Instrumentation Cable

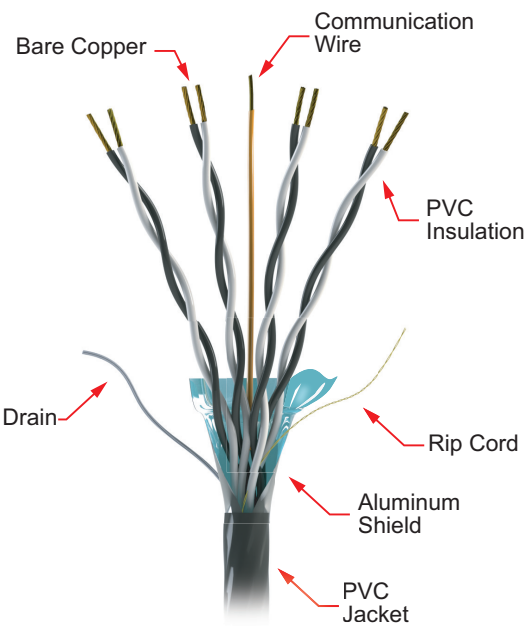
AutomationDirect offers 300V UL Instrumentation Cable available with 18AWG and 16AWG conductors in 1, 2, 4, or 8 twisted pairs with an overall shield or in 2, 4, or 8 individually shielded twisted pairs with an overall shield. The overall shielded cables have an aluminum/polyester foil shield with 100% coverage and a tinned copper continuous drain wire for protection against external electrical noise interference. Cables with both individually shielded pairs and an overall shield have aluminum/polyester foil shields with 100% coverage complete with separate tinned copper continuous drain wires for maximum effectiveness against both external electrical noise interference and crosstalk between pairs. Individual conductor pairs are stranded bare copper with black and white premium grade PVC insulation and marked with alpha-numeric print for easy identification. The cable's outer jacket is a black premium grade PVC that is sunlight and moisture resistant. A convenient 22AWG orange PVC insulated communications conductor is included on multi-pair cables. These cables are made in the USA and are available in 100 foot, 250 foot, or 1000 foot reels.

Our instrumentation cables are dual listed as UL 2250 Type ITC (Instrumentation Tray Cables) and UL 13 Type PLTC (Power Limited Tray Cables). Type ITC cables can be used for instrumentation and control circuits operating at 150 volts or less and 5 amperes or less as described in NEC Article 727. Type PLTC cables can be used for Class 2 and Class 3 remote-control, signaling, and power-limited circuits as described in NEC Article 725. Additionally these cables are permitted for use in hazardous locations as described in NEC Articles 501 through 505.

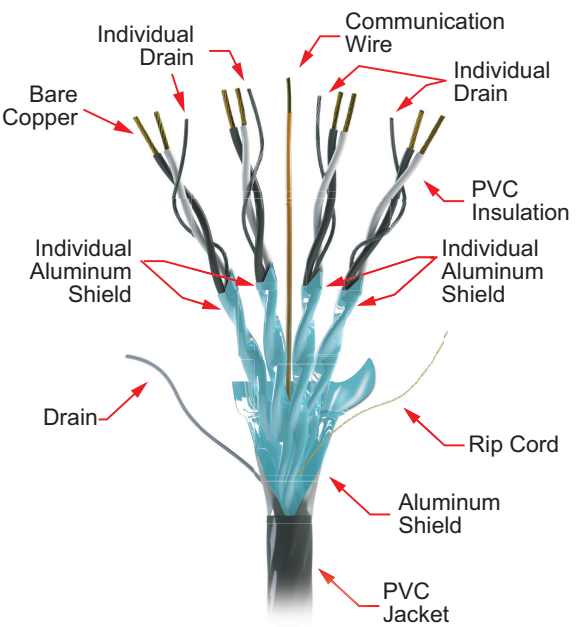
Features

- Typical applications include industrial instrumentation, control, alarm, audio, intercom, and energy management circuits
- Dual listed Type ITC and Type PLTC
- Suitable for use in hazardous locations
- 18AWG & 16AWG with 1, 2, 4 or 8 twisted pairs, overall shield or individually shielded pairs with overall shield
- Conductor pairs with black and white premium PVC insulation and alpha-numeric identification
- Communication (Talk) wire included on multi-pair cables for use during installation or instrument calibration
- Sunlight and moisture resistant PVC outer jacket with sequential foot markings
- 100 foot, 250 foot, or 1000 foot reels
- Made in the USA

