

## 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:  $10^{9}\Omega$  at 100V DC (pin to pin and pin to shield)

Capacitance (typical): Path (between adjacent pairs): 10 pF

(shield to chassis) Differential: 50pF

Common Mode: 175pF

Operating Environment: 0° to 50°C

Up to 80% R.H. at ≤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 1Cable conductor identification

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