.8	.246	6.2	32	48
NQ-1024FSJ	10	24	.044	1.1	.032	.8	.246	6.2	34	51
NQ-1224FSJ	12	24	.044	1.1	.032	.8	.253	6.4	39	58
NQ-1524FSJ	15	24	.044	1.1	.032	.8	.277	7.0	46	69
NQ-1924FSJ	19	24	.044	1.1	.032	.8	.290	7.4	55	82
NQ-2724FSJ	27	24	.044	1.1	.032	.8	.341	8.7	75	111
NQ-3724FSJ	37	24	.044	1.1	.032	.8	.378	9.6	97	145
NQ-4824FSJ	48	24	.044	1.1	.032	.8	.426	10.8	122	182
NQ-6024FSJ	60	24	.044	1.1	.032	.8	.466	11.8	149	222

NQ SERIES OVERALL FOIL SHIELD WITH DRAIN - 22, 20 and 18 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NQ-222FSJ	2	22	.050	1.3	.032	.8	.170	4.3	16	24
NQ-322FSJ	3	22	.050	1.3	.032	.8	.178	4.5	20	29
NQ-422FSJ	4	22	.050	1.3	.032	.8	.190	4.8	23	35
NQ-522FSJ	5	22	.050	1.3	.032	.8	.205	5.2	27	40
NQ-622FSJ	6	22	.050	1.3	.032	.8	.220	5.6	31	46
NQ-722FSJ	7	22	.050	1.3	.032	.8	.220	5.6	34	50
NQ-822FSJ	8	22	.050	1.3	.032	.8	.255	6.5	39	58
NQ-922FSJ	9	22	.050	1.3	.032	.8	.270	6.9	43	63
NQ-1022FSJ	10	22	.050	1.3	.032	.8	.270	6.9	46	68
NQ-1222FSJ	12	22	.050	1.3	.032	.8	.278	7.1	52	77
NQ-1522FSJ	15	22	.050	1.3	.032	.8	.305	7.7	62	93
NQ-1922FSJ	19	22	.050	1.3	.032	.8	.320	8.1	75	111
NQ-2722FSJ	27	22	.050	1.3	.032	.8	.378	9.6	102	152
NQ-3722FSJ	37	22	.050	1.3	.032	.8	.420	10.7	134	199
NQ-4822FSJ	48	22	.050	1.3	.032	.8	.475	12.1	169	252
NQ-6022FSJ	60	22	.050	1.3	.032	.8	.520	13.2	207	308
NQ-220FSJ	2	20	.058	1.5	.032	.8	.186	4.7	22	33
NQ-320FSJ	3	20	.058	1.5	.032	.8	.195	5.0	28	41
NQ-420FSJ	4	20	.058	1.5	.032	.8	.209	5.3	33	49
NQ-520FSJ	5	20	.058	1.5	.032	.8	.227	5.8	39	58
NQ-620FSJ	6	20	.058	1.5	.032	.8	.244	6.2	45	66
NQ-720FSJ	7	20	.058	1.5	.032	.8	.244	6.2	49	73
NQ-820FSJ	8	20	.058	1.5	.032	.8	.285	7.2	56	84
NQ-920FSJ	9	20	.058	1.5	.032	.8	.302	7.7	62	93
NQ-1020FSJ	10	20	.058	1.5	.032	.8	.302	7.7	67	100
NQ-1220FSJ	12	20	.058	1.5	.032	.8	.311	7.9	77	114
NQ-1520FSJ	15	20	.058	1.5	.032	.8	.343	8.7	93	138
NQ-1920FSJ	19	20	.058	1.5	.032	.8	.360	9.1	113	168
NQ-2720FSJ	27	20	.058	1.5	.032	.8	.427	10.9	155	230
NQ-3720FSJ	37	20	.058	1.5	.032	.8	.476	12.0	205	305
NQ-218FSJ	2	18	.068	1.7	.032	.8	.206	5.2	30	45
NQ-318FSJ	3	18	.068	1.7	.032	.8	.217	5.5	38	56
NQ-418FSJ	4	18	.068	1.7	.032	.8	.245	5.9	46	68
NQ-518FSJ	5	18	.068	1.7	.032	.8	.254	6.4	54	80
NQ-618FSJ	6	18	.068	1.7	.032	.8	.274	7.0	62	92
NQ-718FSJ	7	18	.068	1.7	.032	.8	.274	7.0	69	102
NQ-818FSJ	8	18	.068	1.7	.032	.8	.322	8.2	79	117
NQ-918FSJ	9	18	.068	1.7	.032	.8	.342	8.7	87	129
NQ-1018FSJ	10	18	.068	1.7	.032	.8	.342	8.7	94	139
NQ-1218FSJ	12	18	.068	1.7	.032	.8	.353	9.0	100	161
NQ-1518FSJ	15	18	.068	1.7	.032	.8	.390	9.9	131	196
NQ-1918FSJ	19	18	.068	1.7	.032	.8	.410	10.4	150	239
NQ-2718FSJ	27	18	.068	1.7	.032	.8	.489	12.4	221	329

# RoHS COMPLIANT PRODUCTS:

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

NRQ SERIES OVERALL FOIL SHIELD WITH DRAIN - 28, 26 and 24 AWG											NRQ SERIES OVERALL FOIL SHIELD WITH DRAIN - 22, 20 and 18 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NRQ-228FSJ	2	28	.035	.9	.032	.8	.140	3.6	9	13	NRQ-222FSJ	2	22	.050	1.3	.032	.8	.170	4.3	16	24
NRQ-328FSJ	3	28	.035	.9	.032	.8	.146	3.7	10	15	NRQ-322FSJ	3	22	.050	1.3	.032	.8	.178	4.5	20	29
NRQ-428FSJ	4	28	.035	.9	.032	.8	.154	3.9	12	18	NRQ-422FSJ	4	22	.050	1.3	.032	.8	.190	4.8	23	35
NRQ-528FSJ	5	28	.035	.9	.032	.8	.165	4.2	13	20	NRQ-522FSJ	5	22	.050	1.3	.032	.8	.205	5.2	27	40
NRQ-628FSJ	6	28	.035	.9	.032	.8	.175	4.4	15	22	NRQ-622FSJ	6	22	.050	1.3	.032	.8	.220	5.6	31	46
NRQ-728FSJ	7	28	.035	.9	.032	.8	.175	4.4	16	24	NRQ-722FSJ	7	22	.050	1.3	.032	.8	.220	5.6	34	50
NRQ-828FSJ	8	28	.035	.9	.032	.8	.200	5.1	19	28	NRQ-822FSJ	8	22	.050	1.3	.032	.8	.255	6.5	39	58
NRQ-928FSJ	9	28	.035	.9	.032	.8	.210	5.3	20	30	NRQ-922FSJ	9	22	.050	1.3	.032	.8	.270	6.9	43	63
NRQ-1028FSJ	10	28	.035	.9	.032	.8	.210	5.3	21	32	NRQ-1022FSJ	10	22	.050	1.3	.032	.8	.270	6.9	46	68
NRQ-1228FSJ	12	28	.035	.9	.032	.8	.216	5.5	24	35	NRQ-1222FSJ	12	22	.050	1.3	.032	.8	.278	7.1	52	77
NRQ-1528FSJ	15	28	.035	.9	.032	.8	.235	6.0	28	41	NRQ-1522FSJ	15	22	.050	1.3	.032	.8	.305	7.7	62	93
NRQ-1928FSJ	19	28	.035	.9	.032	.8	.245	6.2	32	48	NRQ-1922FSJ	19	22	.050	1.3	.032	.8	.320	8.1	75	111
NRQ-2728FSJ	27	28	.035	.9	.032	.8	.286	7.3	43	64	NRQ-2722FSJ	27	22	.050	1.3	.032	.8	.378	9.6	102	152
NRQ-3728FSJ	37	28	.035	.9	.032	.8	.315	8.0	55	82	NRQ-3722FSJ	37	22	.050	1.3	.032	.8	.420	10.7	134	199
NRQ-226FSJ	2	26	.039	1.0	.032	.8	.148	3.8	11	16	NRQ-4822FSJ	48	22	.050	1.3	.032	.8	.475	12.1	169	252
NRQ-326FSJ	3	26	.039	1.0	.032	.8	.154	3.9	12	18	NRQ-6022FSJ	60	22	.050	1.3	.032	.8	.520	13.2	207	308
NRQ-426FSJ	4	26	.039	1.0	.032	.8	.164	4.2	14	21	NRQ-220FSJ	2	20	.058	1.5	.032	.8	.186	4.7	22	33
NRQ-526FSJ	5	26	.039	1.0	.032	.8	.175	4.5	16	24	NRQ-320FSJ	3	20	.058	1.5	.032	.8	.195	5.0	28	41
NRQ-626FSJ	6	26	.039	1.0	.032	.8	.187	4.7	18	28	NRQ-420FSJ	4	20	.058	1.5	.032	.8	.209	5.3	33	49
NRQ-726FSJ	7	26	.039	1.0	.032	.8	.187	4.7	20	30	NRQ-520FSJ	5	20	.058	1.5	.032	.8	.227	5.8	39	58
NRQ-826FSJ	8	26	.039	1.0	.032	.8	.214	5.4	23	34	NRQ-620FSJ	6	20	.058	1.5	.032	.8	.244	6.2	45	66
NRQ-926FSJ	9	26	.039	1.0	.032	.8	.226	5.7	25	37	NRQ-720FSJ	7	20	.058	1.5	.032	.8	.244	6.2	49	73
NRQ-1026FSJ	10	26	.039	1.0	.032	.8	.226	5.7	26	39	NRQ-820FSJ	8	20	.058	1.5	.032	.8	.285	7.2	56	84
NRQ-1226FSJ	12	26	.039	1.0	.032	.8	.232	5.9	30	44	NRQ-920FSJ	9	20	.058	1.5	.032	.8	.302	7.7	62	93
NRQ-1526FSJ	15	26	.039	1.0	.032	.8	.253	6.4	35	52	NRQ-1020FSJ	10	20	.058	1.5	.032	.8	.302	7.7	67	100
NRQ-1926FSJ	19	26	.039	1.0	.032	.8	.265	6.7	41	62	NRQ-1220FSJ	12	20	.058	1.5	.032	.8	.311	7.9	77	114
NRQ-2726FSJ	27	26	.039	1.0	.032	.8	.310	7.9	55	82	NRQ-1520FSJ	15	20	.058	1.5	.032	.8	.343	8.7	93	138
NRQ-3726FSJ	37	26	.039	1.0	.032	.8	.343	8.7	71	106	NRQ-1920FSJ	19	20	.058	1.5	.032	.8	.360	9.1	113	168
NRQ-4826FSJ	48	26	.039	1.0	.032	.8	.386	9.8	90	133	NRQ-2720FSJ	27	20	.058	1.5	.032	.8	.427	10.9	155	230
NRQ-224FSJ	2	24	.044	1.1	.032	.8	.158	4.0	13	19	NRQ-3720FSJ	37	20	.058	1.5	.032	.8	.476	12.0	205	305
NRQ-324FSJ	3	24	.044	1.1	.032	.8	.165	4.2	15	23	NRQ-218FSJ	2	18	.068	1.7	.032	.8	.206	5.2	30	45
NRQ-424FSJ	4	24	.044	1.1	.032	.8	.176	4.5	18	27	NRQ-318FSJ	3	18	.068	1.7	.032	.8	.217	5.5	38	56
NRQ-524FSJ	5	24	.044	1.1	.032	.8	.189	4.8	21	31	NRQ-418FSJ	4	18	.068	1.7	.032	.8	.245	5.9	46	68
NRQ-624FSJ	6	24	.044	1.1	.032	.8	.202	5.1	24	35	NRQ-518FSJ	5	18	.068	1.7	.032	.8	.254	6.4	54	80
NRQ-724FSJ	7	24	.044	1.1	.032	.8	.202	5.1	26	38	NRQ-618FSJ	6	18	.068	1.7	.032	.8	.274	7.0	62	92
NRQ-824FSJ	8	24	.044	1.1	.032	.8	.233	5.9	30	44	NRQ-718FSJ	7	18	.068	1.7	.032	.8	.274	7.0	69	102
NRQ-924FSJ	9	24	.044	1.1	.032	.8	.246	6.2	32	48	NRQ-818FSJ	8	18	.068	1.7	.032	.8	.322	8.2	79	117
NRQ-1024FSJ	10	24	.044	1.1	.032	.8	.246	6.2	34	51	NRQ-918FSJ	9	18	.068	1.7	.032	.8	.342	8.7	87	129
NRQ-1224FSJ	12	24	.044	1.1	.032	.8	.253	6.4	39	58	NRQ-1018FSJ	10	18	.068	1.7	.032	.8	.342	8.7	94	139
NRQ-1524FSJ	15	24	.044	1.1	.032	.8	.277	7.0	46	69	NRQ-1218FSJ	12	18	.068	1.7	.032	.8	.353	9.0	100	161
NRQ-1924FSJ	19	24	.044	1.1	.032	.8	.290	7.4	55	82	NRQ-1518FSJ	15	18	.068	1.7	.032	.8	.390	9.9	131	196
NRQ-2724FSJ	27	24	.044	1.1	.032	.8	.341	8.7	75	111	NRQ-1918FSJ	19	18	.068	1.7	.032	.8	.410	10.4	150	239
NRQ-3724FSJ	37	24	.044	1.1	.032	.8	.378	9.6	97	145	NRQ-2718FSJ	27	18	.068	1.7	.032	.8	.489	12.4	221	329
NRQ-4824FSJ	48	24	.044	1.1	.032	.8	.426	10.8	122	182											
NRQ-6024FSJ	60	24	.044	1.1	.032	.8	.466	11.8	149	222											

# CABLED TWISTED PAIRS CONDUCTORS



## NQP SERIES

- Twisted Pair Conductors
- Mil Spec, U.L. AWM

Recognized Style 2464 and CSA Certified AWM *II* A/B

### GRAY PVC JACKET

National Wire & Cable Corporation manufactures a complete line of highly flexible micro-miniature low-voltage instrument control cable. These are available as cabled pairs or singles, with optional overall shield of either foil with drain or a braided shield.

Conductors are stranded tinned copper with .010" wall of tough extruded polyvinyl chloride primary insulation, rated for 300 volt use at +80°C under U.L. style 1061\*. All are color coded using ten standard colors plus white with stripes per MIL-STD-681. View Color Table in the National Wire Cable Designers Guide, page 7-13.

Conductors are planetary cabled and helically laid for optimum flexibility, with a barrier under braids. Shielded cables have a tinned copper braid of 90% coverage per MIL-C-7078, with braid angles below 40° for easy pushback; or have a 100% coverage foil shield in intimate contact with a drain wire for easy termination.

Outer jacket is highly flexible abrasion-resistant gray polyvinyl chloride thermoplastic, meeting the requirements of U.L. style 2464. \*\*U.L. & CSA certification furnished.

Military certification furnished only when requested.

All materials are flame retardant and fungus resistant. Standard Putups: 500 and 1000 ft. No-deposit reels. For shorter quantities or specific lengths, consult factory.

\*Wire also meets MIL-W-16878 rated 600 volts, +105°C.

\*\*Jacket material is military rated for 105°C; meets MIL-I-631, Type F. Meets E.I.A. Standards RS-232 for 18-24 gauges.

TECHNICAL DATA (ALL CABLES)	
<b>Insulation Breakdown Voltage:</b>	Greater than 3400 volts AC RMS, 60cps.
<b>Capacitance:</b>	Nominal capacitance from a wire to all else in a cable ranges from 25 to 45 pfft at 1 kc, depending on gauge and position.
<b>Insulation Leakage:</b>	200 megohms/1000 feet minimum @ 500 VDC from conductor to all else in cable.
<b>Sheath Leakage:</b>	10 megohms/1000 feet minimum @ 500 VDC from shield or conductor group through sheath to ground.
<b>Temperature Range:</b>	U.L. rating: +80°C per U.L. style 2464. Military: Continuous use from -40°C to +105°C.
<b>Bending Characteristics:</b>	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 applications consult the factory.
<b>Foil Shielded Cables:</b>	The nominal over-all diameter of foil shielded cables will be .006" greater than the non-shielded cables of the same conductor count and wire size.
<b>Characteristic Impedance (NQP Paired Cables)</b>	Ranges from 150 ohms to 45 ohms, dependent on wire size (AWG), geometry and drive method. Consult our technical staff for data on specific cable types.

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

## MULTI-CONDUCTOR STOCK CABLED SINGLES Conductor sizes 28, 26, 24, 22 are 7 strand. All others are 19 strand.

NQP SERIES UNSHIELDED - 28 and 26 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NQP-228J	2	28	.035	.9	.032	.8	.187	4.7	14	22
NQP-328J	3	28	.035	.9	.032	.8	.197	5.0	17	26
NQP-428J	4	28	.035	.9	.032	.8	.215	5.5	20	30
NQP-528J	5	28	.035	.9	.032	.8	.236	6.0	23	35
NQP-628J	6	28	.035	.9	.032	.8	.257	6.5	27	40
NQP-728J	7	28	.035	.9	.032	.8	.247	6.3	29	43
NQP-828J	8	28	.035	.9	.032	.8	.306	7.8	34	50
NQP-928J	9	28	.035	.9	.032	.8	.292	7.4	37	55
NQP-1028J	10	28	.035	.9	.032	.8	.306	7.8	39	58
NQP-1228J	12	28	.035	.9	.032	.8	.316	8.0	44	65
NQP-1528J	15	28	.035	.9	.032	.8	.355	9.0	52	77
NQP-1928J	19	28	.035	.9	.032	.8	.366	9.3	61	91
NQP-2728J	27	28	.035	.9	.032	.8	.435	11.1	82	122
NQP-3728J	37	28	.035	.9	.032	.8	.485	12.2	106	158
NQP-226J	2	26	.039	1.0	.032	.8	.201	5.1	17	25
NQP-326J	3	26	.039	1.0	.032	.8	.211	5.4	21	31
NQP-426J	4	26	.039	1.0	.032	.8	.232	5.9	25	36
NQP-526J	5	26	.039	1.0	.032	.8	.255	6.5	29	43
NQP-626J	6	26	.039	1.0	.032	.8	.279	7.1	33	49
NQP-726J	7	26	.039	1.0	.032	.8	.267	6.8	36	53
NQP-826J	8	26	.039	1.0	.032	.8	.333	8.5	42	62
NQP-926J	9	26	.039	1.0	.032	.8	.318	8.1	46	68
NQP-1026J	10	26	.039	1.0	.032	.8	.333	8.5	49	73
NQP-1226J	12	26	.039	1.0	.032	.8	.344	8.7	55	82
NQP-1526J	15	26	.039	1.0	.032	.8	.388	9.9	66	98
NQP-1926J	19	26	.039	1.0	.032	.8	.400	10.1	79	117
NQP-2726J	27	26	.039	1.0	.032	.8	.476	12.1	107	159
NQP-3726J	37	26	.039	1.0	.032	.8	.532	13.5	139	207

NQP SERIES OVERALL BRAIDED SHIELD - 28 and 26 AWG												
Part No.	No. of pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight			
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM		
NQP-228SJ	2	28	.035	.9	.032	.8	.207	5.3	29	38		
NQP-328SJ	3	28	.035	.9	.032	.8	.217	5.5	26	43		
NQP-428SJ	4	28	.035	.9	.032	.8	.235	6.0	33	49		
NQP-528SJ	5	28	.035	.9	.032	.8	.256	6.5	38	56		
NQP-628SJ	6	28	.035	.9	.032	.8	.277	7.0	43	63		
NQP-728SJ	7	28	.035	.9	.032	.8	.267	6.8	45	66		
NQP-828SJ	8	28	.035	.9	.032	.8	.326	8.3	53	79		
NQP-928SJ	9	28	.035	.9	.032	.8	.312	7.9	58	86		
NQP-1028SJ	10	28	.035	.9	.032	.8	.326	8.3	60	89		
NQP-1228SJ	12	28	.035	.9	.032	.8	.336	8.5	65	97		
NQP-1528SJ	15	28	.035	.9	.032	.8	.375	9.5	76	113		
NQP-1928SJ	19	28	.035	.9	.032	.8	.386	9.8	87	129		
NQP-2728SJ	27	28	.035	.9	.032	.8	.460	11.7	125	189		
NQP-3728SJ	37	28	.035	.9	.032	.8	.510	12.9	155	231		
NQP-226SJ	2	26	.039	1.0	.032	.8	.221	5.6	29	43		
NQP-326SJ	3	26	.039	1.0	.032	.8	.231	5.9	34	50		
NQP-426SJ	4	26	.039	1.0	.032	.8	.252	6.4	39	58		
NQP-526SJ	5	26	.039	1.0	.032	.8	.275	7.0	45	66		
NQP-626SJ	6	26	.039	1.0	.032	.8	.299	7.6	50	75		
NQP-726SJ	7	26	.039	1.0	.032	.8	.287	7.3	53	79		
NQP-826SJ	8	26	.039	1.0	.032	.8	.353	9.0	63	94		
NQP-926SJ	9	26	.039	1.0	.032	.8	.338	8.6	69	102		
NQP-1026SJ	10	26	.039	1.0	.032	.8	.353	9.0	72	107		
NQP-1226SJ	12	26	.039	1.0	.032	.8	.364	9.2	79	117		
NQP-1526SJ	15	26	.039	1.0	.032	.8	.413	10.5	103	153		
NQP-1926SJ	19	26	.039	1.0	.032	.8	.425	10.8	118	175		
NQP-2726SJ	27	26	.039	1.0	.032	.8	.502	12.7	154	230		
NQP-3726SJ	37	26	.039	1.0	.032	.8	.557	14.2	193	288		

**RoHS COMPLIANT PRODUCTS:**

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

NRQP SERIES UNSHIELDED - 28 and 26 AWG											NRQP SERIES OVERALL BRAIDED SHIELD - 28 and 26 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. of pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NRQP-228J	2	28	.035	.9	.032	.8	.187	4.7	14	22	NRQP-228SJ	2	28	.035	.9	.032	.8	.207	5.3	26	38
NRQP-328J	3	28	.035	.9	.032	.8	.197	5.0	17	26	NRQP-328SJ	3	28	.035	.9	.032	.8	.217	5.5	29	43
NRQP-428J	4	28	.035	.9	.032	.8	.215	5.5	20	30	NRQP-428SJ	4	28	.035	.9	.032	.8	.235	6.0	33	49
NRQP-528J	5	28	.035	.9	.032	.8	.236	6.0	23	35	NRQP-528SJ	5	28	.035	.9	.032	.8	.256	6.5	38	56
NRQP-628J	6	28	.035	.9	.032	.8	.257	6.5	27	40	NRQP-628SJ	6	28	.035	.9	.032	.8	.277	7.0	43	63
NRQP-728J	7	28	.035	.9	.032	.8	.247	6.3	29	43	NRQP-728SJ	7	28	.035	.9	.032	.8	.267	6.8	45	66
NRQP-828J	8	28	.035	.9	.032	.8	.306	7.8	34	50	NRQP-828SJ	8	28	.035	.9	.032	.8	.326	8.3	53	79
NRQP-928J	9	28	.035	.9	.032	.8	.292	7.4	37	55	NRQP-928SJ	9	28	.035	.9	.032	.8	.312	7.9	58	86
NRQP-1028J	10	28	.035	.9	.032	.8	.306	7.8	39	58	NRQP-1028SJ	10	28	.035	.9	.032	.8	.326	8.3	60	89
NRQP-1228J	12	28	.035	.9	.032	.8	.316	8.0	44	65	NRQP-1228SJ	12	28	.035	.9	.032	.8	.336	8.5	65	97
NRQP-1528J	15	28	.035	.9	.032	.8	.355	9.0	52	77	NRQP-1528SJ	15	28	.035	.9	.032	.8	.375	9.5	76	113
NRQP-1928J	19	28	.035	.9	.032	.8	.366	9.3	61	91	NRQP-1928SJ	19	28	.035	.9	.032	.8	.386	9.8	87	129
NRQP-2728J	27	28	.035	.9	.032	.8	.435	11.1	82	122	NRQP-2728SJ	27	28	.035	.9	.032	.8	.460	11.7	125	189
NRQP-3728J	37	28	.035	.9	.032	.8	.485	12.2	106	158	NRQP-3728SJ	37	28	.035	.9	.032	.8	.510	12.9	155	231
NRQP-226J	2	26	.039	1.0	.032	.8	.201	5.1	17	25	NRQP-226SJ	2	26	.039	1.0	.032	.8	.221	5.6	29	43
NRQP-326J	3	26	.039	1.0	.032	.8	.211	5.4	21	31	NRQP-326SJ	3	26	.039	1.0	.032	.8	.231	5.9	34	50
NRQP-426J	4	26	.039	1.0	.032	.8	.232	5.9	25	36	NRQP-426SJ	4	26	.039	1.0	.032	.8	.252	6.4	39	58
NRQP-526J	5	26	.039	1.0	.032	.8	.255	6.5	29	43	NRQP-526SJ	5	26	.039	1.0	.032	.8	.275	7.0	45	66
NRQP-626J	6	26	.039	1.0	.032	.8	.279	7.1	33	49	NRQP-626SJ	6	26	.039	1.0	.032	.8	.299	7.6	50	75
NRQP-726J	7	26	.039	1.0	.032	.8	.267	6.8	36	53	NRQP-726SJ	7	26	.039	1.0	.032	.8	.287	7.3	53	79
NRQP-826J	8	26	.039	1.0	.032	.8	.333	8.5	42	62	NRQP-826SJ	8	26	.039	1.0	.032	.8	.353	9.0	63	94
NRQP-926J	9	26	.039	1.0	.032	.8	.318	8.1	46	68	NRQP-926SJ	9	26	.039	1.0	.032	.8	.338	8.6	69	102
NRQP-1026J	10	26	.039	1.0	.032	.8	.333	8.5	49	73	NRQP-1026SJ	10	26	.039	1.0	.032	.8	.353	9.0	72	107
NRQP-1226J	12	26	.039	1.0	.032	.8	.344	8.7	55	82	NRQP-1226SJ	12	26	.039	1.0	.032	.8	.364	9.2	79	117
NRQP-1526J	15	26	.039	1.0	.032	.8	.388	9.9	66	98	NRQP-1526SJ	15	26	.039	1.0	.032	.8	.413	10.5	103	153
NRQP-1926J	19	26	.039	1.0	.032	.8	.400	10.1	79	117	NRQP-1926SJ	19	26	.039	1.0	.032	.8	.425	10.8	118	175
NRQP-2726J	27	26	.039	1.0	.032	.8	.476	12.1	107	159	NRQP-2726SJ	27	26	.039	1.0	.032	.8	.502	12.7	154	230
NRQP-3726J	37	26	.039	1.0	.032	.8	.532	13.5	139	207	NRQP-3726SJ	37	26	.039	1.0	.032	.8	.557	14.2	193	288

# CABLED TWISTED PAIRS CONDUCTORS



## NQP SERIES

- Twisted Pair Conductors
- Mil Spec, U.L. AWM

Recognized Style 2464 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.

**MULTI-CONDUCTOR STOCK CABLED SINGLES** Conductor sizes 28, 26, 24, 22 are 7 strand. All others are 19 strand.

NQP SERIES UNSHIELD - 24, 22, 20 and 18 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NQP-224J	2	24	.044	1.1	.032	.8	.218	5.5	21	31
NQP-324J	3	24	.044	1.1	.032	.8	.230	5.8	26	38
NQP-424J	4	24	.044	1.1	.032	.8	.253	6.4	31	46
NQP-524J	5	24	.044	1.1	.032	.8	.279	7.1	37	54
NQP-624J	6	24	.044	1.1	.032	.8	.306	7.8	42	63
NQP-724J	7	24	.044	1.1	.032	.8	.292	7.4	46	69
NQP-824J	8	24	.044	1.1	.032	.8	.367	9.3	54	80
NQP-924J	9	24	.044	1.1	.032	.8	.350	8.9	60	89
NQP-1024J	10	24	.044	1.1	.032	.8	.367	9.3	64	95
NQP-1224J	12	24	.044	1.1	.032	.8	.379	9.6	73	108
NQP-1524J	15	24	.044	1.1	.032	.8	.429	10.9	88	130
NQP-1924J	19	24	.044	1.1	.032	.8	.442	11.2	106	157
NQP-2724J	27	24	.044	1.1	.032	.8	.529	13.4	144	214
NQP-222J	2	22	.050	1.3	.032	.8	.238	6.0	26	38
NQP-322J	3	22	.050	1.3	.032	.8	.252	6.4	33	48
NQP-422J	4	22	.050	1.3	.032	.8	.278	7.1	40	59
NQP-522J	5	22	.050	1.3	.032	.8	.308	7.8	47	71
NQP-622J	6	22	.050	1.3	.032	.8	.338	8.6	55	82
NQP-722J	7	22	.050	1.3	.032	.8	.323	8.2	61	91
NQP-822J	8	22	.050	1.3	.032	.8	.408	10.4	71	106
NQP-922J	9	22	.050	1.3	.032	.8	.388	9.9	79	117
NQP-1022J	10	22	.050	1.3	.032	.8	.408	10.4	85	126
NQP-1222J	12	22	.050	1.3	.032	.8	.422	10.7	97	145
NQP-1522J	15	22	.050	1.3	.032	.8	.478	12.1	118	176
NQP-1922J	19	22	.050	1.3	.032	.8	.493	12.5	143	213
NQP-2722J	27	22	.050	1.3	.032	1.3	.628	15.9	221	328
NQP-220J	2	20	.058	1.5	.032	.8	.265	6.7	35	52
NQP-320J	3	20	.058	1.5	.032	.8	.281	7.1	45	67
NQP-420J	4	20	.058	1.5	.032	.8	.312	7.9	56	84
NQP-520J	5	20	.058	1.5	.032	.8	.346	8.8	66	101
NQP-620J	6	20	.058	1.5	.032	.8	.381	9.7	79	118
NQP-720J	7	20	.058	1.5	.032	.8	.364	9.2	89	132
NQP-820J	8	20	.058	1.5	.032	.8	.462	11.7	103	154
NQP-920J	9	20	.058	1.5	.032	.8	.439	11.2	115	171
NQP-1020J	10	20	.058	1.5	.032	.8	.462	11.7	124	185
NQP-1220J	12	20	.058	1.5	.032	.8	.478	12.1	144	214
NQP-1520J	15	20	.058	1.5	.032	.8	.544	13.8	176	262
NQP-1920J	19	20	.058	1.5	.032	.8	.561	14.2	216	321
NQP-2720J	27	20	.058	1.5	.032	.8	.711	18.1	326	486
NQP-218J	2	18	.068	1.7	.032	.8	.299	7.6	46	69
NQP-318J	3	18	.068	1.7	.032	.8	.318	8.1	61	91
NQP-418J	4	18	.068	1.7	.032	.8	.354	9.0	77	115
NQP-518J	5	18	.068	1.7	.032	.8	.394	10.0	94	139
NQP-618J	6	18	.068	1.7	.032	.8	.435	11.1	110	163
NQP-718J	7	18	.068	1.7	.032	.8	.415	10.5	124	184
NQP-1218J	12	18	.068	1.7	.032	.8	.549	13.9	203	302