Overall Cable Shield



Individual and Overall Cable Shields



18AWG Instrumentation Cable - Overall Shield

18AWG Instrumentation Cable - Overall Shield Specifications			
Conductor Gauge & Stranding	18AWG Class B 7 stranded bare copper per ASTM B-3 and B-8	***Print Legend****	CCI ROYAL 18 AWG XX SHIELDED PAIRS PVC/PVC TYPE PLTC/ITC E176494 (UL) 105C SUN RES FT4/IEEE 1202 --- SEQUENTIAL MARKING
Voltage Rating	300V	***Flame Rating***	Passes FT4/EEE 1202 Flame Test Passes IEEE 383 Flame Test (70,000btu)
Jacket Material	Sunlight resistant black PVC (polyvinyl chloride)	***Applicable Standards***	UL Standard 13 Type PLTC UL Standard 2250 Type ITC EPA 40 CFR, Part 26, Subpart C, heavy metals per Table 1, TCLP method NEC Article 725 (Type PLTC) NEC Article 727 (Type ITC) Hazardous Locations: NEC Article 501.10 (Class I, Div 2) NEC Article 502.10 (Class II, Div 2) NEC Article 503.10 (Class III, Div 1 and 2) NEC Article 504 (Intrinsically Safe Systems) NEC Article 505.15 (Class I, Zone 2)
Conductor Insulation	PVC		
Pair Lay Length	1.25 twists per inch		
Resistance	6.60Ω/1000' @ 20°C per conductor		
Conductor Markings	Black / White; Alpha-numeric print; alternate & inverted @ 2.5 inch intervals		
Temperature Rating	-30°C to 105°C (-22°F to 221°F)		
Shield and Drain Wire	Overall aluminum polyester foil shield with a tinned copper drain wire		
Communication Wire*	22AWG PVC (orange)		
Min. Bend Radius	10x diameter		

**** XX = Number of shielded pairs***
***** Included on multi-pair cables***

18AWG Instrumentation Cable - Overall Shield

Part Number	*Number of Pairs*	*AWG*	*Stranding*	*Overall Conductor Insulation Thickness (Mils)*	*Conductor Approx. O.D. (Inches)*	*Overall Jacket Thickness (Mils)*	*Nominal O.D. (Inches ±10%)*	*Installed Bend Radius (Inches)*	*Reel Length (ft)*	*Approx. Weight (lbs)*	*Price*
PLTC3-18-1S-100	1	18	7	15	0.0152	52	0.258	2.58	100	3.8	
PLTC3-18-1S-250									250	9.5	
PLTC3-18-1S-1000									1000	38.0	
PLTC3-18-2S-100	2						0.385	3.85	100	7.2	
PLTC3-18-2S-250									250	18.0	
PLTC3-18-2S-1000									1000	72.0	
PLTC3-18-4S-100	4						0.440	4.40	100	10.7	
PLTC3-18-4S-250									250	26.8	
PLTC3-18-4S-1000									1000	107.0	
PLTC3-18-8S-100	8					65	0.575	5.75	100	19.1	
PLTC3-18-8S-250									250	47.8	
PLTC3-18-8S-1000									1000	191.0	

Please Note: Our prices on instrumentation cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

