



Product: [77003WS](#)

MachFlex™, 3+1G C #20 Str BC, PVC Ins, OA TC Brd, PVC Jkt, PVC Jkt, AWM 2587

[Request Sample](#)

Product Description

MachFlex™ for High Flex, 3+1G Conductor 20AWG (63(7x9)x38) Bare Copper, PVC Insulation, Overall Tinned Copper Braid(85%) Shield, PVC Inner Jacket, PVC Outer Jacket, AWM 2587

Technical Specifications

Product Overview

Suitable Applications:	Robotics, Robot, Continuous Flex
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Physical Characteristics (Overall)

Conductor

Element	AWG	Stranding	Material	No. of Conductors
Conductor(s)	20	63x38	BC - Bare Copper	2
Ground	20	63x38	BC - Bare Copper	1

Conductor Count:	3
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Insulation

Element	Material	Nominal Diameter	Nominal Wall Thickness
Conductor(s)	PVC - Polyvinyl Chloride	0.084 in	0.022 in
Ground	PVC - Polyvinyl Chloride		

Color Chart

Color
Red and Numbered

Inner Jacket

Material	Nominal Diameter	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.252 in	0.025 in

Outer Shield

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

Outer Jacket

Material	Nominal Diameter	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.350 in	0.035 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR
10.7 Ohm/1000ft

Capacitance

Nom. Capacitance Conductor to Conductor
40 pF/ft

Inductance

Nominal Inductance
.20 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:	14 Million Cycles
Bulk Cable Weight:	142 lbs/1000ft
Max. Pull Tension:	30 lbs
Min. Bend Radius (Continuous Flexing):	2.8 in
Min. Bend Radius/Minor Axis:	2.8 in

Standards

UL AWM Style Compliance:	AWM 2587, AWM 10012
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
77003WS 010100	Black	Reel	612825411994
77003WS 0101000	Black	Reel	612825412007

History

Update and Revision:	Revision Number: 0.137 Revision Date: 03-27-2024
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