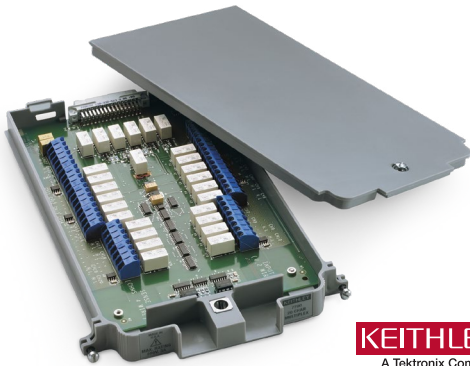


# 7700 20-channel, Differential Multiplexer Module with Automatic CJC, Screw Terminals, and up to 50MHz Bandwidth

## Datasheet

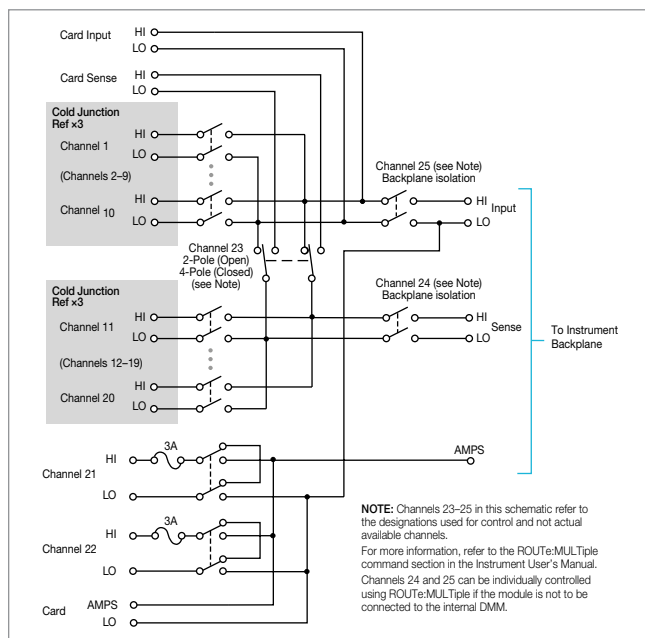


**KEITHLEY**  
A Tektronix Company

The 7700 plug-in module offers 20 channels of 2-pole or 10 channels of 4-pole multiplexer switching that can be configured as two independent banks of multiplexers. There are two additional protected channels for current measurements. Automatic CJC is provided so that no other accessories are required to make thermocouple temperature measurements. In addition, the 7700 contains latching electromechanical relays that enable signal bandwidths of up to 50 MHz. The 7700 is ideal for RTD, thermistor, and thermocouple temperature applications.

### Key Features

- 20 channels for general purpose measurements, plus two channels to measure current
- Oversize screw terminal connection blocks are standard for easier connections
- 50 MHz bandwidth
- 300 V, 1 A capacity for voltage channels; 60 W, 125 VA
- 3 A capacity for current channels
- Low insertion loss of up to 50 MHz
- Relay closures stored in onboard memory



### Specifications

#### Capabilities

<b>Channels 1–20</b>	Multiplex one of twenty 2-pole or one of ten 4-pole signals into DMM.
<b>Channels 21–22</b>	Multiplex one of two 2-pole current signals into DMM.

