

## SWITCH/CONTROL MODULE SPECIFICATIONS

7707

## 7707 Multiplexer-Digital I/O Module

## GENERAL

**10 CHANNELS:** 10 channels of 2-pole relay input.  
All channels configurable to 4-pole.

**RELAY TYPE:** Latching electromechanical.

**ACTUATION TIME:** <3ms.

**FIRMWARE:** Specified for Model 2700 rev. B03 and Model 2750 rev. A01.

**CAPACITY: Model 2700:** (1) 7707 and (1) 770X, except 7706.  
**Model 2750:** (3) 7707 and (2) 770X, except 7706. A 7706 module may be substituted for a 7707 module.

## CAPABILITIES

**CHANNELS 1–10:** Multiplex one of 10 2-pole or one of 5 4-pole signals into DMM.

**CHANNELS 11–14:** 32 Digital Inputs/Outputs referenced to chassis ground.

**THERMAL PROTECTION:** Channels 11–14 are thermally protected to 1A.

## INPUTS (Channels 1–10)

**MAXIMUM SIGNAL LEVEL: Any Channel to Any Channel (1–10):** 300VDC or 300Vrms (425V peak) for AC waveforms, 1A switched, 60W, 125VA maximum.

**SAFETY CATEGORY:** Conforms to European Union Directive 73/23/EEC EN 61010-1, CAT I.

**CONTACT LIFE (typ.):** >10<sup>5</sup> operations at max. signal level; >10<sup>8</sup> operations cold switching.

**CONTACT RESISTANCE:** <1Ω any path and additional 1Ω at end of contact life.

**CONTACT POTENTIAL:** <6μV typical per contact pair and additional 5μV with Channels 11–14 at rate  $V_{OUT}(L)$ .

**OFFSET CURRENT:** <100pA.

**CONNECTOR TYPE:** 50-pin male D-shell, Channels 11–14.

25-pin female D-shell, Channels 1–10.

Supplied with female and male IDC ribbon cable connectors.

**ISOLATION BETWEEN ANY TWO TERMINALS:** >10<sup>9</sup>Ω, <100pF with isolation channels 16 and 17 open.

**ISOLATION BETWEEN ANY TERMINAL AND EARTH:** > 10<sup>9</sup>Ω, <200pF.

**CROSS TALK (10MHz, 50Ω Load):** <–35dB.

**INSERTION LOSS (50Ω Source, 50Ω Load):** <0.1dB below 1MHz.  
<3dB below 2MHz.

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

## DIGITAL INPUT/OUTPUT (Channels 11–14)

$V_{IN}(L)$ : <0.8V (TTL).

$V_{IN}(H)$ : >2V (TTL).

$V_{OUT}(L)$ : <1.0V @  $I_{OUT} = 100\text{mA}$ .

$V_{OUT}(H)$ : >2.4V @  $I_{OUT} = 1\text{mA}$ .

$V_{OUT}(H)\text{MAX.}$ : <40V with external open drain pull-up.

**READ/WRITE SPEED:** 50/s.

## ENVIRONMENTAL

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

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

**WEIGHT:** <0.5kg (1.1 lbs).

## ACCESSORY AVAILABLE:

Model 7790 50/50/25 Pin Female/Male D-Shell IDC Connectors

## Features

- 10 channels of analog input for general-purpose measurement.
- 32 channels of digital input and output (four 8-bit ports) for I/O control.
- 300V, 1A capacity; 60W, 125VA maximum (analog).
- Configurable as two independent banks of multiplexers.
- 33V, 100mA capacity (digital).
- Two mating IDC connectors supplied (Model 7790).
- Digital outputs are short circuit protected.
- Relay closures stored in on-board memory.

