

**PVC/Nylon 600 Volts 90°C Overall Shield and PVC Jacket**

PART NUMBER	NO. OF CONDS.	14 AWG			PART NUMBER	NO. OF CONDS.	12 AWG		
		OVERALL JACKET THICK. (MILS)	APPROX. OUTSIDE DIAMETER (IN)	APPROX. WEIGHT 1000 FT. (POUNDS)			OVERALL JACKET THICK. (MILS)	APPROX. OUTSIDE DIAMETER (IN)	APPROX. WEIGHT 1000 FT. (POUNDS)
02-0136A	2	45	.325	85	02-0136B	2	45	.363	107
02-0137A	3	45	.342	102	02-0137B	3	45	.383	128
02-0138A	4	45	.372	122	02-0138B	4	45	.417	160
02-0139A	5	45	.463	144	02-0139B	5	45	.514	195
02-0140A	6	45	.498	162	02-0140B	6	60	.585	219
02-0141A	7	45	.498	180	02-0141B	7	60	.585	243
02-0142A	8	60	.563	204	02-0142B	8	60	.626	288
02-0143A	9	60	.598	241	02-0143B	9	60	.666	324
02-0144A	10	60	.620	257	02-0144B	10	60	.692	347
02-0145A	11	60	.633	277	02-0145B	11	60	.708	377
02-0146A	12	60	.648	291	02-0146B	12	60	.725	408
02-0147A	13	60	.669	313	02-0147B	13	60	.749	433
02-0148A	14	60	.690	336	02-0148B	14	60	.773	462
02-0149A	15	60	.706	360	02-0149B	15	60	.792	486
02-0150A	16	60	.723	381	02-0150B	16	60	.812	525
02-0151A	17	60	.741	400	02-0151B	17	80	.874	555
02-0152A	18	60	.758	418	02-0152B	18	80	.893	583
02-0153A	19	60	.758	433	02-0153B	19	80	.893	606
02-0154A	20	60	.778	449	02-0154B	20	80	.917	672
02-0155A	21	60	.793	475	02-0155B	21	80	.934	705
02-0156A	22	60	.814	499	02-0156B	22	80	.958	736
02-0157A	23	80	.868	518	02-0157B	23	80	.974	763
02-0158A	24	80	.880	538	02-0158B	24	80	.989	794
02-0159A	25	80	.891	554	02-0159B	25	80	1.001	820
02-0160A	26	80	.903	612	02-0160B	26	80	1.014	847
02-0161A	27	80	.913	631	02-0161B	27	80	1.023	875
02-0162A	28	80	.927	651	02-0162B	28	80	1.043	910
02-0163A	29	80	.939	670	02-0163B	29	80	1.057	937
02-0164A	30	80	.959	696	02-0164B	30	80	1.077	968
02-0165A	31	80	.963	710	02-0165B	31	80	1.082	994
02-0166A	32	80	.976	732	02-0166B	32	80	1.096	1020
02-0167A	33	80	.993	748	02-0167B	33	80	1.115	1052
02-0168A	34	80	1.000	767	02-0168B	34	80	1.125	1080
02-0169A	35	80	1.011	786	02-0169B	35	80	1.140	1103
02-0170A	36	80	1.028	810	02-0170B	36	80	1.165	1136
02-0171A	37	80	1.028	824	02-0171B	37	80	1.165	1160

**SCOPE:**

This specification covers multiconductor shielded cables having VW-1 TFFN or THHN/THWN (PVC/Nylon) conductors, an aluminum polyester tape shield with drain wire, and an overall gas/vapor-tight polyvinyl chloride (PVC) jacket; conforming to Article 318 "Cable Trays" and Article 340 "Power and Control Cable Type TC" of the 1999 National Electrical Code, and Standard 1277 of Underwriters Laboratories, Inc. They meet the requirements of the ICEA T-29-520 and T-30-520 flame tests as well as the 70,000 BTU "Cable Tray Propagation Test" per IEEE-383 and show reserve capabilities by also passing the 210,000 BTU flame test. Rated 600 volts, 90°C dry and 75°C wet. They also meet the CSA FT4 and the IEEE 1202 70,000 BTU flame test.

**APPLICATIONS:**

UL listed and OSHA acceptable. Recognized for use in Class 1 or 2, Division 2 hazardous locations and for installation in trays, wireways, troughs, channels, ducts and conduit. Specifically approved for direct burial, wet or dry locations and outdoors in cable trays where a sunlight resistant rating is required. Designed for control, power, lighting, telemetering, signals and relay or traffic control where shielding against external interference is required.

**CONSTRUCTION:**

**CONDUCTORS**

Bare, soft annealed copper per ASTM B-3

**Sizes 18 and 16 AWG (TFFN)**

Bunch stranded, Size 18 (16/.010") and Size 16 (19/.0117") UL-62 paragraph 10.2

**Sizes 14, 12 and 10 AWG (THHN/THWN)**

Concentric stranded, class B (7 strands) per ASTM B-8 and UL-83 table 13.1

**INSULATION:**

High dielectric polyvinyl chloride

UL-1581 table 50.145 (THWN 75°C)

UL-1581 table 50.155 (THHN 90°C)

UL-1581 table 50.155 Class 12B (TFFN 90°C)

Thickness: UL-83 table 15.5 for THHN/THWN and UL-62 table 6.2 for TFFN

**INSULATION ARMOR**

Nylon: UL-83 paragraph 25.1 for THHN/THWN & UL-62 paragraph 22.1 for TFFN

Thickness: UL-83 table 15.5 for THHN/THWN and UL-62 paragraph 26.4 for TFFN

**CABLING:**

Two or more conductors are assembled round with fillers as needed. A tape binder is applied over assembly.

**DRAIN WIRE:**

Tinned copper per ASTM B-33

**Sizes 20, 18 and 16 AWG**

Concentric stranded, class B (7 strands), ASTM B-8

**SHIELDING:**

A .00035 aluminum foil/.001 polyester tape shield is applied helically with a 15% minimum overlap.

**OVERALL JACKET:**

Gas/vapor-tight Polyvinyl Chloride (black) - UL 1277 table 10.1 Thickness - Specified herein

**COLOR CODING:**

ICEA Method 1 Table E-2

**CONSTRUCTION OPTIONS:**

Consult factory for specifications on cables with copper tape shield or copper braid (tinned or bare) shields.

**Indicate AWG required, when ordering.**

Information on this sheet is subject to change without notice. All diameters are nominal values. All diameters and weights are subject to normal manufacturing tolerances.

CONDUCTOR DATA				
SIZE (AWG)	STRANDS NO./O.D. (INCHES)	PVC INSULATION (INCHES)	NYLON ARMOR (INCHES)	APPROX. O.D. (INCHES)
18	16/.010	.015	.004	.089
16	19/.0117	.015	.004	.100
14	7/.0242	.015	.004	.113
12	7/.0305	.015	.004	.132
10	7/.0385	.020	.004	.166

**CABLE IDENTIFICATION:**

Sizes 18 and 16 AWG  
Ink print on one side of jacket  
"Shielded (size) AWG Type TC 90°C dry 75°C wet, Sunlight Resistant, 600V (UL) Direct Burial"

DRAIN WIRE DATA	
SIZE (AWG)	STRANDS NO./O.D. (INCHES)
20	7/.0121
18	7/.0152
16	7/.0192

