

# 7700 20-channel, Differential Multiplexer Module

## with Automatic CJC, Screw Terminals, and up to 50 MHz Bandwidth

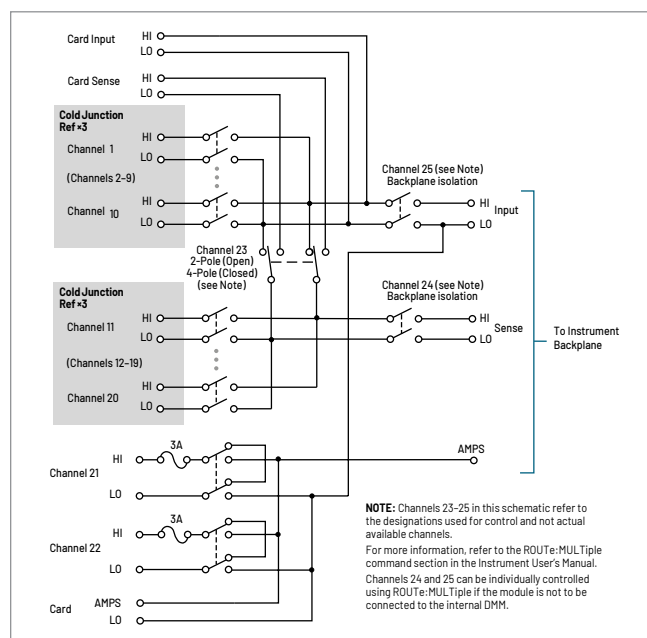
### Datasheet



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

**Channels 1–20** Multiplex one of twenty 2-pole or one of ten 4-pole signals into DMM.

**Channels 21–22** 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  $\mu$ A.

**Contact Resistance** <1  $\Omega$  at end of contact life.

**Contact Potential** < $\pm$ 500 nV typical per contact, 1  $\mu$ V maximum.

< $\pm$ 500 nV typical per contact pair, 1  $\mu$ V maximum.

**Offset Current** <100 pA.

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

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

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

###### Insertion Loss (50 $\Omega$ Source, 50 $\Omega$ Load)

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

###### Crosstalk (50 $\Omega$ 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% relative humidity 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

For indoor, non-residential use only.

**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:**

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