

# FR-XLPE/PVC Shielded-Helical

## CONSTRUCTION AT A GLANCE

**CONDUCTOR TYPE** ①  
14 – 10 AWG COPPER

**INSULATION TYPE** ②  
FR-XLPE

**SHIELD TYPE** ③  
HELICAL COPPER TAPE

**JACKET TYPE** ④  
PVC

### APPLICATIONS

- Predominantly used in utility substations
- Can be installed indoors or outdoors, in cable trays, conduit, underground duct, or direct buried in wet or dry locations
- Conductor operating temperatures are not to exceed 90°C wet or dry
- Rated 600 Volts

### CONSTRUCTION DETAILS

- **Conductors**
  - 14 AWG thru 10 AWG Annealed Class B Copper Unilay Compressed Stranded
- **Insulation**
  - Flame Retardant Cross-Linked Polyethylene (FR-XLPE)
  - Color Coded per preferred method in ICEA S-73-532 standard
- **Assembly**
  - Cabled with non-hygroscopic polyethylene fillers in order to give the cable a circular cross-section, when needed
  - Wrapped with a Mylar binder
- **Shield**
  - Helically applied 5 mil annealed copper tape with a minimum overlap of 12.5%
- **Overall Jacket**
  - Heat, Moisture, and Sunlight Resistant Black Polyvinyl Chloride (PVC)
- **Print**
  - SOUTHWIRE XXAWG XX/C FR-XLPE (XHHW-2) CDRS 90C PVC JKT SHIELDED TYPE TC 600V SUN. RES. DIRECT BURIAL YEAR SEQUENTIAL FOOTAGE MARKS

### SPECIFICATIONS

Southwire's Type TC Substation Control Cable meets or exceeds:

- All applicable ASTM Standards
- ANSI/ICEA S-73-532
- UL 44 Type XHHW-2 rated VW-1
- UL 1277
- UL 1581
- IEEE 1202

- ICEA T-29-520
- RoHS Compliant

### OPTIONS

#### Strand:

- Stranding Classes – C, K
- Tin Coated Copper

#### Color Coding Methods:

- Color Coding per ICEA S-73-532
  - Method 1, Table E1
  - Method 1, Table E2
  - Method 4

- Custom, available upon request

#### Insulation:

- PE/PVC
- PE
- FR-XLPE
- THHN

#### Binder Tape:

- Flame Retardant

#### Shielded Constructions:

- CU LCT
- CU Helical Tape
- AL Helical Tape
- AL Longitudinal
- With drain wire

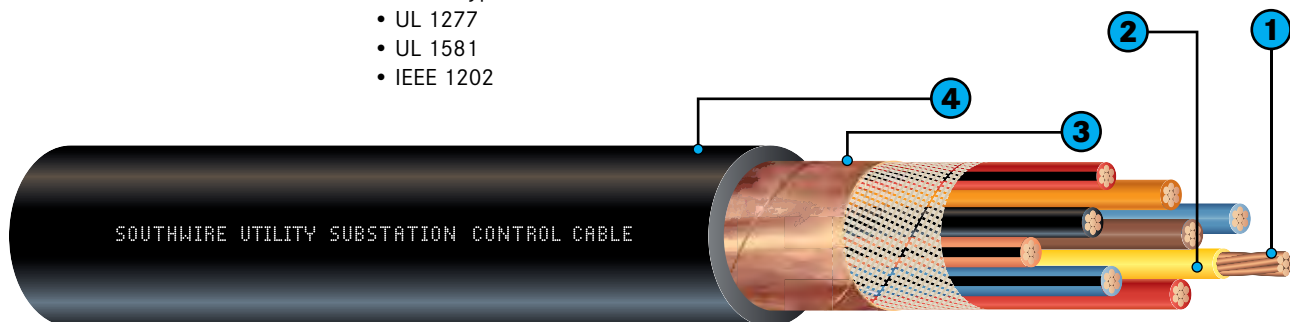
#### Jacket:

- PVC
- LSZH-TP
- LSZH-TS
- CPE-TP
- CPE-TS

#### Other:

- Rip cord
- 1000 Volt rated
- Custom print

Additional constructions available upon request



Number of Conductors	Conductor Size (AWG)	Copper Tape Shield Thickness (inches)	Nominal Jacket Thickness (inches)	Nominal Overall Diameter		Approximate Weight	
				(inches)	(mm)	(lbs/1000 ft)	(kg/km)
<b>Shielded AWG 14 (7 strands)</b>							
2	14	0.005	0.045	0.375	9.5	86	128
3	14	0.005	0.045	0.396	10.1	108	160
4	14	0.005	0.045	0.429	10.9	132	196
5	14	0.005	0.045	0.466	11.8	156	232
6	14	0.005	0.045	0.505	12.8	181	269
7	14	0.005	0.045	0.505	12.8	199	297
8	14	0.005	0.060	0.575	14.6	240	357
9	14	0.005	0.060	0.614	15.6	266	396
10	14	0.005	0.060	0.664	16.9	294	437
12	14	0.005	0.060	0.685	17.4	335	498
<b>Shielded AWG 12 (7 strands)</b>							
2	12	0.005	0.045	0.410	10.4	109	162
3	12	0.005	0.045	0.434	11.0	140	208
4	12	0.005	0.045	0.471	12.0	173	258
5	12	0.005	0.045	0.513	13.0	207	308
6	12	0.005	0.060	0.588	14.9	257	383
7	12	0.005	0.060	0.588	14.9	284	423
8	12	0.005	0.060	0.633	16.1	320	476
9	12	0.005	0.060	0.677	17.2	356	529
10	12	0.005	0.060	0.735	18.7	394	586
12	12	0.005	0.060	0.758	19.3	452	673
<b>Shielded AWG 10 (7 strands)</b>							
2	10	0.005	0.045	0.457	11.6	144	214
3	10	0.005	0.045	0.485	12.3	189	281
4	10	0.005	0.060	0.558	14.2	252	374
5	10	0.005	0.060	0.607	15.4	302	449
6	10	0.005	0.060	0.658	16.7	352	524
7	10	0.005	0.060	0.658	16.7	393	584
8	10	0.005	0.060	0.711	18.1	443	660
9	10	0.005	0.060	0.762	19.4	494	735
10	10	0.005	0.080	0.869	22.1	578	861
12	10	0.005	0.080	0.896	22.8	666	991

Dimensions and weights shown above are nominal and subject to industry tolerances.