16AWG Instrumentation Cable - Overall Shield

16AWG Instrumentation Cable - Overall Shield Specifications			
Conductor Gauge & Stranding	16AWG Class B 7 stranded bare copper per ASTM B-3 and B-8	***Print Legend****	CCI ROYAL 16 AWG XX SHIELDED PAIRS PVC/PVC TYPE PLTC/ITC E176494 (UL) 105C SUN RES FT4/IEEE 1202 --- SEQUENTIAL MARKING
Voltage Rating	300V	***Flame Rating***	Passes FT4/EEE 1202 Flame Test Passes IEEE 383 Flame Test (70,000btu)
Jacket Material	Sunlight resistant black PVC (polyvinyl chloride)	***Applicable Standards***	UL Standard 13 Type PLTC UL Standard 2250 Type ITC EPA 40 CFR, Part 26, Subpart C, heavy metals per Table 1, TCLP method NEC Article 725 (Type PLTC) NEC Article 727 (Type ITC) Hazardous Locations: NEC Article 501.10 (Class I, Div 2) NEC Article 502.10 (Class II, Div 2) NEC Article 503.10 (Class III, Div 1 and 2) NEC Article 504 (Intrinsically Safe Systems) NEC Article 505.15 (Class I, Zone 2)
Conductor Insulation	PVC		
Pair Lay Length	1.25 twists per inch		
Resistance	4.18Ω/1000' @ 20°C per conductor		
Conductor Markings	Black / White; Alpha-numeric print; alternate & inverted @ 2.5 inch intervals		
Temperature Rating	-30°C to 105°C (-22°F to 221°F)		
Shield and Drain Wire	Overall aluminum polyester foil shield with a tinned copper drain wire		
Communication Wire*	22AWG PVC (orange)		
Min. Bend Radius	10x diameter		

**** XX = Number of shielded pairs***
***** Included on multi-pair cables***

16AWG Instrumentation Cable - Overall Shield											
Part Number	***Number of Pairs***	***AWG***	***Stranding***	***Overall Conductor Insulation Thickness (Mils)***	***Conductor Approx. O.D. (Inches)***	***Overall Jacket Thickness (Mils)***	***Nominal O.D. (Inches ±10%)***	***Installed Bend Radius (Inches)***	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
PLTC3-16-1S-100	1	16	7	15	0.0152	52	0.282	2.82	100	4.9	
PLTC3-16-1S-250									250	12.3	
PLTC3-16-1S-1000									1000	49.0	
PLTC3-16-2S-100	2						0.407	4.07	100	8.4	
PLTC3-16-2S-250									250	21.0	
PLTC3-16-2S-1000									1000	84.0	
PLTC3-16-4S-100	4					65	0.516	5.16	100	15.4	
PLTC3-16-4S-250									250	38.5	
PLTC3-16-4S-1000									1000	154.0	
PLTC3-16-8S-100	8					75	0.662	6.62	100	27.0	
PLTC3-16-8S-250									250	67.5	
PLTC3-16-8S-1000									1000	270.0	

Please Note: Our prices on instrumentation cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

18AWG Instrumentation Cable - Individual and Overall Shields

18AWG Instrumentation Cable - Individual and Overall Shields Specifications			
Conductor Gauge & Stranding	18AWG Class B 7 stranded bare copper per ASTM B-3 and B-8	***Print Legend****	CCI ROYAL 18 AWG XX SHIELDED PAIRS PVC/PVC TYPE PLTC/ITC E176494 (UL) 105C SUN RES FT4/IEEE 1202 --- SEQUENTIAL MARKING
Voltage Rating	300V	***Flame Rating***	Passes FT4/EEE 1202 Flame Test Passes IEEE 383 Flame Test (70,000btu)
Jacket Material	Sunlight resistant black PVC (polyvinyl chloride)	***Applicable Standards***	UL Standard 13 Type PLTC UL Standard 2250 Type ITC EPA 40 CFR, Part 26, Subpart C, heavy metals per Table 1, TCLP method NEC Article 725 (Type PLTC) NEC Article 727 (Type ITC) Hazardous Locations: NEC Article 501.10 (Class I, Div 2) NEC Article 502.10 (Class II, Div 2) NEC Article 503.10 (Class III, Div 1 and 2) NEC Article 504 (Intrinsically Safe Systems) NEC Article 505.15 (Class I, Zone 2)
Conductor Insulation	PVC		
Pair Lay Length	1.25 twists per inch		
Resistance	6.60Ω/1000' @ 20°C per conductor		
Conductor Markings	Black / White; Alpha-numeric print; alternate & inverted @ 2.5 inch intervals		
Temperature Rating	-30°C to 105°C (-22°F to 221°F)		
Shield and Drain Wire	Individual and overall aluminum polyester foil shield with a tinned copper drain wire		
Communication Wire **	22AWG PVC (orange)		
Min. Bend Radius	10x diameter		

