



Product: [7453W](#)

MachFlex™, 3+1 C #6 Str BC, PVC-NYL Ins, TPE Jkt, 1000V WTTC, 600V TC-ER

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Product Description

MachFlex™ for High Flex, 3+1 Conductor 6AWG (259(7x37)x30) 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) | 3 | 6 AWG | 259x30 | BC - Bare Copper |
| Ground Wire | 1 | 6 AWG | 259x30 | BC - Bare Copper |

Insulation

| Element | Material | Nom. Thickness | Nom. Insulation Diameter | Color Code |
|--------------|--|--------------------|--------------------------|--------------------|
| Conductor(s) | PVC/Nylon - Polyvinyl Chloride + Nylon | 0.033 in (0.84 mm) | 0.276 in (7.01 mm) | Black and Numbered |
| Ground Wire | PVC/Nylon - Polyvinyl Chloride + Nylon | 0.033 in (0.84 mm) | 0.276 in (7.01 mm) | Green/Yellow |

Outer Shield

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

Outer Jacket

| Separator | Material | Nom. Thickness | Nom. Diameter |
|----------------|-------------------------------|-------------------|---------------|
| non-Woven Tape | TPE - Thermoplastic Elastomer | 0.085 in (2.2 mm) | 0.875 in |

| | |
|-----------------------------------|----------|
| Overall Cable Diameter (Nominal): | 0.875 in |
|-----------------------------------|----------|

Electrical Characteristics

Electricals

| Element | Nom. Conductor DCR | Max. Current |
|--------------|------------------------------|-------------------------------|
| Conductor(s) | 0.41 Ohm/1000ft | 62 Amps per Conductor at 25°C |
| Ground Wire | 0.41 Ohm/1000ft (1.3 Ohm/km) | 62 Amps per Conductor at 25°C |

Voltage

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

Mechanical Characteristics

Temperature

| UL Temperature | Operating |
|--|-----------------|
| TC-ER: 90°C Dry, 75°C Wet; AWM 20328: 105°C; AWM I/II A/B: 105°C | -40°C To +105°C |

Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 3.5 in (89 mm) | 4.37 in |

| | |
|--------------------|------------------------|
| Max. Pull Tension: | 1346.8 lbs (610.90 kg) |
| Bulk Cable Weight: | 591 lbs/1000ft |

Standards and Compliance

| | |
|----------------------------------|---|
| Environmental Suitability: | Indoor, Outdoor, Sunlight 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: 0.259 Revision Date: 01-10-2024 |
|----------------------|--|

Part Numbers

Variants

| Item # | Color | Putup Type | Length | UPC | Footnote |
|--------------|--------|------------|--------|--------------|----------|
| 7453W 060250 | Chrome | Reel | 250 ft | 612825187035 | C |

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