

### STANDARD INSULATED THERMOCOUPLE EXTENSION WIRE

On this and the following pages are the details of the standard insulated thermocouple extension wires generally available for base and noble metal thermocouple installations. By using the tabulated wire insulation data below, one can select a wire suitable for most process applications. When process conditions require the use of a special construction wire, please provide complete process requirements and specifications with your request for quotation. Minimums of 2,000 feet are generally required for special constructions.

#### Extension Wire Types, Construction and Characteristics

##### ServTex Insulations

SINGLE CONDUCTOR			DUPLEX CONDUCTOR		TEMP. RATING <sup>[1]</sup>		PHYSICAL PROPERTIES			
Type	Insulation	Impregnation	Insulation	Impregnation	Continuous	ANSI Sgl. Reading	Color-Code	Abrasion-Resistance	Moisture-Resistance	Notes
155	Heavy fiberglass braid single insulation	Moisture resistant impregnation	ServTex Braid	Ceramic-like impregnation	288 °C [550 °F]	343 °C [650 °F]	Yes	Good	Fair	Impregnation retained to 200 °C [400 °F]
157	TFE tape (not fused). Heavy fiberglass braid single insulation	Modified resin	ServTex Braid	Moisture-resistant compound	288 °C [550 °F]	343 °C [650 °F]	Yes	Good	Fair	Impregnation retained to 204 °C [400 °F]; TFE good to 260 °C [500 °F]

##### Fiberglass Insulation

303	Enamel/glass braid 0.006"	Modified resin	Glass braid 0.006"	Modified resin	482 °C [900 °F]	538 °C [1000 °F]	Yes	Good	Fair	Impregnation retained to 204 °C [400 °F]
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##### Polyvinyl Insulations

SINGLE CONDUCTOR			DUPLEX CONDUCTOR		TEMP. RATING <sup>[1]</sup>		PHYSICAL PROPERTIES			
Type	Insulation	Impregnation	Insulation	Impregnation	Continuous	ANSI Sg. Reading	Color-Code	Abrasion-Resistance	Moisture-Resistance	Notes
502	Polyvinyl Extr. 0.012" to #20; #16 to 0.018"	None	Polyvinyl Extr., 0.016"	None	(-29 to 105) °C [-20 to +221] °F		Yes	Good	Excellent	
503	Polyvinyl Extr. 0.015"	None	Twisted w/cotton filler; PVC 0.030"	None	(-29 to 105) °C [-20 to +221] °F		Yes	Good	Excellent	Stranded conductors only
510	Polyvinyl Extr. 0.015"	None	Polyvinyl 0.020" Twisted	None	(-29 to 105) °C [-20 to +221] °F		Yes	Good	Excellent	Polyester shield for computer application #16 uses #18 drain wire; #20 uses #20 drain wire

##### Fluoropolymer Insulations

514	ETFE Extr., 0.008"	None	ETFE 0.0010"	None	150 °C [302 °F]	200 °C [392 °F]	Yes	Excellent	Excellent	
515	ETFE Extr., 0.008"	None	Twisted	None	150 °C [302 °F]	200 °C [392 °F]	Yes	Excellent	Excellent	Polyester shield w/20 AWG drain wire

[1] Thermocouple extension grade wire is only calibrated up to 204 °C [400 °F]