

# Datamate Mix-Tek Specification

## Materials

Housings:	Glass-filled thermoplastic UL94V-0
Female contacts:	Brass shell, with Beryllium Copper inner contact
Male contacts:	Copper alloy
Finish:	See individual pages

## Electrical

<b>Current</b>	
Individual contacts in isolation:	3.3A max (at 25°C) 2.6A max (at 85°C)
All contacts simultaneously:	3.0A max (at 25°C) 2.2A max (at 85°C)
<b>Working voltage</b>	
At sea level 1013 mbar:	800V DC or AC <sub>rms</sub>
<b>Voltage proof</b>	
At sea level 1013 mbar:	1,200V DC or AC <sub>rms</sub>
<b>Contact resistance</b>	
Initial:	20mΩ max
After conditioning:	25mΩ max
<b>Insulation resistance</b>	
Initial:	1,000MΩ min
After conditioning:	100MΩ min

## Mechanical

Durability:	500 operations
Insertion force (max):	2.8N
Withdrawal force (min):	0.2N
Signal crimp accommodation:	22 AWG to 28 AWG BS 3G 210 Type A

## Environmental

Environmental classification:	55/125/56 days at 95% RH
Operational temperature:	-55°C to +125°C
*Vibration sensitivity:	10Hz to 2000Hz, 0.75mm, 98m/s <sup>2</sup> (10G), duration 6h
*Bump severity:	390m/s <sup>2</sup> (40G), 4000 ±10 bumps
*Shock severity:	981m/s <sup>2</sup> (100G) for 6ms
*Acceleration severity:	490m/s <sup>2</sup> (50G)

\* Tested with connectors with Jackscrews.

## Power Contacts

### Materials

Latching collar:	Beryllium Copper, Nickel plated
Other metallic parts:	Copper alloy, Gold plated

### Electrical

<b>Current (in isolation)</b>	
32x, 33x:	20A max
PFx, PMx:	40A nominal, up to 80A max
Contact resistance:	6mΩ max

### Mechanical

<b>Insertion force (max)</b>	
32x, 33x:	8N
PFx, PMx:	15N
Withdrawal force (min):	0.5N
<b>Contact replacement in connector:</b>	
	5 times
<b>Power contact accommodation</b>	
32x, 33x:	12 to 20 AWG
PFx, PMx:	10 AWG

All dimensions in mm.

## Coax Contacts

### Materials

Latching collar:	Beryllium Copper, Nickel plated
Other metallic parts:	Copper alloy, Gold plated
Insulator:	PTFE

### Electrical

Frequency range:	6GHz (depending on cable)
Impedance:	50Ω
VSWR:	1.05 + (0.04 x Frequency) GHz max
Operating voltage (sea level):	180V AC at 500mA
Maximum voltage (sea level):	1000V AC <sub>rms</sub>
Contact resistance:	6mΩ max
Insulation resistance:	10 <sup>6</sup> MΩ at 250V AC <sub>rms</sub>

### Mechanical

Insertion force (max):	8N
Withdrawal force (min):	0.5N
Contact replacement in connector:	5 times