



**CSA TRAY RATED**

**HVTC SPECIFICATIONS**  
**HVTC AL 1/C 260TRXLPE TS PVC 25KV 100% CSA**

**PRODUCT HIGHLIGHTS**

Southwire's 25KV HVTC is a CSA approved copper tape shielded cable for Industrial and Commercial medium voltage applications. FT4, -40°C, and 105°C rated for use in harsh Canadian environments. Rated for installation in cable trays, duct banks, direct burial, troughs, continuous rigid cable supports and concrete encaseable. For use in cable trays, exposed run and hazardous locations as per the limitations in the Canadian Electrical Code Part I, particularly Table 19.

**CONSTRUCTION**

**Conductor**

- Class B - compact stranded -8000 Series Aluminum -ACM

**Options**

- Class B compact stranded copper
- Class B compressed stranded copper
- Strand blocking technology
- Tinning on copper conductors

**Conductor Shield**

- Extruded semi-conducting thermosetting polymeric layer

**Insulation**

- TR-XLPE - (Tree Retardent Cross Linked Polyethylene)
- Thickness: 0.26 inches (6.60mm) - nominal
- Insulation level: 100% - grounded system
- 105°C rated

**Insulation Shield**

- Extruded Semi-conducting thermosetting polymeric layer
- CSA 68.10 - Shield Removal/termination requirements are printed on the surface
- Meets requirement of ICEA but built to CSA standards

**Copper Tape Shield**

- Helically wrapped 5 mil copper tape with 25% overlap
- Not designed to carry ground fault current
- A separate bonding/grounding conductor may be required

**Overall Jacket**

- Black PVC (optional colours available)
- Nominal Thickness:  
No.1 AWG to 500 kcmil = 0.08 inches (2.03mm)  
750 kcmil to 1000 kcmil = 0.11 inches (2.79mm)

**Typical Print Legend**

- (CSA) SOUTHWIRE (NESC) #P# [#AWG or #kcmil] CPT AL 260 TRXLPE 25KV 100% INS LEVEL 25% TS SUN RES TC-ER 105° FT4 (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]

**TABLE 1 - WEIGHTS & MEASUREMENTS**

HVTC Product Code	Conductor Size*	Conductor Diameter		Diameter Over Insulation		Diameter Over Insulation Shield		Approx. Overall Diameter		Minimum Bend Radius		Approx. Weight of Cable		Max. Reel Weight (reel and cable)**		Max. Reel Diameter / Width**		Max. Length of Cable on Reel**	
	AWG or Kcmil	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	lb / 1000ft	kg/km	lbs	kg	inches	m	feet	m
AL260V13-001	1(19)	0.299	7.6	0.849	21.6	0.929	23.6	1.109	28.2	13.3	338	560	833	4108	1863	78/54	1.98/1.37	6000	1829
AL260V13-010	1/0(19)	0.336	8.5	0.886	22.5	0.966	24.5	1.146	29.1	13.8	349	604	898	4373	1983	78/54	1.98/1.37	6000	1829
AL260V13-020	2/0(19)	0.376	9.6	0.926	23.5	1.006	25.6	1.186	30.1	14.2	361	655	975	4681	2123	78/54	1.98/1.37	6000	1829
AL260V13-030	3/0(19)	0.423	10.7	0.973	24.7	1.053	26.7	1.233	31.3	14.8	376	718	1068	5056	2293	78/54	1.98/1.37	6000	1829
AL260V13-040	4/0(19)	0.475	12.1	1.025	26.0	1.105	28.1	1.285	32.6	15.4	392	792	1179	5502	2496	78/54	1.98/1.37	6000	1829
AL260V13-250	250(37)	0.520	13.2	1.080	27.4	1.160	29.5	1.340	34.0	16.1	408	867	1291	5953	2700	78/54	1.98/1.37	6000	1829
AL260V13-350	350(37)	0.616	15.6	1.176	29.9	1.256	31.9	1.436	36.5	17.2	438	1023	1522	7296	3310	96/54.5	2.44/1.38	6000	1829
AL260V13-500	500(37)	0.736	18.7	1.296	32.9	1.376	35.0	1.556	39.5	18.7	474	1241	1847	8605	3903	96/54.5	2.44/1.38	6000	1829
AL260V13-750	750(61)	0.908	23.1	1.478	37.5	1.558	39.6	1.798	45.7	21.6	548	1700	2529	11753	5331	108/70.5	2.74/1.79	6000	1829
AL260V13-1000	1000(61)	1.060	26.9	1.630	41.4	1.710	43.4	1.950	49.5	23.4	594	2041	3038	13395	6076	108/70.5	2.74/1.79	5800	1768

NOTE: These are minimum average dimensions as per CSA Standards.

\* Other conductor sizes and outer jacket colours are available upon request. (#s in brackets represent # of strands / conductor)

\*\* Longer maximum lengths may be possible. Standard sizes and lengths may be supplied. Reel sizes are not guaranteed. The factory reserves the right to make changes as necessary to optimize manufacturing requirements.



