

Product Datasheet - Technical Specifications



More information in our Web-Shop at > www.meilhaus.com and in our download section.

Your contact

Technical and commercial sales, price information, quotations, demo/test equipment, consulting:

Tel.:	+49 - 81 41 - 52 71-0				
FAX:	+49 - 81 41 - 52 71-129				
E-Mail: sales@meilhaus.com					
Downloads:					

www.meilhaus.com/en/infos/download.htm

Meilhaus Electronic GmbHTel.Am Sonnenlicht 2Fax82239 Alling/GermanyE-Mat

 Tel.
 +49 - 81 41 - 52 71-0

 Fax
 +49 - 81 41 - 52 71-129

 E-Mail
 sales@meilhaus.com

Mentioned company and product names may be registered trademarks of the respective companies. Prices in Euro plus VAT. Errors and omissions excepted. © Meilhaus Electronic.

www.meilhaus.de



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				
		Measure	ement Range			
	Range	-6V~+6V	-60V~+60V	'	-300~+300V	
Voltage	Resolution	10uV	0.1mV		1mV	
	Accuracy	±(0.01%+0.01%FS)			•	
	Temperature Coefficient	rature +/0.001% +0.001% ESV°C				
	Range	3mΩ	Resolution		0.1 uΩ	
	Range	30mΩ	Resolution		1 uΩ	
	Range	300mΩ	Resolution		10uΩ	
	Range	3Ω	Resolution		0.1 mΩ	
– • <i>i</i> /	Range	30Ω	Resolution		1 mΩ	
Resistance	Range	300Ω	Resolution		10 mΩ	
	Range	3000Ω	Resolution		0.1Ω	
	Accuracy	±(0.4%+0.05%FS) ±(0.4%+0.1%FS) (3mΩ range)				
	Temperature Coefficient	±(0.04%+0.005%FS)/℃ ±(0.04%+0.01%FS)/℃ (3mΩ range)				
	L L	Spec	ifications	<u> </u>	• 	
	sar	nple	R&V (ms)		R/V (ms)	
	EX.FAS	ST(50Hz)	8		4	
	FAST	(60Hz)	24		12	
	MEDIU	M(50Hz)	80		40	
Sample Time	MEDIU	M(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	>=1MQ					
Input Rating	DC±300V					
Channel	1ch					
Interface	GPIB,USB,LAN					
Open circuit	0.003Ω/0.03Ω/0.3Ω/30Ω about 15V peak					
voltage	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)					
		Copyright© Ited	ch Electronic Co., Ltd.		42	



(mm) Weight(net)

2.4KG

Model		IT5101E					
Measurement Range							
	Range	-6V~+6V			-60V~+60V		-300~+300V
Voltage	Resolution	10uV			0.1mV		1mV
	Accuracy	±(0.01%+0.01%FS)					
	Temperature Coefficient						
	Range	30	0mΩ		Resolution		10uΩ
	Range		3Ω		Resolution	0.1 mΩ	
Resistance	Accuracy	±(0.4%+0.05%FS) ±(0.4%+0.1%FS) (3mΩ)					
	Temperature Coefficient				04%+0.005%F\$ %+0.01%FS)/℃		
		Spe	ecifica	ations			
	sam			R&V	(ms)		R/V (ms)
	EX.FAST	(50Hz)		8	3		4
	FAST(6	60Hz)		24	4		12
Sample Time	MEDIUM(50Hz)		80			40	
Sample Time	MEDIUM(60Hz)		68			34	
	SLOW(OW(50Hz)		200			100
	SLOW(.OW(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°C~40°C 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						
	Range	-10V~+10V	-100V~+100V	-1000~+1000V		
Voltage	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	300	2	Resolution	1 mΩ	
	Range	300	Ω	Resolution	10 mΩ	
	Range	3000	Ω	Resolution	0.1Ω	
	Accuracy	±(0.4%+0.05%FS) ±(0.4%+0.1%FS) (3mΩ)				
	Temperature	±(0.04%+0.005%FS)/°C				
	Coefficient	±(0.04%+0.01%FS)/°C (3mΩ)				
		Sp	ecifications			
	san	nple	R&V	/ (ms)	R/V (ms)	
	EX.FAS	T(50Hz)	z) 8		4	
	FAST(60Hz)	24		12	
Sample Time	MEDIUI	M(50Hz)	80		40	
Sample Time	MEDIUI	M(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	0.003 Ω/0.03 Ω/0.3 Ω/3 Ω/30 Ω about 15V peak					
voltage	300 Ω/3000 Ω about 4V peak					
Fuse	AC100V~ AC120V:1.6AT					
specification Working	AC220V~ AC240V:1.25AT					
temperature	0°C~40°C Under 80%RH (non-condensation)					
Storage	-10°C~50°C Under 80%RH (non-condensation)					
temperature 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 cicuit which is connected to the battery changes quickly may affact the measurement acscuarcy!

- 1. In Med, add ±0.01%FS; in Fast, add ±0.02%FS; in Ex_fast, add ±0.03%FS.
- 2. In Med, add ±0.1%FS; in Fast, add ±0.2%FS; in Ex_fast, add ±0.5%FS (3mΩ range).

3. The above data are applicable for >5%FS working conditions.

6.2 Supplemental characteristics

Recommended calibration frequency:

once a year