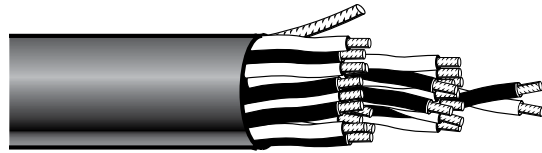
NQP SERIES OVERALL BRAIDED SHIELD - 24, 22, 20 and 18 AWG												
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Shield	Weight
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM		
NQP-224SJ	2	24	.044	1.1	.032	.8	.238	6.0	34	51		
NQP-324SJ	3	24	.044	1.1	.032	.8	.250	6.3	40	60		
NQP-424SJ	4	24	.044	1.1	.032	.8	.273	6.9	47	70		
NQP-524SJ	5	24	.044	1.1	.032	.8	.299	7.6	54	81		
NQP-624SJ	6	24	.044	1.1	.032	.8	.326	8.3	62	92		
NQP-724SJ	7	24	.044	1.1	.032	.8	.312	7.9	66	98		
NQP-824SJ	8	24	.044	1.1	.032	.8	.387	9.8	78	116		
NQP-924SJ	9	24	.044	1.1	.032	.8	.370	9.4	85	127		
NQP-1024SJ	10	24	.044	1.1	.032	.8	.387	9.8	89	133		
NQP-1224SJ	12	24	.044	1.1	.032	.8	.404	10.3	109	163		
NQP-1524SJ	15	24	.044	1.1	.032	.8	.454	11.5	129	192		
NQP-1924SJ	19	24	.044	1.1	.032	.8	.467	11.9	149	222		
NQP-2724SJ	27	24	.044	1.1	.032	.8	.554	14.1	198	294		
NQP-222SJ	2	22	.050	1.3	.032	.8	.258	6.6	41	61		
NQP-322SJ	3	22	.050	1.3	.032	.8	.272	6.9	49	73		
NQP-422SJ	4	22	.050	1.3	.032	.8	.298	7.6	58	86		
NQP-522SJ	5	22	.050	1.3	.032	.8	.328	8.3	67	100		
NQP-622SJ	6	22	.050	1.3	.032	.8	.350	9.1	77	115		
NQP-722SJ	7	22	.050	1.3	.032	.8	.343	8.7	83	123		
NQP-822SJ	8	22	.050	1.3	.032	.8	.433	11.0	108	161		
NQP-922SJ	9	22	.050	1.3	.032	.8	.413	10.5	119	176		
NQP-1022SJ	10	22	.050	1.3	.032	.8	.433	11.0	124	185		
NQP-1222SJ	12	22	.050	1.3	.032	.8	.447	11.3	139	206		
NQP-1522SJ	15	22	.050	1.3	.032	.8	.503	12.8	165	245		
NQP-1922SJ	19	22	.050	1.3	.032	.8	.518	13.2	193	287		
NQP-2722SJ	27	22	.050	1.3	.032	.8	.653	16.6	282	419		
NQP-220SJ	2	20	.058	1.5	.032	.8	.285	7.2	52	78		
NQP-320SJ	3	20	.058	1.5	.032	.8	.301	7.6	64	95		
NQP-420SJ	4	20	.058	1.5	.032	.8	.332	8.4	77	114		
NQP-520SJ	5	20	.058	1.5	.032	.8	.336	9.3	91	135		
NQP-620SJ	6	20	.058	1.5	.032	.8	.401	10.2	105	156		
NQP-720SJ	7	20	.058	1.5	.032	.8	.384	9.7	114	170		
NQP-820SJ	8	20	.058	1.5	.032	.8	.488	12.4	146	217		
NQP-920SJ	9	20	.058	1.5	.032	.8	.464	11.8	161	239		
NQP-1020SJ	10	20	.058	1.5	.032	.8	.488	12.4	170	253		
NQP-1220SJ	12	20	.058	1.5	.032	.8	.503	12.8	192	285		
NQP-1520SJ	15	20	.058	1.5	.032	1.3	.605	15.4	252	375		
NQP-1920SJ	19	20	.058	1.5	.032	1.3	.622	15.8	296	441		
NQP-2720SJ	27	20	.058	1.5	.032	1.3	.737	18.7	397	591		
NQP-218SJ	2	18	.068	1.7	.032	.8	.319	8.1	66	98		
NQP-318SJ	3	18	.068	1.7	.032	.8	.338	8.6	83	123		
NQP-418SJ	4	18	.068	1.7	.032	.8	.374	9.5	101	150		
NQP-518SJ	5	18	.068	1.7	.032	.8	.420	10.7	130	194		
NQP-618SJ	6	18	.068	1.7	.032	.8	.460	11.7	151	224		
NQP-718SJ	7	18	.068	1.7	.032	.8	.440	11.2	164	245		
NQP-1218SJ	12	18	.068	1.7	.032	.8	.610	15.5	281	418		

**RoHS COMPLIANT PRODUCTS:**

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

NRQP SERIES UNSHIELD - 24, 22, 20 and 18 AWG											NRQP SERIES OVERALL BRAIDED SHIELD - 24, 22, 20 and 18 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NRQP-224J	2	24	.044	1.1	.032	.8	.218	5.5	21	31	NRQP-224SJ	2	24	.044	1.1	.032	.8	.238	6.0	34	51
NRQP-324J	3	24	.044	1.1	.032	.8	.230	5.8	26	38	NRQP-324SJ	3	24	.044	1.1	.032	.8	.250	6.3	40	60
NRQP-424J	4	24	.044	1.1	.032	.8	.253	6.4	31	46	NRQP-424SJ	4	24	.044	1.1	.032	.8	.273	6.9	47	70
NRQP-524J	5	24	.044	1.1	.032	.8	.279	7.1	37	54	NRQP-524SJ	5	24	.044	1.1	.032	.8	.299	7.6	54	81
NRQP-624J	6	24	.044	1.1	.032	.8	.306	7.8	42	63	NRQP-624SJ	6	24	.044	1.1	.032	.8	.326	8.3	62	92
NRQP-724J	7	24	.044	1.1	.032	.8	.292	7.4	46	69	NRQP-724SJ	7	24	.044	1.1	.032	.8	.312	7.9	66	98
NRQP-824J	8	24	.044	1.1	.032	.8	.367	9.3	54	80	NRQP-824SJ	8	24	.044	1.1	.032	.8	.387	9.8	78	116
NRQP-924J	9	24	.044	1.1	.032	.8	.350	8.9	60	89	NRQP-924SJ	9	24	.044	1.1	.032	.8	.370	9.4	85	127
NRQP-1024J	10	24	.044	1.1	.032	.8	.367	9.3	64	95	NRQP-1024SJ	10	24	.044	1.1	.032	.8	.387	9.8	89	133
NRQP-1224J	12	24	.044	1.1	.032	.8	.379	9.6	73	108	NRQP-1224SJ	12	24	.044	1.1	.032	.8	.404	10.3	109	163
NRQP-1524J	15	24	.044	1.1	.032	.8	.429	10.9	88	130	NRQP-1524SJ	15	24	.044	1.1	.032	.8	.454	11.5	129	192
NRQP-1924J	19	24	.044	1.1	.032	.8	.442	11.2	106	157	NRQP-1924SJ	19	24	.044	1.1	.032	.8	.467	11.9	149	222
NRQP-2724J	27	24	.044	1.1	.032	.8	.529	13.4	144	214	NRQP-2724SJ	27	24	.044	1.1	.032	.8	.554	14.1	198	294
NRQP-222J	2	22	.050	1.3	.032	.8	.238	6.0	26	38	NRQP-222SJ	2	22	.050	1.3	.032	.8	.258	6.6	41	61
NRQP-322J	3	22	.050	1.3	.032	.8	.252	6.4	33	48	NRQP-322SJ	3	22	.050	1.3	.032	.8	.272	6.9	49	73
NRQP-422J	4	22	.050	1.3	.032	.8	.278	7.1	40	59	NRQP-422SJ	4	22	.050	1.3	.032	.8	.298	7.6	58	86
NRQP-522J	5	22	.050	1.3	.032	.8	.308	7.8	47	71	NRQP-522SJ	5	22	.050	1.3	.032	.8	.328	8.3	67	100
NRQP-622J	6	22	.050	1.3	.032	.8	.338	8.6	55	82	NRQP-622SJ	6	22	.050	1.3	.032	.8	.350	9.1	77	115
NRQP-722J	7	22	.050	1.3	.032	.8	.323	8.2	61	91	NRQP-722SJ	7	22	.050	1.3	.032	.8	.343	8.7	83	123
NRQP-822J	8	22	.050	1.3	.032	.8	.408	10.4	71	106	NRQP-822SJ	8	22	.050	1.3	.032	.8	.433	11.0	108	161
NRQP-922J	9	22	.050	1.3	.032	.8	.388	9.9	79	117	NRQP-922SJ	9	22	.050	1.3	.032	.8	.413	10.5	119	176
NRQP-1022J	10	22	.050	1.3	.032	.8	.408	10.4	85	126	NRQP-1022SJ	10	22	.050	1.3	.032	.8	.433	11.0	124	185
NRQP-1222J	12	22	.050	1.3	.032	.8	.422	10.7	97	145	NRQP-1222SJ	12	22	.050	1.3	.032	.8	.447	11.3	139	206
NRQP-1522J	15	22	.050	1.3	.032	.8	.478	12.1	118	176	NRQP-1522SJ	15	22	.050	1.3	.032	.8	.503	12.8	165	245
NRQP-1922J	19	22	.050	1.3	.032	.8	.493	12.5	143	213	NRQP-1922SJ	19	22	.050	1.3	.032	.8	.518	13.2	193	287
NRQP-2722J	27	22	.050	1.3	.032	1.3	.628	15.9	221	328	NRQP-2722SJ	27	22	.050	1.3	.032	.8	.653	16.6	282	419
NRQP-220J	2	20	.058	1.5	.032	.8	.265	6.7	35	52	NRQP-220SJ	2	20	.058	1.5	.032	.8	.285	7.2	52	78
NRQP-320J	3	20	.058	1.5	.032	.8	.281	7.1	45	67	NRQP-320SJ	3	20	.058	1.5	.032	.8	.301	7.6	64	95
NRQP-420J	4	20	.058	1.5	.032	.8	.312	7.9	56	84	NRQP-420SJ	4	20	.058	1.5	.032	.8	.332	8.4	77	114
NRQP-520J	5	20	.058	1.5	.032	.8	.346	8.8	66	101	NRQP-520SJ	5	20	.058	1.5	.032	.8	.336	9.3	91	135
NRQP-620J	6	20	.058	1.5	.032	.8	.381	9.7	79	118	NRQP-620SJ	6	20	.058	1.5	.032	.8	.401	10.2	105	156
NRQP-720J	7	20	.058	1.5	.032	.8	.364	9.2	89	132	NRQP-720SJ	7	20	.058	1.5	.032	.8	.384	9.7	114	170
NRQP-820J	8	20	.058	1.5	.032	.8	.462	11.7	103	154	NRQP-820SJ	8	20	.058	1.5	.032	.8	.488	12.4	146	217
NRQP-920J	9	20	.058	1.5	.032	.8	.439	11.2	115	171	NRQP-920SJ	9	20	.058	1.5	.032	.8	.464	11.8	161	239
NRQP-1020J	10	20	.058	1.5	.032	.8	.462	11.7	124	185	NRQP-1020SJ	10	20	.058	1.5	.032	.8	.488	12.4	170	253
NRQP-1220J	12	20	.058	1.5	.032	.8	.478	12.1	144	214	NRQP-1220SJ	12	20	.058	1.5	.032	.8	.503	12.8	192	285
NRQP-1520J	15	20	.058	1.5	.032	.8	.544	13.8	176	262	NRQP-1520SJ	15	20	.058	1.5	.032	1.3	.605	15.4	252	375
NRQP-1920J	19	20	.058	1.5	.032	.8	.561	14.2	216	321	NRQP-1920SJ	19	20	.058	1.5	.032	1.3	.622	15.8	296	441
NRQP-2720J	27	20	.058	1.5	.032	.8	.711	18.1	326	486	NRQP-2720SJ	27	20	.058	1.5	.032	1.3	.737	18.7	397	591
NRQP-218J	2	18	.068	1.7	.032	.8	.299	7.6	46	69	NRQP-218SJ	2	18	.068	1.7	.032	.8	.319	8.1	66	98
NRQP-318J	3	18	.068	1.7	.032	.8	.318	8.1	61	91	NRQP-318SJ	3	18	.068	1.7	.032	.8	.338	8.6	83	123
NRQP-418J	4	18	.068	1.7	.032	.8	.354	9.0	77	115	NRQP-418SJ	4	18	.068	1.7	.032	.8	.374	9.5	101	150
NRQP-518J	5	18	.068	1.7	.032	.8	.394	10.0	94	139	NRQP-518SJ	5	18	.068	1.7	.032	.8	.420	10.7	130	194
NRQP-618J	6	18	.068	1.7	.032	.8	.435	11.1	110	163	NRQP-618SJ	6	18	.068	1.7	.032	.8	.460	11.7	151	224
NRQP-718J	7	18	.068	1.7	.032	.8	.415	10.5	124	184	NRQP-718SJ	7	18	.068	1.7	.032	.8	.440	11.2	164	245
NRQP-1218J	12	18	.068	1.7	.032	.8	.549	13.9	203	302	NRQP-1218SJ	12	18	.068	1.7	.032	.8	.610	15.5	281	418

# CABLED TWISTED PAIRS CONDUCTORS



## NQP SERIES

- Twisted Pair Conductors
- Mil Spec, U.L. AWM

Recognized Style 2464 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.

**MULTI-CONDUCTOR STOCK CABLED SINGLES** Conductor sizes 28, 26, 24, 22 are 7 strand. All others are 19 strand.

NQP SERIES OVERALL FOIL SHIELD WITH DRAIN - 28, 26 and 24 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NQP-228FSJ	2	28	.035	.9	.032	.8	.189	4.8	15	23
NQP-328FSJ	3	28	.035	.9	.032	.8	.199	5.0	18	27
NQP-428FSJ	4	28	.035	.9	.032	.8	.217	5.5	21	31
NQP-528FSJ	5	28	.035	.9	.032	.8	.238	6.0	24	36
NQP-628FSJ	6	28	.035	.9	.032	.8	.259	6.6	27	41
NQP-728FSJ	7	28	.035	.9	.032	.8	.249	6.3	29	44
NQP-828FSJ	8	28	.035	.9	.032	.8	.308	7.8	34	51
NQP-928FSJ	9	28	.035	.9	.032	.8	.294	7.5	38	56
NQP-1028FSJ	10	28	.035	.9	.032	.8	.308	7.8	40	59
NQP-1228FSJ	12	28	.035	.9	.032	.8	.318	8.1	44	66
NQP-1528FSJ	15	28	.035	.9	.032	.8	.357	9.1	53	78
NQP-1928FSJ	19	28	.035	.9	.032	.8	.368	9.3	62	92
NQP-2728FSJ	27	28	.035	.9	.032	.8	.437	11.1	83	124
NQP-3728FSJ	37	28	.035	.9	.032	.8	.487	12.3	107	159
NQP-226FSJ	2	26	.039	1.0	.032	.8	.203	5.1	18	27
NQP-326FSJ	3	26	.039	1.0	.032	.8	.213	5.4	22	32
NQP-426FSJ	4	26	.039	1.0	.032	.8	.234	5.9	25	38
NQP-526FSJ	5	26	.039	1.0	.032	.8	.257	6.5	30	44
NQP-626FSJ	6	26	.039	1.0	.032	.8	.281	7.1	34	50
NQP-726FSJ	7	26	.039	1.0	.032	.8	.269	6.8	37	55
NQP-826FSJ	8	26	.039	1.0	.032	.8	.335	8.5	43	64
NQP-926FSJ	9	26	.039	1.0	.032	.8	.320	8.1	47	70
NQP-1026FSJ	10	26	.039	1.0	.032	.8	.335	8.5	50	74
NQP-1226FSJ	12	26	.039	1.0	.032	.8	.346	8.8	56	84
NQP-1526FSJ	15	26	.039	1.0	.032	.8	.390	9.9	67	100
NQP-1926FSJ	19	26	.039	1.0	.032	.8	.402	10.2	80	119
NQP-2726FSJ	27	26	.039	1.0	.032	.8	.478	12.2	108	160
NQP-3726FSJ	37	26	.039	1.0	.032	.8	.534	13.5	140	209
NQP-224FSJ	2	24	.044	1.1	.032	.8	.220	5.6	22	3
NQP-324FSJ	3	24	.044	1.1	.032	.8	.232	5.9	27	40
NQP-424FSJ	4	24	.044	1.1	.032	.8	.255	6.5	32	48
NQP-524FSJ	5	24	.044	1.1	.032	.8	.281	7.1	38	57
NQP-624FSJ	6	24	.044	1.1	.032	.8	.308	7.8	44	65
NQP-724FSJ	7	24	.044	1.1	.032	.8	.294	7.5	48	71
NQP-824FSJ	8	24	.044	1.1	.032	.8	.369	9.4	55	83
NQP-924FSJ	9	24	.044	1.1	.032	.8	.352	8.9	61	91
NQP-1024FSJ	10	24	.044	1.1	.032	.8	.369	9.4	65	97
NQP-1224FSJ	12	24	.044	1.1	.032	.8	.381	8.9	61	91
NQP-1524FSJ	15	24	.044	1.1	.032	.8	.431	10.9	89	133
NQP-1924FSJ	19	24	.044	1.1	.032	.8	.444	11.3	107	159
NQP-2724FSJ	24	24	.044	1.1	.032	.8	.531	13.5	146	217

NQP SERIES OVERALL FOIL SHIELD WITH DRAIN - 22, 20 and 18 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NQP-222FSJ	2	22	.050	1.3	.032	.8	.240	6.1	28	42
NQP-322FSJ	3	22	.050	1.3	.032	.8	.254	6.4	35	52
NQP-422FSJ	4	22	.050	1.3	.032	.8	.280	7.1	42	63
NQP-522FSJ	5	22	.050	1.3	.032	.8	.310	7.9	50	74
NQP-622FSJ	6	22	.050	1.3	.032	.8	.340	8.6	57	85
NQP-722FSJ	7	22	.050	1.3	.032	.8	.325	8.3	63	94
NQP-822FSJ	8	22	.050	1.3	.032	.8	.410	10.4	73	109
NQP-922FSJ	9	22	.050	1.3	.032	.8	.390	9.9	81	120
NQP-1022FSJ	10	22	.050	1.3	.032	.8	.410	10.4	87	129
NQP-1222FSJ	12	22	.050	1.3	.032	.8	.424	10.8	99	148
NQP-1522FSJ	15	22	.050	1.3	.032	.8	.480	12.2	120	179
NQP-1922FSJ	19	22	.050	1.3	.032	.8	.495	12.6	146	216
NQP-2722FSJ	27	22	.050	1.3	.032	.8	.630	16.0	223	331
NQP-220FSJ	2	20	.058	1.5	.032	.8	.267	6.8	39	57
NQP-320FSJ	3	20	.058	1.5	.032	.8	.283	7.2	49	73
NQP-420FSJ	4	20	.058	1.5	.032	.8	.314	8.0	60	90
NQP-520FSJ	5	20	.058	1.5	.032	.8	.348	8.8	72	107
NQP-620FSJ	6	20	.058	1.5	.032	.8	.383	9.7	83	124
NQP-720FSJ	7	20	.058	1.5	.032	.8	.366	9.3	93	138
NQP-820FSJ	8	20	.058	1.5	.032	.8	.464	11.8	107	159
NQP-920FSJ	9	20	.058	1.5	.032	.8	.441	11.2	119	176
NQP-1020FSJ	10	20	.058	1.5	.032	.8	.464	11.8	128	190
NQP-1220FSJ	12	20	.058	1.5	.032	.8	.480	12.2	148	220
NQP-1520FSJ	15	20	.058	1.5	.032	.8	.546	13.9	180	268
NQP-1920FSJ	19	20	.058	1.5	.032	.8	.563	14.3	220	327
NQP-2720FSJ	27	20	.058	1.5	.032	.8	.713	18.1	330	492
NQP-218FSJ	2	18	.068	1.7	.032	.8	.301	7.7	52	77
NQP-318FSJ	3	18	.068	1.7	.032	.8	.320	8.1	67	100
NQP-418FSJ	4	18	.068	1.7	.032	.8	.356	9.0	83	124
NQP-518FSJ	5	18	.068	1.7	.032	.8	.396	10.1	99	148
NQP-618FSJ	6	18	.068	1.7	.032	.8	.437	11.1	116	172
NQP-718FSJ	7	18	.068	1.7	.032	.8	.417	10.6	130	193
NQP-1218FSJ	12	18	.068	1.7	.032	.8	.551	14.0	209	310

**RoHS COMPLIANT PRODUCTS:**

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

NRQP SERIES OVERALL FOIL SHIELD WITH DRAIN - 28, 26 and 24 AWG											NRQP SERIES OVERALL FOIL SHIELD WITH DRAIN - 22, 20 and 18 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NRQP-228FSJ	2	28	.035	.9	.032	.8	.189	4.8	15	23	NRQP-222FSJ	2	22	.050	1.3	.032	.8	.240	6.1	28	42
NRQP-328FSJ	3	28	.035	.9	.032	.8	.199	5.0	18	27	NRQP-322FSJ	3	22	.050	1.3	.032	.8	.254	6.4	35	52
NRQP-428FSJ	4	28	.035	.9	.032	.8	.217	5.5	21	31	NRQP-422FSJ	4	22	.050	1.3	.032	.8	.280	7.1	42	63
NRQP-528FSJ	5	28	.035	.9	.032	.8	.238	6.0	24	36	NRQP-522FSJ	5	22	.050	1.3	.032	.8	.310	7.9	50	74
NRQP-628FSJ	6	28	.035	.9	.032	.8	.259	6.6	27	41	NRQP-622FSJ	6	22	.050	1.3	.032	.8	.340	8.6	57	85
NRQP-728FSJ	7	28	.035	.9	.032	.8	.249	6.3	29	44	NRQP-722FSJ	7	22	.050	1.3	.032	.8	.325	8.3	63	94
NRQP-828FSJ	8	28	.035	.9	.032	.8	.308	7.8	34	51	NRQP-822FSJ	8	22	.050	1.3	.032	.8	.410	10.4	73	109
NRQP-928FSJ	9	28	.035	.9	.032	.8	.294	7.5	38	56	NRQP-922FSJ	9	22	.050	1.3	.032	.8	.390	9.9	81	120
NRQP-1028FSJ	10	28	.035	.9	.032	.8	.308	7.8	40	59	NRQP-1022FSJ	10	22	.050	1.3	.032	.8	.410	10.4	87	129
NRQP-1228FSJ	12	28	.035	.9	.032	.8	.318	8.1	44	66	NRQP-1222FSJ	12	22	.050	1.3	.032	.8	.424	10.8	99	148
NRQP-1528FSJ	15	28	.035	.9	.032	.8	.357	9.1	53	78	NRQP-1522FSJ	15	22	.050	1.3	.032	.8	.480	12.2	120	179
NRQP-1928FSJ	19	28	.035	.9	.032	.8	.368	9.3	62	92	NRQP-1922FSJ	19	22	.050	1.3	.032	.8	.495	12.6	146	216
NRQP-2728FSJ	27	28	.035	.9	.032	.8	.437	11.1	83	124	NRQP-2722FSJ	27	22	.050	1.3	.032	.8	.630	16.0	223	331
NRQP-3728FSJ	37	28	.035	.9	.032	.8	.487	12.3	107	159	NRQP-220FSJ	2	20	.058	1.5	.032	.8	.267	6.8	39	57
NRQP-226FSJ	2	26	.039	1.0	.032	.8	.203	5.1	18	27	NRQP-320FSJ	3	20	.058	1.5	.032	.8	.283	7.2	49	73
NRQP-326FSJ	3	26	.039	1.0	.032	.8	.213	5.4	22	32	NRQP-420FSJ	4	20	.058	1.5	.032	.8	.314	8.0	60	90
NRQP-426FSJ	4	26	.039	1.0	.032	.8	.234	5.9	25	38	NRQP-520FSJ	5	20	.058	1.5	.032	.8	.348	8.8	72	107
NRQP-526FSJ	5	26	.039	1.0	.032	.8	.257	6.5	30	44	NRQP-620FSJ	6	20	.058	1.5	.032	.8	.383	9.7	83	124
NRQP-626FSJ	6	26	.039	1.0	.032	.8	.281	7.1	34	50	NRQP-720FSJ	7	20	.058	1.5	.032	.8	.366	9.3	93	138
NRQP-726FSJ	7	26	.039	1.0	.032	.8	.269	6.8	37	55	NRQP-820FSJ	8	20	.058	1.5	.032	.8	.464	11.8	107	159
NRQP-826FSJ	8	26	.039	1.0	.032	.8	.335	8.5	43	64	NRQP-920FSJ	9	20	.058	1.5	.032	.8	.441	11.2	119	176
NRQP-926FSJ	9	26	.039	1.0	.032	.8	.320	8.1	47	70	NRQP-1020FSJ	10	20	.058	1.5	.032	.8	.464	11.8	128	190
NRQP-1026FSJ	10	26	.039	1.0	.032	.8	.335	8.5	50	74	NRQP-1220FSJ	12	20	.058	1.5	.032	.8	.480	12.2	148	220
NRQP-1226FSJ	12	26	.039	1.0	.032	.8	.346	8.8	56	84	NRQP-1520FSJ	15	20	.058	1.5	.032	.8	.546	13.9	180	268
NRQP-1526FSJ	15	26	.039	1.0	.032	.8	.390	9.9	67	100	NRQP-1920FSJ	19	20	.058	1.5	.032	.8	.563	14.3	220	327
NRQP-1926FSJ	19	26	.039	1.0	.032	.8	.402	10.2	80	119	NRQP-2720FSJ	27	20	.058	1.5	.032	.8	.713	18.1	330	492
NRQP-2726FSJ	27	26	.039	1.0	.032	.8	.478	12.2	108	160	NRQP-218FSJ	2	18	.068	1.7	.032	.8	.301	7.7	52	77
NRQP-3726FSJ	37	26	.039	1.0	.032	.8	.534	13.5	140	209	NRQP-318FSJ	3	18	.068	1.7	.032	.8	.320	8.1	67	100
NRQP-224FSJ	2	24	.044	1.1	.032	.8	.220	5.6	22	3	NRQP-418FSJ	4	18	.068	1.7	.032	.8	.356	9.0	83	124
NRQP-324FSJ	3	24	.044	1.1	.032	.8	.232	5.9	27	40	NRQP-518FSJ	5	18	.068	1.7	.032	.8	.396	10.1	99	148
NRQP-424FSJ	4	24	.044	1.1	.032	.8	.255	6.5	32	48	NRQP-618FSJ	6	18	.068	1.7	.032	.8	.437	11.1	116	172
NRQP-524FSJ	5	24	.044	1.1	.032	.8	.281	7.1	38	57	NRQP-718FSJ	7	18	.068	1.7	.032	.8	.417	10.6	130	193
NRQP-624FSJ	6	24	.044	1.1	.032	.8	.308	7.8	44	65	NRQP-1218FSJ	12	18	.068	1.7	.032	.8	.551	14.0	209	310
NRQP-724FSJ	7	24	.044	1.1	.032	.8	.294	7.5	48	71											
NRQP-824FSJ	8	24	.044	1.1	.032	.8	.369	9.4	55	83											
NRQP-924FSJ	9	24	.044	1.1	.032	.8	.352	8.9	61	91											
NRQP-1024FSJ	10	24	.044	1.1	.032	.8	.369	9.4	65	97											
NRQP-1224FSJ	12	24	.044	1.1	.032	.8	.381	8.9	61	91											
NRQP-1524FSJ	15	24	.044	1.1	.032	.8	.431	10.9	89	133											
NRQP-1924FSJ	19	24	.044	1.1	.032	.8	.444	11.3	107	159											
NRQP-2724FSJ	24	24	.044	1.1	.032	.8	.531	13.5	146	217											



# NV & NVP CABLES

Suitable for Rough Usage - 20 AWG

- AWM Style 20233
- 80°C, 300 Volt, VW-1
- CSA AWM II A/B, 80°C, 300 V, FT-1

National Wire & Cable Corporation manufactures a family of highly flexible miniature **rough-usage** low-voltage instrument control cable. These are available as cabled pairs or singles, with optional overall shield of foil with drain wire.

Conductors are stranded tinned copper with .011" wall of super-tough extruded polypropylene primary insulation, having excellent electrical properties. Wires are color coded using ten std. colors + stripes meeting UL style 10493.

Conductors are planetary cabled and helically laid for optimum flexibility, with a barrier tape under braids, if used.

Shielded cables have 100% coverage aluminum-foil shield in contact with a stranded drain wire for easy termination. Optional tinned copper braid of >90% coverage per MIL-C-7078, with braid angles below 40° for easy pushback is available on special order.

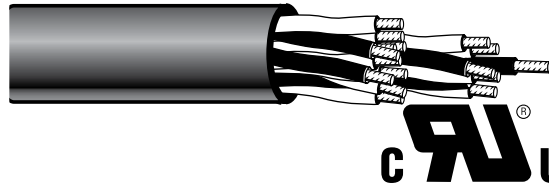
Outer jacket is highly flexible poly-ether-urethane thermoplastic, very resistant to oils, fuels, flame, and UV. Polyurethane is noted for outstanding resistance to scuffing and tearing.

Standard cable has super-durable black polyurethane jacket, or may be supplied with blue outer jacket for use in "Intrinsically Safe" applications. (Ref. National Electric Code, Chapter 5, Section 504.)

Finished cable meets the UL Vertical Flame Test type VW-1 and CSA FT-1 flame test.

Finished cable is UL Recognized and meets all requirements of Appliance Wiring Material Style 20233 which bears the agency intended-use of "External connection of electronic equipment."

Widely used for molded-connector assemblies due to uniform controlled diameter. All cables bear printed marks for UL rated voltage (300 V.), temperature (+80°C), and flame resistance (UL VW-1). Available in other conductor AWG sizes and stranding. Please consult factory.



Property	Technical Data for 20 AWG
Agency Cable Style	ULAWM Style 20233
Agency voltage rating	300 Volts
Agency temperature rating	+80°C.
Agency Flame Rating	UL VW-1 and also Canadian CSA FT-1
Factory HiPot test volts	1500 VAC each conductor to all others & shield, connected in common.
Factory spark test (dry) individual wires	100 % of all wire passes 3400 VAC "spark test" before processing.
Cold Bending	Passes cold bend (180° over 2x mandrel) at -20°C. Storage OK at -40°C.
Conductor Resistance, single, not pair	9.5 ohms per 1000 feet; (3.1 ohms per 100 meter) (20 awg)
Conductor Resistance, single, in a pair	10 ohms per 1000 feet; (3.3 ohms per 100 meter) (20 awg)
Wire Insulation Resistance (IR)	3,000 megohms per 100 meters, from one conductor to all else in common + shield, nom.
Jacket Insulation Resistance (Wet IR)	100 megohm per 100 meters from conductor group + shield to water bath electrode, nom.
Jacket Capacitance (Fully immersed)	95 nFd per 100 meters from wires & shield, grouped, to bath electrode.
Capacitance, one wire to group + shield	17 nFd per 100 meters @ 1000 Hz, nominal (20 awg)
Pair Capacitance wire-wire	9.7 nFd per 100 meters @ 1000 Hz, nominal (20 awg)
Pair Inductance, 2-wire Loop	.064 milli-Henry per 100 meters @ 1000 Hz, nominal. (20 awg)
Pair Impedance, wire-wire	90 ohm diff. impedance, for pairs, nominal (20 awg)
Single conductor Inductance	3.33 milli-Henry per 100 m, end-to-end, @ 1000 Hz. nominal. (20 awg)

## NV FAMILY OF CABLED SINGLE WIRES

UNSHIELDED CABLED SINGLE WIRES					20 AWG OVERALL FOIL-SHIELDED OVER CABLED SINGLE WIRES				
Part No.	No. of Wires	Wire AWG & Strands	Diameter Inch   mm	Weight Lb/M   kg/km	Part No.	No. of Wires	Wire AWG & Strands	Diameter Inch   mm	Weight Lb/M   kg/km
NV220J	2	20(19)	.184   4.7	16   24	NV220FSJ	2	20(19)	.186   4.7	20   30
NV320J	3	20(19)	.193   4.9	21   31	NV320FSJ	3	20(19)	.195   5.0	25   37
NV420J	4	20(19)	.207   5.3	26   39	NV420FSJ	4	20(19)	.209   5.3	30   45
NV520J	5	20(19)	.225   5.7	31   47	NV520FSJ	5	20(19)	.227   5.8	35   52
NV620J	6	20(19)	.242   6.1	37   55	NV620FSJ	6	20(19)	.244   6.2	40   60
NV920J	9	20(19)	.300   7.6	53   79	NV920FSJ	9	20(19)	.302   7.7	57   84
NV1220J	12	20(19)	.309   7.9	67   99	NV1220FSJ	12	20(19)	.311   7.9	71   105



## NVP FAMILY OF CABLED TWISTED PAIRS

UNSHIELDED CABLED PAIRS					20 AWG OVERALL FOIL-SHIELDED OVER CABLED PAIRS				
Part No.	No. of Pairs	Wire AWG & Strands	Diameter Inch   mm	Weight Lb/M   kg/km	Part No.	No. of Pairs	Wire AWG & Strands	Diameter Inch   mm	Weight Lb/M   kg/km
NVP220J	2	20(19)	.261   6.7	20   30	NVP220FSJ	2	20(19)	.263   6.8	24   36
NVP320J	3	20(19)	.277   7.1	26   38	NVP320FSJ	3	20(19)	.279   7.2	29   44
NVP420J	4	20(19)	.301   7.9	31   47	NVP420FSJ	4	20(19)	.303   8.0	35   53
NVP520J	5	20(19)	.330   8.8	37   56	NVP520FSJ	5	20(19)	.332   8.8	41   62
NVP620J	6	20(19)	.360   9.7	43   65	NVP620FSJ	6	20(19)	.362   9.7	47   71
NVP920J	9	20(19)	.458   11.2	62   93	NVP920FSJ	9	20(19)	.460   11.2	66   99
NVP1220J	12	20(19)	.474   12.1	77   115	NVP1220FSJ	12	20(19)	.476   12.2	81   121

# CABLED SINGLE CONDUCTORS



## NX SERIES

- Single Conductors
- Mil Spec, U.L. AWM

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

National Wire & Cable Corporation manufactures a complete line of MINIATURE low voltage signal and control cable. Available as cabled pairs or cabled singles, with optional overall shield. Conductors are stranded tinned copper with .010" wall of vinyl primary insulation for use up to 105°C. per MIL-W-16878/1.

