CSA TRAY RATED

HVTC SPECIFICATIONS

HVTC AL 3/C 260EPR TS PVC 25KV 100% CSA

Southwire® CANADA

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
- 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
- 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.4/0 AWG = 0.11 inches (2.79mm)
  250 kcmil to 500 kcmil = 0.14 inches (3.56mm)

Typical Print Legend
- (CSA) SOUTHWIRE (NESC) #P# 3/C [#AWG or #kcmil] CPT AL 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

	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 **	
HVTC Product Code	AWG or Kcmil	inches	mm	inches	mm	inches	mm	AWG	inches	mm	inches	mm	lb / 1000ft	kg/km	lbs	kg	inches	m	feet	m
AL260K40-001	1(19)	0.299	7.6	0.849	21.6	0.929	23.6	6	2.270	57.7	15.9	404	2128	3166	10811	4904	108/70.5	2.74/1.79	4350	1326
AL260K40-010	1/0(19)	0.336	8.5	0.886	22.5	0.966	24.5	6	2.350	59.7	16.4	418	2288	3406	10022	4546	108/70.5	2.74/1.79	3700	1128
AL260K40-020	2/0(19)	0.376	9.6	0.926	23.5	1.006	25.6	6	2.436	61.9	17.1	433	2474	3682	10339	4690	108/70.5	2.74/1.79	3550	1082
AL260K40-030	3/0(19)	0.423	10.7	0.973	24.7	1.053	26.7	6	2.538	64.5	17.8	451	2700	4018	9519	4318	108/70.5	2.74/1.79	2950	899
AL260K40-040	4/0(19)	0.475	12.1	1.025	26.0	1.105	28.1	6	2.650	67.3	18.6	471	2967	4415	9862	4473	108/70.5	2.74/1.79	2800	853
AL260K40-250	250(37)	0.520	13.2	1.080	27.4	1.160	29.5	4	2.829	71.9	19.8	503	3444	5126	9477	4299	108/70.5	2.74/1.79	2300	701
AL260K40-350	350(37)	0.616	15.6	1.176	29.9	1.256	31.9	4	3.036	77.1	21.3	540	4011	5969	10178	4617	108/70.5	2.74/1.79	2150	655
AL260K40-500	500(37)	0.736	18.7	1.296	32.9	1.376	35.0	3	3.295	83.7	23.1	586	4830	7187	9282	4210	108/70.5	2.74/1.79	1600	488

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

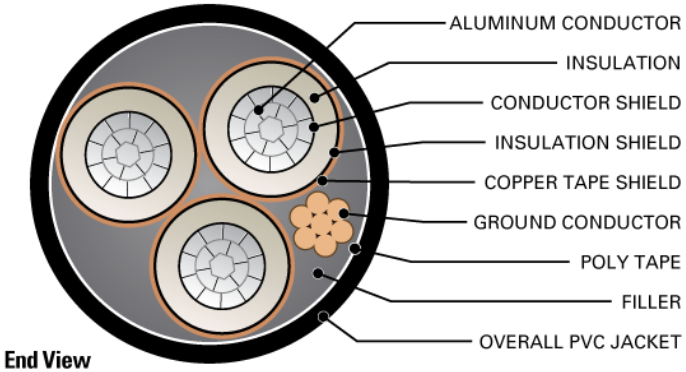
- FT1 - Flame Test - (1,706 BTU/Hr. nominal - Vertical Wire Flame Test)
- FT4, Flame Test - (70,000 BTU/Hr. - Vertical Tray Flame Test)
- IEEE 1202 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Test)
- IEEE 383 - Flame Test - (70,000 BTU/Hr.)
- ICEA T-29-520 - Vertical Cable Tray Flame Test - (210,000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



End View

TABLE 2 - ENGINEERING SPECIFICATIONS

HVTC Product Code	Maximum Pulling Tension		DC Resistance @ 25°C R_{DC}		AC Resistance @ 90°C 60 Hz (triplex formation) R_{AC}		Inductance L		Capacitance C		Inductive Reactance @ 60Hz (triplexed) X_L		Capacitive Reactance @ 60Hz (triplexed) X_C		Positive - Sequence Impedance*	Zero - Sequence Impedance*	Short Circuit Current (each phase conductor) @ 60Hz	Allowable Ampacities in Ventilated Cable Tray †	Allowable Ampacities Directly Buries 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
AL260K40-001	1506	6701	0.211	0.692	0.265	0.870	0.1212	0.3977	0.0471	0.1545	0.0457	0.1499	0.0563	0.0172	0.266 + j0.048	0.635 + j0.377	3.7	158	177
AL260K40-010	1901	8455	0.168	0.551	0.211	0.693	0.1167	0.3828	0.0507	0.1663	0.0440	0.1443	0.0523	0.0160	0.212 + j0.046	0.579 + j0.362	4.7	181	200
AL260K40-020	2396	10657	0.133	0.436	0.167	0.549	0.1125	0.3692	0.0545	0.1789	0.0424	0.1392	0.0486	0.0148	0.168 + j0.045	0.532 + j0.347	5.9	208	228
AL260K40-030	3020	13435	0.105	0.345	0.132	0.433	0.1084	0.3555	0.0590	0.1936	0.0408	0.1340	0.0450	0.0137	0.132 + j0.043	0.493 + j0.330	7.4	239	258
AL260K40-040	3809	16942	0.084	0.274	0.105	0.345	0.1045	0.3427	0.0639	0.2097	0.0394	0.1292	0.0415	0.0127	0.106 + j0.041	0.462 + j0.313	9.4	273	292
AL260K40-250	4500	20017	0.071	0.232	0.089	0.292	0.1021	0.3351	0.0672	0.2206	0.0385	0.1263	0.0394	0.0120	0.089 + j0.040	0.441 + j0.296	11.1	302	321
AL260K40-350	6300	28024	0.051	0.166	0.064	0.209	0.0970	0.3182	0.0760	0.2494	0.0366	0.1200	0.0349	0.0106	0.064 + j0.038	0.406 + j0.270	15.5	368	385
AL260K40-500	9000	40034	0.035	0.116	0.045	0.147	0.0921	0.3021	0.0869	0.2850	0.0347	0.1139	0.0305	0.0093	0.045 + j0.036	0.375 + j0.241	22.2	454	462

* 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.

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