**** XX = Number of shielded pairs***
***** Included on multi-pair cables***

18AWG Instrumentation Cable - Individual and Overall Shields											
Part Number	***Number of Pairs***	***AWG***	***Stranding***	***Overall Conductor Insulation Thickness (Mils)***	***Conductor Approx. O.D. (Inches)***	***Overall Jacket Thickness (Mils)***	***Nominal O.D. (Inches ±10%)***	***Installed Bend Radius (Inches)***	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
PLTC3-18-2SS-100	2	18	7	15	0.0152	52	0.401	4.01	100	8.3	
PLTC3-18-2SS-250									250	20.8	
PLTC3-18-2SS-1000									1000	83.0	
PLTC3-18-4SS-100	4					65	0.490	4.90	100	13.9	
PLTC3-18-4SS-250									250	34.8	
PLTC3-18-4SS-1000									1000	139.0	
PLTC3-18-8SS-100	8						0.605	6.05	100	22.9	
PLTC3-18-8SS-250									250	57.3	
PLTC3-18-8SS-1000									1000	229.0	

Please Note: Our prices on instrumentation cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

16AWG Instrumentation Cable - Individual and Overall Shields

16AWG Instrumentation Cable - Individual and Overall Shields Specifications			
Conductor Gauge & Stranding	16AWG Class B 7 stranded bare copper per ASTM B-3 and B-8	***Print Legend****	CCI ROYAL 16 AWG XX SHIELDED PAIRS PVC/PVC TYPE PLTC/ITC E176494 (UL) 105C SUN RES FT4/IEEE 1202 --- SEQUENTIAL MARKING
Voltage Rating	300V	***Flame Rating***	Passes FT4/EEE 1202 Flame Test Passes IEEE 383 Flame Test (70,000btu)
Jacket Material	Sunlight resistant black PVC (polyvinyl chloride)	***Applicable Standards***	UL Standard 13 Type PLTC UL Standard 2250 Type ITC EPA 40 CFR, Part 26, Subpart C, heavy metals per Table 1, TCLP method NEC Article 725 (Type PLTC) NEC Article 727 (Type ITC) Hazardous Locations: NEC Article 501.10 (Class I, Div 2) NEC Article 502.10 (Class II, Div 2) NEC Article 503.10 (Class III, Div 1 and 2) NEC Article 504 (Intrinsically Safe Systems) NEC Article 505.15 (Class I, Zone 2)
Conductor Insulation	PVC		
Pair Lay Length	1.25 twists per inch		
Resistance	4.18Ω/1000' @ 20°C per conductor		
Conductor Markings	Black / White; Alpha-numeric print; alternate & inverted @ 2.5 inch intervals		
Temperature Rating	-30°C to 105°C (-22°F to 221°F)		
Shield and Drain Wire	Individual and overall aluminum polyester foil shield with a tinned copper drain wire		
Communication Wire*	22AWG PVC (orange)		
Min. Bend Radius	10x diameter		

**** XX = Number of shielded pairs***
***** Included on multi-pair cables***

16AWG Instrumentation Cable - Individual and Overall Shields											
Part Number	***Number of Pairs***	***AWG***	***Stranding***	***Overall Conductor Insulation Thickness (Mils)***	***Conductor Approx. O.D. (Inches)***	***Overall Jacket Thickness (Mils)***	***Nominal O.D. (Inches ±10%)***	***Installed Bend Radius (Inches)***	***Reel Length (ft)***	***Approx. Weight (lbs)***	***Price***
PLTC3-16-2SS-100	2	16	7	15	0.0152	52	0.443	4.43	100	10.6	
PLTC3-16-2SS-250									250	26.5	
PLTC3-16-2SS-1000									1000	106.0	
PLTC3-16-4SS-100	4					65	0.539	5.39	100	18.2	
PLTC3-16-4SS-250									250	45.5	
PLTC3-16-4SS-1000									1000	182.0	
PLTC3-16-8SS-100	8					75	0.690	6.90	100	32.3	
PLTC3-16-8SS-250									250	80.8	
PLTC3-16-8SS-1000									1000	323.0	

Please Note: Our prices on instrumentation cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.