



MODEL 5B36—SPECIFICATIONS (typical @ +25°C and V_S = +5 V dc)

Model	5B36
INPUT	
Standard Ranges	See Table I
Custom Range Limits	See Table II
Impedance	
Normal (Power On)	>1000 MΩ
Power Off	200 kΩ
Overload	200 kΩ
Normal Mode Rejection (NMR)	116 dB (60 Hz); 108 dB (50 Hz)
Protection	
Continuous	240 V rms max
Transient	ANSI/IEEE C37.90.1–1989
SENSOR EXCITATION CURRENT	
100 Ω, 500 Ω, 1 kΩ Sensors	0.25 mA
10 kΩ Sensor	0.1 mA
LEAD RESISTANCE EFFECT	
100 Ω, 500 Ω, 1 kΩ Sensors	±0.005 Ω/Ω
10 kΩ Sensor	±0.01 Ω/Ω
COMMON-MODE VOLTAGE (CMV)	
Input-to-Output, Continuous	1500 V rms, max
Input-to-Power, Continuous	1500 V rms, max
Power-to-Output, Continuous ¹	250 V rms, max
COMMON-MODE REJECTION (CMR) 50 Hz/60 Hz	170 dB
ACCURACY	
Initial @ +25°C ²	±0.08% Span
Stability vs. Temperature (–40°C to +85°C)	
Input Offset	
100 Ω, 500 Ω, 1 kΩ Sensors	±0.004 Ω/°C
10 kΩ Sensor	±0.010 Ω/°C
Output Offset	±20 μV/°C
Gain	±30 ppm of Reading/°C
OUTPUT	
Range	0 V to +5 V
Resistance	25 Ω
Bandwidth, –3 dB	4 Hz
Step Response Time (10% to 90% Range)	100 ms
Noise	
Input, 0.1 Hz to 10 Hz	0.2 μV rms RTI ³
Output, 100 kHz Bandwidth	100 μV rms
	0.3 mV p-p
Output, 1 MHz Bandwidth	1.5 mV p-p
Output, 5 MHz Bandwidth	6 mV p-p
Protection	Continuous Short to Ground
Current Limit	±9 mA
Enable Time (C Load = 0 pF to 2000 pF)	6 μs to ±1 mV of V _{OUT}
Enable Control	
Max Logic “0”	+0.8 V
Min Logic “1”	+2.4 V
Max Logic “1”	+100 V
Input Current “0,” “1”	0.5 μA
POWER SUPPLY	
Voltage, Rated Performance	+5 V dc ± 5%
Current	15 mA
Sensitivity	±2 μV/% RTI ³
CASE SIZE, Maximum	2.275" × 2.325" × 0.595" (57.8 mm × 59.1 mm × 15.1 mm)
WEIGHT	70 grams
ENVIRONMENTAL	
Temperature Range, Rated Performance	–40°C to +85°C
Storage Temperature	–40°C to +85°C
Relative Humidity	0% to 93% @ +40°C, Noncondensing
RFI Susceptibility	±0.5% Span Error @ 400 MHz, 5 W, 3'

NOTES

¹The user's board layout must separate Power Ground from I/O Common and when the 5B36 output switch is not used, ground the enable input to I/O Common. Power-to-Output CMV is not available when the 5B36 is installed on a 5B Series backplane.

²Includes the combined effects of repeatability, hysteresis and nonlinearity.

³Referenced to input.

Specifications subject to change without notice.

Table I. Standard Model Input/Output Ranges*

Model	Input Range	Output Range
5B36-01	0 Ω to 100 Ω	0 V to +5 V
5B36-02	0 Ω to 500 Ω	0 V to +5 V
5B36-03	0 Ω to 1 kΩ	0 V to +5 V
5B36-04	0 Ω to 10 kΩ	0 V to +5 V

NOTE

*Custom input/output ranges are available. See Table II.

Table II. Custom Model Ordering Guide

Order Model: **5B36-CUSTOM**

Plus Customer Specified Information

Input Range

Zero Suppression

(= Low); *specify*

Minimum 0 Ω

Maximum 150 Ω

High; specify

Minimum 25 Ω + Zero Suppression

Maximum 10 kΩ + Zero Suppression

Output Range

Low; *fixed* 0 V

High; specify +5 V max

Examples:

Smallest Input Range with No Zero Suppression

Specify 0 Ω to 25 Ω Input Range

Smallest Input Range with Highest Zero Suppression

Specify 150 Ω to 175 Ω Input Range

Largest Input Range with No Zero Suppression

Specify 0 Ω to 10 kΩ Input Range

Largest Input Range with Highest Zero Suppression

Specify 150 Ω to 10.150 kΩ Input Range