

# 7710 20-Channel High-Speed/ Long-Life Differential Multiplexer w/ Automatic CJC Specifications

## GENERAL

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

**RELAY TYPE:** Solid State Opto-Coupled FET

**ACTUATION TIME:** <0.5mS (100mA load)

**FIRMWARE:** Specified for Model 2700 Rev. B05, Model 2750 Rev. A04, and Model 2701 Rev. A01.

## CAPABILITIES

**CHANNELS 1-20:** Multiplex one of 20 2-pole or one of 10 4-pole signals into DMM.

## INPUTS

**MAXIMUM SIGNAL LEVEL:** 60V DC or 42V rms between channel (1-20) HI and channel LO or between any channel HI or LO to any other channel HI or LO, 100mA switched, 6W, 4.2VA maximum.

**COMMON MODE VOLTAGE:** 300V DC or 300V rms (425V peak) for AC waveforms between any terminal and chassis.

**SAFETY:** Conforms to European Union Directive 73/23/EEC EN61010-1, CAT I.

**EMC:** Conforms with European Union Directive 89/336/EEC EN61326-1.

**CONTACT LIFE:** >10<sup>10</sup> operations at cold switching or max signal level (guaranteed by design).

**CONTACT RESISTANCE:** <10Ω per channel or <5Ω per conductor. Refer to the Model 7710 User's Guide for measurement considerations when used in a Model 2750 on the 1Ω or 10Ω ranges.

**CONTACT POTENTIAL:** <3μV per pair.

**OFFSET CURRENT:** <1nA @ 23°C (±5°C) for 0V, <5nA @ 23°C (±5°C) for 60V, additional 0.13nA per 1°C above 28°C.

**CONNECTOR TYPE:** 3.5mm Removable Screw Terminals, #20 AWG wire size.

**ISOLATION BETWEEN ANY TWO TERMINALS:** >10<sup>10</sup>Ω @ 23°C, >8•10<sup>9</sup>Ω @ 50°C, <100pF.

**ISOLATION BETWEEN ANY TERMINAL AND EARTH:** >10<sup>10</sup>Ω, <100pF.

**CROSSTALK (CH-CH, 500kHz, 50Ω Load):** <-40dB.

**INSERTION LOSS (50Ω Source, 50Ω Load):** <1dB below 500kHz, <3dB below 2MHz.

## ENVIRONMENTAL

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

**STORAGE ENVIRONMENT:** -25°C to 65°C.

**WEIGHT:** 0.45kg (1 lb).

**ALTITUDE:** <2km.

