

Product Datasheet - Technical Specifications



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7 Technical Specification

This chapter will introduce the rated voltage, current, power and many other main parameters of IT-M7700 series power source.

- ◆ IT-M7721
- ◆ IT-M7721L
- ◆ IT-M7722
- ◆ IT-M7722L

7.1 IT-M7721

Parameter		IT-M7721
AC Input		
Input voltage		100–240Vac (±10%)
Phase		Single-phase
Frequency		47–63Hz
Max. input current		2A/4.3A
Power factor		0.99 (Typical)
AC Output		
Max. output power		300VA
Max. output voltage		300V
Output phase		Single-phase
Current range(rms)	100V	3A
	300V	1A
Current range (peak)	100V	9A
	300V	3A
Output frequency range		45–1000Hz
Phase angle degree range		0–359.9°
THD*2*4		≤0.3% at 45-100Hz; ≤1% at 101-1000Hz
Crest factor		3
Line Regulation *4		≤0.06% (100V±10%) ; ≤0.03% (240V±10%)
Load Regulation		≤0.13% (100V); ≤0.04% (200V); ≤0.015% (300V)

Parameter		IT-M7721
Output voltage (VAC)	Resolution	0.1V
	Accuracy	$\pm(0.2\% \times \text{VAC} + 0.2\% \times \text{F.S.})^*1$
Output frequency	Resolution	0.1Hz
	Accuracy	$\pm 0.1\%$
Phase angle degree range	Resolution	0.1°
	Accuracy	0.5°
DC offset value		20mV
Efficiency		75% (Typical)
DC Output		
Max. output power		300W
Max. output voltage		$\pm 400\text{V}$
Maximum output current (rms)		$\pm 3\text{A} / \pm 0.75\text{A} (\pm 100\text{V} / \pm 400\text{V})$
Output voltage (VDC)	Accuracy	$\pm(0.2\% \times \text{VDC} + 0.2\% \times \text{F.S.})^*1$
Voltage ripple	Peak- peak	3.2V
	RMS	1.27V
Dynamic response time *5		$\leq 0.5\text{ms}$
Meter		
AC Voltage	Range	0-300V
	Resolution	0.1V
	Accuracy	$\pm(0.25\% \times \text{VAC} + 0.25\% \times \text{F.S.})^*1$
AC current (rms)	Range	0.1-3A
	Resolution	10mA
	Accuracy	$\pm(0.25\% \times \text{VAC} + 0.25\% \times \text{F.S.})^*1$
AC current (peak)	Range	0-4.2A
	Resolution	10mA
	Accuracy	$\pm(0.4\% \times \text{IP} + 0.8\% \times \text{F.S.})^*1$
DC voltage	Accuracy	$\pm(0.25\% \times \text{VDC} + 0.25\% \times \text{F.S.})^*1$
DC current	Accuracy	$\pm(0.25\% \times \text{IDC} + 0.25\% \times \text{F.S.})^*1$
Frequency	Range	45 - 1000Hz
	Resolution	0.1Hz
	Accuracy	$\pm 0.1\% *3$
Power (S)	Resolution	10mVA

Parameter		IT-M7721
	Accuracy	$\pm(0.5\% \times S + 0.5\% \times F.S.) * 1$
Other		
Protection	OVP、OCP、OTP、OPP	
Interface	GPIB、USBTMC、LAN、RS232	
Dimension (WxHxD)	215 x 44.45(1U) x 450 mm	
Weight	4.5Kg	

*1: F.S. value is full range.

*2: Min voltage for THD test is 100Vac .

*3: Min voltage for frequency display accuracy is 100Vac.

*4: Tested with pure resistive load.

*5: From 10% to 90% full load.