Insulated for 600 volts working voltage. (Also meets U.L. AWM Type 1061; 300 volt, 80°C.) All are coded using 10 standard colors plus stripes on white per MIL-STD-681. View Color Table in the National Wire Cable Designers Guide, page 7-13.

All conductors are planetary cabled and contra-helically laid for optimum flexibility, with a Mylar tape barrier undershields. 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. All materials are self-extinguishing and fungus-resistant. All items are U.L. STYLE 2343 COMPUTER CABLE; rated 80°C (Higher temp. ratings apply for any non-U.L. service). Meets E.I.A. Standard RS-232 for 18-24 gauges.

\*CSA certification furnished only when requested.  
Standard Putups: 500 and 1000 ft. No-deposit reels.

TECHNICAL DATA (ALL CABLES)	
<b>Insulation Breakdown Voltage:</b>	Greater than 3400 volts AC RMS, 60cps.
<b>Capacitance:</b>	Nominal capacitance from a wire to all else in a cable ranges from 45 to 70 pf/ft at 1 kc, depending on gauge and position.
<b>Insulation Leakage:</b>	200 megohms/1000 feet minimum @ 500 VDC from conductor to all else in cable.
<b>Sheath Leakage:</b>	10 megohms/1000 feet minimum @ 500 VDC from shield or conductor group through sheath to ground.
<b>Temperature Range:</b>	Suitable for continuous use from -40°C to +105°C. (U.L. Service limited to +80°C)
<b>Bending Characteristics:</b>	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 applications consult the factory.

## MULTI-CONDUCTOR STOCK CABLED SINGLES Conductor sizes 24, 22 are 7 strand. All others are 19 strand.

NX SERIES UNSHIELDED - 24, 22 and 20 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NX-524J	5	24	.044	1.1	.062	1.6	.247	6.3	31	47
NX-724J	7	24	.044	1.1	.062	1.6	.260	6.6	37	55
NX-1224J	12	24	.044	1.1	.062	1.6	.311	7.9	53	79
NX-1524J	15	24	.044	1.1	.062	1.6	.335	8.5	62	92
NX-1924J	19	24	.044	1.1	.062	1.6	.348	8.8	72	106
NX-2724J	27	24	.044	1.1	.062	1.6	.399	10.1	94	139
NX-3724J	37	24	.044	1.1	.062	1.6	.436	11.1	118	176
NX-4824J	48	24	.044	1.1	.062	1.6	.484	12.3	146	217
NX-6024J	60	24	.044	1.1	.062	1.6	.524	13.3	175	261
NX-522J	5	22	.050	1.3	.062	1.6	.263	6.7	38	56
NX-722J	7	22	.050	1.3	.062	1.6	.278	7.1	45	67
NX-1222J	12	22	.050	1.3	.062	1.6	.336	8.5	67	99
NX-1522J	15	22	.050	1.3	.062	1.6	.363	9.2	79	117
NX-1922J	19	22	.050	1.3	.062	1.6	.378	9.6	92	137
NX-2722J	27	22	.050	1.3	.062	1.6	.436	11.1	122	182
NX-3722J	37	22	.050	1.3	.062	1.6	.478	12.1	156	233
NX-4822J	48	22	.050	1.3	.062	1.6	.533	13.5	195	290
NX-6022J	60	22	.050	1.3	.062	1.6	.578	14.7	235	350
NX-520J	5	20	.062	1.5	.062	1.6	.285	7.2	49	73
NX-720J	7	20	.062	1.5	.062	1.6	.302	7.7	61	90
NX-1220J	12	20	.062	1.5	.062	1.6	.369	9.4	92	137
NX-1520J	15	20	.062	1.5	.062	1.6	.401	10.2	110	163
NX-1920J	19	20	.062	1.5	.062	1.6	.418	10.6	131	194
NX-2720J	27	20	.062	1.5	.062	1.6	.485	12.3	176	262
NX-3720J	37	20	.062	1.5	.062	1.6	.534	13.6	229	341
NX-4820J	48	20	.062	1.5	.062	1.6	.598	15.2	288	429
NX-6020J	60	20	.062	1.5	.062	1.6	.650	16.5	351	522

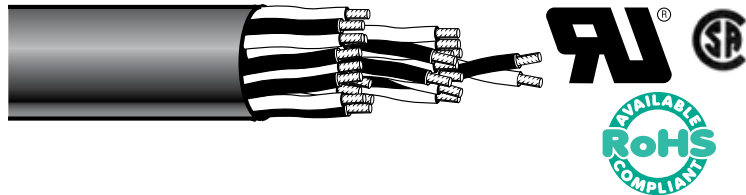
NX SERIES OVERALL SHIELDED - 24, 22 and 20 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NX-524SJ	5	24	.044	1.1	.062	1.6	.267	6.8	42	63
NX-724SJ	7	24	.044	1.1	.062	1.6	.280	7.1	49	72
NX-1224SJ	12	24	.044	1.1	.062	1.6	.331	8.4	63	101
NX-1524SJ	15	24	.044	1.1	.062	1.6	.355	9.0	79	117
NX-1924SJ	19	24	.044	1.1	.062	1.6	.368	9.3	89	133
NX-2724SJ	27	24	.044	1.1	.062	1.6	.419	10.6	115	171
NX-3724SJ	37	24	.044	1.1	.062	1.6	.461	11.7	151	224
NX-4824SJ	48	24	.044	1.1	.062	1.6	.510	12.9	183	273
NX-6024SJ	60	24	.044	1.1	.062	1.6	.549	13.9	216	321
NX-522SJ	5	22	.050	1.3	.062	1.6	.283	7.2	50	74
NX-722SJ	7	22	.050	1.3	.062	1.6	.298	7.6	58	87
NX-1222SJ	12	22	.050	1.3	.062	1.6	.356	9.0	83	124
NX-1522SJ	15	22	.050	1.3	.062	1.6	.383	9.7	97	145
NX-1922SJ	19	22	.050	1.3	.062	1.6	.398	10.1	112	166
NX-2722SJ	27	22	.050	1.3	.062	1.6	.461	11.7	155	230
NX-3722SJ	37	22	.050	1.3	.062	1.6	.503	12.8	193	287
NX-4822SJ	48	22	.050	1.3	.062	1.6	.558	14.2	237	352
NX-6022SJ	60	22	.050	1.3	.062	1.6	.603	15.3	281	419
NX-520SJ	5	20	.058	1.5	.062	1.6	.305	7.7	62	93
NX-720SJ	7	20	.058	1.5	.062	1.6	.322	8.2	75	112
NX-1220SJ	12	20	.058	1.5	.062	1.6	.389	9.9	111	165
NX-1520SJ	15	20	.058	1.5	.062	1.6	.421	10.7	131	195
NX-1920SJ	19	20	.058	1.5	.062	1.6	.438	11.1	153	228
NX-2720SJ	27	20	.058	1.5	.062	1.6	.510	13.0	213	317
NX-3720SJ	37	20	.058	1.5	.062	1.6	.559	14.2	271	403
NX-4820SJ	48	20	.058	1.5	.062	1.6	.623	15.8	336	500
NX-6020SJ	60	20	.058	1.5	.062	1.6	.675	17.2	404	601

**RoHS COMPLIANT PRODUCTS:**

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

NRX SERIES UNSHIELDED - 24, 22 and 20 AWG											NRX SERIES OVERALL SHIELDED - 24, 22 and 20 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NRX-524J	5	24	.044	1.1	.062	1.6	.247	6.3	31	47	NRX-524SJ	5	24	.044	1.1	.062	1.6	.267	6.8	42	63
NRX-724J	7	24	.044	1.1	.062	1.6	.260	6.6	37	55	NRX-724SJ	7	24	.044	1.1	.062	1.6	.280	7.1	49	72
NRX-1224J	12	24	.044	1.1	.062	1.6	.311	7.9	53	79	NRX-1224SJ	12	24	.044	1.1	.062	1.6	.331	8.4	63	101
NRX-1524J	15	24	.044	1.1	.062	1.6	.335	8.5	62	92	NRX-1524SJ	15	24	.044	1.1	.062	1.6	.355	9.0	79	117
NRX-1924J	19	24	.044	1.1	.062	1.6	.348	8.8	72	106	NRX-1924SJ	19	24	.044	1.1	.062	1.6	.368	9.3	89	133
NRX-2724J	27	24	.044	1.1	.062	1.6	.399	10.1	94	139	NRX-2724SJ	27	24	.044	1.1	.062	1.6	.419	10.6	115	171
NRX-3724J	37	24	.044	1.1	.062	1.6	.436	11.1	118	176	NRX-3724SJ	37	24	.044	1.1	.062	1.6	.461	11.7	151	224
NRX-4824J	48	24	.044	1.1	.062	1.6	.484	12.3	146	217	NRX-4824SJ	48	24	.044	1.1	.062	1.6	.510	12.9	183	273
NRX-6024J	60	24	.044	1.1	.062	1.6	.524	13.3	175	261	NRX-6024SJ	60	24	.044	1.1	.062	1.6	.549	13.9	216	321
NRX-522J	5	22	.050	1.3	.062	1.6	.263	6.7	38	56	NRX-522SJ	5	22	.050	1.3	.062	1.6	.283	7.2	50	74
NRX-722J	7	22	.050	1.3	.062	1.6	.278	7.1	45	67	NRX-722SJ	7	22	.050	1.3	.062	1.6	.298	7.6	58	87
NRX-1222J	12	22	.050	1.3	.062	1.6	.336	8.5	67	99	NRX-1222SJ	12	22	.050	1.3	.062	1.6	.356	9.0	83	124
NRX-1522J	15	22	.050	1.3	.062	1.6	.363	9.2	79	117	NRX-1522SJ	15	22	.050	1.3	.062	1.6	.383	9.7	97	145
NRX-1922J	19	22	.050	1.3	.062	1.6	.378	9.6	92	137	NRX-1922SJ	19	22	.050	1.3	.062	1.6	.398	10.1	112	166
NRX-2722J	27	22	.050	1.3	.062	1.6	.436	11.1	122	182	NRX-2722SJ	27	22	.050	1.3	.062	1.6	.461	11.7	155	230
NRX-3722J	37	22	.050	1.3	.062	1.6	.478	12.1	156	233	NRX-3722SJ	37	22	.050	1.3	.062	1.6	.503	12.8	193	287
NRX-4822J	48	22	.050	1.3	.062	1.6	.533	13.5	195	290	NRX-4822SJ	48	22	.050	1.3	.062	1.6	.558	14.2	237	352
NRX-6022J	60	22	.050	1.3	.062	1.6	.578	14.7	235	350	NRX-6022SJ	60	22	.050	1.3	.062	1.6	.603	15.3	281	419
NRX-520J	5	20	.062	1.5	.062	1.6	.285	7.2	49	73	NRX-520SJ	5	20	.058	1.5	.062	1.6	.305	7.7	62	93
NRX-720J	7	20	.062	1.5	.062	1.6	.302	7.7	61	90	NRX-720SJ	7	20	.058	1.5	.062	1.6	.322	8.2	75	112
NRX-1220J	12	20	.062	1.5	.062	1.6	.369	9.4	92	137	NRX-1220SJ	12	20	.058	1.5	.062	1.6	.389	9.9	111	165
NRX-1520J	15	20	.062	1.5	.062	1.6	.401	10.2	110	163	NRX-1520SJ	15	20	.058	1.5	.062	1.6	.421	10.7	131	195
NRX-1920J	19	20	.062	1.5	.062	1.6	.418	10.6	131	194	NRX-1920SJ	19	20	.058	1.5	.062	1.6	.438	11.1	153	228
NRX-2720J	27	20	.062	1.5	.062	1.6	.485	12.3	176	262	NRX-2720SJ	27	20	.058	1.5	.062	1.6	.510	13.0	213	317
NRX-3720J	37	20	.062	1.5	.062	1.6	.534	13.6	229	341	NRX-3720SJ	37	20	.058	1.5	.062	1.6	.559	14.2	271	403
NRX-4820J	48	20	.062	1.5	.062	1.6	.598	15.2	288	429	NRX-4820SJ	48	20	.058	1.5	.062	1.6	.623	15.8	336	500
NRX-6020J	60	20	.062	1.5	.062	1.6	.650	16.5	351	522	NRX-6020SJ	60	20	.058	1.5	.062	1.6	.675	17.2	404	601

# CABLED TWISTED PAIRS CONDUCTORS



## NXP SERIES

- Twisted Pair Conductors
- Mil Spec, U.L. AWM

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

National Wire & Cable Corporation manufactures a complete line of MINIATURE low voltage signal and control cable. Available as cabled pairs or cabled singles, with optional overall shield. Conductors are stranded tinned copper with .010" wall of vinyl primary insulation for use up to 105°C. per MIL-W-16878/1.

Insulated for 600 volts working voltage. (Also meets U.L. AWM Type 1061; 300 volt, 80°C.) All are coded using 10 standard colors plus stripes on white as per the Color Table in the National Wire Cable Designers Guide, page 7-13.

All conductors are planetary cabled and contra-helically laid for optimum flexibility, with a Mylar tape barrier under shields. 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-L-631 Type F. All materials are self-extinguishing and fungus-resistant. All items are U.L. STYLE 2343 COMPUTER CABLE; rated 80°C (Higher temp. ratings apply for any non-U.L. service). Meets RS-423 for 20-24 gauges.

\*U.L. and/or CSA certification furnished only when requested. Standard Putups: 500 and 1000 ft. No-deposit reels.

TECHNICAL DATA (ALL CABLES)	
<b>Insulation Breakdown Voltage:</b>	Greater than 5000 volts AC RMS, 60cps.
<b>Capacitance:</b>	Nominal capacitance from a wire to all else in a cable ranges from 45 to 70 pf/ft at 1 kc, depending on gauge and position.
<b>Insulation Leakage:</b>	200 megohms/1000 feet minimum @ 500 VDC from conductor to all else in cable.
<b>Sheath Leakage:</b>	10 megohms/1000 feet minimum @ 500 VDC from shield or conductor group through sheath to ground.
<b>Temperature Range:</b>	Suitable for continuous use from -40°C to +105°C. (U.L. Service limited to +80°C)
<b>Bending Characteristics:</b>	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 applications consult the factory.
<b>Impedance: (24 AWG pairs)</b>	Balanced: 87 ohms ± 5% Unbalanced: 52 ohms ± 5%

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

## MULTI-CONDUCTOR STOCK CABLED PAIRS Conductor sizes 24, 22 are 7 strand. All others are 19 strand.

NXP SERIES UNSHIELDED - 24, 22 and 20 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NXP-524J	5	24	.044	1.1	.062	1.6	.339	8.6	55	82
NXP-724J	7	24	.044	1.1	.062	1.6	.352	9.0	66	99
NXP-1224J	12	24	.044	1.1	.062	1.6	.439	11.2	98	146
NXP-1524J	15	24	.044	1.1	.062	1.6	.489	12.4	116	173
NXP-1924J	19	24	.044	1.1	.062	1.6	.502	12.8	135	201
NXP-2724J	27	24	.044	1.1	.062	1.6	.589	15.0	180	267
NXP-3724J	37	24	.044	1.1	.062	1.6	.652	16.6	229	340
NXP-4824J	48	24	.044	1.1	.062	1.6	.734	18.6	285	424
NXP-6024J	60	24	.044	1.1	.062	1.6	.801	20.4	343	510
NXP-522J	5	22	.050	1.3	.062	1.6	.368	9.3	68	101
NXP-722J	7	22	.050	1.3	.062	1.6	.383	9.7	83	124
NXP-1222J	12	22	.050	1.3	.062	1.6	.482	12.2	126	187
NXP-1522J	15	22	.050	1.3	.062	1.6	.538	13.7	150	223
NXP-1922J	19	22	.050	1.3	.062	1.6	.553	14.0	177	263
NXP-2722J	27	22	.050	1.3	.062	1.6	.652	16.6	237	352
NXP-3722J	37	22	.050	1.3	.062	1.6	.723	18.4	305	454
NXP-4822J	48	22	.050	1.3	.062	1.6	.817	20.7	382	569
NXP-6022J	60	22	.050	1.3	.062	2.0	.929	23.6	498	741
NXP-520J	5	20	.058	1.5	.062	1.6	.406	10.3	91	135
NXP-720J	7	20	.058	1.5	.062	1.6	.424	10.8	114	169
NXP-1220J	12	20	.058	1.5	.062	1.6	.538	13.7	176	262
NXP-1520J	15	20	.058	1.5	.062	1.6	.604	15.3	212	315
NXP-1920J	19	20	.058	1.5	.062	1.6	.621	15.8	254	378
NXP-2720J	27	20	.058	1.5	.062	1.6	.735	18.7	345	513
NXP-3720J	37	20	.058	1.5	.062	1.6	.818	20.8	451	670
NXP-4820J	48	20	.058	1.5	.062	1.6	.963	24.5	605	901
NXP-6020J	60	20	.058	1.5	.062	1.6	1.051	26.7	734	1092

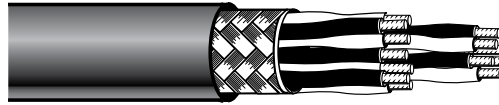
NXP SERIES OVERALL SHIELDED - 24, 22 and 20 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NXP-524SJ	5	24	.044	1.1	.062	1.6	.359	9.1	74	110
NXP-724SJ	7	24	.044	1.1	.062	1.6	.372	9.5	87	129
NXP-1224SJ	12	24	.044	1.1	.062	1.6	.464	11.8	137	203
NXP-1524SJ	15	24	.044	1.1	.062	1.6	.514	13.1	159	236
NXP-1924SJ	19	24	.044	1.1	.062	1.6	.527	13.4	181	269
NXP-2724SJ	27	24	.044	1.1	.062	1.6	.614	15.6	234	349
NXP-3724SJ	37	24	.044	1.1	.062	1.6	.677	17.2	291	432
NXP-4824SJ	48	24	.044	1.1	.062	1.6	.759	19.3	356	529
NXP-6024SJ	60	24	.044	1.1	.062	1.6	.862	21.9	453	674
NXP-522SJ	5	22	.050	1.3	.062	1.6	.388	9.9	89	132
NXP-722SJ	7	22	.050	1.3	.062	1.6	.403	10.2	106	158
NXP-1222SJ	12	22	.050	1.3	.062	1.6	.507	12.9	169	251
NXP-1522SJ	15	22	.050	1.3	.062	1.6	.563	14.3	198	294
NXP-1922SJ	19	22	.050	1.3	.062	1.6	.578	14.7	227	338
NXP-2722SJ	27	22	.050	1.3	.062	1.6	.677	17.2	299	444
NXP-3722SJ	37	22	.050	1.3	.062	1.6	.748	19.0	375	558
NXP-4822SJ	48	22	.050	1.3	.062	1.6	.878	22.3	495	737
NXP-6022SJ	60	22	.050	1.3	.062	1.6	.954	24.2	588	874
NXP-520SJ	5	20	.058	1.5	.062	1.6	.426	10.8	115	171
NXP-720SJ	7	20	.058	1.5	.062	1.6	.444	11.3	140	208
NXP-1220SJ	12	20	.058	1.5	.062	1.6	.563	14.3	226	336
NXP-1520SJ	15	20	.058	1.5	.062	1.6	.629	16.0	267	397
NXP-1920SJ	19	20	.058	1.5	.062	1.6	.646	16.4	312	464
NXP-2720SJ	27	20	.058	1.5	.062	1.6	.761	19.3	416	619
NXP-3720SJ	37	20	.058	1.5	.062	1.6	.879	22.3	564	839
NXP-4820SJ	48	20	.058	1.5	.062	1.6	.988	25.1	699	1039
NXP-6020SJ	60	20	.058	1.5	.062	1.6	1.077	27.3	838	1246

**RoHS COMPLIANT PRODUCTS:**

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

NRXP SERIES UNSHIELDED - 24, 22 and 20 AWG											NRXP SERIES OVERALL SHIELDED - 24, 22 and 20 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NRXP-524J	5	24	.044	1.1	.062	1.6	.339	8.6	55	82	NRXP-524SJ	5	24	.044	1.1	.062	1.6	.359	9.1	74	110
NRXP-724J	7	24	.044	1.1	.062	1.6	.352	9.0	66	99	NRXP-724SJ	7	24	.044	1.1	.062	1.6	.372	9.5	87	129
NRXP-1224J	12	24	.044	1.1	.062	1.6	.439	11.2	98	146	NRXP-1224SJ	12	24	.044	1.1	.062	1.6	.464	11.8	137	203
NRXP-1524J	15	24	.044	1.1	.062	1.6	.489	12.4	116	173	NRXP-1524SJ	15	24	.044	1.1	.062	1.6	.514	13.1	159	236
NRXP-1924J	19	24	.044	1.1	.062	1.6	.502	12.8	135	201	NRXP-1924SJ	19	24	.044	1.1	.062	1.6	.527	13.4	181	269
NRXP-2724J	27	24	.044	1.1	.062	1.6	.589	15.0	180	267	NRXP-2724SJ	27	24	.044	1.1	.062	1.6	.614	15.6	234	349
NRXP-3724J	37	24	.044	1.1	.062	1.6	.652	16.6	229	340	NRXP-3724SJ	37	24	.044	1.1	.062	1.6	.677	17.2	291	432
NRXP-4824J	48	24	.044	1.1	.062	1.6	.734	18.6	285	424	NRXP-4824SJ	48	24	.044	1.1	.062	1.6	.759	19.3	356	529
NRXP-6024J	60	24	.044	1.1	.062	1.6	.801	20.4	343	510	NRXP-6024SJ	60	24	.044	1.1	.062	1.6	.862	21.9	453	674
NRXP-522J	5	22	.050	1.3	.062	1.6	.368	9.3	68	101	NRXP-522SJ	5	22	.050	1.3	.062	1.6	.388	9.9	89	132
NRXP-722J	7	22	.050	1.3	.062	1.6	.383	9.7	83	124	NRXP-722SJ	7	22	.050	1.3	.062	1.6	.403	10.2	106	158
NRXP-1222J	12	22	.050	1.3	.062	1.6	.482	12.2	126	187	NRXP-1222SJ	12	22	.050	1.3	.062	1.6	.507	12.9	169	251
NRXP-1522J	15	22	.050	1.3	.062	1.6	.538	13.7	150	223	NRXP-1522SJ	15	22	.050	1.3	.062	1.6	.563	14.3	198	294
NRXP-1922J	19	22	.050	1.3	.062	1.6	.553	14.0	177	263	NRXP-1922SJ	19	22	.050	1.3	.062	1.6	.578	14.7	227	338
NRXP-2722J	27	22	.050	1.3	.062	1.6	.652	16.6	237	352	NRXP-2722SJ	27	22	.050	1.3	.062	1.6	.677	17.2	299	444
NRXP-3722J	37	22	.050	1.3	.062	1.6	.723	18.4	305	454	NRXP-3722SJ	37	22	.050	1.3	.062	1.6	.748	19.0	375	558
NRXP-4822J	48	22	.050	1.3	.062	1.6	.817	20.7	382	569	NRXP-4822SJ	48	22	.050	1.3	.062	1.6	.878	22.3	495	737
NRXP-6022J	60	22	.050	1.3	.062	2.0	.929	23.6	498	741	NRXP-6022SJ	60	22	.050	1.3	.062	1.6	.954	24.2	588	874
NRXP-520J	5	20	.058	1.5	.062	1.6	.406	10.3	91	135	NRXP-520SJ	5	20	.058	1.5	.062	1.6	.426	10.8	115	171
NRXP-720J	7	20	.058	1.5	.062	1.6	.424	10.8	114	169	NRXP-720SJ	7	20	.058	1.5	.062	1.6	.444	11.3	140	208
NRXP-1220J	12	20	.058	1.5	.062	1.6	.538	13.7	176	262	NRXP-1220SJ	12	20	.058	1.5	.062	1.6	.563	14.3	226	336
NRXP-1520J	15	20	.058	1.5	.062	1.6	.604	15.3	212	315	NRXP-1520SJ	15	20	.058	1.5	.062	1.6	.629	16.0	267	397
NRXP-1920J	19	20	.058	1.5	.062	1.6	.621	15.8	254	378	NRXP-1920SJ	19	20	.058	1.5	.062	1.6	.646	16.4	312	464
NRXP-2720J	27	20	.058	1.5	.062	1.6	.735	18.7	345	513	NRXP-2720SJ	27	20	.058	1.5	.062	1.6	.761	19.3	416	619
NRXP-3720J	37	20	.058	1.5	.062	1.6	.818	20.8	451	670	NRXP-3720SJ	37	20	.058	1.5	.062	1.6	.879	22.3	564	839
NRXP-4820J	48	20	.058	1.5	.062	1.6	.963	24.5	605	901	NRXP-4820SJ	48	20	.058	1.5	.062	1.6	.988	25.1	699	1039
NRXP-6020J	60	20	.058	1.5	.062	1.6	1.051	26.7	734	1092	NRXP-6020SJ	60	20	.058	1.5	.062	1.6	1.077	27.3	838	1246

# CABLED SINGLE CONDUCTORS



## Heavy Duty

- Single Conductors (NW Series)
- Mil Spec, U.L. AWM

Recognized Style 2343 or 2344 and CSA Certified

AWM *II* A/B\*\*

National Wire & Cable Corp. manufactures a complete line of multiple conductor control cable. All conductors are stranded tinned copper with .015" wall of vinyl primary insulation for use up to 105°C per MIL-W-16878/2\*. Insulated for 1000 volts working voltage. Color coded using 10 standard plus stripes on white per MIL-STD-681. View Color Table in the National Wire Cable Designers Guide, page 7-13.

All conductors are planetary cabled and contra-helically laid for optimum flexibility, with a Mylar tape serve over cable bundle. Shielded cables have a tinned copper braid overall, of 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. All materials are self-extinguishing and fungus resistant. Also available with Neoprene jacket as a custom product. Consult factory for details.

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

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

TECHNICAL DATA (ALL CABLES)	
<b>Insulation Breakdown Voltage:</b>	Greater than 5000 volts AC RMS, 60cps.
<b>U.L. Voltage Rating:</b>	300 volts RMS AC (appliance use). 600 volts RMS AC (electronic use).
<b>CSA Voltage Rating:</b>	300 volts RMS AC (appliance use).
<b>Military Voltage Rating:</b>	1000 volts RMS
<b>Capacitance:</b>	Nominal capacitance from a wire to all else in the cable ranges from 40 to 65 pf., @ 1000 cps, dependent on gauge and position.
<b>Insulation Leakage Res.:</b>	200 megohms/1000 ft. min. at 500 VDC from any conductor to all else in cable.
<b>Sheath Leakage Res.:</b>	10 megohms/1000 ft. min. at 500 VDC from overall shield through sheath to outside world.
<b>Usable Temp. Range:</b>	Suitable for continuous use from -40°C to +105°C.
<b>Cold Bending Capability:</b>	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.

## MULTI-CONDUCTOR STOCK CABLES Conductor sizes 22, 20, 18, 16, 14 & 12 gauge. 22 AWG is 7 stranded. All others are 19 strand.