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## DESIGN

### Qualification Standards

- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- CSA C68.3 - Shielded & Concentric Neutral Power Cable - 5 to 46 KV
- CSA C22.2 No. 230 - Tray Cables
- ICEA S-93-639 (NEMA WC 74) 5 to 46 kV - Shielded Power Cable
- AEIC CS-8 - Qualification Testing Requirements

### Flame Test Ratings

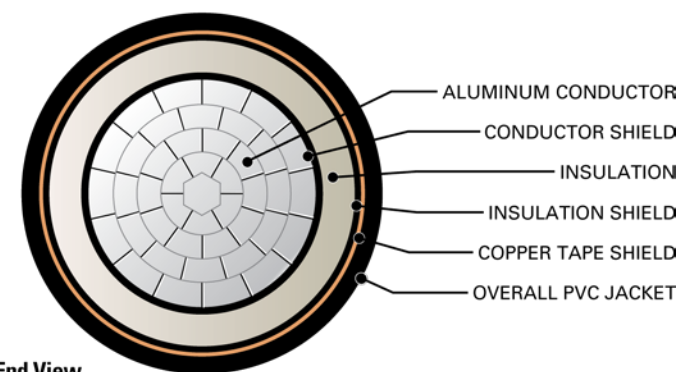
- FT1 - Flame Test - (1,706 BTU/Hr. nominal - Vertical Wire Flame Test)
- FT4, Flame Test - (70,000 BTU/Hr. - Vertical Tray Flame Test)
- IEEE 1202 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Test)
- IEEE 383 - Flame Test - (70,000 BTU/Hr.)
- ICEA T-29-520 - Vertical Cable Tray Flame Test - (210,000 BTU/Hr)

### Product Ratings

- CSA C22.2 No. 2556 & No. 0.3 - Wire and Cable Test Methods
- CSA LTGG [-40°C] - as per C68.10 - for Cold Bend and Impact rating
- CSA FT4 - for Flame Retardancy rating
- CSA SUN RES - for Sunlight Resistant rating
- CSA TC-ER (marked TC for No. 1/0 AWG and larger)\*\*\*

### Operating Temperatures

- -40°C - CSA Cold Bend and Impact Temperature
- -25°C - Min. Installation Temperature
- 105°C - Max Continuous Operating Temperature
- 140°C for Emergency Overload Temperature
- 250°C for Short Circuit Temperature



End View

**TABLE 2 - ENGINEERING SPECIFICATIONS**

HVTC Product Code	Maximum Pulling Tension		DC Resistance @ 25°C R <sub>DC</sub>		AC Resistance @ 90°C 60 Hz (triplex formation) R <sub>AC</sub>		Inductance L		Capacitance C		Inductive Reactance @ 60Hz (triplexed) X <sub>L</sub>		Capacitive Reactance @ 60Hz (triplexed) X <sub>C</sub>		Positive - Sequence Impedance*	Zero - Sequence Impedance*	Short Circuit Current (each phase conductor) @ 60Hz	Allowable Ampacities in Ventilated Cable Tray †	Allowable Ampacities Directly Buried in Earth ‡
	lb	Newtons	Ω / 1000 ft.	Ω / km	Ω / 1000 ft.	Ω / km	mH / 1000 ft.	mH / km	μF / 1000 ft.	μF / km	Ω / 1000 ft.	Ω / km	MΩ · 1000ft	MΩ · km	Ω / 1000ft	Ω / 1000ft	kAmps	Amps	Amps
AL260V13-001	502	2234	0.211	0.692	0.265	0.870	0.1212	0.3977	0.0373	0.1225	0.0457	0.1499	0.0710	0.0216	0.266 + j0.052	0.632 + j0.377	3.9	193	194
AL260V13-010	634	2818	0.168	0.551	0.211	0.693	0.1167	0.3828	0.0402	0.1319	0.0440	0.1443	0.0660	0.0201	0.212 + j0.050	0.576 + j0.362	5.0	221	219
AL260V13-020	799	3552	0.133	0.436	0.167	0.549	0.1125	0.3692	0.0432	0.1419	0.0424	0.1392	0.0613	0.0187	0.168 + j0.048	0.529 + j0.347	6.3	253	246
AL260V13-030	1007	4478	0.105	0.345	0.132	0.433	0.1084	0.3555	0.0468	0.1535	0.0408	0.1340	0.0567	0.0173	0.133 + j0.046	0.491 + j0.330	7.9	288	275
AL260V13-040	1270	5647	0.084	0.274	0.105	0.345	0.1045	0.3427	0.0507	0.1663	0.0394	0.1292	0.0523	0.0160	0.106 + j0.045	0.459 + j0.313	9.9	327	305
AL260V13-250	1500	6672	0.071	0.232	0.089	0.292	0.1021	0.3351	0.0533	0.1750	0.0385	0.1263	0.0497	0.0152	0.090 + j0.043	0.438 + j0.296	11.8	367	343
AL260V13-350	2100	9341	0.051	0.166	0.064	0.209	0.0970	0.3182	0.0603	0.1978	0.0366	0.1200	0.0440	0.0134	0.064 + j0.041	0.404 + j0.270	16.5	443	399
AL260V13-500	3000	13345	0.035	0.116	0.045	0.147	0.0921	0.3021	0.0689	0.2260	0.0347	0.1139	0.0385	0.0117	0.046 + j0.039	0.374 + j0.241	23.5	529	451
AL260V13-750	4500	20017	0.024	0.077	0.030	0.099	0.0873	0.2863	0.0800	0.2625	0.0329	0.1079	0.0332	0.0101	0.031 + j0.037	0.341 + j0.206	35.3	633	505
AL260V13-1000	6000	26689	0.018	0.058	0.023	0.076	0.0838	0.2750	0.0906	0.2972	0.0316	0.1037	0.0293	0.0089	0.024 + j0.036	0.319 + j0.182	47.0	711	544

\* Calculations are based on three cables triplexed / 5 mil 25% over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

† Ampacities are based on Table D17M of the 2015 Canadian Electrical Code Part I (40°C Ambient Air Temperature, indoor installation)

‡ Ampacities are based on Table D17A of the 2015 Canadian Electrical Code Part I

\*\*\* For use in cable trays, exposed run and hazardous locations as per the limitations in the Canadian Electrical Code Part I, particularly Table 19.

