



**Product:** [7111W](#)

MachFlex™, 3+1G C #18 Str BC, PVC-NYL Ins, 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 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

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

**Outer Shield**

Material
No Shield

Material	Nominal Diameter	Nominal Wall Thickness
TPE - Thermoplastic Elastomer	0.313 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:	58 lbs/1000ft
Max. Pull Tension:	92 lbs
Min. Bend Radius (Continuous Flexing):	3.1 in

Standards

NEC/(UL) Compliance:	TC-ER, WTTC
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
7111W 003250	Orange	Reel	250 ft	612825182160
7111W 0031000	Orange	Reel	1,000 ft	612825182153
7111W 0035000	Orange	Reel	5,000 ft	612825182177

Footnote:	C - CRATE REEL PUT-UP.
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History

Update and Revision:	Revision Number: 0.376 Revision Date: 01-10-2024
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Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.