



**CSA TRAY RATED**

HVTC SPECIFICATIONS

# HVTC CU 3/C 260TRXLPE TS PVC 25KV 100% CSA



**Southwire®**  
C A N A D A

## 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 compressed stranded copper
- in accordance with ASTM B3 and ASTM B8

### Options

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

### 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
- Phase identification as per ICEA Method 3, using printed circuit numbers
- Meets requirement of ICEA but built to CSA standards

### Copper Tape Shield

- Helically wrapped 5 mil copper tape with 25% overlap

### Bonding Conductor

- Class B compressed stranded bare copper
- in accordance with ASTM B3 and B8

### Fillers

- Non-wicking, non-hygroscopic

### Overall Jacket

- Black PVC (optional colours available)
- Nominal Thickness:  
No.1 AWG to No.3/0 AWG = 0.11 inches (2.79mm)  
No.4/0 AWG to 500 kcmil = 0.14 inches (3.56mm)

### Typical Print Legend

- (CSA) SOUTHWIRE (NESC) #P# 3/C [#AWG or #kcmil] CU 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		Bonding Cond. Size	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	AWG	inches	mm	inches	mm	lb / 1000ft	kg/km	lbs	kg	inches	m	feet	m
CU260N80-001	1(19)	0.322	8.2	0.872	22.1	0.952	24.2	6	2.320	58.9	16.2	412	2593	3858	11537	5233	108/70.5	2.74/1.79	3850	1173
CU260N80-010	1/0(19)	0.362	9.2	0.912	23.2	0.992	25.2	6	2.406	61.1	16.8	428	2894	4306	12262	5562	108/70.5	2.74/1.79	3700	1128
CU260N80-020	2/0(19)	0.405	10.3	0.955	24.3	1.035	26.3	6	2.499	63.5	17.5	444	3256	4846	13115	5949	108/70.5	2.74/1.79	3550	1082
CU260N80-030	3/0(19)	0.456	11.6	1.006	25.6	1.086	27.6	4	2.609	66.3	18.3	464	3754	5587	12631	5729	108/70.5	2.74/1.79	2950	899
CU260N80-040	4/0(19)	0.512	13.0	1.062	27.0	1.142	29.0	4	2.790	70.9	19.5	496	4458	6634	11807	5356	108/70.5	2.74/1.79	2300	701
CU260N80-250	250(37)	0.558	14.2	1.118	28.4	1.198	30.4	4	2.911	73.9	20.4	518	4798	7140	12111	5493	108/70.5	2.74/1.79	2200	671
CU260N80-350	350(37)	0.661	16.8	1.221	31.0	1.301	33.0	3	3.133	79.6	21.9	557	6224	9263	12137	5505	108/70.5	2.74/1.79	1700	518
CU260N80-500	500(37)	0.789	20.0	1.349	34.3	1.429	36.3	3	3.410	86.6	23.9	606	7977	11871	13520	6133	108/70.5	2.74/1.79	1500	457

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**

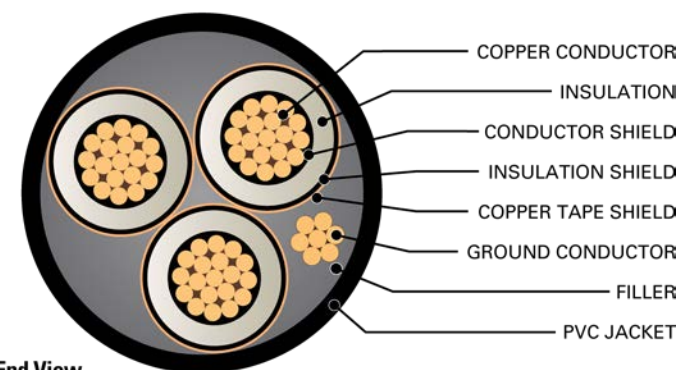
- FT1 - Flame Test - (1,706 BTU/Hr. nominal - Vertical Wire Flame Test)
- FT4, Flame Test - (70,000 BTU/Hr. - Vertical Tray Flame Test)
- IEEE 1202 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Test)
- IEEE 383 - Flame Test - (70,000 BTU/Hr.)
- ICEA T-29-520 - Vertical Cable Tray Flame Test - (210,000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

**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



**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
CU260N80-001	2009	8935	0.129	0.423	0.161	0.529	0.1183	0.3882	0.0391	0.1284	0.0446	0.1463	0.0678	0.0207	0.162 + j0.047	0.530 + j0.368	6.0	202	226
CU260N80-010	2534	11274	0.102	0.335	0.128	0.419	0.1139	0.3737	0.0422	0.1384	0.0429	0.1409	0.0629	0.0192	0.128 + j0.045	0.493 + j0.352	7.6	231	256
CU260N80-020	3194	14209	0.081	0.266	0.101	0.333	0.1099	0.3605	0.0454	0.1491	0.0414	0.1359	0.0584	0.0178	0.102 + j0.044	0.464 + j0.336	9.6	265	290
CU260N80-030	4027	17914	0.064	0.211	0.081	0.264	0.1058	0.3472	0.0493	0.1616	0.0399	0.1309	0.0538	0.0164	0.081 + j0.042	0.439 + j0.319	12.1	303	327
CU260N80-040	5078	22590	0.051	0.167	0.064	0.210	0.1021	0.3348	0.0534	0.1753	0.0385	0.1262	0.0497	0.0151	0.065 + j0.040	0.417 + j0.301	15.2	348	369
CU260N80-250	6000	26689	0.043	0.141	0.054	0.178	0.0999	0.3279	0.0561	0.1840	0.0377	0.1236	0.0473	0.0144	0.055 + j0.040	0.402 + j0.285	18.0	384	408
CU260N80-350	8400	37365	0.031	0.101	0.039	0.128	0.0950	0.3116	0.0635	0.2084	0.0358	0.1175	0.0418	0.0127	0.040 + j0.038	0.377 + j0.258	25.2	468	485
CU260N80-500	12000	53379	0.022	0.071	0.028	0.092	0.0903	0.2962	0.0727	0.2384	0.0340	0.1117	0.0365	0.0111	0.028 + j0.036	0.353 + j0.230	36.0	565	571

\* Calculations are based on 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 D17N of the 2015 Canadian Electrical Code Part I (40°C Ambient Air Temperature, indoor installation)

‡ Ampacities are based on Table D17E 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.