7.2 IT-M7721L

Parameter		IT-M7721L
AC Input		
Input voltage		100–240Vac ($\pm 10\%$)
Phase		Single-phase
Frequency		47–63Hz
Max. input current		2A/4.3A
Power factor		0.99 (Typical)
AC Output		
Max. output power		300VA
Max. output voltage		300V
Output phase		Single-phase
Current range(rms)	100V	3A
	300V	1A
Current range (peak)	100V	9A
	300V	3A
Output frequency range		45–100Hz

Parameter		IT-M7721L
Phase angle degree range		0–359.9°
THD*2*4		≤0.3% at 45-100Hz
Crest factor		3
Line Regulation *4		≤0.06% (100V±10%) ; ≤0.03% (240V ±10%)
Load Regulation		≤0.13% (100V); ≤0.04% (200V); ≤0.015% (300V)
Output voltage (VAC)	Resolution	0.1V
	Accuracy	±(0.2%×VAC + 0.2%×F.S.)*1
Output frequency	Resolution	0.1Hz
	Accuracy	±0.1%
Phase angle degree range	Resolution	0.1°
	Accuracy	0.5°
DC offset value		20mV
Efficiency		75% (Typical)
DC Output		
Max. output power		300W
Max. output voltage		±400V
Maximum output current (rms)		±3A±0.75A(±100V/±400V)
Output voltage (VDC)	Accuracy	±(0.2%×VDC + 0.2%×F.S.)*1
Voltage ripple	Peak- peak	3.2V
	RMS	1.27V
Dynamic response time *5		≤0.5ms
Meter		
AC Voltage	Range	0-300V
	Resolution	0.1V
	Accuracy	±(0.25%×VAC + 0.25%×F.S.)*1
AC current (rms)	Range	0.1-3A
	Resolution	10mA
	Accuracy	±(0.25%×VAC + 0.25%×F.S.)*1
AC current (peak)	Range	0-4.2A
	Resolution	10mA
	Accuracy	±(0.4%×IP + 0.8%×F.S.)*1

Parameter		IT-M7721L
DC voltage	Accuracy	$\pm(0.25\% \times VDC + 0.25\% \times F.S.)^{*1}$
DC current	Accuracy	$\pm(0.25\% \times IDC + 0.25\% \times F.S.)^{*1}$
Frequency	Range	45 - 100Hz
	Resolution	0.1Hz
	Accuracy	$\pm 0.1\%^{*3}$
Power (S)	Resolution	10mVA
	Accuracy	$\pm(0.5\% \times S + 0.5\% \times F.S.)^{*1}$
Other		
Protection	OVP、OCP、OTP、OPP	
Interface	GPIB、USBTMC、LAN、RS232	
Dimension (WxHxD)	215 x 44.45(1U) x 450 mm	
Weight	4.5Kg	

*1: F.S. value is full range.

*2: Min voltage for THD test is 100Vac .

*3: Min voltage for frequency display accuracy is 100Vac.

*4: Tested with pure resistive load.

*5: From 10% to 90% full load.

7.3 IT-M7722

Parameter	IT-M7722
AC Input	
Input voltage	100–240Vac ($\pm 10\%$)
Phase	Single-phase
Frequency	47–63Hz
Max. input current	4A/8.5A
Power factor	0.99 (Typical)
AC Output	
Max. output power	600VA
Max. output voltage	300V

Parameter		IT-M7722
Output phase		Single-phase
Current range(rms)	100V	6A
	300V	2A
Current range (peak)	100V	18A
	300V	6A
Output frequency range		45–1000Hz
Phase angle degree range		0–359.9°
THD*2*4		≤0.3% at 45-100Hz; ≤1% at 101-1000Hz
Crest factor		3
Line Regulation *4		≤0.06% (100V±10%) ; ≤0.03% (240V±10%)
Load Regulation		≤0.13% (100V); ≤0.04% (200V); ≤0.015% (300V)
Output voltage (VAC)	Resolution	0.1V
	Accuracy	±(0.2%×VAC + 0.2%×F.S.)*1
Output frequency	Resolution	0.1Hz
	Accuracy	±0.1%
Phase angle degree range	Resolution	0.1°
	Accuracy	0.5°
DC offset value		20mV
Efficiency		80% (Typical)
DC Output		
Max. output power		600W
Max. output voltage		±400V
Maximum output current (rms)		±6A/±1.5A(±100V/±400V)
Output voltage (VDC)	Accuracy	±(0.2%×VDC + 0.2%×F.S.)*1
Voltage ripple	Peak- peak	1.5V
	RMS	0.53V
Dynamic response time *5		≤0.5ms
Meter		
AC Voltage	Range	0-300V
	Resolution	0.1V
	Accuracy	±(0.25%×VAC + 0.25%×F.S.)*1

