



Product: [73003WS](#)

MachFlex™, 3 C #20 Str BC, PVC Ins, OA TC Brd, PVC Jkt, PVC Jkt, AWM 2587 CLASS K

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Product Description

MachFlex™ for Moderate Flex, 3 Conductor 20AWG (10x30) Bare Copper, PVC Insulation, Overall Tinned Copper Braid(85%) Shield, PVC Inner Jacket, PVC Outer Jacket, AWM 2587 CLASS K

Technical Specifications

Product Overview

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

Physical Characteristics (Overall)

Conductor

| Element | AWG | Stranding | Material | No. of Conductors |
|--------------|-----|-----------|------------------|-------------------|
| Conductor(s) | 20 | 10x30 | BC - Bare Copper | 2 |
| Ground | 20 | 10x30 | BC - Bare Copper | 1 |

| | |
|------------------|---|
| Conductor Count: | 3 |
|------------------|---|

Insulation

| Element | Material | Nominal Diameter | Nominal Wall Thickness |
|--------------|--------------------------|------------------|------------------------|
| Conductor(s) | PVC - Polyvinyl Chloride | 0.081 in | 0.022 in |
| Ground | PVC - Polyvinyl Chloride | | |

Color Chart

| Color |
|--------------------|
| Black and Numbered |

Inner Jacket

| Material | Nominal Diameter | Nominal Wall Thickness |
|--------------------------|------------------|------------------------|
| PVC - Polyvinyl Chloride | .339 in | .030 in |

Outer Shield

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

Outer Jacket

| Material | Nominal Diameter | Nominal Wall Thickness |
|--------------------------|------------------|------------------------|
| PVC - Polyvinyl Chloride | 0.339 in | 0.035 in |

Electrical Characteristics

Conductor DCR

| Nominal Conductor DCR | Nominal Outer Shield DCR |
|-----------------------|--------------------------|
| 10.7 Ohm/1000ft | 3.5 Ohm/1000ft |

Capacitance

| Nom. Capacitance Conductor to Conductor |
|---|
| 38 pF/ft |

Inductance

| Nominal Inductance |
|--------------------|
| .210 µH/ft |

Voltage

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

Temperature Range

| | |
|------------------------------|--|
| UL Temp Rating: | 90°C |
| Operating Temperature Range: | -40°C To 90°C (Static), -5°C To 90°C (Flexing) |

Mechanical Characteristics

| | |
|--|------------------|
| Oil Resistance: | Yes |
| Flex Cycle Rating: | 1 Million Cycles |
| Bulk Cable Weight: | 137 lbs/1000ft |
| Max. Pull Tension: | 30 lbs |
| Min. Bend Radius (Continuous Flexing): | 2.7 in |
| Min. Bend Radius/Minor Axis: | 2.7 in |

Standards

| | |
|--------------------------|--------------|
| NEC/(UL) Compliance: | THHN, THWN |
| UL AWM Style Compliance: | AWM 2587 |
| CSA AWM Compliance: | AWM I/II A/B |

Applicable Environmental and Other Programs

| | |
|--|-------------------------------|
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2003/11/EC (BFR): | Yes |
| EU Directive 2011/65/EU (RoHS 2): | Yes |
| EU Directive 2012/19/EU (WEEE): | Yes |
| EU Directive 2015/863/EU (RoHS 2 amendment): | Yes |
| EU Directive Compliance: | EU Directive 2003/11/EC (BFR) |
| EU CE Mark: | Yes |

Flammability, LS0H, Toxicity Testing

| | |
|--------------------|-----------|
| CSA Flammability: | FT1 |
| UL voltage rating: | 600 V RMS |

Related Part Numbers

Variants

| Item # | Color | Put-Up Type | UPC |
|-----------------|-------|-------------|--------------|
| 73003WS 008100 | Gray | Reel | 612825409014 |
| 73003WS 0081000 | Gray | Reel | 612825409021 |
| 73003WS 008500 | Gray | Reel | 612825409038 |

History

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| Update and Revision: | Revision Number: 0.265 Revision Date: 12-22-2023 |
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