



**CSA TRAY RATED**

HVTC SPECIFICATIONS

# HVTC CU 1/C 260EPR 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 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

- No-lead EPR (Ethylene Propylene Rubber)
- 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] CU 260 EPR 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
CU260N03-001	1(19)	0.322	8.2	0.872	22.1	0.952	24.2	1.132	28.8	13.6	345	800	1190	5549	2517	78/54	1.98/1.37	6000	1829
CU260N03-010	1/0(19)	0.362	9.2	0.912	23.2	0.992	25.2	1.172	29.8	14.1	357	896	1333	6125	2778	78/54	1.98/1.37	6000	1829
CU260N03-020	2/0(19)	0.405	10.3	0.955	24.3	1.035	26.3	1.215	30.9	14.6	370	1012	1505	6820	3093	78/54	1.98/1.37	6000	1829
CU260N03-030	3/0(19)	0.456	11.6	1.006	25.6	1.086	27.6	1.266	32.2	15.2	386	1155	1719	7681	3484	78/54	1.98/1.37	6000	1829
CU260N03-040	4/0(19)	0.512	13.0	1.062	27.0	1.142	29.0	1.322	33.6	15.9	403	1330	1980	8732	3961	78/54	1.98/1.37	6000	1829
CU260N03-250	250(37)	0.558	14.2	1.118	28.4	1.198	30.4	1.378	35.0	16.5	420	1433	2133	9759	4426	96/54.5	2.44/1.38	6000	1829
CU260N03-350	350(37)	0.661	16.8	1.221	31.0	1.301	33.0	1.481	37.6	17.8	451	1877	2793	12419	5633	96/54.5	2.44/1.38	6000	1829
CU260N03-500	500(37)	0.789	20.0	1.349	34.3	1.429	36.3	1.609	40.9	19.3	490	2432	3619	15934	7228	104/56.5	2.64/1.44	6000	1829
CU260N03-750	750(61)	0.968	24.6	1.538	39.1	1.618	41.1	1.858	47.2	22.3	566	3450	5135	16391	7435	108/70.5	2.74/1.79	4300	1311
CU260N03-1000	1000(61)	1.117	28.4	1.687	42.8	1.767	44.9	2.007	51.0	24.1	612	4339	6458	16526	7496	108/70.5	2.74/1.79	3450	1052

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

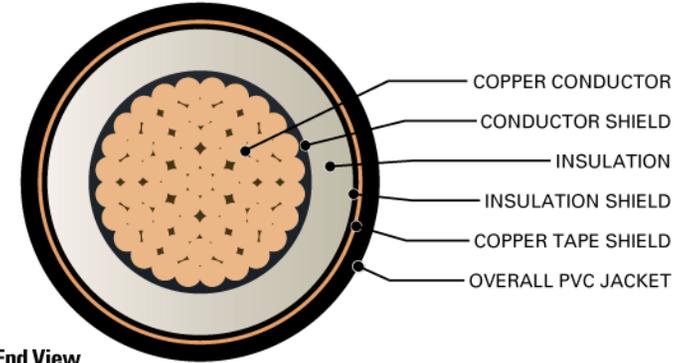
- FT1 - Flame Test - (1,706 BTU/Hr. nominal - Vertical Wire Flame Test)
- FT4, Flame Test - (70,000 BTU/Hr. - Vertical Tray Flame Test)
- IEEE 1202 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Test)
- IEEE 383 - Flame Test - (70,000 BTU/Hr.)
- ICEA T-29-520 - Vertical Cable Tray Flame Test - (210,000 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					
CU260N03-001	670	2978	0.129	0.423	0.161	0.529	0.1183	0.3882	0.0493	0.1619	0.0446	0.1463	0.0538	0.0164	0.162 + j0.051	0.527 + j0.367	5.7	245	244
CU260N03-010	845	3758	0.102	0.335	0.128	0.419	0.1139	0.3737	0.0532	0.1745	0.0429	0.1409	0.0499	0.0152	0.128 + j0.049	0.490 + j0.352	7.2	278	272
CU260N03-020	1065	4736	0.081	0.266	0.101	0.333	0.1099	0.3605	0.0573	0.1880	0.0414	0.1359	0.0463	0.0141	0.102 + j0.047	0.461 + j0.336	9.0	316	303
CU260N03-030	1342	5971	0.064	0.211	0.080	0.264	0.1058	0.3472	0.0621	0.2038	0.0399	0.1309	0.0427	0.0130	0.081 + j0.045	0.436 + j0.319	11.4	356	333
CU260N03-040	1693	7530	0.051	0.167	0.064	0.210	0.1021	0.3348	0.0674	0.2210	0.0385	0.1262	0.0394	0.0120	0.065 + j0.043	0.415 + j0.301	14.3	403	367
CU260N03-250	2000	8896	0.043	0.141	0.054	0.178	0.0999	0.3279	0.0707	0.2320	0.0377	0.1236	0.0375	0.0114	0.055 + j0.042	0.400 + j0.285	16.9	455	411
CU260N03-350	2800	12455	0.031	0.101	0.039	0.128	0.0950	0.3116	0.0801	0.2628	0.0358	0.1175	0.0331	0.0101	0.040 + j0.040	0.375 + j0.259	23.7	537	459
CU260N03-500	4000	17793	0.022	0.071	0.028	0.091	0.0903	0.2962	0.0916	0.3006	0.0340	0.1117	0.0289	0.0088	0.029 + j0.038	0.351 + j0.230	33.9	616	499
CU260N03-750	6000	26689	0.014	0.047	0.019	0.063	0.0858	0.2815	0.1061	0.3483	0.0323	0.1061	0.0250	0.0076	0.020 + j0.037	0.324 + j0.196	50.8	716	557
CU260N03-1000	8000	35586	0.011	0.035	0.015	0.050	0.0827	0.2714	0.1192	0.3911	0.0312	0.1023	0.0223	0.0068	0.016 + j0.035	0.306 + j0.174	67.8	825	608

\* 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.