NW SERIES UNSHIELDED - 22, 20 and 18 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NW-722J	7	22	.064	1.6	.062	1.6	.320	8.1	55	82
NW-1222J	12	22	.064	1.6	.062	1.6	.394	10.1	82	123
NW-1922J	19	22	.064	1.6	.062	1.6	.448	11.4	114	170
NW-2722J	27	22	.064	1.6	.062	1.6	.522	13.3	152	227
NW-3722J	37	22	.064	1.6	.062	1.6	.576	14.6	195	291
NW-4822J	48	22	.064	1.6	.062	1.6	.646	16.4	244	363
NW-6022J	60	22	.064	1.6	.062	1.6	.704	17.9	295	438
NW-7222J	72	22	.064	1.6	.062	1.6	.768	19.5	346	515
NW-8822J	82	22	.064	1.6	.080	2.0	.868	22.0	441	656
NW-10222J	102	22	.064	1.6	.080	2.0	.932	23.7	502	747
NW-720J	7	20	.072	1.8	.062	1.6	.344	8.7	71	106
NW-1220J	12	20	.072	1.8	.062	1.6	.428	10.9	109	162
NW-1920J	19	20	.072	1.8	.062	1.6	.488	12.4	155	230
NW-2720J	27	20	.072	1.8	.062	1.6	.572	14.5	209	311
NW-3720J	37	20	.072	1.8	.062	1.6	.632	16.1	272	405
NW-4820J	48	20	.072	1.8	.062	1.6	.711	18.1	342	509
NW-6020J	60	20	.072	1.8	.062	1.6	.776	19.7	417	620
NW-7220J	72	20	.072	1.8	.080	2.0	.884	22.5	521	775
NW-8820J	88	20	.072	1.8	.080	2.0	.956	24.3	621	924
NW-10220J	102	20	.072	1.8	.080	2.0	1.028	26.1	710	1056
NW-718J	7	18	.082	2.1	.062	1.6	.374	9.5	91	136
NW-1218J	12	18	.082	2.1	.062	1.6	.469	11.9	142	211
NW-1918J	19	18	.082	2.1	.062	1.6	.538	13.7	206	306
NW-2718J	27	18	.082	2.1	.062	1.6	.633	16.0	280	417
NW-3718J	37	18	.082	2.1	.062	1.6	.702	17.8	368	547
NW-4818J	48	18	.082	2.1	.062	1.6	.792	20.1	465	692
NW-6018J	60	18	.082	2.1	.080	2.0	.922	22.9	599	891
NW-7218J	72	18	.082	2.1	.080	2.0	.984	25.0	706	1051

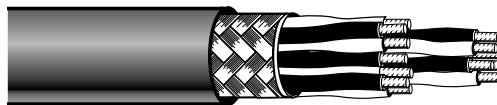
NW SERIES OVERALL BRAIDED SHIELD - 22, 20 and 18 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NW-722SJ	7	22	.064	1.6	.062	1.6	.340	8.6	71	106
NW-1222SJ	12	22	.064	1.6	.062	1.6	.414	10.5	103	153
NW-1922SJ	19	22	.064	1.6	.062	1.6	.473	12.0	148	220
NW-2722SJ	27	22	.064	1.6	.062	1.6	.547	13.9	193	287
NW-3722SJ	37	22	.064	1.6	.062	1.6	.601	15.3	241	359
NW-4822SJ	48	22	.064	1.6	.062	1.6	.672	17.0	296	441
NW-6022SJ	60	22	.064	1.6	.062	1.6	.729	18.5	353	525
NW-7222SJ	72	22	.064	1.6	.062	1.6	.793	20.1	410	610
NW-8822SJ	88	22	.064	1.6	.080	2.0	.893	22.7	512	761
NW-10222SJ	102	22	.064	1.6	.080	2.0	.957	24.3	579	861
NW-720SJ	7	20	.072	1.8	.062	1.6	.364	9.2	89	132
NW-1220SJ	12	20	.072	1.8	.062	1.6	.448	11.4	132	196
NW-1920SJ	19	20	.072	1.8	.062	1.6	.513	13.0	192	286
NW-2720SJ	27	20	.072	1.8	.062	1.6	.597	15.2	255	379
NW-3720SJ	37	20	.072	1.8	.062	1.6	.657	16.7	323	481
NW-4820SJ	48	20	.072	1.8	.062	1.6	.736	18.7	401	597
NW-6020SJ	60	20	.072	1.8	.062	1.6	.801	20.4	482	716
NW-7220SJ	72	20	.072	1.8	.080	2.0	.909	23.1	593	883
NW-8820SJ	88	20	.072	1.8	.080	2.0	.981	24.9	700	1042
NW-10220SJ	102	20	.072	1.8	.080	2.0	1.053	26.8	796	1184
NW-718SJ	7	18	.082	2.1	.062	1.6	.394	10.0	111	165
NW-1218SJ	12	18	.082	2.1	.062	1.6	.494	12.6	178	265
NW-1918SJ	19	18	.082	2.1	.062	1.6	.563	14.3	248	369
NW-2718SJ	27	18	.082	2.1	.062	1.6	.658	16.7	332	493
NW-3718SJ	37	18	.082	2.1	.062	1.6	.727	18.5	425	633
NW-4818SJ	48	18	.082	2.1	.062	1.6	.817	20.8	532	791
NW-6018SJ	60	18	.082	2.1	.080	2.0	.927	23.6	673	1001
NW-7218SJ	72	18	.082	2.1	.080	2.0	1.009	25.6	788	1173

**RoHS COMPLIANT PRODUCTS:**

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

NRW SERIES UNSHIELDED - 22, 20 and 18 AWG										NRW SERIES OVERALL BRAIDED SHIELD - 22, 20 and 18 AWG											
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	Inches	MM				Inches	MM	Inches	MM	Inches	MM	Inches	MM
NRW-722J	7	22	.064	1.6	.062	1.6	.320	8.1	55	82	NRW-722SJ	7	22	.064	1.6	.062	1.6	.340	8.6	71	106
NRW-1222J	12	22	.064	1.6	.062	1.6	.394	10.1	82	123	NRW-1222SJ	12	22	.064	1.6	.062	1.6	.414	10.5	103	153
NRW-1922J	19	22	.064	1.6	.062	1.6	.448	11.4	114	170	NRW-1922SJ	19	22	.064	1.6	.062	1.6	.473	12.0	148	220
NRW-2722J	27	22	.064	1.6	.062	1.6	.522	13.3	152	227	NRW-2722SJ	27	22	.064	1.6	.062	1.6	.547	13.9	193	287
NRW-3722J	37	22	.064	1.6	.062	1.6	.576	14.6	195	291	NRW-3722SJ	37	22	.064	1.6	.062	1.6	.601	15.3	241	359
NRW-4822J	48	22	.064	1.6	.062	1.6	.646	16.4	244	363	NRW-4822SJ	48	22	.064	1.6	.062	1.6	.672	17.0	296	441
NRW-6022J	60	22	.064	1.6	.062	1.6	.704	17.9	295	438	NRW-6022SJ	60	22	.064	1.6	.062	1.6	.729	18.5	353	525
NRW-7222J	72	22	.064	1.6	.062	1.6	.768	19.5	346	515	NRW-7222SJ	72	22	.064	1.6	.062	1.6	.793	20.1	410	610
NRW-8822J	82	22	.064	1.6	.080	2.0	.868	22.0	441	656	NRW-8822SJ	88	22	.064	1.6	.080	2.0	.893	22.7	512	761
NRW-10222J	102	22	.064	1.6	.080	2.0	.932	23.7	502	747	NRW-10222SJ	102	22	.064	1.6	.080	2.0	.957	24.3	579	861
NRW-720J	7	20	.072	1.6	.062	1.6	.344	8.7	71	106	NRW-720SJ	7	20	.072	1.8	.062	1.6	.364	9.2	89	132
NRW-1220J	12	20	.072	1.6	.062	1.6	.428	10.9	109	162	NRW-1220SJ	12	20	.072	1.8	.062	1.6	.448	11.4	132	196
NRW-1920J	19	20	.072	1.6	.062	1.6	.488	12.4	155	230	NRW-1920SJ	19	20	.072	1.8	.062	1.6	.513	13.0	192	286
NRW-2720J	27	20	.072	1.6	.062	1.6	.572	14.5	209	311	NRW-2720SJ	27	20	.072	1.8	.062	1.6	.597	15.2	255	379
NRW-3720J	37	20	.072	1.6	.062	1.6	.632	16.1	272	405	NRW-3720SJ	37	20	.072	1.8	.062	1.6	.657	16.7	323	481
NRW-4820J	48	20	.072	1.6	.062	1.6	.711	18.1	342	509	NRW-4820SJ	48	20	.072	1.8	.062	1.6	.736	18.7	401	597
NRW-6020J	60	20	.072	1.6	.062	1.6	.776	19.7	417	620	NRW-6020SJ	60	20	.072	1.8	.062	1.6	.801	20.4	482	716
NRW-7220J	72	20	.072	1.6	.080	2.0	.884	22.5	521	775	NRW-7220SJ	72	20	.072	1.8	.080	2.0	.909	23.1	593	883
NRW-8820J	88	20	.072	1.6	.080	2.0	.956	24.3	621	924	NRW-8820SJ	88	20	.072	1.8	.080	2.0	.981	24.9	700	1042
NRW-10220J	102	20	.072	1.6	.080	2.0	1.028	26.1	710	1056	NRW-10220SJ	102	20	.072	1.8	.080	2.0	1.053	26.8	796	1184
NRW-718J	7	18	.082	2.1	.062	1.6	.374	9.5	91	136	NRW-718SJ	7	18	.082	2.1	.062	1.6	.394	10.0	111	165
NRW-1218J	12	18	.082	2.1	.062	1.6	.469	11.9	142	211	NRW-1218SJ	12	18	.082	2.1	.062	1.6	.494	12.6	178	265
NRW-1918J	19	18	.082	2.1	.062	1.6	.538	13.7	206	306	NRW-1918SJ	19	18	.082	2.1	.062	1.6	.563	14.3	248	369
NRW-2718J	27	18	.082	2.1	.062	1.6	.633	16.0	280	417	NRW-2718SJ	27	18	.082	2.1	.062	1.6	.658	16.7	332	493
NRW-3718J	37	18	.082	2.1	.062	1.6	.702	17.8	368	547	NRW-3718SJ	37	18	.082	2.1	.062	1.6	.727	18.5	425	633
NRW-4818J	48	18	.082	2.1	.062	1.6	.792	20.1	465	692	NRW-4818SJ	48	18	.082	2.1	.062	1.6	.817	20.8	532	791
NRW-6018J	60	18	.082	2.1	.080	2.0	.922	22.9	599	891	NRW-6018SJ	60	18	.082	2.1	.080	2.0	.927	23.6	673	1001
NRW-7218J	72	18	.082	2.1	.080	2.0	.984	25.0	706	1051	NRW-7218SJ	72	18	.082	2.1	.080	2.0	1.009	25.6	788	1173

# CABLED SINGLE CONDUCTORS



## Heavy Duty

- Single Conductors (NW Series)
- Mil Spec, U.L. AWM

Recognized Style 2343 or 2344 and CSA Certified

AWM *II* A/B\*\*

## MULTI-CONDUCTOR STOCK CABLES

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 NWC table below for UL/CSA.

NW SERIES UNSHIELDED - 16, 14 and 12 AWG											NW SERIES OVERALL SHIELDED - 16, 14 and 12 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NW-716J	7	16	.091	2.3	.062	1.6	.401	10.2	108	161	NW-716SJ	7	16	.091	2.3	.062	1.6	.421	10.7	129	192
NW-1216J	12	16	.091	2.3	.062	1.6	.507	12.9	170	253	NW-1216SJ	12	16	.091	2.3	.062	1.6	.532	13.5	209	311
NW-1916J	19	16	.091	2.3	.062	1.6	.583	14.8	248	369	NW-1916SJ	19	16	.091	2.3	.062	1.6	.608	15.4	294	437
NW-2716J	27	16	.091	2.3	.062	1.6	.689	17.5	339	504	NW-2716SJ	27	16	.091	2.3	.062	1.6	.714	18.1	395	588
NW-3716J	37	16	.091	2.3	.062	1.6	.765	19.4	446	664	NW-3716SJ	37	16	.091	2.3	.062	1.6	.790	20.0	510	759
NW-4816J	48	16	.091	2.3	.080	2.0	.901	22.9	576	857	NW-4816SJ	48	16	.091	2.3	.080	2.0	.926	23.5	670	997
NW-6016J	60	16	.091	2.3	.080	2.0	.983	25.0	270	1071	NW-6016SJ	60	16	.091	2.3	.080	2.0	1.008	25.6	808	1202
NW-714J	7	14	.105	2.7	.062	1.6	.443	11.2	146	217	NW-714SJ	7	14	.105	2.7	.062	1.6	.468	11.9	175	260
NW-1214J	12	14	.105	2.7	.062	1.6	.565	14.3	233	347	NW-1214SJ	12	14	.105	2.7	.062	1.6	.590	15.0	270	402
NW-1914J	19	14	.105	2.7	.062	1.6	.653	16.6	345	513	NW-1914SJ	19	14	.105	2.7	.062	1.6	.678	17.2	399	594
NW-2714J	27	14	.105	2.7	.062	1.6	.775	19.7	476	708	NW-2714SJ	27	14	.105	2.7	.062	1.6	.805	20.4	530	789
NW-512J	5	12	.124	3.1	.062	1.6	.463	11.7	157	234	NW-512SJ	5	12	.124	3.1	.062	1.6	.488	12.4	192	286
NW-712J	7	12	.124	3.1	.062	1.6	.500	12.7	205	305	NW-712SJ	7	12	.124	3.1	.062	1.6	.525	13.3	244	363
NW-1212J	12	12	.124	3.1	.062	1.6	.644	16.4	332	494	NW-1212SJ	12	12	.124	3.1	.062	1.6	.669	17.0	385	573
NW-1912J	19	12	.124	3.1	.062	1.6	.748	19.0	499	743	NW-1912SJ	19	12	.124	3.1	.062	1.6	.773	19.6	562	836

The following cables in 16-12 gauge are similar to NW 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.

NWC SERIES UNSHIELDED - 16, 14 and 12 AWG											NWC SERIES OVERALL SHIELDED - 16, 14 and 12 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NWC-716J	7	16	.091	2.3	.062	1.6	.401	10.2	108	161	NWC-716SJ	7	16	.091	2.3	.062	1.6	.421	10.7	129	192
NWC-1216J	12	16	.091	2.3	.062	1.6	.507	12.9	170	253	NWC-1216SJ	12	16	.091	2.3	.062	1.6	.532	13.5	209	311
NWC-1916J	19	16	.091	2.3	.062	1.6	.583	14.8	248	369	NWC-1916SJ	19	16	.091	2.3	.062	1.6	.608	15.4	294	437
NWC-2716J	27	16	.091	2.3	.062	1.6	.689	17.5	339	504	NWC-2716SJ	27	16	.091	2.3	.062	1.6	.714	18.1	395	588
NWC-3716J	37	16	.091	2.3	.062	1.6	.765	19.4	446	664	NWC-3716SJ	37	16	.091	2.3	.062	1.6	.790	20.0	510	759
NWC-4816J	48	16	.091	2.3	.080	2.0	.901	22.9	576	857	NWC-4816SJ	48	16	.091	2.3	.062	1.6	.926	23.5	670	997
NWC-6016J	60	16	.091	2.3	.080	2.0	.983	25.0	720	1071	NWC-6016SJ	60	16	.091	2.3	.062	1.6	1.008	25.6	808	1202
NWC-714J	7	14	.105	2.7	.062	1.6	.443	11.2	146	217	NWC-714SJ	7	14	.105	2.7	.062	1.6	.468	11.9	175	260
NWC-1214J	12	14	.105	2.7	.062	1.6	.565	14.3	233	347	NWC-1214SJ	12	14	.105	2.7	.062	1.6	.590	15.0	270	402
NWC-1914J	19	14	.105	2.7	.062	1.6	.653	16.6	345	513	NWC-1914SJ	19	14	.105	2.7	.062	1.6	.678	17.2	399	594
NWC-2714J	27	14	.105	2.7	.062	1.6	.775	19.7	476	708	NWC-2714SJ	27	14	.105	2.7	.062	1.6	.805	20.4	530	789
NWC-512J	5	12	.124	3.1	.062	1.6	.463	11.7	157	234	NWC-512SJ	5	12	.124	3.1	.062	1.6	.488	12.4	192	286
NWC-712J	7	12	.124	3.1	.062	1.6	.500	12.7	205	305	NWC-712SJ	7	12	.124	3.1	.062	1.6	.525	13.3	244	363
NWC-1212J	12	12	.124	3.1	.062	1.6	.644	16.4	332	494	NWC-1212SJ	12	12	.124	3.1	.062	1.6	.669	17.0	385	573
NWC-1912J	19	12	.124	3.1	.062	1.6	.748	19.0	499	743	NWC-1912SJ	19	12	.124	3.1	.062	1.6	.773	19.6	562	836

### UL/CSA -- CONDUCTOR SIZE & STRANDING

16 AWG (26 x 30)

14 AWG (41 x 30)

12 AWG (65 x 30)



# RoHS COMPLIANT PRODUCTS:

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

NRW SERIES UNSHIELDED - 16, 14 and 12 AWG										NRW SERIES OVERALL SHIELDED - 16, 14 and 12 AWG											
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	Inches	MM				lbs per 1000 ft	KG/KM	Inches	MM	Inches	MM	Inches	MM
NRW-716J	7	16	.091	2.3	.062	1.6	.401	10.2	108	161	NRW-716SJ	7	16	.091	2.3	.062	1.6	.421	10.7	129	192
NRW-1216J	12	16	.091	2.3	.062	1.6	.507	12.9	170	253	NRW-1216SJ	12	16	.091	2.3	.062	1.6	.532	13.5	209	311
NRW-1916J	19	16	.091	2.3	.062	1.6	.583	14.8	248	369	NRW-1916SJ	19	16	.091	2.3	.062	1.6	.608	15.4	294	437
NRW-2716J	27	16	.091	2.3	.062	1.6	.689	17.5	339	504	NRW-2716SJ	27	16	.091	2.3	.062	1.6	.714	18.1	395	588
NRW-3716J	37	16	.091	2.3	.062	1.6	.765	19.4	446	664	NRW-3716SJ	37	16	.091	2.3	.062	1.6	.790	20.0	510	759
NRW-4816J	48	16	.091	2.3	.080	2.0	.901	22.9	576	857	NRW-4816SJ	48	16	.091	2.3	.080	2.0	.926	23.5	670	997
NRW-6016J	60	16	.091	2.3	.080	2.0	.983	25.0	720	1071	NRW-6016SJ	60	16	.091	2.3	.080	2.0	1.008	25.6	808	1202
NRW-714J	7	14	.105	2.7	.062	1.6	.443	11.2	146	217	NRW-714SJ	7	14	.105	2.7	.062	1.6	.468	11.9	175	260
NRW-1214J	12	14	.105	2.7	.062	1.6	.565	14.3	233	347	NRW-1214SJ	12	14	.105	2.7	.062	1.6	.590	15.0	270	402
NRW-1914J	19	14	.105	2.7	.062	1.6	.653	16.6	345	513	NRW-1914SJ	19	14	.105	2.7	.062	1.6	.678	17.2	399	594
NRW-2714J	27	14	.105	2.7	.062	1.6	.775	19.7	476	708	NRW-2714SJ	27	14	.105	2.7	.062	1.6	.805	20.4	530	789
NRW-512J	5	12	.124	3.1	.062	1.6	.463	11.7	157	234	NRW-512SJ	5	12	.124	3.1	.062	1.6	.488	12.4	192	286
NRW-712J	7	12	.124	3.1	.062	1.6	.500	12.7	205	305	NRW-712SJ	7	12	.124	3.1	.062	1.6	.525	13.3	244	363
NRW-1212J	12	12	.124	3.1	.062	1.6	.644	16.4	332	494	NRW-1212SJ	12	12	.124	3.1	.062	1.6	.669	17.0	385	573
NRW-1912J	19	12	.124	3.1	.062	1.6	.748	19.0	499	743	NRW-1912SJ	19	12	.124	3.1	.062	1.6	.773	19.6	562	836

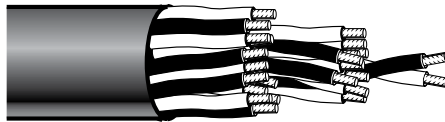
The following cables in 16-12 gauge are similar to NW series but utilize materials to qualify for CSA certification for AWM II A/B 105°C service at 300 volts as well as styles 2343 and 2344. Items below are not stocked and are subject to minimum run quantities.

NRWC SERIES UNSHIELDED - 16, 14 and 12 AWG										NRWC SERIES OVERALL SHIELDED - 16, 14 and 12 AWG											
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	Inches	MM				lbs per 1000 ft	KG/KM	Inches	MM	Inches	MM	Inches	MM
NRWC-716J	7	16	.091	2.3	.062	1.6	.401	10.2	108	161	NRWC-716SJ	7	16	.091	2.3	.062	1.6	.421	10.7	129	192
NRWC-1216J	12	16	.091	2.3	.062	1.6	.507	12.9	170	253	NRWC-1216SJ	12	16	.091	2.3	.062	1.6	.532	13.5	209	311
NRWC-1916J	19	16	.091	2.3	.062	1.6	.583	14.8	248	369	NRWC-1916SJ	19	16	.091	2.3	.062	1.6	.608	15.4	294	437
NRWC-2716J	27	16	.091	2.3	.062	1.6	.689	17.5	339	504	NRWC-2716SJ	27	16	.091	2.3	.062	1.6	.714	18.1	395	588
NRWC-3716J	37	16	.091	2.3	.062	1.6	.765	19.4	446	664	NRWC-3716SJ	37	16	.091	2.3	.062	1.6	.790	20.0	510	759
NRWC-4816J	48	16	.091	2.3	.080	2.0	.901	22.9	576	857	NRWC-4816SJ	48	16	.091	2.3	.062	1.6	.926	23.5	670	997
NRWC-6016J	60	16	.091	2.3	.080	2.0	.983	25.0	720	1071	NRWC-6016SJ	60	16	.091	2.3	.062	1.6	1.008	25.6	808	1202
NRWC-714J	7	14	.105	2.7	.062	1.6	.443	11.2	146	217	NRWC-714SJ	7	14	.105	2.7	.062	1.6	.468	11.9	175	260
NRWC-1214J	12	14	.105	2.7	.062	1.6	.565	14.3	233	347	NRWC-1214SJ	12	14	.105	2.7	.062	1.6	.590	15.0	270	402
NRWC-1914J	19	14	.105	2.7	.062	1.6	.653	16.6	345	513	NRWC-1914SJ	19	14	.105	2.7	.062	1.6	.678	17.2	399	594
NRWC-2714J	27	14	.105	2.7	.062	1.6	.775	19.7	476	708	NRWC-2714SJ	27	14	.105	2.7	.062	1.6	.805	20.4	530	789
NRWC-512J	5	12	.124	3.1	.062	1.6	.463	11.7	157	234	NRWC-512SJ	5	12	.124	3.1	.062	1.6	.488	12.4	192	286
NRWC-712J	7	12	.124	3.1	.062	1.6	.500	12.7	205	305	NRWC-712SJ	7	12	.124	3.1	.062	1.6	.525	13.3	244	363
NRWC-1212J	12	12	.124	3.1	.062	1.6	.644	16.4	332	494	NRWC-1212SJ	12	12	.124	3.1	.062	1.6	.669	17.0	385	573
NRWC-1912J	19	12	.124	3.1	.062	1.6	.748	19.0	499	743	NRWC-1912SJ	19	12	.124	3.1	.062	1.6	.773	19.6	562	836

## UL/CSA -- CONDUCTOR SIZE & STRANDING

- 16 AWG (26 x 30)
- 14 AWG (41 x 30)
- 12 AWG (65 x 30)

# 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)	
<b>Insulation Breakdown Voltage:</b>	Greater than 5000 volts AC RMS, 60cps.
<b>U.L. Voltage Rating:</b>	300 volts RMS AC (appliance use).
<b>600 volts RMS AC (electronic use).</b>	
<b>CSA Voltage Rating:</b>	300 volts RMS AC (appliance use).
<b>Military Voltage Rating:</b>	1000 volts RMS
<b>Capacitance:</b>	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.
<b>Insulation Leakage Res.:</b>	200 megohms/1000 ft. min. at 500 VDC from any conductor to all else in cable.
<b>Sheath Leakage Res.:</b>	10 megohms/1000 ft. min. at 500 VDC form overall shield through sheath to outside world.
<b>Usable Temp. Range:</b>	Suitable for continuous use from +105°C to -40°C.
<b>Cold Bending Capability:</b>	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 Inches	Cond. Diameter MM	Jacket Wall Inches	Jacket Wall MM	Nominal Diameter Inches	Nominal Diameter MM	Weight Lbs. per 1000 ft.	Weight 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 Inches	Cond. Diameter MM	Jacket Wall Inches	Jacket Wall MM	Nominal Diameter Inches	Nominal Diameter MM	Weight Lbs. per 1000 ft.	Weight 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

**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 Inches MM		Jacket Wall Inches MM		Nominal Diameter Inches MM		Weight Lbs. per 1000 ft. KG/KM		Part No.	No. of Pairs	Cond. AWG	Cond. Diameter Inches MM		Jacket Wall Inches MM		Nominal Diameter Inches MM		Weight 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)

# 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

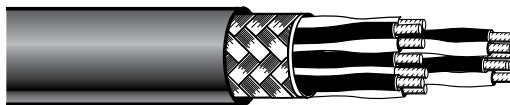
NRWP SERIES OVERALL SHIELDED - 16 AWG										
Part No.	No. of Pairs	Cond. AWG	Cond. Diameter		Jacket Wall		Nominal Diameter		Weight	
			Inches	MM	Inches	MM	Inches	MM	Lbs. per 1000 ft.	KG/KM
NRWP-716SJ	7	16	.091	2.3	.062	1.6	.617	15.7	264	392
NRWP-1216SJ	12	16	.091	2.3	.062	1.6	.797	20.2	407	605
NRWP-1916SJ	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)

# CABLED SINGLE CONDUCTORS



## Extra Heavy Duty

- Single Conductors (NWH Series)
- Mil Spec, U.L. AWM

Recognized Style 2343 or 2344 and CSA Certified

AWM II A/B\*

National Wire & Cable Corp. manufactures a complete line of extra heavy duty multi-conductor control cables. Conductors are of tinned copper strand with .031" wall of polyvinylchloride primary insulation for use up to 105°C. Per MIL-W-16878/3, insulated for 3000 volts working voltage\*\*.

Conductors are color coded using 10 standard basic colors, plus spiral tracers on white per MIL-STD-681. View Color Table in the National Wire Cable Designers Guide, page 7-13.

All conductor are planetary cabled and contra-helically laid for optimum flexibility, with a Mylar tape serve over 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. Neoprene to MIL-R-6855 Class 2 Grade 60 specifications also available on special for non-U.L. applications.

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

\*\*Insulated wires also meet Style 1015.

TECHNICAL DATA (ALL CABLES)	
<b>Insulation Breakdown Voltage:</b>	Greater than 12000 volts AC RMS, 60cps.
<b>U.L. Voltage Rating:</b>	600 volts RMS AC (appliance use). 2500 volts RMS AC (electronic use).
<b>CSA Voltage Rating:</b>	600 volts RMS AC (appliance use).
<b>Military Voltage Rating:</b>	3000 volts RMS
<b>Capacitance:</b>	Nominal capacitance from a wire to all else in the cable ranges from 40 to 65 pf per ft. @ 1000 cps. dependent on gauge and position.
<b>Insulation Leakage Res.:</b>	200 megohms/1000 ft. min. at 500 VDC from any conductor to all else in cable.
<b>Sheath Leakage Res.:</b>	10 megohms/1000 ft. min. at 500 VDC form overall shield through sheath to outside world.
<b>Usable Temp. Range:</b>	Suitable for continuous use from +105°C to -40°C.
<b>Cold Bending Capability:</b>	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.

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

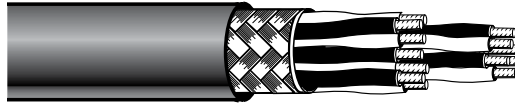
NWH SERIES UNSHIELD - 22, 20 and 18 AWG											NWH SERIES OVERALL SHIELDED - 22, 20 and 18 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM				Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NWH-722J	7	22	.092	2.3	.080	2.0	.992	25.2	479	713	NWH-722SJ	7	22	.092	2.3	.062	1.6	.424	10.8	101	150
NWH-1222J	12	22	.092	2.3	.080	2.0	1.084	27.5	562	835	NWH-1222SJ	12	22	.092	2.3	.062	1.6	.536	13.6	160	238
NWH-1922J	19	22	.092	2.3	.080	2.0	1.176	29.9	667	992	NWH-1922SJ	19	22	.092	2.3	.062	1.6	.613	15.6	216	322
NWH-2722J	27	22	.092	2.3	.080	2.0	1.268	32.2	761	1132	NWH-2722SJ	27	22	.092	2.3	.062	1.6	.720	18.3	285	423
NWH-3722J	37	22	.092	2.3	.062	1.6	.772	19.6	294	437	NWH-3722SJ	37	22	.092	2.3	.062	1.6	.797	20.2	358	533
NWH-4822J	48	22	.092	2.3	.080	2.0	.909	23.1	398	592	NWH-4822SJ	48	22	.092	2.3	.080	2.0	.934	23.7	473	704
NWH-6022J	60	22	.092	2.3	.080	2.0	.992	25.2	479	713	NWH-6022SJ	60	22	.092	2.3	.080	2.0	1.017	25.8	562	836
NWH-7222J	72	22	.092	2.3	.080	2.0	1.084	27.5	562	835	NWH-7222SJ	72	22	.092	2.3	.080	2.0	1.109	28.2	653	971
NWH-8822J	88	22	.092	2.3	.080	2.0	1.176	29.9	667	992	NWH-8822SJ	88	22	.092	2.3	.080	2.0	1.176	29.9	667	992
NWH-10222J	102	22	.092	2.3	.080	2.0	1.268	32.2	761	1132	NWH-10222SJ	102	22	.092	2.3	.080	2.0	1.293	32.8	870	1294
NWH-720J	7	20	.098	2.5	.062	1.6	.422	10.7	95	141	NWH-720SJ	7	20	.098	2.5	.062	1.6	.422	10.7	95	141
NWH-1220J	12	20	.098	2.5	.062	1.6	.536	13.6	146	218	NWH-1220SJ	12	20	.098	2.5	.062	1.6	.536	13.6	146	218
NWH-1920J	19	20	.098	2.5	.062	1.6	.618	15.7	209	311	NWH-1920SJ	19	20	.098	2.5	.062	1.6	.618	15.7	209	311
NWH-2720J	27	20	.098	2.5	.062	1.6	.732	18.6	284	422	NWH-2720SJ	27	20	.098	2.5	.062	1.6	.732	18.6	284	422
NWH-3720J	37	20	.098	2.5	.062	1.6	.814	20.7	370	550	NWH-3720SJ	37	20	.098	2.5	.062	1.6	.814	20.7	370	550
NWH-4820J	48	20	.098	2.5	.080	2.0	.958	24.3	497	740	NWH-4820SJ	48	20	.098	2.5	.080	2.0	.958	24.3	497	740
NWH-6020J	60	20	.098	2.5	.080	2.0	1.046	26.6	602	896	NWH-6020SJ	60	20	.098	2.5	.080	2.0	1.046	26.6	602	896
NWH-7220J	72	20	.098	2.5	.080	2.0	1.144	29.1	709	1054	NWH-7220SJ	72	20	.098	2.5	.080	2.0	1.144	29.1	709	1054
NWH-8820J	88	20	.098	2.5	.080	2.0	1.242	31.5	846	1258	NWH-8820SJ	88	20	.098	2.5	.080	2.0	1.242	31.5	846	1258
NWH-10220J	102	20	.098	2.5	.080	2.0	1.340	34.0	967	1439	NWH-10220SJ	102	20	.098	2.5	.080	2.0	1.365	34.7	1083	1611
NWH-718J	7	18	.110	2.8	.062	1.6	.458	11.6	119	177	NWH-718SJ	7	18	.110	2.8	.062	1.6	.458	11.6	119	177
NWH-1218J	12	18	.110	2.8	.062	1.6	.586	14.9	186	276	NWH-1218SJ	12	18	.110	2.8	.062	1.6	.586	14.9	186	276
NWH-1918J	19	18	.110	2.8	.062	1.6	.678	17.2	270	401	NWH-1918SJ	19	18	.110	2.8	.062	1.6	.678	17.2	270	401
NWH-2718J	27	18	.110	2.8	.062	1.6	.806	20.5	368	548	NWH-2718SJ	27	18	.110	2.8	.062	1.6	.806	20.5	368	548
NWH-3718J	37	18	.110	2.8	.080	2.0	.934	23.7	514	765	NWH-3718SJ	37	18	.110	2.8	.080	2.0	.934	23.7	514	765
NWH-4818J	48	18	.110	2.8	.080	2.0	1.055	26.8	647	963	NWH-4818SJ	48	18	.110	2.8	.080	2.0	1.055	26.8	647	963
NWH-6018J	60	18	.110	2.8	.080	2.0	1.154	29.3	788	1171	NWH-6018SJ	60	18	.110	2.8	.080	2.0	1.154	29.3	788	1171
NWH-7218J	72	18	.110	2.8	.080	2.0	1.264	32.1	930	1383	NWH-7218SJ	72	18	.110	2.8	.080	2.0	1.264	32.1	930	1383

**RoHS COMPLIANT PRODUCTS:**

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

NRWH SERIES UNSHIELD - 22, 20 and 18 AWG											NRWH SERIES OVERALL SHIELDED - 22, 20 and 18 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NRWH-722J	7	22	.092	2.3	.080	2.0	.992	25.2	479	713	NRWH-722SJ	7	22	.092	2.3	.062	1.6	.424	10.8	101	150
NRWH-1222J	12	22	.092	2.3	.080	2.0	1.084	27.5	562	835	NRWH-1222SJ	12	22	.092	2.3	.062	1.6	.536	13.6	160	238
NRWH-1922J	19	22	.092	2.3	.080	2.0	1.176	29.9	667	992	NRWH-1922SJ	19	22	.092	2.3	.062	1.6	.613	15.6	216	322
NRWH-2722J	27	22	.092	2.3	.080	2.0	1.268	32.2	761	1132	NRWH-2722SJ	27	22	.092	2.3	.062	1.6	.720	18.3	285	423
NRWH-3722J	37	22	.092	2.3	.062	1.6	.772	19.6	294	437	NRWH-3722SJ	37	22	.092	2.3	.062	1.6	.797	20.2	358	533
NRWH-4822J	48	22	.092	2.3	.080	2.0	.909	23.1	398	592	NRWH-4822SJ	48	22	.092	2.3	.080	2.0	.934	23.7	473	704
NRWH-6022J	60	22	.092	2.3	.080	2.0	.992	25.2	479	713	NRWH-6022SJ	60	22	.092	2.3	.080	2.0	1.017	25.8	562	836
NRWH-7222J	72	22	.092	2.3	.080	2.0	1.084	27.5	562	835	NRWH-7222SJ	72	22	.092	2.3	.080	2.0	1.109	28.2	653	971
NRWH-8822J	88	22	.092	2.3	.080	2.0	1.176	29.9	667	992	NRWH-8822SJ	88	22	.092	2.3	.080	2.0	1.176	29.9	667	992
NRWH-10222J	102	22	.092	2.3	.080	2.0	1.268	32.2	761	1132	NRWH-10222SJ	102	22	.092	2.3	.080	2.0	1.293	32.8	870	1294
NRWH-720J	7	20	.098	2.5	.062	1.6	.422	10.7	95	141	NRWH-720SJ	7	20	.098	2.5	.062	1.6	.422	10.7	95	141
NRWH-1220J	12	20	.098	2.5	.062	1.6	.536	13.6	146	218	NRWH-1220SJ	12	20	.098	2.5	.062	1.6	.536	13.6	146	218
NRWH-1920J	19	20	.098	2.5	.062	1.6	.618	15.7	209	311	NRWH-1920SJ	19	20	.098	2.5	.062	1.6	.618	15.7	209	311
NRWH-2720J	27	20	.098	2.5	.062	1.6	.732	18.6	284	422	NRWH-2720SJ	27	20	.098	2.5	.062	1.6	.732	18.6	284	422
NRWH-3720J	37	20	.098	2.5	.062	1.6	.814	20.7	370	550	NRWH-3720SJ	37	20	.098	2.5	.062	1.6	.814	20.7	370	550
NRWH-4820J	48	20	.098	2.5	.080	2.0	.958	24.3	497	740	NRWH-4820SJ	48	20	.098	2.5	.080	2.0	.958	24.3	497	740
NRWH-6020J	60	20	.098	2.5	.080	2.0	1.046	26.6	602	896	NRWH-6020SJ	60	20	.098	2.5	.080	2.0	1.046	26.6	602	896
NRWH-7220J	72	20	.098	2.5	.080	2.0	1.144	29.1	709	1054	NRWH-7220SJ	72	20	.098	2.5	.080	2.0	1.144	29.1	709	1054
NRWH-8820J	88	20	.098	2.5	.080	2.0	1.242	31.5	846	1258	NRWH-8820SJ	88	20	.098	2.5	.080	2.0	1.242	31.5	846	1258
NRWH-10220J	102	20	.098	2.5	.080	2.0	1.340	34.0	967	1439	NRWH-10220SJ	102	20	.098	2.5	.080	2.0	1.365	34.7	1083	1611
NRWH-718J	7	18	.110	2.8	.062	1.6	.458	11.6	119	177	NRWH-718SJ	7	18	.110	2.8	.062	1.6	.458	11.6	119	177
NRWH-1218J	12	18	.110	2.8	.062	1.6	.586	14.9	186	276	NRWH-1218SJ	12	18	.110	2.8	.062	1.6	.586	14.9	186	276
NRWH-1918J	19	18	.110	2.8	.062	1.6	.678	17.2	270	401	NRWH-1918SJ	19	18	.110	2.8	.062	1.6	.678	17.2	270	401
NRWH-2718J	27	18	.110	2.8	.062	1.6	.806	20.5	368	548	NRWH-2718SJ	27	18	.110	2.8	.062	1.6	.806	20.5	368	548
NRWH-3718J	37	18	.110	2.8	.080	2.0	.934	23.7	514	765	NRWH-3718SJ	37	18	.110	2.8	.080	2.0	.934	23.7	514	765
NRWH-4818J	48	18	.110	2.8	.080	2.0	1.055	26.8	647	963	NRWH-4818SJ	48	18	.110	2.8	.080	2.0	1.055	26.8	647	963
NRWH-6018J	60	18	.110	2.8	.080	2.0	1.154	29.3	788	1171	NRWH-6018SJ	60	18	.110	2.8	.080	2.0	1.154	29.3	788	1171
NRWH-7218J	72	18	.110	2.8	.080	2.0	1.264	32.1	930	1383	NRWH-7218SJ	72	18	.110	2.8	.080	2.0	1.264	32.1	930	1383

# CABLED SINGLE CONDUCTORS



## Extra Heavy Duty

- Single Conductors (NWH Series)
- Mil Spec, U.L. AWM

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

## MULTI-CONDUCTOR STOCK CABLES

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 NWHC table below for UL/CSA.

