

7706 All-in-One I/O Module

GENERAL

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

RELAY TYPE: Latching electromechanical.

ACTUATION TIME: <3ms.

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 (Channels 1–20)

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

SAFETY CATEGORY: CAT I.

CONTACT LIFE (typ.): >10⁵ operations at max. signal level: >10⁸ operations no load.¹

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

CONTACT POTENTIAL: <±2 μ V typical per contact pair, 3 μ V max.

OFFSET CURRENT: <100pA.

CONNECTOR TYPE: Screw terminal, #22 AWG wire size.

ISOLATION BETWEEN ANY TWO TERMINALS: >10⁹, <100pF with isolation channels 27 and 28 open.

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

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

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

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

DIGITAL OUTPUT (Channels 21 and 22)

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.

ANALOG VOLTAGE OUTPUT (Channels 23 and 24)

DAC 1, 2: ±12V @ 1mA max, non-isolated.

DAC 1, 2: ±10V @ 5mA max.

RESOLUTION: 1mV.

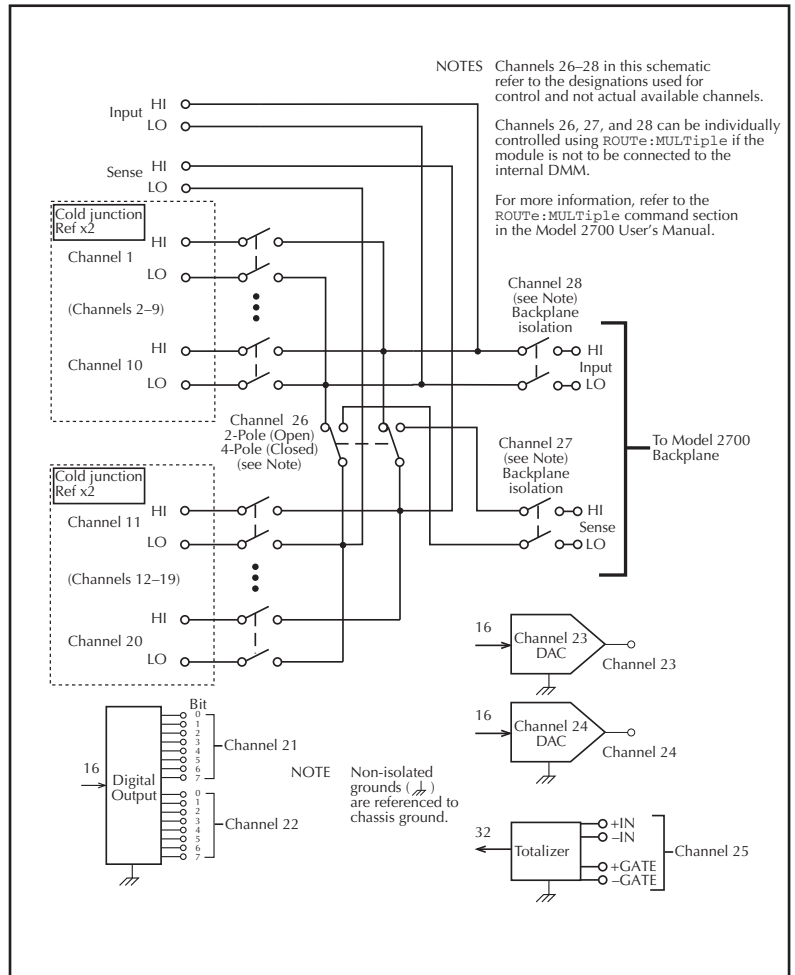
SETTLING TIME: 1ms to 0.01% of output.

ACCURACY ±(% of output + mV):
Measured with 10M Ω input resistance DMM. Accuracy includes DMM's DC plus RMS response.
1 year ±5°C: 0.15% + 19mV;
90 day ±5°C: 0.1% + 19mV;
24 hour ±1°C: 0.04% + 19mV.

TEMPERATURE COEFFICIENT: ±(0.015% + 1mV)/°C.

WRITE SPEED: 50/s.

1. Minimum signal level 10mV, 10uA.



TOTALIZE INPUT (Channel 25)

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.

ENVIRONMENTAL

Specified for Model 2700, firmware revision A02 or later.

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

STORAGE ENVIRONMENT: -25°C to 65°C.

WEIGHT: 0.5kg (1.1 lbs).