

Integra Series Modules

Multimeter/Switch Systems

7706 ALL-IN-ONE I/O MODULE

FEATURES

- 20 channels of analog input (w/automatic CJC) for general-purpose measurement.
- 16 channels of digital output.
- Event counter/totalizer can monitor and control system components, such as fixturing, limit switches, pass/fail indicators, external voltage sources, loads, door closures, revolutions, etc., while performing mixed signal measurement.
- 300V, 1A capacity; 60W, 125VA maximum.
- Configurable as two independent banks of multiplexers.
- Two analog outputs ($\pm 12V$, 5mA).
- Relay closures stored in on-board memory.

GENERAL

20 CHANNELS: 20 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. A02 or B01, 2701 rev. A01, and 2750 rev. A01 or higher.

CAPABILITIES

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

Channels 21–25 are referenced to chassis ground.

CHANNELS 21–22: 16 Digital Outputs.

CHANNELS 23–24: Analog Voltage Output (2).

CHANNELS 25: Totalize Input.

INPUTS

MAXIMUM SIGNAL LEVEL (Channels 1–20): 300V DC or rms, 1A switched, 60W, 125VA maximum.

CONTACT LIFE (typ.): >10⁵ operations at max. signal level; >10⁸ operations cold switching.

CONTACT RESISTANCE: <1 Ω at end of contact life.

CONTACT POTENTIAL: < $\pm 2\mu V$ typical per contact, 3 μV max.

OFFSET CURRENT: <100pA.

CONNECTOR TYPE: Screw terminal, #20 AWG wire size.

ISOLATION BETWEEN ANY TWO TERMINALS: >10⁹ Ω , <100pF.

ISOLATION BETWEEN ANY TERMINAL AND EARTH: > 10⁹ Ω , <200pF.

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

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

COMMON MODE VOLTAGE: 300V between any terminal and chassis.

TEMPERATURE ACCURACY USING INTERNAL CJC: 1.0 $^{\circ}C$ (see mainframe specification for details).

TOTALIZE INPUT

MAXIMUM COUNT: 2³²-1.

TOTALIZE INPUT: 100kHz (max), rising or falling edge, programmable.

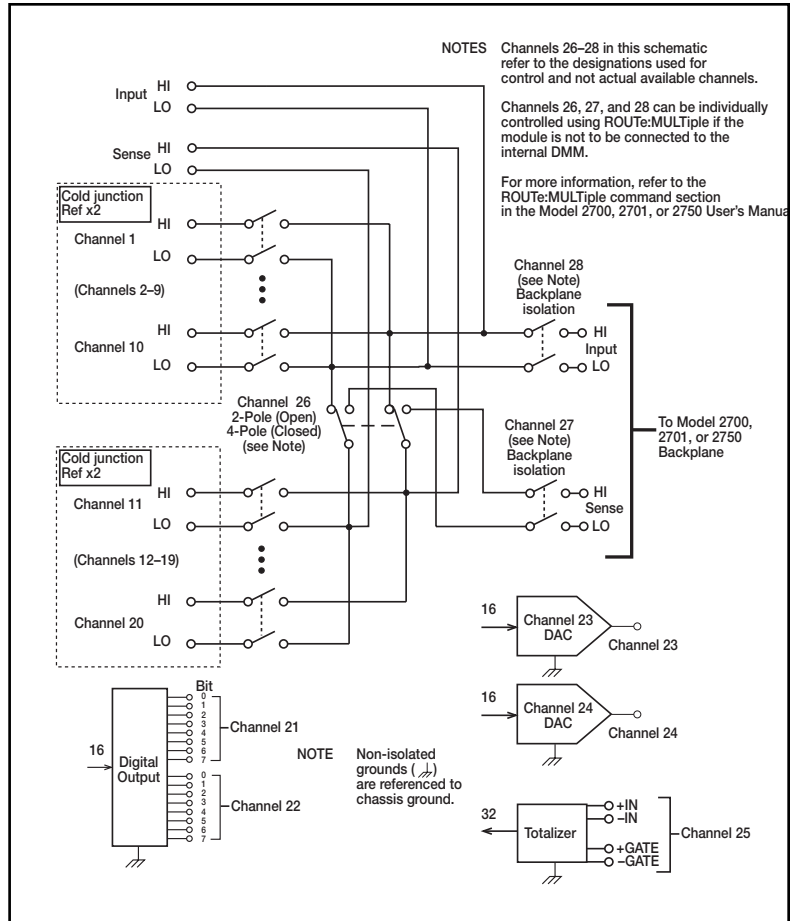
SIGNAL LEVEL: 1Vp-p (min), 42Vpk (max).

THRESHOLD: 0V or TTL, jumper selectable.

DATE INPUT: TTL-Hi, TTL-Lo, or none.

COUNT RESET: manual or Read+Reset.

READ SPEED: 50/s.



ANALOG VOLTAGE OUTPUT

DAC 1, 2: $\pm 12V$ in 1mV increments, non-isolated.

RESOLUTION: 1mV

I_{OUT}: 5mA max.

SETTLING TIME: 1ms to 0.01% of output.

ACCURACY \pm (% of output + mV):

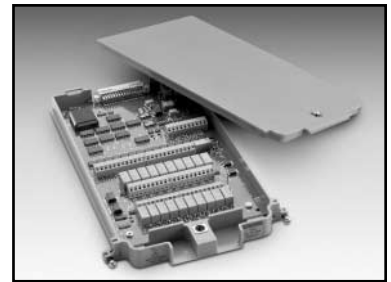
1 year $\pm 5^{\circ}C$: 0.15% + 19mV;

90 day $\pm 5^{\circ}C$: 0.1% + 19mV;

24 hour $\pm 1^{\circ}C$: 0.04% + 19mV

TEMPERATURE COEFFICIENT:

$\pm(0.015\% + 1mV)^{\circ}C$.



DIGITAL OUTPUT

V_{OUT}(L): <0.8V @ I_{out} = 400mA.

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

V_{OUT}(H)MAX.: <42V with external open drain pull-up.

WRITE SPEED: 50/s.

ENVIRONMENTAL

OPERATING ENVIRONMENT: Specified for 0 $^{\circ}C$ to 50 $^{\circ}C$.

Specified to 80% R.H. at 35 $^{\circ}C$.

STORAGE ENVIRONMENT: -25 $^{\circ}C$ to 65 $^{\circ}C$.

WEIGHT: 0.5kg (1.1 lbs).

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