NWH SERIES UNSHIELDED - 16, 14 and 12 AWG											NWH SERIES OVERALL SHIELDED - 16, 14 and 12 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NWH-716J	7	16	.092	2.3	.062	1.6	.424	10.8	101	150	NWH-716SJ	7	16	.116	2.9	.062	1.6	.501	12.7	170	253
NWH-1216J	12	16	.092	2.3	.062	1.6	.536	13.6	160	238	NWH-1216SJ	12	16	.116	2.9	.062	1.6	.636	16.1	260	386
NWH-1916J	19	16	.092	2.3	.062	1.6	.613	15.6	216	322	NWH-1916SJ	19	16	.116	2.9	.062	1.6	.733	18.6	366	545
NWH-2716J	27	16	.092	2.3	.062	1.6	.720	18.3	285	423	NWH-2716SJ	27	16	.116	2.9	.080	2.0	.904	23.0	523	777
NWH-3716J	37	16	.092	2.3	.062	1.6	.797	20.2	358	533	NWH-3716SJ	37	16	.116	2.9	.080	2.0	1.001	25.4	669	996
NWH-4816J	48	16	.092	2.3	.080	2.0	.934	23.7	473	704	NWH-4816SJ	48	16	.116	2.9	.080	2.0	1.129	28.7	836	1243
NWH-6016J	60	16	.092	2.3	.080	2.0	1.017	25.8	562	836	NWH-6016SJ	60	16	.116	2.9	.080	2.0	1.233	31.3	1009	1501
NWH-714J	7	14	.131	3.3	.062	1.6	.521	13.2	175	261	NWH-714SJ	7	14	.131	3.3	.062	1.6	.546	13.9	216	321
NWH-1214J	12	14	.131	3.3	.062	1.6	.673	17.1	280	417	NWH-1214SJ	12	14	.131	3.3	.062	1.6	.698	17.7	335	498
NWH-1914J	19	14	.131	3.3	.062	1.6	.783	19.9	415	617	NWH-1914SJ	19	14	.131	3.3	.062	1.6	.808	20.5	481	715
NWH-2714J	27	14	.131	3.3	.062	1.6	.971	24.7	604	899	NWH-2714SJ	27	14	.131	3.3	.080	2.0	.996	25.3	685	1019
NWH-512J	5	12	.161	4.1	.062	1.6	.563	14.3	193	287	NWH-512SJ	5	12	.161	4.1	.062	1.6	.588	14.9	238	353
NWH-712J	7	12	.161	4.1	.062	1.6	.611	15.5	253	376	NWH-712SJ	7	12	.161	4.1	.062	1.6	.636	16.2	302	449
NWH-1212J	12	12	.161	4.1	.062	1.6	.789	20.3	410	609	NWH-1212SJ	12	12	.161	4.1	.062	1.6	.823	20.9	476	709
NWH-1912J	19	12	.161	4.1	.080	2.0	.969	24.6	646	962	NWH-1912SJ	19	12	.161	4.1	.080	2.0	.994	25.3	727	1081

The following cables in 16 gauge are similar to NWH series but utilize materials to qualify for CSA certification for AWM **II** A/B 105°C service at 600 volts as well as styles 2343 and 2344. Items below are not stocked and are subject to minimum run quantities.

NWHC SERIES UNSHIELDED - 16, 14 and 12 AWG											NWHC SERIES OVERALL SHIELDED - 16, 14 and 12 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NWHC-716J	7	16	.116	2.9	.062	1.6	.476	12.1	134	199	NWHC-716SJ	7	16	.116	2.9	.062	1.6	.501	12.7	170	253
NWHC-1216J	12	16	.116	2.9	.062	1.6	.611	15.5	211	313	NWHC-1216SJ	12	16	.116	2.9	.062	1.6	.636	16.1	260	386
NWHC-1916J	19	16	.116	2.9	.062	1.6	.708	18.0	308	458	NWHC-1916SJ	19	16	.116	2.9	.062	1.6	.733	18.6	366	545
NWHC-2716J	27	16	.116	2.9	.080	2.0	.879	22.3	451	670	NWHC-2716SJ	27	16	.116	2.9	.080	2.0	.904	23.0	523	777
NWHC-3716J	37	16	.116	2.9	.080	2.0	.976	24.8	588	875	NWHC-3716SJ	37	16	.116	2.9	.080	2.0	1.001	25.4	669	996
NWHC-4816J	48	16	.116	2.9	.080	2.0	1.104	28.0	742	1104	NWHC-4816SJ	48	16	.116	2.9	.080	2.0	1.129	28.7	836	1243
NWHC-6016J	60	16	.116	2.9	.080	2.0	1.208	30.7	905	1347	NWHC-6016SJ	60	16	.116	2.9	.080	2.0	1.233	31.3	1009	1501
NWHC-714J	7	14	.131	3.3	.062	1.6	.521	13.2	175	261	NWHC-714SJ	7	14	.131	3.3	.062	1.6	.546	13.9	216	321
NWHC-1214J	12	14	.131	3.3	.062	1.6	.673	17.1	280	417	NWHC-1214SJ	12	14	.131	3.3	.062	1.6	.698	17.7	335	498
NWHC-1914J	19	14	.131	3.3	.062	1.6	.783	19.9	415	617	NWHC-1914SJ	19	14	.131	3.3	.062	1.6	.808	20.5	481	715
NWHC-2714J	27	14	.131	3.3	.080	2.0	.971	24.7	604	899	NWHC-2714SJ	27	14	.131	3.3	.080	2.0	.996	25.3	685	1019
NWHC-512J	5	12	.161	4.1	.062	1.6	.563	14.3	193	287	NWHC-512SJ	5	12	.161	4.1	.062	1.6	.588	14.9	238	353
NWHC-712J	7	12	.161	4.1	.062	1.6	.611	15.5	253	376	NWHC-712SJ	7	12	.161	4.1	.062	1.6	.636	16.2	302	449
NWHC-1212J	12	12	.161	4.1	.062	1.6	.798	20.3	410	609	NWHC-1212SJ	12	12	.161	4.1	.062	1.6	.823	20.9	476	709
NWHC-1912J	19	12	.161	4.1	.080	2.0	.969	24.6	646	962	NWHC-1912SJ	19	12	.161	4.1	.080	2.0	.994	25.3	727	1081

### UL/CSA -- CONDUCTOR SIZE & STRANDING

- 16 AWG (26 x 30)
- 14 AWG (41 x 30)
- 12 AWG (65 x 30)



# RoHS COMPLIANT PRODUCTS:

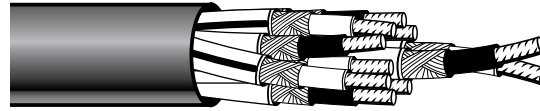
all RoHS products have the letter "R" written into the second position of the Part No.

NRWH SERIES UNSHIELDED - 16, 14 and 12 AWG											NRWH SERIES OVERALL SHIELDED - 16, 14 and 12 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	Inches	MM				lbs per 1000 ft	KG/KM	Inches	MM	Inches	MM	Inches	MM
NRWH-716J	7	16	.092	2.3	.062	1.6	.424	10.8	101	150	NRWH-716SJ	7	16	.116	2.9	.062	1.6	.501	12.7	170	253
NRWH-1216J	12	16	.092	2.3	.062	1.6	.536	13.6	160	238	NRWH-1216SJ	12	16	.116	2.9	.062	1.6	.636	16.1	260	386
NRWH-1916J	19	16	.092	2.3	.062	1.6	.613	15.6	216	322	NRWH-1916SJ	19	16	.116	2.9	.062	1.6	.733	18.6	366	545
NRWH-2716J	27	16	.092	2.3	.062	1.6	.720	18.3	285	423	NRWH-2716SJ	27	16	.116	2.9	.080	2.0	.904	23.0	523	777
NRWH-3716J	37	16	.092	2.3	.062	1.6	.797	20.2	358	533	NRWH-3716SJ	37	16	.116	2.9	.080	2.0	1.001	25.4	669	996
NRWH-4816J	48	16	.092	2.3	.080	2.0	.934	23.7	473	704	NRWH-4816SJ	48	16	.116	2.9	.080	2.0	1.129	28.7	836	1243
NRWH-6016J	60	16	.092	2.3	.080	2.0	1.017	25.8	562	836	NRWH-6016SJ	60	16	.116	2.9	.080	2.0	1.233	31.3	1009	1501
NRWH-714J	7	14	.131	3.3	.062	1.6	.521	13.2	175	261	NRWH-714SJ	7	14	.131	3.3	.062	1.6	.546	13.9	216	321
NRWH-1214J	12	14	.131	3.3	.062	1.6	.673	17.1	280	417	NRWH-1214SJ	12	14	.131	3.3	.062	1.6	.698	17.7	335	498
NRWH-1914J	19	14	.131	3.3	.062	1.6	.783	19.9	415	617	NRWH-1914SJ	19	14	.131	3.3	.062	1.6	.808	20.5	481	715
NRWH-2714J	27	14	.131	3.3	.062	1.6	.971	24.7	604	899	NRWH-2714SJ	27	14	.131	3.3	.080	2.0	.996	25.3	685	1019
NRWH-512J	5	12	.161	4.1	.062	1.6	.563	14.3	193	287	NRWH-512SJ	5	12	.161	4.1	.062	1.6	.588	14.9	238	353
NRWH-712J	7	12	.161	4.1	.062	1.6	.611	15.5	253	376	NRWH-712SJ	7	12	.161	4.1	.062	1.6	.636	16.2	302	449
NRWH-1212J	12	12	.161	4.1	.062	1.6	.789	20.3	410	609	NRWH-1212SJ	12	12	.161	4.1	.062	1.6	.823	20.9	476	709
NRWH-1912J	19	12	.161	4.1	.080	2.0	.969	24.6	646	962	NRWH-1912SJ	19	12	.161	4.1	.080	2.0	.994	25.3	727	1081

NRWHC SERIES UNSHIELDED - 16, 14 and 12 AWG											NRWHC SERIES OVERALL SHIELDED - 16, 14 and 12 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	Inches	MM				lbs per 1000 ft	KG/KM	Inches	MM	Inches	MM	Inches	MM
NRWHC-716J	7	16	.116	2.9	.062	1.6	.476	12.1	134	199	NRWHC-716SJ	7	16	.116	2.9	.062	1.6	.501	12.7	170	253
NRWHC-1216J	12	16	.116	2.9	.062	1.6	.611	15.5	211	313	NRWHC-1216SJ	12	16	.116	2.9	.062	1.6	.636	16.1	260	386
NRWHC-1916J	19	16	.116	2.9	.062	1.6	.708	18.0	308	458	NRWHC-1916SJ	19	16	.116	2.9	.062	1.6	.733	18.6	366	545
NRWHC-2716J	27	16	.116	2.9	.080	2.0	.879	22.3	451	670	NRWHC-2716SJ	27	16	.116	2.9	.080	2.0	.904	23.0	523	777
NRWHC-3716J	37	16	.116	2.9	.080	2.0	.976	24.8	588	875	NRWHC-3716SJ	37	16	.116	2.9	.080	2.0	1.001	25.4	669	996
NRWHC-4816J	48	16	.116	2.9	.080	2.0	1.104	28.0	742	1104	NRWHC-4816SJ	48	16	.116	2.9	.080	2.0	1.129	28.7	836	1243
NRWHC-6016J	60	16	.116	2.9	.080	2.0	1.208	30.7	905	1347	NRWHC-6016SJ	60	16	.116	2.9	.080	2.0	1.233	31.3	1009	1501
NRWHC-714J	7	14	.131	3.3	.062	1.6	.521	13.2	175	261	NRWHC-714SJ	7	14	.131	3.3	.062	1.6	.546	13.9	216	321
NRWHC-1214J	12	14	.131	3.3	.062	1.6	.673	17.1	280	417	NRWHC-1214SJ	12	14	.131	3.3	.062	1.6	.698	17.7	335	498
NRWHC-1914J	19	14	.131	3.3	.062	1.6	.783	19.9	415	617	NRWHC-1914SJ	19	14	.131	3.3	.080	2.0	.996	25.3	685	1019
NRWHC-2714J	27	14	.131	3.3	.080	2.0	.971	24.7	604	899	NRWHC-2714SJ	27	14	.131	3.3	.062	1.6	.698	17.7	335	498
NRWHC-512J	5	12	.161	4.1	.062	1.6	.563	14.3	193	287	NRWHC-512SJ	5	12	.161	4.1	.062	1.6	.588	14.9	238	353
NRWHC-712J	7	12	.161	4.1	.062	1.6	.611	15.5	253	376	NRWHC-712SJ	7	12	.161	4.1	.062	1.6	.636	16.2	302	449
NRWHC-1212J	12	12	.161	4.1	.062	1.6	.798	20.3	410	609	NRWHC-1212SJ	12	12	.161	4.1	.062	1.6	.823	20.9	476	709
NRWHC-1912J	19	12	.161	4.1	.080	2.0	.969	24.6	646	962	NRWHC-1912SJ	19	12	.161	4.1	.080	2.0	.994	25.3	727	1081

UL/CSA -- CONDUCTOR SIZE & STRANDING  
 16 AWG (26 x 30)  
 14 AWG (41 x 30)  
 12 AWG (65 x 30)

# CABLED SINGLE CONDUCTORS



## (PTFE) Insulated Cables

- Single Conductors (NZ Series)
- High Temp

National Wire & Cable Corp., manufactures a standard line of Polytetrafluoroethylene (PTFE) INSULATED multi-conductor signal and control cables designed for extreme environments and rough usage.

Construction is widely used in aerospace and industrial applications requiring a near-ultimate in cable physical and electrical performance plus high reliability.

Conductors are stranded silver-plated copper, insulated with .010" of extruded Polytetrafluoroethylene (PTFE) insulation rated at 600 volts working from -65°C to +200°C per NEMA HP-3. Conductors are color coded using 10 standard colors plus spiral striped on white per MIL-STD-681. (All conductors are 19 strand.) View Color Table in the National Wire Cable Designers Guide, page 7-13.

All conductors are planetary cabled and contra-helically laid for optimum flexibility, with a Mylar tape wrap over the cabled bundle. The outer sheath is abrasion-resistant black Neoprene per MIL-R-6855, Class 2, Grade 60.

Optional overall shield is a 90% coverage tinned copper braid over the tape wrap per MIL-C-7078. Also available with paired conductors (NZP-family). For color code see page 7-13.

TECHNICAL DATA (ALL CABLES)	
<b>Insulation Breakdown Voltage:</b>	Greater than 3400 volts AC RMS, 60 Hz.
<b>Capacitance:</b>	Nominal capacitance from a wire to all else in cable ranges from 25 to 45 pf.ft. dependent on gauge and position in cable bundle.
<b>Insulation Leakage Resistance:</b>	5000 Megohms per 1000 ft. minimum from any wire to all else in cable.
<b>Sheath Leakage Resistance:</b>	20 Megohms/ft. minimum, from shield through sheath to saline bath after 24 hr. at 25°C.
<b>Usable Temperature Range:</b>	Suitable for continuous use from -55°C to +75°C in flexing service or stored.
<b>Cold Bending Capability:</b>	All cables are suitable for bending to a circle diameter as small as 4 times their diameter from -55°C to +75°C. continuous flexing to less than 6 times diameter is not recommended below -40°C.
<b>General Performance:</b>	Abrasion-resistant. Non-nutrient to fungus. Highly resistant to ozone, oils, mild acids and bases, high humidity.

NZ SERIES UNSHIELDED - 24, 22, 20, 18 and 16 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NZ-724J	7	24	.044	1.1	.062	1.6	.260	6.5	37	54
NZ-1224J	12	24	.044	1.1	.062	1.6	.311	7.9	53	79
NZ-1924J	19	24	.044	1.1	.062	1.6	.348	8.8	72	107
NZ-2724J	27	24	.044	1.1	.078	1.9	.431	10.9	106	158
NZ-3724J	37	24	.044	1.1	.078	1.9	.468	11.9	132	196
NZ-4824J	48	24	.044	1.1	.078	1.9	.516	13.1	161	240
NZ-6024J	60	24	.044	1.1	.078	1.9	.556	14.1	191	284
NZ-722J	7	22	.050	1.3	.062	1.6	.278	7.1	45	67
NZ-1222J	12	22	.050	1.3	.062	1.6	.336	8.5	67	100
NZ-1922J	19	22	.050	1.3	.062	1.6	.378	9.6	92	137
NZ-2722J	27	22	.050	1.3	.078	1.9	.468	11.9	136	202
NZ-3722J	37	22	.050	1.3	.078	1.9	.510	12.9	171	254
NZ-4822J	48	22	.050	1.3	.093	2.3	.595	15.1	227	338
NZ-6022J	60	22	.050	1.3	.093	2.3	.640	16.2	270	402
NZ-720J	7	20	.058	1.5	.062	1.6	.302	7.6	61	91
NZ-1220J	12	20	.058	1.5	.062	1.6	.369	9.3	92	137
NZ-1920J	19	20	.058	1.5	.078	1.9	.450	11.4	144	214
NZ-2720J	27	20	.058	1.5	.078	1.9	.517	13.1	191	284
NZ-3720J	37	20	.058	1.5	.093	2.3	.596	15.1	262	390
NZ-4820J	48	20	.058	1.5	.093	2.3	.660	16.7	325	484
NZ-6020J	60	20	.058	1.5	.093	2.3	.712	18.0	390	580
NZ-718J	7	18	.069	1.7	.062	1.6	.335	8.51	81	121
NZ-1218J	12	18	.069	1.7	.078	1.9	.447	11.35	138	205
NZ-1918J	19	18	.069	1.7	.078	1.9	.505	12.83	195	290
NZ-2718J	27	18	.069	1.7	.093	2.3	.615	15.62	280	417
NZ-3718J	37	18	.069	1.7	.093	2.3	.673	17.09	360	536
NZ-4818J	48	18	.069	1.7	.093	2.3	.749	19.02	450	670
NZ-716J	7	16	.080	2.0	.062	1.6	.368	9.35	98	146
NZ-1216J	12	16	.080	2.0	.078	1.9	.493	12.52	168	250
NZ-1916J	19	16	.080	2.0	.078	1.9	.560	14.22	241	359
NZ-2716J	27	16	.080	2.0	.093	2.3	.683	17.35	344	512
NZ-3716J	37	16	.080	2.0	.093	2.3	.750	19.05	446	664
NZ-4816J	48	16	.080	2.0	.093	2.3	.838	21.29	560	833

NZ SERIES OVERALL SHIELDED - 24, 22, 20, 18 and 16 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NZ-724SJ	7	24	.044	1.1	.062	1.6	.280	7.0	49	72
NZ-1224SJ	12	24	.044	1.1	.062	1.6	.331	8.41	68	101
NZ-1924SJ	19	24	.044	1.1	.062	1.6	.368	9.35	89	132
NZ-2724SJ	27	24	.044	1.1	.078	1.9	.451	11.46	128	190
NZ-3724SJ	37	24	.044	1.1	.078	1.9	.493	12.52	165	246
NZ-4824SJ	48	24	.044	1.1	.078	1.9	.542	13.77	199	296
NZ-6024SJ	60	24	.044	1.1	.078	1.9	.531	13.49	233	347
NZ-722SJ	7	22	.050	1.3	.062	1.6	.298	7.57	58	86
NZ-1222SJ	12	22	.050	1.3	.062	1.6	.356	9.04	83	124
NZ-1922SJ	19	22	.050	1.3	.062	1.6	.398	10.11	112	167
NZ-2722SJ	27	22	.050	1.3	.078	1.9	.493	12.52	169	251
NZ-3722SJ	37	22	.050	1.3	.078	1.9	.535	13.59	208	310
NZ-4822SJ	48	22	.050	1.3	.093	2.3	.620	15.75	271	403
NZ-6022SJ	60	22	.050	1.3	.093	2.3	.665	16.89	318	473
NZ-720SJ	7	20	.058	1.5	.062	1.6	.322	8.18	75	112
NZ-1220SJ	12	20	.058	1.5	.062	1.6	.389	9.88	111	165
NZ-1920SJ	19	20	.058	1.5	.078	1.9	.470	11.94	167	248
NZ-2720SJ	27	20	.058	1.5	.078	1.9	.542	13.77	229	341
NZ-3720SJ	37	20	.058	1.5	.093	2.3	.621	15.77	305	454
NZ-4820SJ	48	20	.058	1.5	.093	2.3	.685	17.40	374	557
NZ-6020SJ	60	20	.058	1.5	.093	2.3	.737	18.72	445	662
NZ-718SJ	7	18	.069	1.7	.062	1.6	.355	9.02	97	144
NZ-1218SJ	12	18	.069	1.7	.078	1.9	.467	11.86	160	238
NZ-1918SJ	19	18	.069	1.7	.078	1.9	.530	13.46	232	345
NZ-2718SJ	27	18	.069	1.7	.093	2.3	.640	16.26	325	484
NZ-3718SJ	37	18	.069	1.7	.093	2.3	.698	17.73	411	612
NZ-4818SJ	48	18	.069	1.7	.093	2.3	.774	19.66	508	756
NZ-716SJ	7	16	.080	2.0	.062	1.6	.388	9.86	117	174
NZ-1216SJ	12	16	.080	2.0	.078	1.9	.518	13.16	204	304
NZ-1916SJ	19	16	.080	2.0	.078	1.9	.585	14.86	283	421
NZ-2716SJ	27	16	.080	2.0	.093	2.3	.708	17.98	396	589
NZ-3716SJ	37	16	.080	2.0	.093	2.3	.775	19.69	504	750
NZ-4816SJ	48	16	.080	2.0	.093	2.3	.863	21.92	626	931

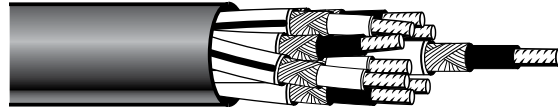
# RoHS COMPLIANT PRODUCTS:

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

NRZ SERIES UNSHIELDED - 24, 22, 20, 18 and 16 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NRZ-724J	7	24	.044	1.1	.062	1.6	.260	6.5	37	54
NRZ-1224J	12	24	.044	1.1	.062	1.6	.311	7.9	53	79
NRZ-1924J	19	24	.044	1.1	.062	1.6	.348	8.8	72	107
NRZ-2724J	27	24	.044	1.1	.078	1.9	.431	10.9	106	158
NRZ-3724J	37	24	.044	1.1	.078	1.9	.468	11.9	132	196
NRZ-4824J	48	24	.044	1.1	.078	1.9	.516	13.1	161	240
NRZ-6024J	60	24	.044	1.1	.078	1.9	.556	14.1	191	284
NRZ-722J	7	22	.050	1.3	.062	1.6	.278	7.1	45	67
NRZ-1222J	12	22	.050	1.3	.062	1.6	.336	8.5	67	100
NRZ-1922J	19	22	.050	1.3	.062	1.6	.378	9.6	92	137
NRZ-2722J	27	22	.050	1.3	.078	1.9	.468	11.9	136	202
NRZ-3722J	37	22	.050	1.3	.078	1.9	.510	12.9	171	254
NRZ-4822J	48	22	.050	1.3	.093	2.3	.595	15.1	227	338
NRZ-6022J	60	22	.050	1.3	.093	2.3	.640	16.2	270	402
NRZ-720J	7	20	.058	1.5	.062	1.6	.302	7.6	61	91
NRZ-1220J	12	20	.058	1.5	.062	1.6	.369	9.3	92	137
NRZ-1920J	19	20	.058	1.5	.078	1.9	.450	11.4	144	214
NRZ-2720J	27	20	.058	1.5	.078	1.9	.517	13.1	191	284
NRZ-3720J	37	20	.058	1.5	.093	2.3	.596	15.1	262	390
NRZ-4820J	48	20	.058	1.5	.093	2.3	.660	16.7	325	484
NRZ-6020J	60	20	.058	1.5	.093	2.3	.712	18.0	390	580
NRZ-718J	7	18	.069	1.7	.062	1.6	.335	8.51	81	121
NRZ-1218J	12	18	.069	1.7	.078	1.9	.447	11.35	138	205
NRZ-1918J	19	18	.069	1.7	.078	1.9	.505	12.83	195	290
NRZ-2718J	27	18	.069	1.7	.093	2.3	.615	15.62	280	417
NRZ-3718J	37	18	.069	1.7	.093	2.3	.673	17.09	360	536
NRZ-4818J	48	18	.069	1.7	.093	2.3	.749	19.02	450	670
NRZ-716J	7	16	.080	2.0	.062	1.6	.368	9.35	98	146
NRZ-1216J	12	16	.080	2.0	.078	1.9	.493	12.52	168	250
NRZ-1916J	19	16	.080	2.0	.078	1.9	.560	14.22	241	359
NRZ-2716J	27	16	.080	2.0	.093	2.3	.683	17.35	344	512
NRZ-3716J	37	16	.080	2.0	.093	2.3	.750	19.05	446	664
NRZ-4816J	48	16	.080	2.0	.093	2.3	.838	21.29	560	833

NRZ SERIES OVERALL SHIELDED - 24, 22, 20, 18 and 16 AWG										
Part No.	No. Cond	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NRZ-724SJ	7	24	.044	1.1	.062	1.6	.280	7.0	49	72
NRZ-1224SJ	12	24	.044	1.1	.062	1.6	.331	8.41	68	101
NRZ-1924SJ	19	24	.044	1.1	.062	1.6	.368	9.35	89	132
NRZ-2724SJ	27	24	.044	1.1	.078	1.9	.451	11.46	128	190
NRZ-3724SJ	37	24	.044	1.1	.078	1.9	.493	12.52	165	246
NRZ-4824SJ	48	24	.044	1.1	.078	1.9	.542	13.77	199	296
NRZ-6024SJ	60	24	.044	1.1	.078	1.9	.531	13.49	233	347
NRZ-722SJ	7	22	.050	1.3	.062	1.6	.298	7.57	58	86
NRZ-1222SJ	12	22	.050	1.3	.062	1.6	.356	9.04	83	124
NRZ-1922SJ	19	22	.050	1.3	.062	1.6	.398	10.11	112	167
NRZ-2722SJ	27	22	.050	1.3	.078	1.9	.493	12.52	169	251
NRZ-3722SJ	37	22	.050	1.3	.078	1.9	.535	13.59	208	310
NRZ-4822SJ	48	22	.050	1.3	.093	2.3	.620	15.75	271	403
NR Z-6022SJ	60	22	.050	1.3	.093	2.3	.665	16.89	318	473
NRZ-720SJ	7	20	.058	1.5	.062	1.6	.322	8.18	75	112
NRZ-1220SJ	12	20	.058	1.5	.062	1.6	.389	9.88	111	165
NRZ-1920SJ	19	20	.058	1.5	.078	1.9	.470	11.94	167	248
NRZ-2720SJ	27	20	.058	1.5	.078	1.9	.542	13.77	229	341
NRZ-3720SJ	37	20	.058	1.5	.093	2.3	.621	15.77	305	454
NRZ-4820SJ	48	20	.058	1.5	.093	2.3	.685	17.40	374	557
NRZ-6020SJ	60	20	.058	1.5	.093	2.3	.737	18.72	445	662
NRZ-718SJ	7	18	.069	1.7	.062	1.6	.355	9.02	97	144
NRZ-1218SJ	12	18	.069	1.7	.078	1.9	.467	11.86	160	238
NRZ-1918SJ	19	18	.069	1.7	.078	1.9	.530	13.46	232	345
NRZ-2718SJ	27	18	.069	1.7	.093	2.3	.640	16.26	325	484
NRZ-3718SJ	37	18	.069	1.7	.093	2.3	.698	17.73	411	612
NRZ-4818SJ	48	18	.069	1.7	.093	2.3	.774	19.66	508	756
NRZ-716SJ	7	16	.080	2.0	.062	1.6	.388	9.86	117	174
NRZ-1216SJ	12	16	.080	2.0	.078	1.9	.518	13.16	204	304
NRZ-1916SJ	19	16	.080	2.0	.078	1.9	.585	14.86	283	421
NRZ-2716SJ	27	16	.080	2.0	.093	2.3	.708	17.98	396	589
NRZ-3716SJ	37	16	.080	2.0	.093	2.3	.775	19.69	504	750
NRZ-4816SJ	48	16	.080	2.0	.093	2.3	.863	21.92	626	931

# SHIELDED SINGLES CONDUCTORS



## Military & UL Grade

- Single Conductors (NTS Series)
- RFI Shielded Cables

Meets U.L. Style 2343 or 2344 for Computer Use

National Wire & Cable Corp. manufactures a complete line of flexible signal and control cables in which each conductor is individually shielded and plastic-jacketed. Conforming to MIL-C-27072, these cables provide extended temperature, rough usage, military shielding, excellent flexibility. Provides a minimum of crosstalk between signal channels, plus complete isolation between shields. Excellent for analog signals. All jackets are moisture proof and suitable for use in duct, conduit, aerial, or burial installations.

Conductors are stranded tinned copper with .010" vinyl primary insulation plus .004" nylon insulation over the vinyl per MIL-DTL-16878/17. Insulation for 600 volts working rating at 105°C. Color-coding: White. All conductors are 19 strand.

Shielding is tinned copper braid with 85-90% coverage per MIL-C-7078, and shield angle below 40 degrees for easy pushback.

Jackets over shields are extruded white polyvinylchloride plastic per MIL-I-631, Type F. Each subcable is individually identified by color code per MIL-STD-681, starting with color #9. View Color Table in the National Wire Cable Designers Guide, page 7-12..

All sub-components are planetary cabled and contra-helicly laid with a mylar tape serve over the cable bundle. The overall sheath is abrasion- resistant black 105°C vinyl thermoplastic per MIL-I-631, Type F.