Parameter		IT-M7722
AC current (rms)	Range	0.1-6A
	Resolution	10mA
	Accuracy	$\pm(0.25\% \times VAC + 0.25\% \times F.S.)^{*1}$
AC current (peak)	Range	0-8.5A
	Resolution	10mA
DC voltage	Accuracy	$\pm(0.4\% \times IP + 0.8\% \times F.S.)^{*1}$
	Accuracy	$\pm(0.25\% \times VDC + 0.25\% \times F.S.)^{*1}$
DC current	Accuracy	$\pm(0.25\% \times IDC + 0.25\% \times F.S.)^{*1}$
Frequency	Range	45 - 1000Hz
	Resolution	0.1Hz
	Accuracy	$\pm 0.1\%^{*3}$
Power (S)	Resolution	10mVA
	Accuracy	$\pm(0.5\% \times S + 0.5\% \times F.S.)^{*1}$
Other		
Protection	OVP、OCP、OTP、OPP	
Interface	GPIB、USBTCM、LAN、RS232	
Dimension (WxHxD)	215 x 44.45(1U) x 450 mm	
Weight	4.5Kg	

*1: F.S. value is full range.

*2: Min voltage for THD test is 100Vac .

*3: Min voltage for frequency display accuracy is 100Vac.

*4: Tested with pure resistive load.

*5: From 10% to 90% full load.

7.4 IT-M7722L

Parameter	IT-M7722L
AC Input	
Input voltage	100–240Vac ($\pm 10\%$)
Phase	Single-phase

Parameter		IT-M7722L
Frequency		47–63Hz
Max. input current		4A/8.5A
Power factor		0.99 (Typical)
AC Output		
Max. output power		600VA
Max. output voltage		300V
Output phase		Single-phase
Current range(rms)	100V	6A
	300V	2A
Current range(peak)	100V	18A
	300V	6A
Output frequency range		45–100Hz
Phase angle degree range		0–359.9°
THD*2*4		≤0.3% at 45-100Hz
Crest factor		3
Line Regulation *4		≤0.06% (100V±10%) ; ≤0.03% (240V±10%)
Load Regulation		≤0.13% (100V); ≤0.04% (200V); ≤0.015% (300V)
Output voltage (VAC)	Resolution	0.1V
	Accuracy	±(0.2%×VAC + 0.2%×F.S.)*1
Output frequency	Resolution	0.1Hz
	Accuracy	±0.1%
Phase angle degree range	Resolution	0.1°
	Accuracy	0.5°
DC offset value		20mV
Efficiency		80% (Typical)
DC Output		
Max. output power		600W
Max. output voltage		±400V
Maximum output current (rms)		±6A/±1.5A(±100V/±400V)
Output voltage (VDC)	Accuracy	±(0.2%×VDC + 0.2%×F.S.)*1
Voltage ripple	Peak- peak	1.5V

Parameter		IT-M7722L
	RMS	0.53V
Dynamic response time *5		≤0.5ms
Meter		
AC Voltage	Range	0-300V
	Resolution	0.1V
	Accuracy	±(0.25%×VAC + 0.25%×F.S.)*1
AC current (rms)	Range	0.1-6A
	Resolution	10mA
	Accuracy	±(0.25%×VAC + 0.25%×F.S.)*1
AC current (peak)	Range	0-8.5A
	Resolution	10mA
	Accuracy	±(0.4%×IP + 0.8%×F.S.)*1
DC voltage	Accuracy	±(0.25%×VDC + 0.25%×F.S.)*1
DC current	Accuracy	±(0.25%×IDC + 0.25%×F.S.)*1
Frequency	Range	45 - 100Hz
	Resolution	0.1Hz
	Accuracy	±0.1%*3
Power (S)	Resolution	10mVA
	Accuracy	±(0.5%×S + 0.5%×F.S.)*1
Other		
Protection	OVP、OCP、OTP、OPP	
Interface	GPIB、USBTMC、LAN、RS232	
Dimension (WxHxD)	215 x 44.45(1U) x 450 mm	
Weight	4.5Kg	

*1: F.S. value is full range.

*2: Min voltage for THD test is 100Vac .

*3: Min voltage for frequency display accuracy is 100Vac.

*4: Tested with pure resistive load.

*5: From 10% to 90% full load.