

# TYPE TC - CONTROL CABLE

## VW-1 Rated XLP Insulation 600 Volt 90°C 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)
02-0509A	2 FL	45	.230x.367	72	02-0509B	2 FL	45	.250x.407	100
02-0510A	2 RD	45	.367	78	02-0510B	2 RD	45	.407	107
02-0511A	3	45	.387	100	02-0511B	3	45	.430	136
02-0512A	4	45	.423	125	02-0512B	4	45	.471	167
02-0513A	5	45	.462	150	02-0513B	5	60	.546	215
02-0514A	6	45	.504	164	02-0514B	6	60	.594	271
02-0515A	7	45	.504	175	02-0515B	7	60	.594	292
02-0516A	8	60	.576	213	02-0516B	8	60	.642	328
02-0517A	9	60	.617	240	02-0517B	9	60	.689	364
02-0518A	10	60	.643	260	02-0518B	10	60	.719	402
02-0519A	11	60	.660	280	02-0519B	11	60	.738	438
02-0520A	12	60	.677	303	02-0520B	12	60	.758	460
02-0521A	13	60	.702	323	02-0521B	13	60	.787	491
02-0522A	14	60	.727	345	02-0522B	14	80	.815	525
02-0523A	15	60	.746	365	02-0523B	15	80	.877	548
02-0524A	16	60	.766	390	02-0524B	16	80	.900	572
02-0525A	17	60	.788	415	02-0525B	17	80	.926	604
02-0526A	18	60	.808	436	02-0526B	18	80	.948	634
02-0527A	19	60	.808	446	02-0527B	19	80	.948	656
02-0528A	20	80	.872	480	02-0528B	20	80	.976	692
02-0529A	21	80	.890	540	02-0529B	21	80	.996	728
02-0530A	22	80	.915	565	02-0530B	22	80	1.024	760
02-0531A	23	80	.931	588	02-0531B	23	80	1.043	790
02-0532A	24	80	.946	610	02-0532B	24	80	1.061	821
02-0533A	25	80	.958	630	02-0533B	25	80	1.075	851
02-0534A	26	80	.974	650	02-0534B	26	80	1.092	880
02-0535A	27	80	.985	668	02-0535B	27	80	1.105	910
02-0536A	28	80	1.002	693	02-0536B	28	80	1.125	941
02-0537A	29	80	1.016	714	02-0537B	29	80	1.141	971
02-0538A	30	80	1.039	734	02-0538B	30	80	1.167	1003
02-0539A	31	80	1.045	757	02-0539B	31	80	1.174	1031
02-0540A	32	80	1.060	778	02-0540B	32	80	1.191	1061
02-0541A	33	80	1.080	798	02-0541B	33	80	1.214	1086
02-0542A	34	80	1.089	818	02-0542B	34	80	1.224	1121
02-0543A	35	80	1.102	840	02-0543B	35	80	1.240	1155
02-0544A	36	80	1.122	861	02-0544B	36	80	1.262	1185
02-0545A	37	80	1.122	881	02-0545B	37	80	1.262	1215

CONDUCTOR DATA			
SIZE (AWG)	STRANDS NO./O.D. (INCHES)	PVC INSULATION (INCHES)	APPROX. O.D. (INCHES)
18	16/.010	.030	.109
16	26/.010	.030	.121
14	7/.0242	.030	.134
12	7/.0305	.030	.153
10	7/.0385	.030	.177

### CABLE IDENTIFICATION:

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

Sizes 14, 12 and 10 AWG  
Ink print on one side of jacket  
"(size) AWG Type TC 90°C wet or dry. Cdrs. (Type XHHW-2) Sunlight Resistant, 600V (UL) Direct Burial"

### SCOPE:

This specification covers multiconductor cables having cross-linked polyethylene (XLP) insulation with 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 Electric 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 wet and dry. Sizes 14, 12, and 10 AWG conductors are UL Type XHHW-2. They also meet the CSA FT4 and the IEEE 1202 70,000 BTU flame tests.

### 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 a low loss, high temperature insulation is specified.

### CONSTRUCTION:

#### CONDUCTORS

Bare, soft annealed copper per ASTM B-3

#### Sizes 18 and 16 AWG

Bunch stranded, class K (.010" #30 strands) per ASTM B-174, and UL-62 paragraph 10.2

#### Sizes 14, 12 and 10 AWG (XHHW-2)

Concentric stranded, class B (7 strands) per ASTM B-8 and UL-44 paragraph 12.6. (An opaque separator is applied between the conductor and the insulation to facilitate stripping.)

### INSULATION:

Cross-linked polyethylene

Sizes 18 and 16 AWG: UL-1581 table 50.241

Sizes 14, 12, and 10 AWG: UL-44 class XL compound and ICEA S-73-532 part 3

Thickness

Sizes 18 and 16 AWG: UL-62 table 6.1 (RFH-2)

Sizes 14, 12, and 10 AWG: UL-44 table 15.3 and ICEA S-73-532 part 3 table 3-1

### CABLING:

Three or more conductors are assembled round with fillers as needed. A tape binder is applied over the assembly. Sizes 14, 12 and 10 AWG have a nylon ripcord inserted under the jacket for ease of stripping. Two conductors are assembled flat parallel (round, with fillers as needed, is available upon request).

### OVERALL JACKET:

Gas/vapor-tight Polyvinyl Chloride (black) per UL-1277 table 10.1 & ICEA S-73-532 part 4 table 4-2.

Thickness - Specified herein

### COLOR CODING:

ICEA Method 1 using solid colors with stripes in accordance with Table E-2.

### CONSTRUCTION OPTIONS:

Consult factory for specifications on cables with USE-2 or RHW-2 insulation and/or with Neoprene or CPE jackets and CSA approved cables.

**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.



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