

# Product: 7102W

MachFlex™, 3+1G C #20 Str BC, PVC Ins, TPE Jkt, PLTC

Request Sample

## Product Description

MachFlex™ for High Flex, 3+1G Conductor 20AWG (74x38) Bare Copper, PVC Insulation, 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) | 3 | 20 AWG | 74x38 | BC - Bare Copper |
| Ground Wire | 1 | 20 AWG | 74x38 | BC - Bare Copper |

**Insulation**

| Element | Material | Nom. Thickness | Nom. Insulation Diameter | Color Code |
|---|---|---|---|---|
| Conductor(s) | PVC - Polyvinyl Chloride | 0.015 in (0.38 mm) | 0.074 in (1.9 mm) | Black and Numbered |
| Ground Wire | PVC - Polyvinyl Chloride | 0.015 in (0.38 mm) | 0.074 in (1.9 mm) | Green/Yellow |

**Outer Shield**

| Material |
|---|
| No Shield |

**Outer Jacket**

| Separator | Material | Nom. Thickness | Nom. Diameter |
|---|---|---|---|
| non-Woven Tape | TPE - Thermoplastic Elastomer | 0.037 in (0.94 mm) | 0.256 in |

| | |
|---|---|
| Overall Cable Diameter (Nominal): | 0.256 in |

### Electrical Characteristics

**Electricals**

| Element | Nom. Conductor DCR | Max. Current |
|---|---|---|
| Conductor(s) | 10.7 Ohm/1000ft | 9 Amps per Conductor at 30ºC |
| Ground Wire | 10.7 Ohm/1000ft (35.1 Ohm/km) | 14.4 Amps per Conductor at 30ºC |

**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. |
|---|---|
| 2.56 in (65.0 mm) | 2.56 in |

| | |
|---|---|
| Max. Pull Tension: | 50.4 lbs (22.9 kg) |
| Bulk Cable Weight: | 40 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: 0.380 Revision Date: 01-10-2024 |

## Part Numbers

**Variants**

| Item # | Color | Putup Type | Length | UPC | Footnote |
|---|---|---|---|---|---|
| 7102W 003250 | Orange | Reel | 250 ft | 612825181941 | C |
| 7102W 0031000 | Orange | Reel | 1,000 ft | 612825181934 | C |
| 7102W 0035000 | Orange | Reel | 5,000 ft | 612825181958 | |

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