

## Models 7011-MTC-1 and 7011-MTC-2 Cable Assemblies

### Introduction

The Models 7011-MTC-1 (1 meter) and 7011-MTC-2 (2 meters) are round cable assemblies terminated with 96-pin DIN female connectors on each end. These cables mate to the multi-pin connector of any Model 701X-C series switching card. They will also mate to the Model 7011-MTR, which is a 96-pin male bulkhead connector. The bulkhead connector is typically used to make connections to external circuitry and the DUT.

### Specifications

Maximum Current:	1A (in any continuity)
Maximum Working Voltage:	200V peak (pin to pin or pin to shield)
Path Resistance:	<1 $\Omega$ (in any continuity)
Insulation Resistance:	10 <sup>9</sup> $\Omega$ at 100V DC (pin to pin and pin to shield)
Capacitance (typical): (shield to chassis)	Path (between adjacent pairs): 10 pF Differential: 50pF Common Mode: 175pF
Operating Environment:	0° to 50°C Up to 80% R.H. at $\leq$ 35°C

If you wish to hard-wire a cable assembly directly to external circuitry and the DUT, you can cut one of the cable connectors off. Cutting the cable assembly in half will provide two cable assemblies that are unterminated at one end. Terminal identification for the cable conductors depends, of course, on which switching card is being used. Table 1 references the twisted conductor pair cards to the multi-pin connector. Refer to the switching card instruction manual for details on signal assignments.

### Safety warnings

This cable assembly should only be used by qualified personnel who recognize shock hazards and are familiar with the safety precautions required to avoid possible injury.

Never touch or change connections when power is applied to the cable assembly. Always turn off test system power and discharge all capacitors before connecting or disconnecting this cable assembly.

To prevent voltages from being exposed or connections from shorting together, make sure both ends of the cable assembly are properly connected before applying power.

**Table 1***Cable conductor identification*

<b>Cable “B” (with blue stripe or blue Keithley logo)</b>				<b>Cable “A” (with no stripe or black Keithley logo)</b>			
<b>Twisted pair (colors)</b>	<b>Connector designation 1a-32c</b>	<b>Twisted pair (colors)</b>	<b>Connector designation 1a-32c</b>	<b>Twisted pair (colors)</b>	<b>Connector designation 1a-32c</b>	<b>Twisted pair (colors)</b>	<b>Connector designation 1a-32c</b>
Yellow Brown	17b 17a	Purple Green	8c 8b	Red White	32c 32b	Pink Grey	24a 23c
Pink White	16c 16b	Pink Purple	8a 7c	Blue Grey	32a 31c	Pink Brown	23b 23a
Red White	16a 15c	Pink Grey	7b 7a	Blue Brown	31b 31a	White Blue	22c 22b
Blue Grey	15b 15a	Pink Brown	6c 6b	White Green	30c 30b	Purple Blue	22a 21c
Blue Brown	14c 14b	White Blue	6a 5c	Brown Green	30a 29c	Yellow Purple	21b 21a
White Green	14a 13c	Purple Blue	5b 5a	Grey Green	29b 29a	Blue Orange	20c 20b
Brown Green	13b 13a	Yellow Purple	4c 4b	Red Purple	28c 28b	Yellow Orange	20a 19c
Grey Green	12c 12b	Blue Orange	4a 3c	Red Grey	28a 27c	Pink Orange	19b 19a
Red Purple	12a 11c	Yellow Orange	3b 3a	Red Brown	27b 27a	Red Orange	18c 18b
Red Grey	11b 11a	Pink Orange	2c 2b	Grey Yellow	26c 26b	Green Orange	18a 17c
Red Brown	10c 10b	Red Orange	2a 1c	White Yellow	26a 25c	White Pink	NC
Grey Yellow	10a 9c	Short (see note)	1b 1a	Purple Green	25b 25a	Brown Yellow	NC
Shield Shield	9b 9a			Pink Purple	24c 24b		

Note: Pins 1a and 1b are shorted together in the cable assembly. This allows the output relays to close when the cable assembly is connected to the switching card.