

3700A Specifications

This section includes specifications for Model 3700A, which is a TMR Analog Input Module with a voltage range of 0 to 5 VDC.



If the common-mode voltage range of a channel is exceeded, Invensys does not guarantee proper operation of the module and accuracy of other channels.

Table 18 3700/3700A Analog Input Specifications

Feature	Specification
Color code	Yellow
Number of input signals	32 differential, DC-coupled
Input update rate	55 ms
Resolution	12 bits
Accuracy	< 0.15% of FSR, from 32° to 140° F (0° to 60° C)
Input resistance (load)	30 M Ω (DC), minimum
Input resistance @ power off	30 k Ω (DC), typical
Common mode rejection (typical)	-80 dB (DC - 100 Hz)
Common mode range (<i>See above Warning</i>)	-12V to +12V peak
Channel-to-channel isolation	200 k Ω , typical
Normal mode rejection	-3 dB @ 8 Hz -17 dB @ 60 Hz -23 dB @ 120 Hz
Input voltage range	0 to 5V
Input over-range measurement (only for 3700A)	+6%, 0 to 5.3 VDC
Logic power	< 10 watts
Input over-range protection	150 VDC continuous, 115 VAC continuous
Input current range	0 to 20 mA with 250 Ω shunt resistor
Module status indicators	Pass, Fault, Active
Input diagnostic fault coverage ^a	
Minimum input change	2% of full scale
Input change sample period	1 scan or 200 ms, whichever is greater
Minimum period of mis-compares	40 samples

- a. Rapidly or continuously changing inputs may cause mis-compare readings because the measured values of the three channels may differ by more than 0.5 percent of full scale, which can cause a fault to be declared in error. If the input readings differ by a minimum of 2 percent of full scale and continue for a minimum period of 40 input samples, the probability of a fault increases.