

Chapter6 Specification

This chapter will introduce the rated voltage, current, power and many other main parameters of IT5101 series.

6.1 Main technical parameters

Model		IT5101		
Measurement Range				
Voltage	Range	-6V~+6V	-60V~+60V	-300~+300V
	Resolution	10uV	0.1mV	1mV
	Accuracy	±(0.01%+0.01%FS)		
	Temperature Coefficient	±(0.001%+0.001%FS)/°C		
Resistance	Range	3mΩ	Resolution	0.1 uΩ
	Range	30mΩ	Resolution	1 uΩ
	Range	300mΩ	Resolution	10uΩ
	Range	3Ω	Resolution	0.1 mΩ
	Range	30Ω	Resolution	1 mΩ
	Range	300Ω	Resolution	10 mΩ
	Range	3000Ω	Resolution	0.1Ω
	Accuracy	±(0.4%+0.05%FS) ±(0.4%+0.1%FS) (3mΩ)		
	Temperature Coefficient	±(0.04%+0.005%FS)/°C ±(0.04%+0.01%FS)/°C (3mΩ)		
Specifications				
Sample Time	sample	R&V (ms)		R/V (ms)
	EX.FAST(50Hz)	8		4
	FAST(60Hz)	24		12
	MEDIUM(50Hz)	80		40
	MEDIUM(60Hz)	68		34
	SLOW(50Hz)	200		100
	SLOW(60Hz)	200		100
* Allowable error is ±10 ms in “SLOW” status and ±2 ms in other modes.				
Response Time	10ms (Response time is the value obtained when pure resistance is measured, and is only for reference. It may be undulation due to different DUTs)			
Input Resistance	≥1MΩ			
Input Rating	DC±300V			
Channel	1ch			
Interface	GPIB,USB,LAN			
Open circuit voltage	0.003Ω/0.03Ω/0.3Ω/3Ω/30Ω about 15V peak 300Ω/3000Ω about 4V peak			
Fuse specification	AC100V~ AC120V:1.6AT AC220V~ AC240V:1.25AT			
Working temperature	0℃~40℃ Under 80%RH (non-condensation)			
Storage temperature	-10℃~50℃ Under 80%RH (non-condensation)			
Dimension	384*230*105 (mm)			

(mm)	
Weight(net)	2.4KG

Model		IT5101E		
Measurement Range				
Voltage	Range	-6V~+6V	-60V~+60V	-300~+300V
	Resolution	10uV	0.1mV	1mV
	Accuracy	±(0.01%+0.01%FS)		
	Temperature Coefficient	±(0.001%+0.001%FS)/°C		
Resistance	Range	300mΩ	Resolution	10uΩ
	Range	3Ω	Resolution	0.1 mΩ
	Accuracy	±(0.4%+0.05%FS) ±(0.4%+0.1%FS) (3mΩ)		
	Temperature Coefficient	±(0.04%+0.005%FS)/°C ±(0.04%+0.01%FS)/°C (3mΩ)		
Specifications				
Sample Time	sample	R&V (ms)		R/V (ms)
	EX.FAST(50Hz)	8		4
	FAST(60Hz)	24		12
	MEDIUM(50Hz)	80		40
	MEDIUM(60Hz)	68		34
	SLOW(50Hz)	200		100
	SLOW(60Hz)	200		100
* Allowable error is ±10 ms in “SLOW” status and ±2 ms in other modes.				
Response Time	10ms (Response time is the value obtained when pure resistance is measured, and is only for reference It may be undulation due to different DUTs)			
Input Resistance	≥1MΩ			
Input Rating	DC±300V			
Channel	1ch			
Interface	GPIB,USB,LAN			
Open circuit voltage	0.003Ω/0.03Ω/0.3Ω/3Ω/30Ω about 15V peak 300Ω/3000Ω about 4V peak			
Fuse specification	AC100V~ AC120V:1.6AT AC220V~ AC240V:1.25AT			
Working temperature	0℃~40℃ Under 80%RH (non-condensation)			
Storage temperature	-10℃~50℃ Under 80%RH (non-condensation)			
Dimension (mm)	384*230*105 (mm)			
Weight(net)	2.4KG			

Model		IT5101H		
Measurement Range				
Voltage	Range	-10V~+10V	-100V~+100V	-1000~+1000V
	Resolution	10uV	0.1mV	1mV
	Accuracy	±(0.01%+0.01%FS)		

	Temperature Coefficient	±(0.001%+0.001%FS)/°C		
Resistance	Range	3mΩ	Resolution	0.1 uΩ
	Range	30mΩ	Resolution	1 uΩ
	Range	300mΩ	Resolution	10uΩ
	Range	3Ω	Resolution	0.1 mΩ
	Range	30Ω	Resolution	1 mΩ
	Range	300Ω	Resolution	10 mΩ
	Range	3000Ω	Resolution	0.1Ω
	Accuracy	±(0.4%+0.05%FS) ±(0.4%+0.1%FS) (3mΩ)		
	Temperature Coefficient	±(0.04%+0.005%FS)/°C ±(0.04%+0.01%FS)/°C (3mΩ)		
Specifications				
Sample Time	sample	R&V (ms)		R/V (ms)
	EX.FAST(50Hz)	8		4
	FAST(60Hz)	24		12
	MEDIUM(50Hz)	80		40
	MEDIUM(60Hz)	68		34
	SLOW(50Hz)	200		100
	SLOW(60Hz)	200		100
	* Allowable error is ±10 ms in “SLOW” status and ±2 ms in other modes.			
Response Time	10ms (Response time is the value obtained when pure resistance is measured, and is only for reference. It may be undulation due to different DUTs)			
Input Resistance	≥1MΩ			
Input Rating	DC±1000V			
Channel	1ch			
Interface	GPIB,USB,LAN			
Open circuit voltage	0.003Ω/0.03Ω/0.3Ω/3Ω/30Ω about 15V peak 300Ω/3000Ω about 4V peak			
Fuse specification	AC100V~ AC120V:1.6AT AC220V~ AC240V:1.25AT			
Working temperature	0℃~40℃ Under 80%RH (non-condensation)			
Storage temperature	-10℃~50℃ Under 80%RH (non-condensation)			
Dimension (mm)	384*230*105 (mm)			
Weight(net)	2.4KG			

The above specifications may be subject to change without prior notice.

When the current in the working circuit which is connected to the battery changes quickly may affect the measurement accuracy!

1. In Med, add $\pm 0.01\%FS$; in Fast, add $\pm 0.02\%FS$; in Ex_fast, add $\pm 0.03\%FS$.
2. In Med, add $\pm 0.1\%FS$; in Fast, add $\pm 0.2\%FS$; in Ex_fast, add $\pm 0.5\%FS$ (3m Ω range).
3. The above data are applicable for $>5\%FS$ working conditions.

6.2 Supplemental characteristics

Recommended calibration frequency:

once a year



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