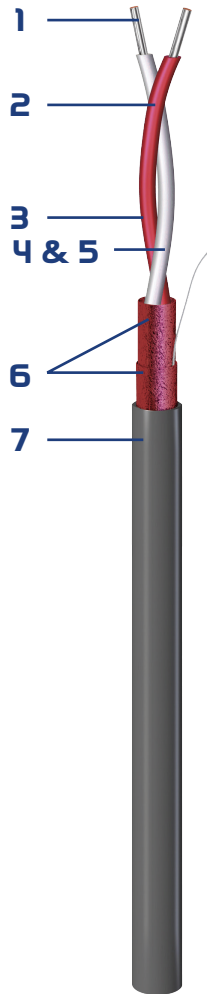
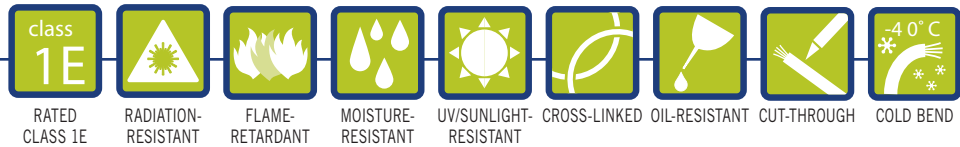


# ULTROL® 60+ Thermocouple Extension Cable

## Individually Shielded Pairs, Overall Shield

SPEC 185-60  
May, 2023

Class 1E Nuclear  
600 V, 90°C, VW-1



### Product Construction

#### 1. Conductor:

- 18AWG and 16AWG annealed, stranded 7/W thermocouple extension grade alloys calibrated to standard limits of error per ANSI-MC96.1, latest edition

#### 2. Insulation:

- Flame-retardant, heat-, moisture- and radiation-resistant, thermoset ULTROL® 60+ Cross-linked Polyethylene (FR-XLPE)

#### 3. Conductor Components:

- Insulated single conductors are matched and twisted into pairs

#### 4. Color Code:

- Negative conductor is red; positive conductor is color coded per ANSI-MC96.1 as follows:

Type	Pos. Cond	Overall Jacket
JX	White	Black
EX	Purple	Black
KX	Yellow	Black
TX	Blue	Black

- In multi-pair cables, pair number is printed alpha-numerically on the positive conductor

#### 5. Cable Core:

- Conductor components are cables with non-hygroscopic fillers and an overall binder tape as necessary

#### 6. Shields:

- Individually shielded: pairs are 100% shielded, helically applied with a copper/polyester tape in contact with a stranded tinned copper drain wire and an overall polyester electrical isolation tape
- Overall shield: copper/polyester tape in contact with a stranded tinned copper drain wire

#### 7. Jacket:

- Flame-retardant, moisture-, oil-, sunlight- and radiation-resistant thermoset, ULTROL® 60+ Cross-linked Polyolefin (XLPO) – Black

#### Print:

- PRYSMIAN GROUP (WC) ULTROL® 60+ XX/PR XXAWG TYPE EX OR JX OR KX OR TX FR-XLPE XLPO SHIELDED 600V 90C DAY/MONTH/YEAR TRACEABILITY NUMBER SEQUENTIAL FOOTAGE

### Applications:

- ULTROL® 60+ thermocouple extension cable is a 600 V individual shielded pairs with an overall shield, thermoset, Class 1E rated construction specifically designed for applications in nuclear generating stations
- Designed for use on critical circuits where total isolation is required between pairs and from external interference
- Can be installed in trays, conduit, ducts, or in direct burial applications

### Features:

- Rated at 90°C wet or dry
- Fully traceable
- Qualified for 60-year service life
- Gamma and Beta radiation resistant (up to 350 megarads)
- Submergence operability
- Long-term thermal endurance and superior electricals
- Excellent mechanical cut-through properties
- Long-term moisture and radiation stability
- Free stripping for ease of termination
- Meets cold bend test at -40°C

### Industry Compliances:

- Class 1E Qualified in accordance with IEEE 323-1974/2003 and IEEE 383-1974/2003
- ICEA S-73-532
- ANSI MC96.1

### Flame Test Compliances:

- IEEE 383:1974
- IEEE 383:2003
- ICEA T-29-520
- IEEE 1202/FT4-1991, Aged & Unaged
- VW-1

### Other:

- Quality assurance program in accordance with NRC 10CFR50 Appendix B
- ANSI N45.2
- ASME NQA-1
- NIAC
- NUPIC

### Packaging:

- Material to be shipped on non-returnable wooden reels

### Options:

- Other sizes and pair counts are available
- Special Limits of Error conductors are available

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CONDUCTOR TYPE	CONDUCTOR SIZE (AWG)	NO. OF PAIRS	MIN. AVG. INSULATION THICKNESS (INCHES)	DRAIN WIRE SIZE (AWG)	MIN. AVG. JACKET THICKNESS (INCHES)
JX, EX, KX, TX	18 and 16	1 - 12	.025	18 and 20	.045