Optional overall shielding of cabled bundle is 85-90% minimum coverage of tinned copper braid applied per MIL-C-7078 over the tape serve under sheath.

### TECHNICAL DATA (ALL CABLES)

<b>Insulation Breakdown Voltage:</b>	Greater than 5000 volts AC RMS, 60 Hz.
<b>Insulation Leakage Resistance:</b>	200 Megohms/1000 ft. at 500 VDC from any conductor to all else in cable.
<b>Sheath Leakage Resistance:</b>	10 Megohms/1000 ft. min. at 500 VDC from overall shield through sheath to saline bath at 25°C.
<b>Usable Temperature Range:</b>	Suitable for continuous use from +105°C to -56°C when stationary. Flexing service: +105°C to -25°C.
<b>Bending Characteristics:</b>	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 applications consult factory.
<b>Crosstalk:</b>	Common-mode, adjacent subcables: Worst case, -80 db @ 1 Mhz; totaling to -100 db below 100 Mhz. (Ref. MIL-C-23437 for test method.) For 100 ft. test length.

Capacitance (pfd/ft.):	
AWG	WIRE-SHIELD
16	132
18	117
20	97
22	83
24	72
26	62

### NTS SERIES UNSHIELDED - 26, 24, 22, 20, 18 and 16 AWG

Part No.	No. of Wires	Cond AWG	Cond Dia.	Jacket Wall	Nom. O.D. Inches	MM	Weight 1000 ft	KG/KM
NTS-726J	7	26	.095	.062	.413	10.5	94	139
NTS-1226J	12	26	.095	.062	.523	13.28	145	216
NTS-1926J	19	26	.095	.062	.603	15.32	208	310
NTS-2726J	27	26	.095	.062	.713	18.11	281	418
NTS-3726J	37	26	.095	.062	.793	20.14	367	546
NTS-4826J	48	26	.095	.085	.944	24.2	503	748
NTS-724J	7	24	.106	.062	.446	11.33	106	158
NTS-1224J	12	24	.106	.062	.569	14.45	165	246
NTS-1924J	19	24	.106	.062	.659	16.74	237	353
NTS-2724J	27	24	.106	.062	.781	19.84	323	481
NTS-3724J	37	24	.106	.085	.916	23.3	460	684
NTS-4824J	48	24	.106	.085	1.033	26.2	576	857
NTS-722J	7	22	.112	.062	.464	11.79	119	177
NTS-1222J	12	22	.112	.062	.594	15.09	186	277
NTS-1922J	19	22	.112	.062	.688	17.48	269	400
NTS-2722J	27	22	.112	.062	.818	20.78	367	546
NTS-3722J	37	22	.112	.085	.958	24.3	522	777
NTS-4822J	48	22	.112	.085	1.081	27.5	655	975
NTS-720J	7	20	.120	.062	.488	12.40	140	208
NTS-1220J	12	20	.120	.062	.627	15.93	221	329
NTS-1920J	19	20	.120	.062	.728	18.49	323	481
NTS-2720J	27	20	.120	.085	.913	23.2	401	597
NTS-3720J	37	20	.120	.085	1.014	25.8	626	931
NTS-718J	7	18	.130	.062	.518	13.16	171	254
NTS-1218J	12	18	.130	.062	.669	16.99	273	406
NTS-1918J	19	18	.130	.062	.778	19.76	404	601
NTS-2718J	27	18	.130	.085	.975	24.8	597	888
NTS-716J	7	16	.142	.062	.554	14.07	193	287
NTS-1216J	12	16	.142	.062	.719	18.26	310	461
NTS-1916J	19	16	.142	.085	.884	22.45	498	741

### NTS SERIES OVERALL SHIELDED - 26, 24, 22, 20, 18 and 16 AWG

Part No.	No. of Wires	Cond AWG	Cond Dia.	Jacket Wall	Nom. O.D. Inches	MM	Weight 1000 ft	KG/KM
NTS-726SJ	7	26	.095	.062	.433	11.00	116	171
NTS-1226SJ	12	26	.095	.062	.548	13.92	188	280
NTS-1926SJ	19	26	.095	.062	.628	15.95	258	384
NTS-2726SJ	27	26	.095	.062	.738	18.75	340	506
NTS-3726SJ	37	26	.095	.062	.818	20.78	434	646
NTS-4826SJ	48	26	.095	.085	.969	24.60	580	863
NTS-724SJ	7	24	.106	.063	.471	11.96	140	208
NTS-1224SJ	12	24	.106	.062	.594	15.09	210	312
NTS-1924SJ	19	24	.106	.062	.683	17.35	291	433
NTS-2724SJ	27	24	.106	.062	.806	20.47	389	579
NTS-3724SJ	37	24	.106	.035	.941	23.9	535	796
NTS-4824SJ	48	24	.106	.085	1.058	26.9	662	985
NTS-722SJ	7	22	.112	.062	.489	12.42	154	229
NTS-1222SJ	12	22	.112	.062	.619	15.72	233	347
NTS-1922SJ	19	22	.112	.062	.713	18.11	326	485
NTS-2722SJ	27	22	.112	.085	.889	22.58	473	704
NTS-3722SJ	37	22	.112	.085	.983	25.0	600	893
NTS-4822SJ	48	22	.112	.085	1.106	28.1	746	1110
NTS-720SJ	7	20	.120	.062	.513	13.03	177	263
NTS-1220SJ	12	20	.120	.062	.652	16.56	271	403
NTS-1920SJ	19	20	.120	.062	.753	19.13	382	568
NTS-2720SJ	27	20	.120	.085	.938	23.80	555	826
NTS-3720SJ	37	20	.120	.085	1.039	26.40	711	1058
NTS-718SJ	7	18	.130	.062	.543	13.79	211	314
NTS-1218SJ	12	18	.130	.062	.694	17.63	327	487
NTS-1918SJ	19	18	.130	.063	.803	20.40	469	698
NTS-2718SJ	27	18	.130	.085	1.000	25.4	677	1007
NTS-716SJ	7	16	.142	.062	.579	14.71	237	353
NTS-1216SJ	12	16	.142	.062	.744	18.90	370	551
NTS-1916SJ	19	16	.142	.085	.909	23.1	567	844

# RoHS COMPLIANT PRODUCTS:

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

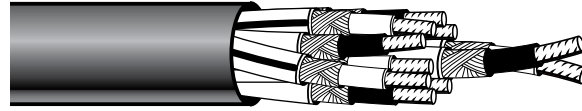
## NRTS SERIES UNSHIELDED - 26, 24, 22, 20, 18 and 16 AWG

Part No.	No. of Wires	Cond AWG	Cond Dia.	Jacket Wall	Nom. O.D.		Weight	
					Inches	MM	1000 ft	KG/KM
NRTS-726J	7	26	.095	.062	.413	10.5	94	139
NRTS-1226J	12	26	.095	.062	.523	13.28	145	216
NRTS-1926J	19	26	.095	.062	.603	15.32	208	310
NRTS-2726J	27	26	.095	.062	.713	18.11	281	418
NRTS-3726J	37	26	.095	.062	.793	20.14	367	546
NRTS-4826J	48	26	.095	.085	.944	24.2	503	748
NRTS-724J	7	24	.106	.062	.446	11.33	106	158
NRTS-1224J	12	24	.106	.062	.569	14.45	165	246
NRTS-1924J	19	24	.106	.062	.659	16.74	237	353
NRTS-2724J	27	24	.106	.062	.781	19.84	323	481
NRTS-3724J	37	24	.106	.085	.916	23.3	460	684
NRTS-4824J	48	24	.106	.085	1.033	26.2	576	857
NRTS-722J	7	22	.112	.062	.464	11.79	119	177
NRTS-1222J	12	22	.112	.062	.594	15.09	186	277
NRTS-1922J	19	22	.112	.062	.688	17.48	269	400
NRTS-2722J	27	22	.112	.062	.818	20.78	367	546
NRTS-3722J	37	22	.112	.085	.958	24.3	522	777
NRTS-4822J	48	22	.112	.085	1.081	27.5	655	975
NRTS-720J	7	20	.120	.062	.488	12.40	140	208
NRTS-1220J	12	20	.120	.062	.627	15.93	221	329
NRTS-1920J	19	20	.120	.062	.728	18.49	323	481
NRTS-2720J	27	20	.120	.085	.913	23.2	401	597
NRTS-3720J	37	20	.120	.085	1.014	25.8	626	931
NRTS-718J	7	18	.130	.062	.518	13.16	171	254
NRTS-1218J	12	18	.130	.062	.669	16.99	273	406
NRTS-1918J	19	18	.130	.062	.778	19.76	404	601
NRTS-2718J	27	18	.130	.085	.975	24.8	597	888
NRTS-3716J	7	16	.142	.062	.554	14.07	193	287
NRTS-1216J	12	16	.142	.062	.719	18.26	310	461
NRTS-1916J	19	16	.142	.085	.884	22.45	498	741

## NRTS SERIES OVERALL SHIELDED - 26, 24, 22, 20, 18 and 16 AWG

Part No.	No. of Wires	Cond AWG	Cond Dia.	Jacket Wall	Nom. O.D.		Weight	
					Inches	MM	1000 ft	KG/KM
NRTS-726SJ	7	26	.095	.062	.433	11.00	116	171
NRTS-1226SJ	12	26	.095	.062	.548	13.92	188	280
NRTS-1926SJ	19	26	.095	.062	.628	15.95	258	384
NRTS-2726SJ	27	26	.095	.062	.738	18.75	340	506
NRTS-3726SJ	37	26	.095	.062	.818	20.78	434	646
NRTS-4826SJ	48	26	.095	.085	.969	24.60	580	863
NRTS-724SJ	7	24	.106	.063	.471	11.96	140	208
NRTS-1224SJ	12	24	.106	.062	.594	15.09	210	312
NRTS-1924SJ	19	24	.106	.062	.683	17.35	291	433
NRTS-2724SJ	27	24	.106	.062	.806	20.47	389	579
NRTS-3724SJ	37	24	.106	.035	.941	23.9	535	796
NRTS-4824SJ	48	24	.106	.085	1.058	26.9	662	985
NRTS-722SJ	7	22	.112	.062	.489	12.42	154	229
NRTS-1222SJ	12	22	.112	.062	.619	15.72	233	347
NRTS-1922SJ	19	22	.112	.062	.713	18.11	326	485
NRTS-2722SJ	27	22	.112	.085	.889	22.58	473	704
NRTS-3722SJ	37	22	.112	.085	.983	25.0	600	893
NRTS-4822SJ	48	22	.112	.085	1.106	28.1	746	1110
NRTS-720SJ	7	20	.120	.062	.513	13.03	177	263
NRTS-1220SJ	12	20	.120	.062	.652	16.56	271	403
NRTS-1920SJ	19	20	.120	.062	.753	19.13	382	568
NRTS-2720SJ	27	20	.120	.085	.938	23.80	555	826
NRTS-3720SJ	37	20	.120	.085	1.039	26.40	711	1058
NRTS-718SJ	7	18	.130	.062	.543	13.79	211	314
NRTS-1218SJ	12	18	.130	.062	.694	17.63	327	487
NRTS-1918SJ	19	18	.130	.063	.803	20.40	469	698
NRTS-2718SJ	27	18	.130	.085	1.000	25.4	677	1007
NRTS-3716SJ	7	16	.142	.062	.579	14.71	237	353
NRTS-1216SJ	12	16	.142	.062	.744	18.90	370	551
NRTS-1916SJ	19	16	.142	.085	.909	23.1	567	844

# CABLED SHIELDED PAIRS



## Military & UL Grade

- Pairs (NTP Series)
- RFI Shielded Cables

Meets U.L. Style 2343 or 2344 for Computer Use

National Wire & Cable Corp. manufactures a complete line of flexible signal and control cables in which each pair is individually shielded and plastic-jacketed. Conforming to MIL-C-27072, these cables provide extended temperature, rough usage, military shielding, excellent flexibility. Provides a minimum of crosstalk between signal channels, plus complete isolation between shields. Excellent for analog signals. All jackets are moisture proof and suitable for use in duct, conduit, aerial, or burial installations.

Conductors are stranded tinned copper with .010" vinyl primary insulation plus .004" nylon insulation over the vinyl per MIL-DTL-16878/17. Insulation for 600 Bolts working rating at 105°C. Color-coding: Pairs - Black & White. All conductors are 19 strand.

Shielding is tinned copper braid with 85-90% coverage per MIL-C-7078, and shield angle below 40 degrees for easy pushback.

Jackets over shields are extruded 105°C white polyvinylchloride plastic per MIL-I-631, Type F. Each subcable is individually identified by color code per MIL-STD-681, starting with color #9. Refer to the Table in the National Wire Cable Designers Guide, page 7-12.

All sub-components are planetary cabled and contra-helicallly laid with a mylar tape serve over the cable bundle. The overall sheath is abrasion-resistant black 105°C vinyl thermoplastic per MIL-I-631, Type F.

Optional overall shielding of cabled bundle is 85-95% minimum coverage of tinned copper braid applied per MIL-C-7078 over the tape serve under sheath.

### TECHNICAL DATA (ALL CABLES)

<b>Insulation Breakdown Voltage:</b>	Greater than 5000 volts AC RMS, 60 Hz.
<b>Insulation Leakage Resistance:</b>	200 Megohms/1000 ft. at 500 VDC from any conductor to all else in cable.
<b>Sheath Leakage Resistance:</b>	10 Megohms/1000 ft. min. at 500 VDC from overall shield through sheath to saline bath at 25°C.
<b>Usable Temperature Range:</b>	Suitable for continuous use from +105°C to -55°C when stationary. Flexing service: +105°C to -25°C.
<b>Bending Characteristics:</b>	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 applications consult factory.
<b>Crosstalk:</b>	Common-mode, adjacent subcables: Worst case, -50 db @ 1 Mhz; falling to -100 db below 100 kHz. (Ref. MIL-C-23437 for test method.) For 100 ft. test length.

Capacitance (pf/d/ft.):		
AWG	WIRE-WIRE	WIRE-SHIELD
16	63	116
18	56	102
20	47	85
22	40	72
24	34	63
26	30	54

### NTP SERIES UNSHIELD - 26, 24, 22, 20, 18 and 16 AWG

Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NTP-726J	7	26	.146	3.7	.062	1.6	.566	14.38	150	223
NTP-1226J	12	26	.146	3.7	.062	1.6	.753	18.7	235	350
NTP-1926J	19	26	.146	3.7	.085	2.1	.904	23.0	378	562
NTP-2726J	27	26	.146	3.7	.085	2.1	1.073	27.3	510	759
NTP-3726J	37	26	.146	3.7	.085	2.1	1.193	30.3	660	982
NTP-4826J	48	26	.146	3.7	.085	2.1	1.357	34.5	830	1235
NTP-724J	7	24	.156	3.9	.062	1.6	.596	15.14	176	262
NTP-1224J	12	24	.156	3.9	.062	1.6	.777	19.74	278	414
NTP-1924J	19	24	.156	3.9	.085	2.1	.954	24.2	447	665
NTP-2724J	27	24	.156	3.9	.085	2.1	1.135	28.8	607	903
NTP-3724J	37	24	.156	3.9	.085	2.1	1.266	32.2	791	1177
NTP-4824J	48	24	.156	3.9	.085	2.1	1.438	36.5	998	1485
NTP-722J	7	22	.168	4.2	.062	1.6	.632	16.05	205	305
NTP-1222J	12	22	.168	4.2	.085	2.1	.873	22.17	363	540
NTP-1922J	19	22	.168	4.2	.085	2.1	1.014	25.8	524	780
NTP-2722J	27	22	.168	4.2	.085	2.1	1.209	30.7	714	1062
NTP-3722J	37	22	.168	4.2	.085	2.1	1.350	34.3	935	1391
NTP-4822J	48	22	.168	4.2	.085	2.1	1.535	38.9	1183	1760
NTP-720J	7	20	.186	4.7	.062	1.6	.686	17.42	247	368
NTP-1220J	12	20	.186	4.7	.062	2.1	.948	24.1	437	650
NTP-1920J	19	20	.186	4.7	.062	2.1	1.104	28.0	637	948
NTP-2720J	27	20	.186	4.7	.062	2.1	1.320	33.5	871	1296
NTP-3720J	37	20	.186	4.7	.062	2.1	1.476	37.5	1148	1708
NTP-718J	7	18	.206	5.2	.085	2.1	.746	18.95	303	451
NTP-1218J	12	18	.206	5.2	.085	2.1	1.031	26.2	533	793
NTP-1918J	19	18	.206	5.2	.085	2.1	1.204	30.6	785	1168
NTP-2718J	27	18	.206	5.2	.085	2.1	1.443	36.7	1079	1606
NTP-716J	7	16	.226	5.7	.062	1.6	.806	20.47	348	518
NTP-1216J	12	16	.226	5.7	.085	2.1	1.114	28.3	613	912
NTP-1916J	19	16	.226	5.7	.085	2.1	1.304	33.1	906	1348

### NTP SERIES OVERALL SHIELD - 26, 24, 22, 20, 18 and 16 AWG

Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NTP-726SJ	7	26	.146	3.7	.062	1.6	.591	15.01	195	290
NTP-1226SJ	12	26	.146	3.7	.062	1.6	.761	19.33	296	440
NTP-1926SJ	19	26	.146	3.7	.062	2.1	.929	23.6	452	673
NTP-2726SJ	27	26	.146	3.7	.062	2.1	1.099	27.9	599	891
NTP-3726SJ	37	26	.146	3.7	.062	2.1	1.221	31.0	762	1134
NTP-4826SJ	48	26	.146	3.7	.062	2.1	1.382	35.1	946	1408
NTP-724SJ	7	24	.156	3.9	.062	1.6	.621	15.77	223	332
NTP-1224SJ	12	24	.156	3.9	.062	1.6	.802	20.37	343	510
NTP-1924SJ	19	24	.156	3.9	.085	2.1	.979	24.9	526	783
NTP-2724SJ	27	24	.156	3.9	.085	2.1	1.160	29.5	702	1045
NTP-3724SJ	37	24	.156	3.9	.085	2.1	1.291	32.8	899	1338
NTP-4824SJ	48	24	.156	3.9	.085	2.1	1.463	2.1	1122	1670
NTP-722SJ	7	22	.168	4.2	.062	1.6	.657	16.69	256	381
NTP-1222SJ	12	22	.168	4.2	.062	1.6	.898	22.8	433	644
NTP-1922SJ	19	22	.168	4.2	.062	1.6	1.039	26.4	608	905
NTP-2722SJ	27	22	.168	4.2	.062	1.6	1.234	31.3	817	1216
NTP-3722SJ	37	22	.168	4.2	.062	1.6	1.375	34.9	1051	1564
NTP-4822SJ	48	22	.168	4.2	.062	1.6	1.560	39.5	1317	1959
NTP-720SJ	7	20	.186	4.7	.062	1.6	.711	18.06	303	451
NTP-1220SJ	12	20	.186	4.7	.085	2.1	.973	24.7	514	765
NTP-1920SJ	19	20	.186	4.7	.085	2.1	1.129	28.7	729	1085
NTP-2720SJ	27	20	.186	4.7	.085	2.1	1.345	34.2	984	1464
NTP-3720SJ	37	20	.186	4.7	.085	2.1	1.501	38.1	1274	1896
NTP-718SJ	7	18	.206	5.2	.062	1.6	.771	19.58	365	543
NTP-1218SJ	12	18	.206	5.2	.062	2.1	1.056	26.8	619	921
NTP-1918SJ	19	18	.206	5.2	.062	2.1	1.229	31.2	887	1320
NTP-2718SJ	27	18	.206	5.2	.062	2.1	1.468	37.3	1204	1792
NTP-716SJ	7	16	.226	5.7	.085	2.1	.877	22.28	453	674
NTP-1216SJ	12	16	.226	5.7	.085	2.1	1.139	28.9	707	1052
NTP-1916SJ	19	16	.226	5.7	.085	2.1	1.329	33.8	1018	1515

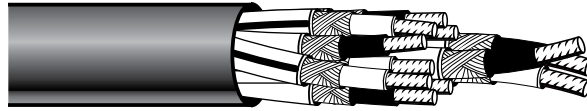
# RoHS COMPLIANT PRODUCTS:

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

NRTP SERIES UNSHIELD - 26, 24, 22, 20, 18 and 16 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NRTP-726J	7	26	.146	3.7	.062	1.6	.566	14.38	150	223
NRTP-1226J	12	26	.146	3.7	.062	1.6	.753	18.7	235	350
NRTP-1926J	19	26	.146	3.7	.085	2.1	.904	23.0	378	562
NRTP-2726J	27	26	.146	3.7	.085	2.1	1.073	27.3	510	759
NRTP-3726J	37	26	.146	3.7	.085	2.1	1.193	30.3	660	982
NRTP-4826J	48	26	.146	3.7	.085	2.1	1.357	34.5	830	1235
NRTP-724J	7	24	.156	3.9	.062	1.6	.596	15.14	176	262
NRTP-1224J	12	24	.156	3.9	.062	1.6	.777	19.74	278	414
NRTP-1924J	19	24	.156	3.9	.085	2.1	.954	24.2	447	665
NRTP-2724J	27	24	.156	3.9	.085	2.1	1.135	28.8	607	903
NRTP-3724J	37	24	.156	3.9	.085	2.1	1.266	32.2	791	1177
NRTP-4824J	48	24	.156	3.9	.085	2.1	1.438	36.5	998	1485
NRTP-722J	7	22	.168	4.2	.062	1.6	.632	16.05	205	305
NRTP-1222J	12	22	.168	4.2	.085	2.1	.873	22.17	363	540
NRTP-1922J	19	22	.168	4.2	.085	2.1	1.014	25.8	524	780
NRTP-2722J	27	22	.168	4.2	.085	2.1	1.209	30.7	714	1062
NRTP-3722J	37	22	.168	4.2	.085	2.1	1.350	34.3	935	1391
NRTP-4822J	48	22	.168	4.2	.085	2.1	1.535	38.9	1183	1760
NRTP-720J	7	20	.186	4.7	.062	1.6	.686	17.42	247	368
NRTP-1220J	12	20	.186	4.7	.062	2.1	.948	24.1	437	650
NRTP-1920J	19	20	.186	4.7	.062	2.1	1.104	28.0	637	948
NRTP-2720J	27	20	.186	4.7	.062	2.1	1.320	33.5	871	1296
NRTP-3720J	37	20	.186	4.7	.062	2.1	1.476	37.5	1148	1708
NRTP-718J	7	18	.206	5.2	.085	2.1	.746	18.95	303	451
NRTP-1218J	12	18	.206	5.2	.085	2.1	1.031	26.2	533	793
NRTP-1918J	19	18	.206	5.2	.085	2.1	1.204	30.6	785	1168
NRTP-2718J	27	18	.206	5.2	.085	2.1	1.443	36.7	1079	1606
NRTP-716J	7	16	.226	5.7	.062	1.6	.806	20.47	348	518
NRTP-1216J	12	16	.226	5.7	.085	2.1	1.114	28.3	613	912
NRTP-1916J	19	16	.226	5.7	.085	2.1	1.304	33.1	906	1348

NRTP SERIES OVERALL SHIELD - 26, 24, 22, 20, 18 and 16 AWG										
Part No.	No. of Pairs	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NRTP-726SJ	7	26	.146	3.7	.062	1.6	.591	15.01	195	290
NRTP-1226SJ	12	26	.146	3.7	.062	1.6	.761	19.33	296	440
NRTP-1926SJ	19	26	.146	3.7	.062	2.1	.929	23.6	452	673
NRTP-2726SJ	27	26	.146	3.7	.062	2.1	1.099	27.9	599	891
NRTP-3726SJ	37	26	.146	3.7	.062	2.1	1.221	31.0	762	1134
NRTP-4826SJ	48	26	.146	3.7	.062	2.1	1.382	35.1	946	1408
NRTP-724SJ	7	24	.156	3.9	.062	1.6	.621	15.77	223	332
NRTP-1224SJ	12	24	.156	3.9	.062	1.6	.802	20.37	343	510
NRTP-1924SJ	19	24	.156	3.9	.085	2.1	.979	24.9	526	783
NRTP-2724SJ	27	24	.156	3.9	.085	2.1	1.160	29.5	702	1045
NRTP-3724SJ	37	24	.156	3.9	.085	2.1	1.291	32.8	899	1338
NRTP-4824SJ	48	24	.156	3.9	.085	2.1	1.463	2.1	1122	1670
NRTP-722SJ	7	22	.168	4.2	.062	1.6	.657	16.69	256	381
NRTP-1222SJ	12	22	.168	4.2	.062	1.6	.898	22.8	433	644
NRTP-1922SJ	19	22	.168	4.2	.062	1.6	1.039	26.4	608	905
NRTP-2722SJ	27	22	.168	4.2	.062	1.6	1.234	31.3	817	1216
NRTP-3722SJ	37	22	.168	4.2	.062	1.6	1.375	34.9	1051	1564
NRTP-4822SJ	48	22	.168	4.2	.062	1.6	1.560	39.5	1317	1959
NRTP-720SJ	7	20	.186	4.7	.062	1.6	.711	18.06	303	451
NRTP-1220SJ	12	20	.186	4.7	.085	2.1	.973	24.7	514	765
NRTP-1920SJ	19	20	.186	4.7	.085	2.1	1.129	28.7	729	1085
NRTP-2720SJ	27	20	.186	4.7	.085	2.1	1.345	34.2	984	1464
NRTP-3720SJ	37	20	.186	4.7	.085	2.1	1.501	38.1	1274	1896
NRTP-718SJ	7	18	.206	5.2	.062	1.6	.771	19.58	365	543
NRTP-1218SJ	12	18	.206	5.2	.062	2.1	1.056	26.8	619	921
NRTP-1918SJ	19	18	.206	5.2	.062	2.1	1.229	31.2	887	1320
NRTP-2718SJ	27	18	.206	5.2	.062	2.1	1.468	37.3	1204	1792
NRTP-716SJ	7	16	.226	5.7	.085	2.1	.877	22.28	453	674
NRTP-1216SJ	12	16	.226	5.7	.085	2.1	1.139	28.9	707	1052
NRTP-1916SJ	19	16	.226	5.7	.085	2.1	1.329	33.8	1018	1515

# CABLED SHIELDED TRIOS



## Military & UL Grade

- Single Conductors (NTT Series)
- RFI Shielded Cables

Meets U.L. Style 2343 or 2344 for Computer Use

National Wire & Cable Corp. manufactures a complete line of flexible signal and control cables in which each trio is individually shielded and plastic-jacketed. Conforming to MIL-C-27072, these cables provide extended temperature, rough usage, military shielding, excellent flexibility. Provides a minimum of crosstalk between signal channels, plus complete isolation between shields. Excellent for analog signals. All jackets are moisture proof and suitable for use in duct, conduit, aerial, or burial installations.

Conductors are stranded tinned copper with .010" vinyl primary insulation plus .004" nylon insulation over the vinyl per MIL-DTL-16878/17. Insulation for 600 Volts working rating at 105°C. Color-coding: Trios-Black, White, and Red. All conductors are 19 strand.

Shielding is tinned copper braid with 85-90% coverage per MIL-C-7078, and shield angle below 40 degrees for easy pushback.

Jackets over shields are extruded 105°C white polyvinylchloride plastic per MIL-I-631, Type F. Each subcable is individually identified by color code per MIL-STD-681, starting with color #9. Refer to the Table in the National Wire Cable Designers Guide, page 7-12.

All sub-components are planetary cabled and contra-helicallly laid with a mylar tape serve over the cable bundle. The overall sheath is abrasion-resistant black 105°C vinyl thermoplastic per MIL-I-631, Type F.

Optional overall shielding of cabled bundle is 85-95% minimum coverage of tinned copper braid applied per MIL-C-7078 over the tape serve under sheath.

TECHNICAL DATA (ALL CABLES)	
<b>Insulation Breakdown Voltage:</b>	Greater than 5000 volts AC RMS, 60 Hz.
<b>Insulation Leakage Resistance:</b>	200 Megohms/1000 ft. at 500 VDC from any conductor to all else in cable.
<b>Sheath Leakage Resistance:</b>	10 Megohms/1000 ft. min. at 500 VDC from overall shield through sheath to saline both at 25°C.
<b>Usable Temperature Range:</b>	Suitable for continuous use from +105°C to -55°C when stationary. Flexing service: +105°C to -25°C.
<b>Bending Characteristics:</b>	All cables are suitable for flexing to a circle diameter of 6 cable diameters from +105°C to -55°C. Recommended flex diameter should be greater than 20 cable diameters for flexing at -40°C. For continuous flexing applications consult factory.
<b>Crosstalk:</b>	Common-mode, adjacent trios: Worst case, -50 db @ 1 Mhz; totaling to -100 db below 100 kHz. (Ref. MIL-C-23437 for test method.) For 100 ft. test length.

