

Product: 7417WS

MachFlex™, 24+1G C #18 Str BC, PVC-NYL Ins, OA TC Brd, TPE Jkt, 1000V WTTC, 600V TC-ER

Request Sample

Product Description

MachFlex™ for High Flex, 24+1G Conductor 18AWG (16x30) Bare Copper, PVC-NYL Insulation, Overall Tinned Copper Braid(85%) Shield, 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)	24	18 AWG	16x30	BC - Bare Copper
Ground Wire	1	18 AWG	16x30	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)	0.089 in (2.3 mm)	Black and Numbered, Green/Yellow
Ground Wire	PVC/Nylon - Polyvinyl Chloride + Nylon	0.021 in (0.53 mm)	0.089 in (2.3 mm)	Green/Yellow

Outer Shield

Shield Type	Material	Coverage
Braid	Tinned Copper (TC)	85%

Inner Jacket

Separator	Material	Nom. Thickness	Nom. Diameter	Color
non-Woven Tape	TPE - Thermoplastic Elastomer	0.25 in (6.4 mm)	0.602 in (15.3 mm)	Chrome

Outer Jacket

Material	Nom. Thickness	Nom. Diameter
TPE - Thermoplastic Elastomer	0.063 in (1.6 mm)	0.756 in

Overall Cable Diameter (Nominal):	0.756 in

Electrical Characteristics

Electricals

Element	Nom. Conductor DCR	Max. Current
Conductor(s)	6.5 Ohm/1000ft	9 Amps per Conductor at 30ºC
Ground Wire	7.06 Ohm/1000ft (23.2 Ohm/km)	24 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.
3.02 in (76.7 mm)	3.78 in

Max. Pull Tension:	520 lbs (240 kg)
Bulk Cable Weight:	342 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: 0.188 Revision Date: 01-10-2024

Part Numbers

Variants

Item #	Color	Putup Type	Length	UPC	Footnote
7417WS 060250	Chrome	Reel	250 ft	612825186090	C
7417WS 0601000	Chrome	Reel	1,000 ft	612825186083	C

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