



**Product:** [MRTC12C21S](#)

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

### Product Description

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

#### 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 Shield

Shield Type	Material
Braid	Tinned Copper (TC)

##### Outer Jacket

Material	
PVC - Polyvinyl Chloride	
Overall Cable Diameter (Nominal):	8 mm (0.31 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:	129.3 kg/km (86.89 lbs/1000ft)
--------------------	--------------------------------

## Standards and Compliance

Environmental Suitability:	IndoorOutdoor, Indoor, Outdoor, Oil Resistance
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
--------	---

## History

Update and Revision:	Revision Number: 0.20 Revision Date: 05-31-2024
----------------------	---

## Part Numbers

### Variants

Item #	Color	Length
MRTC12C21S G8U100M	Gray	100 m
MRTC12C21S G8U200M	Gray	200 m
MRTC12C21S G8U300M	Gray	300 m
MRTC12C21S 003100M	Orange	100 m
MRTC12C21S 003200M	Orange	200 m
MRTC12C21S 003300M	Orange	300 m

© 2024 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

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.