



Product: [MRTC12C21U](#)

MachFlex™ Robotic Multi-Core Control, 12 C 21 AWG Str TC, ETFE Ins, PVC Outer Jkt

Product Description

MachFlex™ Robotic Multi-Core Control & Signal Cable, 12 Conductor 21 AWG Stranded Tinned Copper, ETFE Insulation, PVC Outer Jacket

Technical Specifications

Product Overview

Suitable Applications:	MachFlex Robotic AWM 2517, Multi-Core Cables are meeting the high demands of the robotic industry on the cabling of continuous moving machinery and the corresponding robotic components. These cables are specially designed for high mechanical requirements, they can withstand highly dynamic bending and torsional movements, and can be used in crucial industrial environments
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Construction Details

Conductor

Element	No. of Elements	Size	Stranding	Material
Conductor(s)	12	21 AWG	Stranded	TC - Tinned Copper

Insulation

Material	Color Code
ETFE - Ethylene Tetrafluoroethylene	Black, White, Red, Green, Orange, Blue, White with Black Strips, Red with Black Strips, Green with Black Strips, Orange with Black Strips, Blue with Black Strips, Black with White Strips

Outer Jacket

Material	
PVC - Polyvinyl Chloride	
Overall Cable Diameter (Nominal):	7.3 mm (0.29 in)

Electrical Characteristics

Electricals

Max. Conductor DCR
46.9 Ohm/km (14.3 Ohm/1000ft)

Voltage

UL Voltage Rating
300 V (Max. Operating Voltage)

Mechanical Characteristics

Temperature

Operating	
-40°C to +105°C	
Table Notes:	±90° Bending: Min. 8 million cycles (Speed: 60 cycles/min.; Bending radius: 7.5D) ; Drag Chain: Min. 25 million cycles (Traversing distance: 350mm; Speed: 70 cycles/min; Bending radius: 6D) ; Vertical Torsion Test +/-180°/m: Min. 8 million cycles ; Horizontal Torsion Test +/-90°/m: Min. 8 million cycles.
Bulk Cable Weight:	102.8 kg/km (69.08 lbs/1000ft)

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Oil Resistance
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Flammability / Reaction to Fire:	FT1, FT4, VW-1, IEC 60332-1-2
AWM Compliance:	AWM 2517
CEC / C(UL) Compliance:	CSA C22.2 No.210
European Directive Compliance:	EU Directive 2011/65/EU (RoHS 2)
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Product Notes

Notes:	UL certification : UL 13. Suitability -Oil Resistant : IRM 902 120x18hrs, IRM 903 120x18hrs
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History

Update and Revision:	Revision Number: 0.22 Revision Date: 05-31-2024
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Part Numbers

Variants

Item #	Color	Length
MRTC12C21U G8U100M	Gray	100 m
MRTC12C21U G8U200M	Gray	200 m
MRTC12C21U G8U300M	Gray	300 m
MRTC12C21U 003100M	Orange	100 m
MRTC12C21U 003200M	Orange	200 m
MRTC12C21U 003300M	Orange	300 m

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