# Southwire® Machine Flex® CU 300/600V THHN Insulation Gray TPE Jacket. Silicone-Free

300V Type PLTC ITC Bare Copper Conductors PVC/Nylon Insulation with TPE Jacket Oil Res I/II 90C -40C Cold Impact Method 4 Identification. Silicone-Free




Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class M, Flexible stranded bare annealed copper per ASTM B174
2. **Insulation:** Polyvinyl Chloride (PVC) with nylon layer
3. **Ground:** One Green Ground with Yellow Stripe
4. **Jacket:** Gray Thermoplastic Elastomer TPE: Other jacket colors available upon request

## APPLICATIONS AND FEATURES:

Southwire's Machine Flex® Tray Control is a flexible 20 AWG 300/600V cable and suitable for machine tool, Power Limited Tray and Instrumentation Tray and both exposed run (PLTC-ER & ITC-ER) applications. This product conforms to the NFPA 79 and suited for use in wet and dry areas, conduits, ducts, troughs, trays and where superior electrical properties are desired. It has North American approvals, is CE RoHS-2 for universal use in, on and off the machines utilized in industrial manufacturing work centers. For use in Class 1 Div 2 locations per NEC 501 and 502. These cables can operate continuously at the conductor temperature not in excess of 90C, 130C for emergency overload and 150C for short circuit conditions. Suitable for use in CNC machines, processing and packaging equipment, assembly lines, control panels food and beverage and plant expansions.

## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B174 Standard Specification for Bunch-Stranded Copper
- UL 13 Power-Limited Circuit Cables
- UL 758 AWM Style 2587 Standard for Appliance Wiring Material
- UL 1063 Machine Tool Wiring (MTW)
- UL 2250 Instrumentation Tray Cable
- CSA C22.2 No. 210 Appliance wiring material products I/II A/B
- Exceeds Ecolab PM-40-1 Material Resistance Test With 30-day Exposure, UL Verified V747862
- **CE/RoHS-2 – The CE Marking has been applied solely to express the conformance to the material restrictions identified in the RoHS-2 (2011/65/EU) Directive**
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661



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## SAMPLE PRINT LEGEND:

Southwire EXXXXX (UL) Type PLTC XXAWG (XXmm²) XX/C PVC/Nylon 300V 90ºC Sun Res Oil Res I/II -40ºC or ITC or MTW Flexing 600V or AWM 2587 or -- LLXXXXXX CSA AWM I/II A/B 105C 600V -40ºC FT4 -- CE RoHS -2 Made in USA Sequential Footage


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## Table 1 – Physical and Electrical Data

| Stock Number | Cond. Size | Cond. Number | Cond. Strands | Diameter Over Cond. | Insul. Thickness | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight | DC Resistance @ 25°C | AC Resistance @ 75°C | Inductive Rectance | Min Bending Radius | Jacket Color |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AWG | No. | strands | inch | mil | mil | inch | lb / 1000ft | lb / 1000ft | Ω /1000ft | Ω /1000ft | Ω/1000ft | inch | |
| 20 AWG | | | | | | | | | | | | | | |
| 677511◊ | 20 | 3 | 26 | 0.037 | 15 | 45 | 0.264 | 9 | 33 | 4.487 | 5.569 | 0.027 | 1.1 | BK |
| 672434◊ | 20 | 4 | 26 | 0.037 | 15 | 45 | 0.285 | 12 | 41 | 4.487 | 5.569 | 0.027 | 1.1 | BK |
| 672437◊ | 20 | 5 | 26 | 0.037 | 15 | 45 | 0.307 | 15 | 48 | 4.487 | 5.569 | 0.027 | 1.2 | BK |
| 677513◊ | 20 | 7 | 26 | 0.037 | 15 | 45 | 0.331 | 21 | 60 | 4.487 | 5.569 | 0.027 | 1.3 | BK |
| 677515◊ | 20 | 9 | 26 | 0.037 | 15 | 60 | 0.42 | 27 | 89 | 4.487 | 5.569 | 0.027 | 1.7 | BK |
| 672439◊ | 20 | 12 | 26 | 0.037 | 15 | 60 | 0.439 | 36 | 103 | 4.487 | 5.569 | 0.027 | 1.8 | BK |
| 677517◊ | 20 | 18 | 26 | 0.037 | 15 | 60 | 0.519 | 55 | 147 | 4.487 | 5.569 | 0.027 | 2.1 | BK |
| 677519◊ | 20 | 25 | 26 | 0.037 | 15 | 60 | 0.598 | 76 | 194 | 4.487 | 5.569 | 0.027 | 2.4 | BK |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

***** Cond. Number includes green/yellow ground conductor. Constructions with only 2/C do not have a green/yellow ground conductor.

***** Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.

***** Ampacities have been adjusted for more than Three Current-Carrying Conductors.

TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.


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