



Product: [7111WS](#)

MachFlex™, 3+1G C #18 Str BC, PVC-NYL Ins, TPE Jkt, TPE Jkt, 1000V WTTC, 600V TC-ER

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Product Description

MachFlex™ for High Flex, 3+1G Conductor 18AWG (105x38) Bare Copper, PVC-NYL Insulation, TPE Inner Jacket, TPE Outer Jacket, 1000V WTTC, 600V TC-ER

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
	18	105x38	BC - Bare Copper	3
Ground Wire	18	105x38	BC - Bare Copper	1

Conductor Count:	4
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Insulation

Material	Nominal Diameter
PVC/Nylon - Polyvinyl Chloride + Nylon	0.089 in

Color Chart

Number	Color
1	Black and Numbered 1
2	Black and Numbered 2
3	Black and Numbered 3
4	Green/Yellow

Inner Jacket

Material	Nominal Diameter	Nominal Wall Thickness
TPE - Thermoplastic Elastomer	0.269 in	0.025 in

Outer Shield

Type	Material	Coverage [%]	Nominal Diameter
Braid	Tinned Copper (TC)	85%	0.297 in

Outer Jacket

Material	Nominal Diameter	Nominal Wall Thickness
TPE - Thermoplastic Elastomer	0.391 in	0.047 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR
5.7 Ohm/1000ft

Voltage

UL Voltage Rating
1000 V RMS
600 V RMS

Temperature Range

UL Temp Rating:	75°C Dry, 90°C Wet
Other Temp Range:	Flexing: -5°C To +90 °C

Mechanical Characteristics

Oil Resistance:	Yes
UV Resistance:	Yes
Flex Cycle Rating:	10 Million Flexes
Bulk Cable Weight:	96 lbs/1000ft
Max. Pull Tension:	92 lbs
Min. Bend Radius (Continuous Flexing):	3.9 in

Standards

NEC/(UL) Compliance:	TC-ER, W TTC
CEC/C(UL) Compliance:	CIC, TC
UL AWM Style Compliance:	AWM 20328
CSA AWM Compliance:	AWM I/II A/B

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/96/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)
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	Yes - Oil Res II
Suitability - Sunlight Resistance:	Yes

Flammability, LS0H, Toxicity Testing

UL Flammability:	UL1685 UL Loading
CSA Flammability:	FT4
IEEE Flammability:	IEEE 1202
UL voltage rating:	1000 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
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Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	UPC
7111WS 0031000	Orange	Reel	1,000 ft	612825182184
7111WS 0035000	Orange	Reel	5,000 ft	612825182207

Footnote:	C - CRATE REEL PUT-UP.
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History

Update and Revision:	Revision Number: 0.392 Revision Date: 02-03-2025
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