

SWITCH/CONTROL MODULE SPECIFICATIONS

Model 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 for I/O control.
- 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.
- Two analog outputs ($\pm 12V$, 5mA).

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

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

CONTACT LIFE (typ.): $>10^5$ operations at max. signal level; $>10^8$ operations cold switching.

CONTACT RESISTANCE: $<1\Omega$ at end of contact life.

CONTACT POTENTIAL: $<\pm 500nV$ typical per contact, $1\mu V$ max.

$<\pm 500nV$ typical per contact pair, $1\mu V$ max.

OFFSET CURRENT: $<100pA$.

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

ISOLATION BETWEEN ANY TWO TERMINALS: $>10^9\Omega$, $<100pF$.

ISOLATION BETWEEN ANY TERMINAL AND EARTH: $>10^9\Omega$, $<200pF$.

CROSS TALK (10MHz, 50 Ω Load): $<-40dB$.

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

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

T/C COLD JUNCTION: $1.0^\circ C$ ($18^\circ C$ to $28^\circ C$ mainframe temp.).

$1.5^\circ C$ (0° – $18^\circ C$ & 28° – $50^\circ C$ mainframe temp.).

TOTALIZE INPUT

MAXIMUM COUNT: $2^{32}-1$.

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

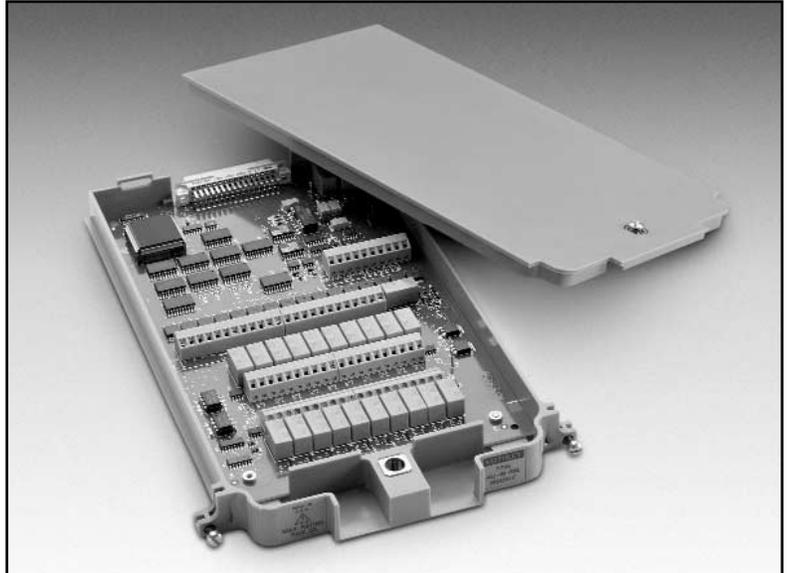
SIGNAL LEVEL: 1Vp-p (min), 42Vpk (max).

THRESHOLD: 0V or TTL, jumper selectable.

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

COUNT RESET: manual or Read+Reset.

READ SPEED: 10/s.



ANALOG VOLTAGE OUTPUT

DAC 1, 2: \pm 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% + 6mV;

90 day $\pm 5^\circ C$: 0.1% + 6mV;

24 hour $\pm 1^\circ C$: 0.04% + 4mV.

TEMPERATURE COEFFICIENT: $\pm(0.015\% + 1mV)/^\circ C$.

DIGITAL OUTPUT

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

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

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

WRITE SPEED: 10/s.

ENVIRONMENTAL

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

Specified for 80% R.H. at $35^\circ C$.

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

WEIGHT: 0.5kg (1.1 lbs).

MODEL 2700 MULTIMETER/DATA ACQUISITION SYSTEM

SWITCH/CONTROL MODULE SPECIFICATIONS

Model 7706 All-in-One I/O Module (cont.)

