# BELDEN

**Product:** [7125W](#) ⧉

# MachFlex™, 6+1G C #16 Str BC, PVC-NYL Ins, TPE Jkt, 1000V WTTC, 600V TC-ER

**⚏ Request Sample**

## Product Description

MachFlex™ for High Flex, 6+1G Conductor 16AWG (168(7x24) x38) Bare Copper, PVC-NYL Insulation, TPE Outer Jacket, 1000V WTTC, 600V TC-ER

## Technical Specifications

### Product Overview

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

### Construction Details

**Conductor**

| Element | No. of Elements | Size | Stranding | Material |
|---|---|---|---|---|
| Conductor(s) | 6 | 16 AWG | 168x38 | BC - Bare Copper |
| Ground Wire | 1 | 16 AWG | 168x38 | BC - Bare Copper |

**Insulation**

| Element | Material | Nom. Thickness | Nom. Insulation Diameter | Color Code |
|---|---|---|---|---|
| Conductor(s) | PVC/Nylon - Polyvinyl Chloride + Nylon | 0.021 in (0.53 mm) | 0.109 in (2.77 mm) | Black and Numbered |
| Ground Wire | PVC/Nylon - Polyvinyl Chloride + Nylon | 0.021 in (0.53 mm) | 0.109 in (2.77 mm) | Green/Yellow |

**Outer Shield**

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

**Outer Jacket**

| Separator | Material | Nom. Thickness | Nom. Diameter |
|---|---|---|---|
| non-Woven Tape | TPE - Thermoplastic Elastomer | 0.047 in (1.2 mm) | 0.46 in |

| Overall Cable Diameter (Nominal): | 0.46 in |
|---|---|

### Electrical Characteristics

**Electricals**

| Element | Nom. Conductor DCR | Max. Current |
|---|---|---|
| Conductor(s) | 4.18 Ohm/1000ft | 13.3 Amps per Conductor at 30ºC |
| Ground Wire | 4.45 Ohm/1000ft (14.6 Ohm/km) | 30.4 Amps per Conductor at 30ºC |

**Voltage**

| UL Voltage Rating |
|---|
| 1000 V (WTTC), 600 V (TC-ER) |

### Mechanical Characteristics

**Temperature**

| UL Temperature | Operating |
|---|---|
| UL : 90°C Dry, 75°C Wet; AWM 20328 : 105°C | -40°C To 105°C |

**Bend Radius**

| Stationary Min. | Installation Min. |
|---|---|
| 1.84 in (46.7 mm) | 2.3 in |

| | |
|---|---|
| Max. Pull Tension: | 257.7 lbs (116.9 kg) |
| Bulk Cable Weight: | 126 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 336 |
| AWM Compliance: | AWM 20328, AWM I/II A/B |
| CEC / C(UL) Compliance: | CIC, TC |
| 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: 0.385 Revision Date: 01-10-2024 |

## Part Numbers

**Variants**

| Item # | Color | Putup Type | Length | UPC | Footnote |
|---|---|---|---|---|---|
| 7125W 003250 | Orange | Reel | 250 ft | 612825182368 | C |
| 7125W 0035000 | Orange | Reel | 5,000 ft | 612825182375 | |

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7125W 003250