#### Inputs

##### Maximum Signal Level

**Channels (1–20)** 300 V DC or 300 V rms (425 V peak) for AC waveforms, 1 A switched, 60 W, 125 VA maximum.

**Channels (21–22)** 60 V DC or 30 V rms, 3 A switched, 60 W, 125 VA maximum.

**Contact Life (typ.)** >10<sup>5</sup> operations at max. signal level. >10<sup>8</sup> operations no load<sup>1</sup>.

1. Open thermocouple detector on during thermocouple measurements. Minimum signal level 10 mV, 10 μA.

**Contact Resistance** <1 Ω at end of contact life.

**Contact Potential** <±500 nV typical per contact, 1 μV max. <±500 nV typical per contact pair, 1 μV max.

**Offset Current** <100 pA.

**Connector Type** Screw terminal, #20 AWG wire size.

**Isolation Between Any Two Terminals:** >10<sup>10</sup> Ω, <100 pF.

**Isolation Between Any Terminal and Earth:** >10<sup>9</sup> Ω, <200 pF.

**Insertion Loss (50 Ω Source, 50 Ω Load)**

	w/Internal DMM	w/o Internal DMM
<0.1 dB	1 MHz	1 MHz
<3 dB	2 MHz	50 MHz

**Crosstalk (50 Ω Load):**

	w/Internal DMM	w/o Internal DMM
10 MHz	<-40 dB	<-40 dB
25 MHz	—	<-25 dB

**Common Mode Voltage**

300 V or 300 V rms (425 V peak) for AC waveforms between any terminal and chassis.

### General

**20 Channels** 20 channels of 2-pole relay input. All channels configurable to 4-pole.

**2 Channels** 2 channels of current only input.

**Relay Type** Latching electromechanical.

**Actuation Time** <3 ms.

#### Environmental and Safety

**Operating Environment:** Specified for 0° to 50°C. Specified to 80% R.H. at 35°C.

**Storage Environment:** -25° to 65°C.

**EMC:** Conforms to European Union EMC Directive.

**Safety:** Conforms to European Union Low Voltage Directive

**RoHS:** Conforms to European Union RoHS Directive

**Weight** 0.45 kg (1 lb).

### Supplied Accessories

**CC-92-1** Set of 20 Cable Ties

**TL-23** Screwdriver

### Available Services

**7700-3Y-EW** 1-year factory warranty extended to 3 years from date of shipment

### Ordering Information

**7700** 20-channel, Differential Multiplexer Module with Automatic CJC and Screw Terminals

**Warranty** 1 year

**Contact Information:**

**Australia\*** 1 800 709 465  
**Austria** 00800 2255 4835  
**Balkans, Israel, South Africa and other ISE Countries** +41 52 675 3777  
**Belgium\*** 00800 2255 4835  
**Brazil** +55 (11) 3759 7627  
**Canada** 1 800 833 9200  
**Central East Europe / Baltics** +41 52 675 3777  
**Central Europe / Greece** +41 52 675 3777  
**Denmark** +45 80 88 1401  
**Finland** +41 52 675 3777  
**France\*** 00800 2255 4835  
**Germany\*** 00800 2255 4835  
**Hong Kong** 400 820 5835  
**India** 000 800 650 1835  
**Indonesia** 007 803 601 5249  
**Italy** 00800 2255 4835  
**Japan** 81 (3) 6714 3010  
**Luxembourg** +41 52 675 3777  
**Malaysia** 1 800 22 55835  
**Mexico, Central/South America and Caribbean** 52 (55) 56 04 50 90  
**Middle East, Asia, and North Africa** +41 52 675 3777  
**The Netherlands\*** 00800 2255 4835  
**New Zealand** 0800 800 238  
**Norway** 800 16098  
**People's Republic of China** 400 820 5835  
**Philippines** 1 800 1601 0077  
**Poland** +41 52 675 3777  
**Portugal** 80 08 12370  
**Republic of Korea** +82 2 6917 5000  
**Russia / CIS** +7 (495) 6647564  
**Singapore** 800 6011 473  
**South Africa** +41 52 675 3777  
**Spain\*** 00800 2255 4835  
**Sweden\*** 00800 2255 4835  
**Switzerland\*** 00800 2255 4835  
**Taiwan** 886 (2) 2656 6688  
**Thailand** 1 800 011 931  
**United Kingdom / Ireland\*** 00800 2255 4835  
**USA** 1 800 833 9200  
**Vietnam** 12060128

\* European toll-free number. If not accessible, call: +41 52 675 3777



Find more valuable resources at [TEK.COM](http://TEK.COM)

Copyright © Tektronix. All rights reserved. Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supersedes that in all previously published material. Specification and price change privileges reserved. TEKTRONIX and TEK are registered trademarks of Tektronix, Inc. All other trade names referenced are the service marks, trademarks or registered trademarks of their respective companies.