Capacitance (pfd/ft.):		
AWG	WIRE-WIRE	WIRE-SHIELD
16	60	108
18	53	96
20	44	80
22	38	68
24	33	59
26	28	51

NTT SERIES WITHOUT OVERALL SHIELD - 26, 24, 22, 20, 18 and 16 AWG										
Part No.	No. of Trios	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight lbs per 1000 ft KG/KM	
			Inches	MM	Inches	MM	Inches	MM		
NTT-726J	7	26	.153	3.8	.062	1.6	.587	14.91	173	257
NTT-1226J	12	26	.153	3.8	.062	1.6	.764	19.41	275	409
NTT-1926J	19	26	.153	3.8	.085	2.1	.939	23.9	442	658
NTT-2726J	27	26	.153	3.8	.085	2.1	1.116	28.3	599	891
NTT-3726J	37	26	.153	3.8	.085	2.1	1.245	31.6	781	1162
NTT-4826J	48	26	.153	3.8	.085	2.1	1.413	35.9	985	1466
NTT-724J	7	24	.164	4.1	.062	1.6	.620	15.75	198	295
NTT-1224J	12	24	.164	4.1	.085	2.1	.810	20.57	316	470
NTT-1924J	19	24	.164	4.1	.085	2.1	.994	25.2	507	754
NTT-2724J	27	24	.164	4.1	.085	2.1	1.184	30.1	690	1027
NTT-3724J	37	24	.164	4.1	.085	2.1	1.322	33.6	903	1344
NTT-722J	7	22	.177	4.5	.062	1.6	.659	16.74	235	350
NTT-1222J	12	22	.177	4.5	.085	2.1	.910	23.1	416	619
NTT-1922J	19	22	.177	4.5	.085	2.1	1.059	26.9	606	902
NTT-2722J	27	22	.177	4.5	.085	2.1	1.264	32.1	829	1234
NTT-3722J	37	22	.177	4.5	.085	2.1	1.413	35.9	1090	1622
NTT-720J	7	20	.195	4.9	.062	1.6	.713	18.11	294	437
NTT-1220J	12	20	.195	4.9	.085	2.1	.985	25.0	517	769
NTT-1920J	19	20	.195	4.9	.085	2.1	1.149	29.2	762	1134
NTT-2720J	27	20	.195	4.9	.085	2.1	1.375	34.9	1049	1561
NTT-718J	7	18	.213	5.4	.062	1.6	.767	19.48	366	545
NTT-1218J	12	18	.213	5.4	.085	2.1	1.060	26.9	642	955
NTT-1918J	19	18	.213	5.4	.085	2.1	1.239	31.5	955	1421
NTT-716J	7	16	.242	6.1	.085	2.1	.900	22.9	471	701
NTT-1216J	12	16	.242	6.1	.085	2.1	1.181	30.0	759	1129
NTT-1916J	19	16	.242	6.1	.085	2.1	1.384	35.2	1133	1686

NTT SERIES WITH OVERALL SHIELD - 26, 24, 22, 20, 18 and 16 AWG										
Part No.	No. of Trios	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight lbs per 1000 ft KG/KM	
			Inches	MM	Inches	MM	Inches	MM		
NTT-726SJ	7	26	.153	3.8	.062	1.6	.612	15.54	220	327
NTT-1226SJ	12	26	.153	3.8	.062	1.6	.790	20.07	338	503
NTT-1926SJ	19	26	.153	3.8	.085	2.1	.964	24.5	519	772
NTT-2726SJ	27	26	.153	3.8	.085	2.1	1.142	29.0	693	1031
NTT-3726SJ	37	26	.153	3.8	.085	2.1	1.270	32.3	887	1320
NTT-4826SJ	48	26	.153	3.8	.085	2.1	1.439	36.6	1107	1647
NTT-724SJ	7	24	.164	4.1	.062	1.6	.645	16.38	248	369
NTT-1224SJ	12	24	.164	4.1	.085	2.1	.881	22.38	420	625
NTT-1924SJ	19	24	.164	4.1	.085	2.1	1.012	25.7	589	876
NTT-2724SJ	27	24	.164	4.1	.085	2.1	1.209	30.7	790	1176
NTT-3724SJ	37	24	.164	4.1	.085	2.1	1.347	34.2	1017	1513
NTT-722SJ	7	22	.177	4.5	.062	1.6	.684	17.37	289	430
NTT-1222SJ	12	22	.177	4.5	.085	2.1	.936	23.8	490	729
NTT-1922SJ	19	22	.177	4.5	.085	2.1	1.004	25.5	694	1033
NTT-2722SJ	27	22	.177	4.5	.085	2.1	1.290	32.8	937	1394
NTT-3722SJ	37	22	.177	4.5	.085	2.1	1.438	36.5	1212	1803
NTT-720SJ	7	20	.195	4.9	.062	1.6	.738	18.75	353	525
NTT-1220SJ	12	20	.195	4.9	.085	2.1	1.010	25.7	599	891
NTT-1920SJ	19	20	.195	4.9	.085	2.1	1.174	29.8	859	1278
NTT-2720SJ	27	20	.195	4.9	.085	2.1	1.400	35.6	1167	1736
NTT-718SJ	7	18	.213	5.4	.062	1.6	.792	20.12	430	640
NTT-1218SJ	12	18	.213	5.4	.085	2.1	1.085	27.6	730	1086
NTT-1918SJ	19	18	.213	5.4	.085	2.1	1.264	32.1	1060	1577
NTT-716SJ	7	16	.242	6.1	.085	2.1	.925	23.5	544	809
NTT-1216SJ	12	16	.242	6.1	.085	2.1	1.206	30.6	859	1278
NTT-1916SJ	19	16	.242	6.1	.085	2.1	1.409	35.8	1253	1864



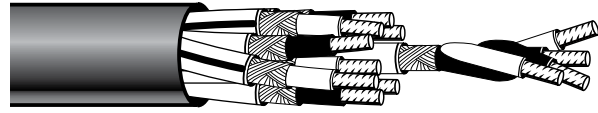
# RoHS COMPLIANT PRODUCTS:

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

NRTT SERIES WITHOUT OVERALL SHIELD - 26, 24, 22, 20, 18 and 16 AWG										
Part No.	No. of Trios	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NRTT-726J	7	26	.153	3.8	.062	1.6	.587	14.91	173	257
NRTT-1226J	12	26	.153	3.8	.062	1.6	.764	19.41	275	409
NRTT-1926J	19	26	.153	3.8	.085	2.1	.939	23.9	442	658
NRTT-2726J	27	26	.153	3.8	.085	2.1	1.116	28.3	599	891
NRTT-3726J	37	26	.153	3.8	.085	2.1	1.245	31.6	781	1162
NRTT-4826J	48	26	.153	3.8	.085	2.1	1.413	35.9	985	1466
NRTT-724J	7	24	.164	4.1	.062	1.6	.620	15.75	198	295
NRTT-1224J	12	24	.164	4.1	.085	2.1	.810	20.57	316	470
NRTT-1924J	19	24	.164	4.1	.085	2.1	.994	25.2	507	754
NRTT-2724J	27	24	.164	4.1	.085	2.1	1.184	30.1	690	1027
NRTT-3724J	37	24	.164	4.1	.085	2.1	1.322	33.6	903	1344
NRTT-722J	7	22	.177	4.5	.062	1.6	.659	16.74	235	350
NRTT-1222J	12	22	.177	4.5	.085	2.1	.910	23.1	416	619
NRTT-1922J	19	22	.177	4.5	.085	2.1	1.059	26.9	606	902
NRTT-2722J	27	22	.177	4.5	.085	2.1	1.264	32.1	829	1234
NRTT-3722J	37	22	.177	4.5	.085	2.1	1.413	35.9	1090	1622
NRTT-720J	7	20	.195	4.9	.062	1.6	.713	18.11	294	437
NRTT-1220J	12	20	.195	4.9	.085	2.1	.985	25.0	517	769
NRTT-1920J	19	20	.195	4.9	.085	2.1	1.149	29.2	762	1134
NRTT-2720J	27	20	.195	4.9	.085	2.1	1.375	34.9	1049	1561
NRTT-718J	7	18	.213	5.4	.062	1.6	.767	19.48	366	545
NRTT-1218J	12	18	.213	5.4	.085	2.1	1.060	26.9	642	955
NRTT-1918J	19	18	.213	5.4	.085	2.1	1.239	31.5	955	1421
NRTT-716J	7	16	.242	6.1	.085	2.1	.900	22.9	471	701
NRTT-1216J	12	16	.242	6.1	.085	2.1	1.181	30.0	759	1129
NRTT-1916J	19	16	.242	6.1	.085	2.1	1.384	35.2	1133	1686

NRTT SERIES WITH OVERALL SHIELD - 26, 24, 22, 20, 18 and 16 AWG										
Part No.	No. of Trios	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight	
			Inches	MM	Inches	MM	Inches	MM	lbs per 1000 ft	KG/KM
NRTT-726SJ	7	26	.153	3.8	.062	1.6	.612	15.54	220	327
NRTT-1226SJ	12	26	.153	3.8	.062	1.6	.790	20.07	338	503
NRTT-1926SJ	19	26	.153	3.8	.085	2.1	.964	24.5	519	772
NRTT-2726SJ	27	26	.153	3.8	.085	2.1	1.142	29.0	693	1031
NRTT-3726SJ	37	26	.153	3.8	.085	2.1	1.270	32.3	887	1320
NRTT-4826SJ	48	26	.153	3.8	.085	2.1	1.439	36.6	1107	1647
NRTT-724SJ	7	24	.164	4.1	.062	1.6	.645	16.38	248	369
NRTT-1224SJ	12	24	.164	4.1	.085	2.1	.881	22.38	420	625
NRTT-1924SJ	19	24	.164	4.1	.085	2.1	1.012	25.7	589	876
NRTT-2724SJ	27	24	.164	4.1	.085	2.1	1.209	30.7	790	1176
NRTT-3724SJ	37	24	.164	4.1	.085	2.1	1.347	34.2	1017	1513
NRTT-722SJ	7	22	.177	4.5	.062	1.6	.684	17.37	289	430
NRTT-1222SJ	12	22	.177	4.5	.085	2.1	.936	23.8	490	729
NRTT-1922SJ	19	22	.177	4.5	.085	2.1	1.004	25.5	694	1033
NRTT-2722SJ	27	22	.177	4.5	.085	2.1	1.290	32.8	937	1394
NRTT-3722SJ	37	22	.177	4.5	.085	2.1	1.438	36.5	1212	1803
NRTT-720SJ	7	20	.195	4.9	.062	1.6	.738	18.75	353	525
NRTT-1220SJ	12	20	.195	4.9	.085	2.1	1.010	25.7	599	891
NRTT-1920SJ	19	20	.195	4.9	.085	2.1	1.174	29.8	859	1278
NRTT-2720SJ	27	20	.195	4.9	.085	2.1	1.400	35.6	1167	1736
NRTT-718SJ	7	18	.213	5.4	.062	1.6	.792	20.12	430	640
NRTT-1218SJ	12	18	.213	5.4	.085	2.1	1.085	27.6	730	1086
NRTT-1918SJ	19	18	.213	5.4	.085	2.1	1.264	32.1	1060	1577
NRTT-716SJ	7	16	.242	6.1	.085	2.1	.925	23.5	544	809
NRTT-1216SJ	12	16	.242	6.1	.085	2.1	1.206	30.6	859	1278
NRTT-1916SJ	19	16	.242	6.1	.085	2.1	1.409	35.8	1253	1864

# CABLED SHIELDED QUADS



## Military & UL Grade

- Pairs (NTQ Series)
- RFI Shielded Cables

Meets U.L. Style 2343 or 2344 for Computer Use

National Wire & Cable Corp. manufactures a complete line of flexible signal and control cables in which each quad is individually shielded and plastic-jacketed. Conforming to MIL-C-27072, these cables provide extended temperature, rough usage, military shielding, excellent flexibility. Provides a minimum of crosstalk between signal channels, plus complete isolation between shields. Excellent for analog signals. All jackets are moisture proof and suitable for use in duct, conduit, aerial, or burial installations.

Conductors are stranded tinned copper with .010" vinyl primary insulation plus .004" nylon insulation over the vinyl per MIL-DTL-16878/17. Insulation for 600 Volts working rating at 105°C. Color-coding: Quads - Black, White, Red, and Green. All conductors are 19 strand.

Shielding is tinned copper braid with 85-90% coverage per MIL-C-7078, and shield angle below 40 degrees for easy pushback.

Jackets over shields are extruded 105°C white polyvinylchloride plastic per MIL-I-631, Type F. Each subcable is individually identified by color code per MIL-STD-681, starting with color #9. Refer to the Table in the National Wire Cable Designers Guide, page 7-12.

All sub-components are planetary cables and contra-helicallly laid with a mylar tape serve over the cable bundle. The overall sheath is abrasion-resistant black 105°C vinyl thermoplastic per MIL-I-631, Type F.

Optional overall shielding of cabled bundle is 85-95% minimum coverage of tinned copper braid applied per MIL-C-7078 over the tape serve under sheath.

TECHNICAL DATA (ALL CABLES)	
<b>Insulation Break-down Voltage:</b>	Greater than 5000 volts AC RMS, 60 Hz.
<b>Insulation Leakage Resistance:</b>	200 Megohms/1000 ft. at 500 VDC from any conductor to all else in cable.
<b>Sheath Leakage Resistance:</b>	10 Megohms/1000 ft. min. at 500 VDC from overall shield through sheath to saline bath at 25°C.
<b>Usable Temperature Range:</b>	Suitable for continuous use from +105°C to -55°C when stationary. Flexing service: +105°C to -25°C.
<b>Bending Characteristics:</b>	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 applications consult factory.
<b>Crosstalk:</b>	Common-mode, adjacent trios: Worst case, -50 db @ 1 Mhz; totaling to -100 db below 100 kHz. (Ref. MIL-C-23437 for test method.) For 100 ft. test length.

Capacitance (pfd/ft.):		
AWG	WIRE-WIRE	WIRE-SHIELD
16	56	110
18	49	97
20	41	81
22	35	69
24	30	59
26	26	52

NTQ SERIES WITHOUT OVERALL SHIELD - 26, 24, 22, 20, 18 and 16 AWG										NTQ SERIES WITH OVERALL SHIELD - 26, 24, 22, 20, 18 and 16 AWG											
Part No.	No. of Quads	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. of Quads	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NTQ-726J	7	26	.164	4.1	.062	1.6	.620	15.75	201	299	NTQ-726SJ	7	26	.164	4.1	.062	1.6	.645	16.38	251	373
NTQ-1226J	12	26	.164	4.1	.062	1.6	.810	20.57	321	478	NTQ-1226SJ	12	26	.164	4.1	.085	2.1	.881	22.38	426	634
NTQ-1926J	19	26	.164	4.1	.085	2.1	.994	25.2	516	768	NTQ-1926SJ	19	26	.164	4.1	.085	2.1	1.019	25.9	598	890
NTQ-2726J	27	26	.164	4.1	.085	2.1	1.184	30.1	703	1046	NTQ-2726SJ	27	26	.164	4.1	.085	2.1	1.209	30.7	803	1195
NTQ-3726J	37	26	.164	4.1	.085	2.1	1.323	33.6	921	1370	NTQ-3726SJ	37	26	.164	4.1	.085	2.1	1.347	34.2	1034	1539
NTQ-724J	7	24	.176	4.4	.062	1.6	.666	16.66	232	345	NTQ-724SJ	7	24	.176	4.4	.062	1.6	.681	17.30	286	426
NTQ-1224J	12	24	.176	4.4	.085	2.1	.906	23.0	410	610	NTQ-1224SJ	12	24	.176	4.4	.085	2.1	.931	23.6	484	720
NTQ-1924J	19	24	.176	4.4	.085	2.1	1.054	26.8	598	890	NTQ-1924SJ	19	24	.176	4.4	.085	2.1	1.079	27.4	686	1021
NTQ-2724J	27	24	.176	4.4	.085	2.1	1.258	32.0	817	1216	NTQ-2724SJ	27	24	.176	4.4	.085	2.1	1.283	32.6	925	1376
NTQ-3724J	37	24	.176	4.4	.085	2.1	1.406	35.7	1075	1600	NTQ-3724SJ	37	24	.176	4.4	.085	2.1	1.431	36.3	1196	1780
NTQ-722J	7	22	.190	4.8	.062	1.6	.698	17.73	274	408	NTQ-722SJ	7	22	.190	4.8	.062	1.6	.723	18.36	331	493
NTQ-1222J	12	22	.190	4.8	.085	2.1	.964	24.5	482	717	NTQ-1222SJ	12	22	.190	4.8	.085	2.1	.990	25.1	562	836
NTQ-1922J	19	22	.190	4.8	.085	2.1	1.124	28.5	708	1054	NTQ-1922SJ	19	22	.190	4.8	.085	2.1	1.149	29.2	803	1195
NTQ-2722J	27	22	.190	4.8	.085	2.1	1.344	34.1	972	1446	NTQ-2722SJ	27	22	.190	4.8	.085	2.1	1.370	34.8	1088	1619
NTQ-720J	7	20	.210	5.3	.062	1.6	.783	19.89	409	609	NTQ-720SJ	7	20	.210	5.3	.062	1.6	.758	19.25	345	513
NTQ-1220J	12	20	.210	5.3	.085	2.1	1.073	27.3	694	1033	NTQ-1220SJ	12	20	.210	5.3	.085	2.1	1.048	26.6	607	903
NTQ-1920J	19	20	.210	5.3	.085	2.1	1.249	31.7	1004	1493	NTQ-1920SJ	19	20	.210	5.3	.085	2.1	1.224	31.1	900	1339
NTQ-718J	7	18	.234	5.9	.085	2.1	.876	22.25	474	705	NTQ-718SJ	7	18	.234	5.9	.085	2.1	.901	22.9	545	811
NTQ-1218J	12	18	.234	5.9	.085	2.1	1.147	29.1	766	1140	NTQ-1218SJ	12	18	.234	5.9	.085	2.1	1.173	29.8	863	1284
NTQ-1918J	19	18	.234	5.9	.085	2.1	1.344	34.1	1147	1707	NTQ-1918SJ	19	18	.234	5.9	.085	2.1	1.369	34.8	1262	1878
NTQ-716J	7	16	.262	6.6	.085	2.1	.960	24.4	560	833	NTQ-716SJ	7	16	.262	6.6	.085	2.1	.985	25.0	639	951
NTQ-1216J	12	16	.262	6.6	.085	2.1	1.264	32.1	909	1353	NTQ-1216SJ	12	16	.262	6.6	.085	2.1	1.289	32.7	1017	1513
NTQ-1916J	19	16	.262	6.6	.085	2.1	1.484	37.7	1366	2032	NTQ-1916SJ	19	16	.262	6.6	.085	2.1	1.509	38.3	1495	2225

# RoHS COMPLIANT PRODUCTS:

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

NRTQ SERIES WITHOUT OVERALL SHIELD - 26, 24, 22, 20, 18 and 16 AWG											NRTQ SERIES WITH OVERALL SHIELD - 26, 24, 22, 20, 18 and 16 AWG										
Part No.	No. of Quads	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		Weight		Part No.	No. of Quads	Cond AWG	Cond. Diam.		Jacket Wall		Nom. Diam.		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
NRTQ-726J	7	26	.164	4.1	.062	1.6	.620	15.75	201	299	NRTQ-726SJ	7	26	.164	4.1	.062	1.6	.645	16.38	251	373
NRTQ-1226J	12	26	.164	4.1	.062	1.6	.810	20.57	321	478	NRTQ-1226SJ	12	26	.164	4.1	.085	2.1	.881	22.38	426	634
NRTQ-1926J	19	26	.164	4.1	.085	2.1	.994	25.2	516	768	NRTQ-1926SJ	19	26	.164	4.1	.085	2.1	1.019	25.9	598	890
NRTQ-2726J	27	26	.164	4.1	.085	2.1	1.184	30.1	703	1046	NRTQ-2726SJ	27	26	.164	4.1	.085	2.1	1.209	30.7	803	1195
NRTQ-3726J	37	26	.164	4.1	.085	2.1	1.323	33.6	921	1370	NRTQ-3726SJ	37	26	.164	4.1	.085	2.1	1.347	34.2	1034	1539
NRTQ-724J	7	24	.176	4.4	.062	1.6	.666	16.66	232	345	NRTQ-724SJ	7	24	.176	4.4	.062	1.6	.681	17.30	286	426
NRTQ-1224J	12	24	.176	4.4	.085	2.1	.906	23.0	410	610	NRTQ-1224SJ	12	24	.176	4.4	.085	2.1	.931	23.6	484	720
NRTQ-1924J	19	24	.176	4.4	.085	2.1	1.054	26.8	598	890	NRTQ-1924SJ	19	24	.176	4.4	.085	2.1	1.079	27.4	686	1021
NRTQ-2724J	27	24	.176	4.4	.085	2.1	1.258	32.0	817	1216	NRTQ-2724SJ	27	24	.176	4.4	.085	2.1	1.283	32.6	925	1376
NRTQ-3724J	37	24	.176	4.4	.085	2.1	1.406	35.7	1075	1600	NRTQ-3724SJ	37	24	.176	4.4	.085	2.1	1.431	36.3	1196	1780
NRTQ-722J	7	22	.190	4.8	.062	1.6	.698	17.73	274	408	NRTQ-722SJ	7	22	.190	4.8	.062	1.6	.723	18.36	331	493
NRTQ-1222J	12	22	.190	4.8	.085	2.1	.964	24.5	482	717	NRTQ-1222SJ	12	22	.190	4.8	.085	2.1	.990	25.1	562	836
NRTQ-1922J	19	22	.190	4.8	.085	2.1	1.124	28.5	708	1054	NRTQ-1922SJ	19	22	.190	4.8	.085	2.1	1.149	29.2	803	1195
NRTQ-2722J	27	22	.190	4.8	.085	2.1	1.344	34.1	972	1446	NRTQ-2722SJ	27	22	.190	4.8	.085	2.1	1.370	34.8	1088	1619
NRTQ-720J	7	20	.210	5.3	.062	1.6	.783	19.89	409	609	NRTQ-720SJ	7	20	.210	5.3	.062	1.6	.758	19.25	345	513
NRTQ-1220J	12	20	.210	5.3	.085	2.1	1.073	27.3	694	1033	NRTQ-1220SJ	12	20	.210	5.3	.085	2.1	1.048	26.6	607	903
NRTQ-1920J	19	20	.210	5.3	.085	2.1	1.249	31.7	1004	1493	NRTQ-1920SJ	19	20	.210	5.3	.085	2.1	1.224	31.1	900	1339
NRTQ-718J	7	18	.234	5.9	.085	2.1	.876	22.25	474	705	NRTQ-718SJ	7	18	.234	5.9	.085	2.1	.901	22.9	545	811
NRTQ-1218J	12	18	.234	5.9	.085	2.1	1.147	29.1	766	1140	NRTQ-1218SJ	12	18	.234	5.9	.085	2.1	1.173	29.8	863	1284
NRTQ-1918J	19	18	.234	5.9	.085	2.1	1.344	34.1	1147	1707	NRTQ-1918SJ	19	18	.234	5.9	.085	2.1	1.369	34.8	1262	1878
NRTQ-716J	7	16	.262	6.6	.085	2.1	.960	24.4	560	833	NRTQ-716SJ	7	16	.262	6.6	.085	2.1	.985	25.0	639	951
NRTQ-1216J	12	16	.262	6.6	.085	2.1	1.264	32.1	909	1353	NRTQ-1216SJ	12	16	.262	6.6	.085	2.1	1.289	32.7	1017	1513
NRTQ-1916J	19	16	.262	6.6	.085	2.1	1.484	37.7	1366	2032	NRTQ-1916SJ	19	16	.262	6.6	.085	2.1	1.509	38.3	1495	2225



## COILED INSTRUMENTATION CABLES FOR CUSTOM APPLICATIONS

Our modern coiling department is ready to design and manufacture coiled instrumentation cables for your specific requirements. These cables are available in any number of conductors and in gauge sizes 10 through 30 AWG. They are designed for high reliability, ultra-flexible long-life applications, as encountered in computer interconnects, biomedical electronics and optimum retractability and general control cable use. Call our technical staff to discuss your custom application.



CABLES WHICH MUST MEET  
1987 NATIONAL ELECTRIC CODE REQUIREMENTS  
FOR FLAME SPREAD OF TRAY CABLE NEC TYPES  
ARTICLE 725

CL2X, CL2, CL3, PLTC  
U.L. File #E 119904

The following pages describe our U.L. Listed multiconductor Low Flame-Spread N.E.C. TRAY CABLES.

Suitable for wiring within buildings without use of electrical conduit for protection.

NL Family of CL2 Cabled Singles  
NLP Family of CL2 Cabled Pairs  
NG Family of PLTC/CL3 Cables

For CL2X Cables, see NQ, NQP Cable Families)

NEC ITC ARTICLE 727  
Exposed Run "ER"  
Direct Buried "DIR BUR"  
Wet Location "WET"  
Sun Light Resistance "SUN RES"  
VERTICAL TRAY FRAME TEST

# CABLED SINGLE CONDUCTORS



## Standard PLTC Cables

- NEC 725 Tray Cables
- UL Rated 300 volts, 105°C
- UL Listed, UL File # E119904
- Extreme Flame Resistance

PAIRS:							
PLTC UNSHIELDED PAIR CABLE				PLTC FOIL-SHIELDED PAIR CABLE			
PART NO.	COND.	AWG	DIAM. INCHES	PART NO.	COND.	AWG	DIAM. INCHES
NG222J	2	22	.170	NG222FSJ	2	22	.176
NG220J	2	20	.190	NG220FSJ	2	20	.196
NG218J	2	18	.206	NG218FSJ	2	18	.212
NG216J	2	16	.220	NG216FSJ	2	16	.226

PLTC Cable Construction: All PLTC Cables use 0.012" (min.) wall of 105°C PVC wire insulation, plus and overall 0.032" wall of special flame-spread-resistant black PVC jacket.

U.L. listed as sunlight-resistant "PLTC" Tray Cable. (PLTC is abbreviation of NEC "Power-Limited Tray Cable"). Also available as CL3 (not sunlight resistant)

Relative Performance: The national PLTC cables are very similar in performance to the national "NQ" family of flexible cables.

Standard Putup: 500 ft. reels (non returnable reels).

Standard Colors:

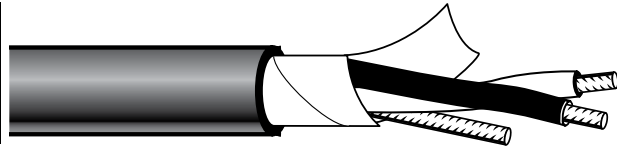
Pairs: Black & Red

Trios: Black, Red, White

Many other PLTC constructions can be made to order. Consult factory for other larger "PLTC" cables.  
UL Rated: 300 Volts, 105°C

TRIOS:							
PLTC UNSHIELDED TRIO CABLE				PLTC FOIL-SHIELDED TRIO CABLE			
PART NO.	COND.	AWG	DIAM. INCHES	PART NO.	COND.	AWG	DIAM. INCHES
NG322J	3	22	.179	NG322FSJ	3	22	.185
NG320J	3	20	.200	NG320FSJ	3	20	.206
NG318J	3	18	.218	NG318FSJ	3	18	.224
NG316J	3	16	.233	NG316FSJ	3	16	.239

# CABLED SINGLE CONDUCTORS



**LISTED**



## Standard CL2 Cables

- NEC 725 Tray Cables
- Cabled Singles (NL Series)

National Wire & Cable Corporation manufactures a complete line of DUAL-RATED multiconductor NEC TRAY CABLE Type CL2, for signal, instrumentation and control uses. Also UL rated for use as 300 Volt Appliance Wiring Material (AWM). These are available as cables singles or pairs, with optional overall shield of aluminum-Mylar foil with drain wire.

Cabled conductors use stranded tinned copper wire with 0.010" wall of tough extruded poly-vinyl-chloride (PVC) insulation, rated for 300 Volt use under U.L. Style 2464.

All wires are color coded using 10 standard solid colors plus white with stripes. Cables singles are color coded the same as our NQ and NX cable families per MIL-STD-681. Cabled pairs are color coded the same as our NQP and NXP cable families. View Color Table in the National Wire Cable Designers Guide, page 7-13.

Conductors are helically cabled and laid for optimum flexibility, with a Mylar tape barrier wrap (or Mylar + Foil) applied between cabled wire bundle and outer jacket.

Shielded cables have an overall Aluminum-Mylar foil shielding tape helically wrapped over cable and a tinned uninsulated drain wire for shield connection. (Use FSJ part Number suffix.) For optional composite tinned copper CFI braid(s) + foil shielding, consult factory.

Outer jacket is a special highly flexible abrasion-resistant gray polyvinylchloride (PVC) thermoplastic. DUAL-RATED jacket compound meets the requirements of both U.L./AWM Style 2464 and U.L. 13 Type CL2 TRAY CABLE. Jacket is surface printed with both UL AWM 2464 and U.L. 13 Type CL2 TRAY CABLE identifiers. Jacket wall thickness is .032" nom.

Finished cables comply with applicable U.L. tests for N.E.C. Type CL2 TRAY CABLE Vertical Tray Flame Spread. All materials are flame-spread retardant and fungus resistant. The products are DUAL-RATED for AWM use as U.L. Style 2464 300 Volt, 80°C, OR for U.L. 13 Type CL2 TRAY CABLE 105°C use.

Standard Putups: 500 ft. and 1000 ft. No-deposit reels. For shorter quantities or specific lengths consult factory.

### TECHNICAL DATA (ALL CABLES)

<b>Rated Working Voltage:</b>	300 Volts for AWM uses.
<b>Rated Temperature:</b>	DUAL-RATED: +105°C or +80°C dependent on AGENCY intended use.
<b>Insulation Breakdown Voltage:</b>	Greater than 3400 Volts AC RMS as 60 Hz.
<b>Capacitance:</b>	Nominal capacitance from a wire to all else in a cable ranges from 25 to 45 PF/FT at 1 kHz, depending on AWG and position.
<b>Insulation Leakage:</b>	100 megohms/1000 ft. min. at 500 VDC from a conductor to all else in a cable, at 25°C,
<b>U.L. Agency Voltage &amp; Temperature Ratings:</b>	UL rated: +80°C AWM, 300 VOLT per UL Style 2464. UL rated +105°C CL2 TRAY CABLE per UL 13, NEC Type CL2.
<b>Bending Characteristics:</b>	All cables are suitable for flexing to a circle diameter of 8 cable diameters from +105°C to -10°C. Recommended flex diameter should be greater than 20 cable diameters for flexing at -20°C.
<b>Characteristic Impedance:</b>	RF Impedance of twisted pairs or adjacent singles is: 87 ohms in AWG 24; 80 ohms in AWG 22. Suitable for digital signals.

UNSHIELDED 24, 22 AWG				
Part No.	No. Cond.	Cond. AWG	Nom. O.D.	Weight LB/K ft.
NL-224J	2	24	.156	11
NL-324J	3	24	.163	14
NL-424J	4	24	.174	17
NL-524J	5	24	.187	19
NL-624J	6	24	.200	22
NL-724J	7	24	.200	24
NL-824J	8	24	.231	28
NL-924J	9	24	.244	31
NL-1024J	10	24	.244	33
NL-1224J	12	24	.251	37
NL-1524J	15	24	.275	45
NL-1924J	19	24	.288	54
NL-2724J	27	24	.339	73
NL-3724J	37	24	.376	96
NL-4824J	48	24	.424	121
NL-6024J	60	24	.464	148
NL-222J	2	22	.168	14
NL-322J	3	22	.176	17
NL-422J	4	22	.188	21
NL-522J	5	22	.203	25
NL-622J	6	22	.218	29
NL-722J	7	22	.218	32
NL-822J	8	22	.253	37
NL-922J	9	22	.268	40
NL-1022J	10	22	.268	43
NL-1222J	12	22	.276	50
NL-1522J	15	22	.303	60
NL-1922J	19	22	.318	73
NL-2722J	27	22	.376	100
NL-3722J	37	22	.418	131
NL-4822J	48	22	.473	167
NL-6022J	60	22	.520	207

OVERALL BRAIDED SHIELD 24, 22 AWG				
Part No.	No. Cond.	Cond. AWG	Nom. O.D.	Weight LB/K ft.
NL-224SJ	2	24	.176	19
NL-324SJ	3	24	.183	22
NL-424SJ	4	24	.194	25
NL-524SJ	5	24	.207	29
NL-624SJ	6	24	.220	33
NL-724SJ	7	24	.220	35
NL-824SJ	8	24	.251	41
NL-924SJ	9	24	.264	44
NL-1024SJ	10	24	.264	46
NL-1224SJ	12	24	.271	51
NL-1524SJ	15	24	.295	61
NL-1924SJ	19	24	.308	70
NL-2724SJ	27	24	.359	93
NL-3724SJ	37	24	.401	127
NL-4824SJ	48	24	.450	157
NL-6024SJ	60	24	.489	187
NL-222SJ	2	22	.188	22
NL-322SJ	3	22	.196	26
NL-422SJ	4	22	.208	31
NL-522SJ	5	22	.223	35
NL-622SJ	6	22	.238	40
NL-722SJ	7	22	.238	43
NL-822SJ	8	22	.273	51
NL-922SJ	9	22	.288	56
NL-1022SJ	10	22	.288	58
NL-1222SJ	12	22	.296	65
NL-1522SJ	15	22	.323	78
NL-1922SJ	19	22	.338	91
NL-2722SJ	27	22	.401	131
NL-3722SJ	37	22	.443	167
NL-4822SJ	48	22	.498	207
NL-6022SJ	60	22	.543	249

OVERALL FOIL SHIELD WITH DRAIN 24, 22 AWG				
Part No.	No. Cond.	Cond. AWG	Nom. O.D.	Weight LB/K ft.
NL-224FSJ	2	24	.158	13
NL-324FSJ	3	24	.165	15
NL-424FSJ	4	24	.176	18
NL-524FSJ	5	24	.189	21
NL-624FSJ	6	24	.202	24
NL-724FSJ	7	24	.202	26
NL-824FSJ	8	24	.233	30
NL-924FSJ	9	24	.246	32
NL-1024FSJ	10	24	.246	34
NL-1224FSJ	12	24	.253	39
NL-1524FSJ	15	24	.277	46
NL-1924FSJ	19	24	.290	55
NL-2724FSJ	27	24	.341	75
NL-3724FSJ	37	24	.378	97
NL-4824FSJ	48	24	.427	122
NL-6024FSJ	60	24	.466	149
NL-222FSJ	2	22	.170	16
NL-322FSJ	3	22	.178	20
NL-422FSJ	4	22	.190	23
NL-522FSJ	5	22	.205	27
NL-622FSJ	6	22	.220	31
NL-722FSJ	7	22	.220	34
NL-822FSJ	8	22	.255	39
NL-922FSJ	9	22	.270	43
NL-1022FSJ	10	22	.270	46
NL-1222FSJ	12	22	.278	52
NL-1522FSJ	15	22	.305	62
NL-1922FSJ	19	22	.320	75
NL-2722FSJ	27	22	.378	102
NL-3722FSJ	37	22	.420	134
NL-4822FSJ	48	22	.475	169
NL-6022FSJ	60	22	.528	207

