



Product: [7403WS](#)

MachFlex™, 4+1G C #20 Str BC, PVC Ins, OA TC Brd, TPE Jkt, PLTC

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Product Description

MachFlex™ for High Flex, 4+1G Conductor 20AWG (19x32) Bare Copper, PVC Insulation, Overall Tinned Copper Braid(85%) Shield, TPE Outer Jacket, PLTC

Technical Specifications

Product Overview

|                        |                                  |
|------------------------|----------------------------------|
| Suitable Applications: | Robotics, Robot, Continuous Flex |
|------------------------|----------------------------------|

Construction Details

Conductor

| Element      | No. of Elements | Size   | Stranding | Material         |
|--------------|-----------------|--------|-----------|------------------|
| Conductor(s) | 4               | 20 AWG | 19x32     | BC - Bare Copper |
| Ground Wire  | 1               | 20 AWG | 19x32     | BC - Bare Copper |

Insulation

| Element      | Material                 | Nom. Thickness     | Nom. Insulation Diameter | Color Code         |
|--------------|--------------------------|--------------------|--------------------------|--------------------|
| Conductor(s) | PVC - Polyvinyl Chloride | 0.015 in (0.38 mm) | 0.066 in (1.7 mm)        | Black and Numbered |
| Ground Wire  | PVC - Polyvinyl Chloride | 0.015 in (0.38 mm) | 0.066 in (1.7 mm)        | Green/Yellow       |

Outer Shield

| Shield Type | Material           | Coverage |
|-------------|--------------------|----------|
| Braid       | Tinned Copper (TC) | 85%      |

Inner Jacket

| Separator      | Material                      | Nom. Thickness     | Nom. Diameter      | Color  |
|----------------|-------------------------------|--------------------|--------------------|--------|
| non-Woven Tape | TPE - Thermoplastic Elastomer | 0.025 in (0.64 mm) | 0.233 in (5.92 mm) | Chrome |

Outer Jacket

| Material                      | Nom. Thickness    | Nom. Diameter |
|-------------------------------|-------------------|---------------|
| TPE - Thermoplastic Elastomer | 0.042 in (1.1 mm) | 0.339 in      |

|                                   |          |
|-----------------------------------|----------|
| Overall Cable Diameter (Nominal): | 0.339 in |
|-----------------------------------|----------|

Electrical Characteristics

Electricals

| Element      | Nom. Conductor DCR            | Max. Current                    |
|--------------|-------------------------------|---------------------------------|
| Conductor(s) | 10.7 Ohm/1000ft               | 7.2 Amps per Conductor at 30°C  |
| Ground Wire  | 10.7 Ohm/1000ft (35.1 Ohm/km) | 14.4 Amps per Conductor at 30°C |

Voltage

| UL Voltage Rating | Voltage Rating |
|-------------------|----------------|
| 300 V             | 600 V          |

Mechanical Characteristics

Temperature

| UL Temperature               | Operating      |
|------------------------------|----------------|
| UL : 90°C, AWM 20327 : 105°C | -40°C To 105°C |

Bend Radius

| Stationary Min.   | Installation Min. |
|-------------------|-------------------|
| 3.39 in (86.1 mm) | 3.39 in           |

|                    |                |
|--------------------|----------------|
| Max. Pull Tension: | 75 lbs (34 kg) |
| Bulk Cable Weight: | 76 lbs/1000ft  |

Standards and Compliance

|                                  |   |
|----------------------------------|---|
| Environmental Suitability:       | Outdoor, Sunlight Resistance, UV Resistance, Oil Resistance   |
| Flammability / Reaction to Fire: | UL1685 UL Loading, IEEE 1202 FT4  |
| NEC / UL Compliance:             | Article 725, PLTC   |
| AWM Compliance:                  | AWM 20327, AWM I/II A/B   |
| European Directive Compliance:   | EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE) |
| APAC Compliance:                 | China RoHS II (GB/T 26572-2011)   |

History

|                      |  |
|----------------------|--|
| Update and Revision: | Revision Number: 0.388 Revision Date: 01-10-2024 |
|----------------------|--|

Part Numbers

Variants

| Item #         | Color  | Putup Type | Length   | UPC          | Footnote |
|----------------|--------|------------|----------|--------------|----------|
| 7403WS 060250  | Chrome | Reel       | 250 ft   | 612825185413 | C        |
| 7403WS 0601000 | Chrome | Reel       | 1,000 ft | 612825185406 | C        |
| 7403WS 0605000 | Chrome | Reel       | 5,000 ft | 612825185420 |          |

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