

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.): >10⁵ operations at max. signal level; >10⁸ 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: >10⁹Ω, <100pF with isolation channels 16 and 17 open.

ISOLATION BETWEEN ANY TERMINAL AND EARTH: > 10⁹Ω, <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} = 100mA.

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

V_{OUT(H)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.