# RoHS COMPLIANT PRODUCTS:

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

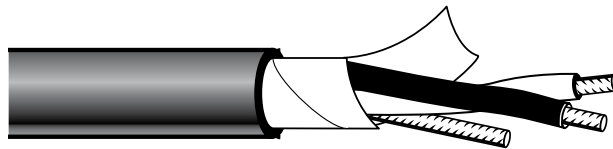
UNSHIELDED 24, 22 AWG				
Part No.	No. Cond	Cond. AWG	Nom. O.D.	Weight LB/K ft.
NRL-224J	2	24	.156	11
NRL-324J	3	24	.163	14
NRL-424J	4	24	.174	17
NRL-524J	5	24	.187	19
NRL-624J	6	24	.200	22
NRL-724J	7	24	.200	24
NRL-824J	8	24	.231	28
NRL-924J	9	24	.244	31
NRL-1024J	10	24	.244	33
NRL-1224J	12	24	.251	37
NRL-1524J	15	24	.275	45
NRL-1924J	19	24	.288	54
NRL-2724J	27	24	.339	73
NRL-3724J	37	24	.376	96
NRL-4824J	48	24	.424	121
NRL-6024J	60	24	.464	148
NRL-222J	2	22	.168	14
NRL-322J	3	22	.176	17
NRL-422J	4	22	.188	21
NRL-522J	5	22	.203	25
NRL-622J	6	22	.218	29
NRL-722J	7	22	.218	32
NRL-822J	8	22	.253	37
NRL-922J	9	22	.268	40
NRL-1022J	10	22	.268	43
NRL-1222J	12	22	.276	50
NRL-1522J	15	22	.303	60
NRL-1922J	19	22	.318	73
NRL-2722J	27	22	.376	100
NRL-3722J	37	22	.418	131
NRL-4822J	48	22	.473	167
NRL-6022J	60	22	.520	207

OVERALL BRAIDED SHIELD 24, 22 AWG				
Part No.	No. Cond	Cond. AWG	Nom. O.D.	Weight LB/K ft.
NRL-224SJ	2	24	.176	19
NRL-324SJ	3	24	.183	22
NRL-424SJ	4	24	.194	25
NRL-524SJ	5	24	.207	29
NRL-624SJ	6	24	.220	33
NRL-724SJ	7	24	.220	35
NRL-824SJ	8	24	.251	41
NRL-924SJ	9	24	.264	44
NRL-1024SJ	10	24	.264	46
NRL-1224SJ	12	24	.271	51
NRL-1524SJ	15	24	.295	61
NRL-1924SJ	19	24	.308	70
NRL-2724SJ	27	24	.359	93
NRL-3724SJ	37	24	.401	127
NRL-4824SJ	48	24	.450	157
NRL-6024SJ	60	24	.489	187
NRL-222SJ	2	22	.188	22
NRL-322SJ	3	22	.196	26
NRL-422SJ	4	22	.208	31
NRL-522SJ	5	22	.223	35
NRL-622SJ	6	22	.238	40
NRL-722SJ	7	22	.238	43
NRL-822SJ	8	22	.273	51
NRL-922SJ	9	22	.288	56
NRL-1022SJ	10	22	.288	58
NRL-1222SJ	12	22	.296	65
NRL-1522SJ	15	22	.323	78
NRL-1922SJ	19	22	.338	91
NRL-2722SJ	27	22	.401	131
NRL-3722SJ	37	22	.443	167
NRL-4822SJ	48	22	.498	207
NRL-6022SJ	60	22	.543	249

OVERALL FOIL SHIELD WITH DRAIN 24, 22 AWG				
Part No.	No. Cond	Cond. AWG	Nom. O.D.	Weight LB/K ft.
NRL-224FSJ	2	24	.158	13
NRL-324FSJ	3	24	.165	15
NRL-424FSJ	4	24	.176	18
NRL-524FSJ	5	24	.189	21
NRL-624FSJ	6	24	.202	24
NRL-724FSJ	7	24	.202	26
NRL-824FSJ	8	24	.233	30
NRL-924FSJ	9	24	.246	32
NRL-1024FSJ	10	24	.246	34
NRL-1224FSJ	12	24	.253	39
NRL-1524FSJ	15	24	.277	46
NRL-1924FSJ	19	24	.290	55
NRL-2724FSJ	27	24	.341	75
NRL-3724FSJ	37	24	.378	97
NRL-4824FSJ	48	24	.427	122
NRL-6024FSJ	60	24	.466	149
NRL-222FSJ	2	22	.170	16
NRL-322FSJ	3	22	.178	20
NRL-422FSJ	4	22	.190	23
NRL-522FSJ	5	22	.205	27
NRL-622FSJ	6	22	.220	31
NRL-722FSJ	7	22	.220	34
NRL-822FSJ	8	22	.255	39
NRL-922FSJ	9	22	.270	43
NRL-1022FSJ	10	22	.270	46
NRL-1222FSJ	12	22	.278	52
NRL-1522FSJ	15	22	.305	62
NRL-1922FSJ	19	22	.320	75
NRL-2722FSJ	27	22	.378	102
NRL-3722FSJ	37	22	.420	134
NRL-4822FSJ	48	22	.475	169
NRL-6022FSJ	60	22	.528	207



# CABLED SINGLE CONDUCTORS



**LISTED**



## Standard CL2 Cables

- NEC 725 Tray Cables
- Cabled Singles (NL Series)

UNSHIELDED 20, 18 AWG				
Part No.	No. Cond	Cond AWG.	Nom. O.D.	Weight LB/K ft
NL-220J	2	20	.184	18
NL-320J	3	20	.193	24
NL-420J	4	20	.207	29
NL-520J	5	20	.225	35
NL-620J	6	20	.242	41
NL-720J	7	20	.242	46
NL-820J	8	20	.283	53
NL-920J	9	20	.300	58
NL-1020J	10	20	.300	63
NL-1220J	12	20	.309	73
NL-1520J	15	20	.341	89
NL-1920J	19	20	.358	109
NL-2720J	27	20	.425	151
NL-3720J	37	20	.474	201
NL-218J	2	18	.204	24
NL-318J	3	18	.215	32
NL-418J	4	18	.231	40
NL-518J	5	18	.252	48
NL-618J	6	18	.272	56
NL-718J	7	18	.272	63
NL-818J	8	18	.320	73
NL-918J	9	18	.340	81
NL-1018J	10	18	.340	88
NL-1218J	12	18	.351	102
NL-1518J	15	18	.388	126
NL-1918J	19	18	.408	155
NL-2718J	27	18	.487	215

OVERALL BRAIDED SHIELDED 20, 18 AWG				
Part No.	No. Cond	Cond AWG.	Nom. O.D.	Weight LB/K ft
NL-220SJ	2	20	.204	28
NL-320SJ	3	20	.213	34
NL-420SJ	4	20	.227	40
NL-520SJ	5	20	.245	47
NL-620SJ	6	20	.262	54
NL-720SJ	7	20	.262	59
NL-820SJ	8	20	.303	69
NL-920SJ	9	20	.320	76
NL-1020SJ	10	20	.320	80
NL-1220SJ	12	20	.329	91
NL-1520SJ	15	20	.361	109
NL-1920SJ	19	20	.378	130
NL-2720SJ	27	20	.450	187
NL-3720SJ	37	20	.499	242
NL-218SJ	2	18	.224	35
NL-318SJ	3	18	.235	43
NL-418SJ	4	18	.251	52
NL-518SJ	5	18	.272	62
NL-618SJ	6	18	.292	71
NL-718SJ	7	18	.293	78
NL-818SJ	8	18	.340	91
NL-918SJ	9	18	.360	101
NL-1018SJ	10	18	.360	108
NL-1218SJ	12	18	.371	123
NL-1518SJ	15	18	.413	158
NL-1918SJ	19	18	.433	189
NL-2718SJ	27	18	.512	257

OVERALL FOIL SHIELD WITH DRAIN 20, 18 AWG				
Part No.	No. Cond	Cond AWG.	Nom. O.D.	Weight LB/K ft
NL-220FSJ	2	20	.186	22
NL-320FSJ	3	20	.195	28
NL-420FSJ	4	20	.209	33
NL-520FSJ	5	20	.227	39
NL-620FSJ	6	20	.244	45
NL-720FSJ	7	20	.244	49
NL-820FSJ	8	20	.285	56
NL-920FSJ	9	20	.302	62
NL-1020FSJ	10	20	.300	63
NL-1220FSJ	12	20	.311	77
NL-1520FSJ	15	20	.343	90
NL-1920FSJ	19	20	.360	113
NL-2720FSJ	27	20	.427	155
NL-3720FSJ	37	20	.476	205
NL-218FSJ	2	18	.206	20
NL-318FSJ	3	18	.217	38
NL-418FSJ	4	18	.233	46
NL-518FSJ	5	18	.254	54
NL-618FSJ	6	18	.274	62
NL-718FSJ	7	18	.274	69
NL-818FSJ	8	18	.322	79
NL-918FSJ	9	18	.342	87
NL-1018FSJ	10	18	.342	94
NL-1218FSJ	12	18	.353	108
NL-1518FSJ	15	18	.390	131
NL-1918FSJ	19	18	.410	180
NL-2718FSJ	27	18	.489	221

# RoHS COMPLIANT PRODUCTS:

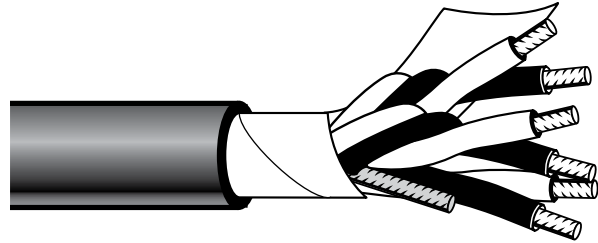
all RoHS products have the letter "R" written into the second position of the Part No.

UNSHIELDED 20, 18 AWG				
Part No.	No. Cond	Cond AWG.	Nom. O.D.	Weight LB/K ft
NRL-220J	2	20	.184	18
NRL-320J	3	20	.193	24
NRL-420J	4	20	.207	29
NRL-520J	5	20	.225	35
NRL-620J	6	20	.242	41
NRL-720J	7	20	.242	46
NRL-820J	8	20	.283	53
NRL-920J	9	20	.300	58
NRL-1020J	10	20	.300	63
NRL-1220J	12	20	.309	73
NRL-1520J	15	20	.341	89
NRL-1920J	19	20	.358	109
NRL-2720J	27	20	.425	151
NRL-3720J	37	20	.474	201
NRL-218J	2	18	.204	24
NRL-318J	3	18	.215	32
NRL-418J	4	18	.231	40
NRL-518J	5	18	.252	48
NRL-618J	6	18	.272	56
NRL-718J	7	18	.272	63
NRL-818J	8	18	.320	73
NRL-918J	9	18	.340	81
NRL-1018J	10	18	.340	88
NRL-1218J	12	18	.351	102
NRL-1518J	15	18	.388	126
NRL-1918J	19	18	.408	155
NRL-2718J	27	18	.487	215

OVERALL BRAIDED SHIELDED 20, 18 AWG				
Part No.	No. Cond	Cond AWG.	Nom. O.D.	Weight LB/K ft
NRL-220SJ	2	20	.204	28
NRL-320SJ	3	20	.213	34
NRL-420SJ	4	20	.227	40
NRL-520SJ	5	20	.245	47
NRL-620SJ	6	20	.262	54
NRL-720SJ	7	20	.262	59
NRL-820SJ	8	20	.303	69
NRL-920SJ	9	20	.320	76
NRL-1020SJ	10	20	.320	80
NRL-1220SJ	12	20	.329	91
NRL-1520SJ	15	20	.361	109
NRL-1920SJ	19	20	.378	130
NRL-2720SJ	27	20	.450	187
NRL-3720SJ	37	20	.499	242
NRL-218SJ	2	18	.224	35
NRL-318SJ	3	18	.235	43
NRL-418SJ	4	18	.251	52
NRL-518SJ	5	18	.272	62
NRL-618SJ	6	18	.292	71
NRL-718SJ	7	18	.293	78
NRL-818SJ	8	18	.340	91
NRL-918SJ	9	18	.360	101
NRL-1018SJ	10	18	.360	108
NRL-1218SJ	12	18	.371	123
NRL-1518SJ	15	18	.413	158
NRL-1918SJ	19	18	.433	189
NRL-2718SJ	27	18	.512	257

OVERALL FOIL SHIELD WITH DRAIN 20, 18 AWG				
Part No.	No. Cond	Cond AWG.	Nom. O.D.	Weight LB/K ft
NRL-220FSJ	2	20	.186	22
NRL-320FSJ	3	20	.195	28
NRL-420FSJ	4	20	.209	33
NRL-520FSJ	5	20	.227	39
NRL-620FSJ	6	20	.244	45
NRL-720FSJ	7	20	.244	49
NRL-820FSJ	8	20	.285	56
NRL-920FSJ	9	20	.302	62
NRL-1020FSJ	10	20	.300	63
NRL-1220FSJ	12	20	.311	77
NRL-1520FSJ	15	20	.343	90
NRL-1920FSJ	19	20	.360	113
NRL-2720FSJ	27	20	.427	155
NRL-3720FSJ	37	20	.476	205
NRL-218FSJ	2	18	.206	20
NRL-318FSJ	3	18	.217	38
NRL-418FSJ	4	18	.233	46
NRL-518FSJ	5	18	.254	54
NRL-618FSJ	6	18	.274	62
NRL-718FSJ	7	18	.274	69
NRL-818FSJ	8	18	.322	79
NRL-918FSJ	9	18	.342	87
NRL-1018FSJ	10	18	.342	94
NRL-1218FSJ	12	18	.353	108
NRL-1518FSJ	15	18	.390	131
NRL-1918FSJ	19	18	.410	180
NRL-2718FSJ	27	18	.489	221

# CABLED TWISTED PAIRS CONDUCTORS



## Standard CL2 Cables

- NEC 725 Tray Cables
- Twisted Pairs (NLP Series)

National Wire & Cable Corporation manufactures a complete line of DUAL-RATED multiconductor NEC TRAY CABLE Type CL2, for signal, instrumentation and control uses. Also UL rated for use as 300 Volt Appliance Wiring Material (AWM). These are available as cables singles or pairs, with optional overall shield of aluminum-Mylar foil with drain wire.

Cabled conductors use stranded tinned copper wire with 0.010" wall of tough extruded poly-vinyl-chloride (PVC) insulation, rated for 300 Volt use under U.L. Style 2464.

All wires are color coded using 10 standard solid colors plus white with stripes. Cables singles are color coded the same as our NQ and NX cable families per MIL-STD-681. Cabled pairs are color coded the same as our NQP and NXP cable families. View Color Table in the National Wire Cable Designers Guide, page 7-13.

Conductors are helically cabled and laid for optimum flexibility, with a Mylar tape barrier wrap (or Mylar + Foil) applied between cabled wire bundle and outer jacket.

Shielded cables have an overall Aluminum-Mylar foil shielding tape helically wrapped over cable and a tinned uninsulated drain wire for shield connection. (Use FSJ part Number suffix.) For optional composite tinned copper CFI braid(s) + foil shielding, consult factory.

Outer jacket is a special highly flexible abrasion-resistant gray polyvinylchloride (PVC) thermoplastic. DUAL-RATED jacket compound meets the requirements of both U.L. AWM Style 2464 and U.L. 13 Type CL2 TRAY CABLE. Jacket is surface printed with both UL AWM 2464 and U.L. 13 Type CL2 TRAY CABLE identifiers. Jacket wall thickness is .032" nom.

Finished cables comply with applicable U.L. tests for N.E.C. Type CL2 TRAY CABLE Vertical Tray Flame Spread. All materials are flame-spread retardant and fungus resistant. The products are DUAL-RATED for AWM use as U.L. Style 2464 300 Volt, 80°C, OR for U.L. 13 Type CL2 TRAY CABLE 105°C use.

Standard Putups: 500 ft. and 1000 ft. No-deposit reels. For shorter quantities or specific lengths consult factory.

TECHNICAL DATA (ALL CABLES)	
<b>Rated Working Voltage:</b>	300 Volts for AWM uses.
<b>Rated Temperature:</b>	DUAL-RATED: +105°C or +80°C dependent on AGENCY intended use.
<b>Insulation Breakdown Voltage:</b>	Greater than 3400 Volts AC RMS as 60 Hz.
<b>Capacitance:</b>	Nominal capacitance from a wire to all else in a cable ranges from 25 to 45 PF/FT at 1 kHz, depending on AWG and position.
<b>Insulation Leakage:</b>	100 megohms/1000 ft. min. at 500 VDC from a conductor to all else in a cable, at 25°C,
<b>U.L. Agency Voltage &amp; Temperature Ratings:</b>	UL rated: +80°C AWM, 300 VOLT per UL Style 2464. UL rated +105°C CL2 TRAY CABLE per UL 13, NEC Type CL2.
<b>Bending Characteristics:</b>	All cables are suitable for flexing to a circle diameter of 8 cable diameters from +105°C to -10°C. Recommended flex diameter should be greater than 20 cable diameters for flexing at -20°C.
<b>Characteristic Impedance:</b>	RF Impedance of twisted pairs or adjacent singles is: 87 ohms in AWG 24; 80 ohms in AWG 22. Suitable for digital signals.

UNSHIELDED 24, 22 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NLP-224J	2	24	.218	21
NLP-324J	3	24	.230	26
NLP-424J	4	24	.253	31
NLP-524J	5	24	.279	37
NLP-624J	6	24	.306	42
NLP-724J	7	24	.292	46
NLP-824J	8	24	.367	54
NLP-924J	9	24	.350	60
NLP-1024J	10	24	.367	64
NLP-1224J	12	24	.379	73
NLP-1524J	15	24	.429	88
NLP-1924J	19	24	.442	106
NLP-2724J	27	24	.529	144
NLP-222J	2	22	.238	26
NLP-322J	3	22	.252	33
NLP-422J	4	22	.278	40
NLP-522J	5	22	.308	47
NLP-622J	6	22	.338	55
NLP-722J	7	22	.323	61
NLP-822J	8	22	.408	71
NLP-922J	9	22	.388	79
NLP-1022J	10	22	.408	85
NLP-1222J	12	22	.422	97
NLP-1522J	15	22	.478	118
NLP-1922J	19	22	.493	143
NLP-2722J	27	22	.592	197

OVERALL BRAIDED SHIELD 24, 22 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NLP-224SJ	2	24	.238	34
NLP-324SJ	3	24	.250	40
NLP-424SJ	4	24	.273	47
NLP-524SJ	5	24	.299	54
NLP-624SJ	6	24	.326	62
NLP-724SJ	7	24	.312	66
NLP-824SJ	8	24	.387	78
NLP-924SJ	9	24	.370	85
NLP-1024SJ	10	24	.387	89
NLP-1224SJ	12	24	.404	109
NLP-1524SJ	15	24	.454	129
NLP-1924SJ	19	24	.467	149
NLP-2724SJ	27	24	.554	198
NLP-222SJ	2	22	.258	41
NLP-322SJ	3	22	.272	49
NLP-422SJ	4	22	.298	58
NLP-522SJ	5	22	.328	67
NLP-622SJ	6	22	.358	77
NLP-722SJ	7	22	.343	83
NLP-822SJ	8	22	.433	108
NLP-922SJ	9	22	.413	119
NLP-1022SJ	10	22	.433	124
NLP-1222SJ	12	22	.447	139
NLP-1522SJ	15	22	.503	165
NLP-1922SJ	19	22	.518	193
NLP-2722SJ	27	22	.617	257

OVERALL FOIL SHIELD WITH DRAIN 24, 22 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NLP-224FSJ	2	24	.220	22
NLP-324FSJ	3	24	.232	27
NLP-424FSJ	4	24	.255	32
NLP-524FSJ	5	24	.281	38
NLP-624FSJ	6	24	.308	44
NLP-724FSJ	7	24	.294	48
NLP-824FSJ	8	24	.369	55
NLP-924FSJ	9	24	.352	61
NLP-1024FSJ	10	24	.369	65
NLP-1224FSJ	12	24	.381	74
NLP-1524FSJ	15	24	.431	89
NLP-1924FSJ	19	24	.444	107
NLP-2724FSJ	27	24	.531	146
NLP-222FSJ	2	22	.240	28
NLP-322FSJ	3	22	.254	35
NLP-422FSJ	4	22	.280	42
NLP-522FSJ	5	22	.310	50
NLP-622FSJ	6	22	.340	57
NLP-722FSJ	7	22	.325	63
NLP-822FSJ	8	22	.410	732
NLP-922FSJ	9	22	.390	81
NLP-1022FSJ	10	22	.410	87
NLP-1222FSJ	12	22	.424	99
NLP-1522FSJ	15	22	.480	120
NLP-1922FSJ	19	22	.495	146
NLP-2722FSJ	27	22	.594	199

# RoHS COMPLIANT PRODUCTS:

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

UNSHIELDED 24, 22 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NRLP-224J	2	24	.218	21
NRLP-324J	3	24	.230	26
NRLP-424J	4	24	.253	31
NRLP-524J	5	24	.279	37
NRLP-624J	6	24	.306	42
NRLP-724J	7	24	.292	46
NRLP-824J	8	24	.367	54
NRLP-924J	9	24	.350	60
NRLP-1024J	10	24	.367	64
NRLP-1224J	12	24	.379	73
NRLP-1524J	15	24	.429	88
NRLP-1924J	19	24	.442	106
NRLP-2724J	27	24	.529	144
NRLP-222J	2	22	.238	26
NRLP-322J	3	22	.252	33
NRLP-422J	4	22	.278	40
NRLP-522J	5	22	.308	47
NRLP-622J	6	22	.338	55
NRLP-722J	7	22	.323	61
NRLP-822J	8	22	.408	71
NRLP-922J	9	22	.388	79
NRLP-1022J	10	22	.408	85
NRLP-1222J	12	22	.422	97
NRLP-1522J	15	22	.478	118
NRLP-1922J	19	22	.493	143
NRLP-2722J	27	22	.592	197

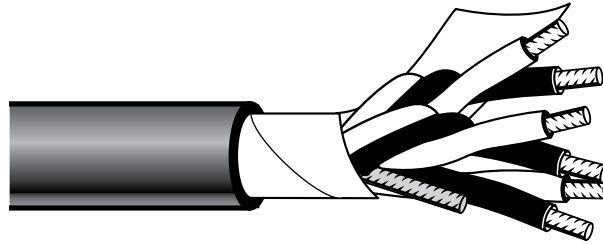
OVERALL BRAIDED SHIELD 24, 22 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NRLP-224SJ	2	24	.238	34
NRLP-324SJ	3	24	.250	40
NRLP-424SJ	4	24	.273	47
NRLP-524SJ	5	24	.299	54
NRLP-624SJ	6	24	.326	62
NRLP-724SJ	7	24	.312	66
NRLP-824SJ	8	24	.387	78
NRLP-924SJ	9	24	.370	85
NRLP-1024SJ	10	24	.387	89
NRLP-1224SJ	12	24	.404	109
NRLP-1524SJ	15	24	.454	129
NRLP-1924SJ	19	24	.467	149
NRLP-2724SJ	27	24	.554	198
NRLP-222SJ	2	22	.258	41
NRLP-322SJ	3	22	.272	49
NRLP-422SJ	4	22	.298	58
NRLP-522SJ	5	22	.328	67
NRLP-622SJ	6	22	.358	77
NRLP-722SJ	7	22	.343	83
NRLP-822SJ	8	22	.433	108
NRLP-922SJ	9	22	.413	119
NRLP-1022SJ	10	22	.433	124
NRLP-1222SJ	12	22	.447	139
NRLP-1522SJ	15	22	.503	165
NRLP-1922SJ	19	22	.518	193
NRLP-2722SJ	27	22	.617	257

OVERALL FOIL SHIELD WITH DRAIN 24, 22 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NRLP-224FSJ	2	24	.220	22
NRLP-324FSJ	3	24	.232	27
NRLP-424FSJ	4	24	.255	32
NRLP-524FSJ	5	24	.281	38
NRLP-624FSJ	6	24	.308	44
NRLP-724FSJ	7	24	.294	48
NRLP-824FSJ	8	24	.369	55
NRLP-924FSJ	9	24	.352	61
NRLP-1024FSJ	10	24	.369	65
NRLP-1224FSJ	12	24	.381	74
NRLP-1524FSJ	15	24	.431	89
NRLP-1924FSJ	19	24	.444	107
NRLP-2724FSJ	27	24	.531	146
NRLP-222FSJ	2	22	.240	28
NRLP-322FSJ	3	22	.254	35
NRLP-422FSJ	4	22	.280	42
NRLP-522FSJ	5	22	.310	50
NRLP-622FSJ	6	22	.340	57
NRLP-722FSJ	7	22	.325	63
NRLP-822FSJ	8	22	.410	732
NRLP-922FSJ	9	22	.390	81
NRLP-1022FSJ	10	22	.410	87
NRLP-1222FSJ	12	22	.424	99
NRLP-1522FSJ	15	22	.480	120
NRLP-1922FSJ	19	22	.495	146
NRLP-2722FSJ	27	22	.594	199

# CABLED TWISTED PAIRS CONDUCTORS

## Standard CL2 Cables

- NEC 725 Tray Cables
- Twisted Pairs (NLP Series)



For color code of pairs, View Color Table on page 5-15.

UNSHIELDED 20, 18 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NLP-220J	2	20	.265	35
NLP-320J	3	20	.281	45
NLP-420J	4	20	.312	56
NLP-520J	5	20	.346	68
NLP-620J	6	20	.381	79
NLP-720J	7	20	.364	89
NLP-820J	8	20	.462	103
NLP-920J	9	20	.439	115
NLP-1020J	10	20	.462	124
NLP-1220J	12	20	.478	144
NLP-1520J	15	20	.544	176
NLP-1920J	19	20	.561	216
NLP-2720J	27	20	.675	300
NLP-218J	2	18	.299	46
NLP-318J	3	18	.318	61
NLP-418J	4	18	.354	77
NLP-518J	5	18	.394	94
NLP-618J	6	18	.435	110
NLP-718J	7	18	.415	124
NLP-1218J	12	18	.549	203

OVERALL BRAIDED SHIELD 20, 18 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NLP-220SJ	2	20	.285	52
NLP-320SJ	3	20	.301	64
NLP-420SJ	4	20	.332	77
NLP-520SJ	5	20	.366	91
NLP-620SJ	6	20	.401	105
NLP-720SJ	7	20	.384	114
NLP-820SJ	8	20	.488	146
NLP-920SJ	9	20	.464	161
NLP-1020SJ	10	20	.488	170
NLP-1220SJ	12	20	.503	192
NLP-1520SJ	15	20	.569	230
NLP-1920SJ	19	20	.586	273
NLP-2720SJ	27	20	.701	369
NLP-218SJ	2	18	.319	66
NLP-318SJ	3	18	.338	83
NLP-418SJ	4	18	.374	101
NLP-518SJ	5	18	.420	130
NLP-618SJ	6	18	.460	151
NLP-718SJ	7	18	.440	164
NLP-1218SJ	12	18	.574	258

OVERALL FOIL SHIELD WITH DRAIN 20, 18 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NLP-220FSJ	2	20	.267	39
NLP-320FSJ	3	20	.293	49
NLP-420FSJ	4	20	.314	60
NLP-520FSJ	5	20	.348	72
NLP-620FSJ	6	20	.383	83
NLP-720FSJ	7	20	.366	93
NLP-820FSJ	8	20	.464	107
NLP-920FSJ	9	20	.441	119
NLP-1020FSJ	10	20	.464	128
NLP-1220FSJ	12	20	.480	148
NLP-1520FSJ	15	20	.546	180
NLP-1920FSJ	19	20	.563	220
NLP-2720FSJ	27	20	.677	304
NLP-218FSJ	2	18	.301	52
NLP-318FSJ	3	18	.320	67
NLP-418FSJ	4	18	.356	83
NLP-518FSJ	5	18	.396	99
NLP-618FSJ	6	18	.437	116
NLP-718FSJ	7	18	.417	130
NLP-1218FSJ	12	18	.551	209

**NOTES:**

1. Available in other conductor sizes.
2. Available in other jacket colors.

## OTHER SPECIAL PURPOSE CABLES

ANTENNA ROTOR CABLE						
Part No.	No. Cond	AWG/Str.	Ins. OD	Jkt Wall	Nom. OD	Weight Lb/M'
NQ 818J	8	18/19	.068 pvc	.032	.320	73

LOW CAPACITANCE MICROPHONE CABLE (ULTRA-LIMP, ULTRA QUIET)						
Part No.	No. Cond	AWG/Str.	Ins. OD	Jkt Wall	Nom. OD	Weight Lb/M'
S10-8819	2	24/105 BC	0.060" pe	.040"	.220"	24.
S10-9109	4	24/41 BC	0.054" pe	.045"	.245"	29.

TRANSDUCER CABLE, SHIELDED (FOR LOW LEVEL USE)						
Part No.	No. Cond	AWG/Str.	Ins. OD	Jkt Wall	Nom. OD	Weight Lb/M'
S10-6023	4	22/19	0.054 PVC	.030"	.210	31.

SEISMIC GEOPHONE CABLE (DIGITAL SIGNALS)						
Part No.	No. Cond	AWG/Str.	Ins. OD	Jkt Wall	Nom. OD	Weight Lb/M'
D-2362	2	20/19	130 Ohm	.045	.370	54.

# RoHS COMPLIANT PRODUCTS:

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

UNSHIELDED 20, 18 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NRLP-220J	2	20	.265	35
NRLP-320J	3	20	.281	45
NRLP-420J	4	20	.312	56
NRLP-520J	5	20	.346	68
NRLP-620J	6	20	.381	79
NRLP-720J	7	20	.364	89
NRLP-820J	8	20	.462	103
NRLP-920J	9	20	.439	115
NRLP-1020J	10	20	.462	124
NRLP-1220J	12	20	.478	144
NRLP-1520J	15	20	.544	176
NRLP-1920J	19	20	.561	216
NRLP-2720J	27	20	.675	300
NRLP-218J	2	18	.299	46
NRLP-318J	3	18	.318	61
NRLP-418J	4	18	.354	77
NRLP-518J	5	18	.394	94
NRLP-618J	6	18	.435	110
NRLP-718J	7	18	.415	124
NRLP-1218J	12	18	.549	203

OVERALL BRAIDED SHIELD 20, 18 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NRLP-220SJ	2	20	.285	52
NRLP-320SJ	3	20	.301	64
NRLP-420SJ	4	20	.332	77
NRLP-520SJ	5	20	.366	91
NRLP-620SJ	6	20	.401	105
NRLP-720SJ	7	20	.384	114
NRLP-820SJ	8	20	.488	146
NRLP-920SJ	9	20	.464	161
NRLP-1020SJ	10	20	.488	170
NRLP-1220SJ	12	20	.503	192
NRLP-1520SJ	15	20	.569	230
NRLP-1920SJ	19	20	.586	273
NRLP-2720SJ	27	20	.701	369
NRLP-218SJ	2	18	.319	66
NRLP-318SJ	3	18	.338	83
NRLP-418SJ	4	18	.374	101
NRLP-518SJ	5	18	.420	130
NRLP-618SJ	6	18	.460	151
NRLP-718SJ	7	18	.440	164
NRLP-1218SJ	12	18	.574	258

OVERALL FOIL SHIELD WITH DRAIN 20, 18 AWG				
Part No.	No. of Pairs	Cond AWG	Nom. O.D.	Weight LB/K ft.
NRLP-220FSJ	2	20	.267	39
NRLP-320FSJ	3	20	.293	49
NRLP-420FSJ	4	20	.314	60
NRLP-520FSJ	5	20	.348	72
NRLP-620FSJ	6	20	.383	83
NRLP-720FSJ	7	20	.366	93
NRLP-820FSJ	8	20	.464	107
NRLP-920FSJ	9	20	.441	119
NRLP-1020FSJ	10	20	.464	128
NRLP-1220FSJ	12	20	.480	148
NRLP-1520FSJ	15	20	.546	180
NRLP-1920FSJ	19	20	.563	220
NRLP-2720FSJ	27	20	.677	304
NRLP-218FSJ	2	18	.301	52
NRLP-318FSJ	3	18	.320	67
NRLP-418FSJ	4	18	.356	83
NRLP-518FSJ	5	18	.396	99
NRLP-618FSJ	6	18	.437	116
NRLP-718FSJ	7	18	.417	130
NR LP-1218FSJ	12	18	.551	209

**NOTES:**

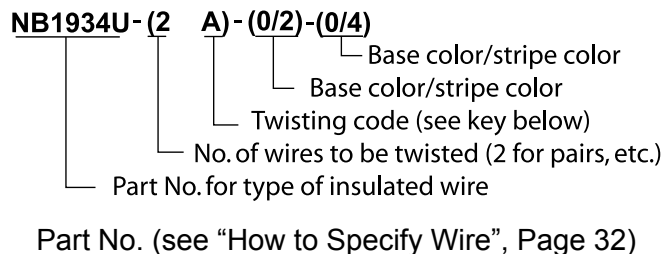
1. Available in other conductor sizes.
2. Available in other jacket colors.



# 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.