





















- 1.8"x1" compact size
- · Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- Suitable for BF application with appropriate system consideration
- No load power consumption<0.075W
- Extremely low leakage current
- Wide operating temp. range -40 ~ +85°C
- EMI class B for class

 configuration
- Protections: Short circuit / Overload / Over voltage / Over temperature
- No minimum load required
- Typical lifetime > 48K hours
- · 3 years warranty

Applications

- · Portable medical device
- Mobile clinical workstation
- Medical computer monitor
- Medical examination instrument

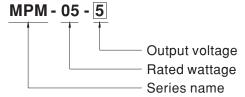
GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

MPM-05 is a 5W high density and small size (45.7*25.4*21.5mm) AC/DC module type medical grade power supply series offered in pin type. It features the operation for 80~264VAC, a low no load power consumption less than 0.075W, a high efficiency up to 82%, Class II (no FG) double insulation, outstanding dissipation and high lifespan thanks to the interior potting, 5G anti-vibration, high EMC performance, 4KVAC isolation, etc. The design observes IEC/BS EN/EN60601-1 and ANSI/AAMI ES60601-1 version three with 2xMOPP level and ultra-low leakage current ($<80 \mu$ A). It is very suitable for BF (patient contact) type medical device or relevant equipment.

■ Model Encoding



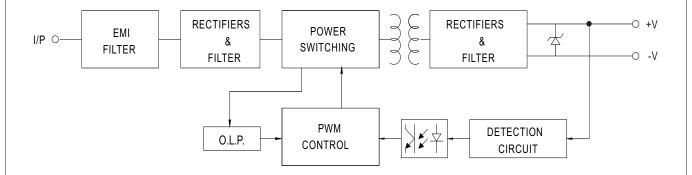


		MPM-05-3.3	MPM-05-5	MPM-05-12	MPM-05-15	MPM-05-24			
	DC VOLTAGE	3.3V	5V	12V	15V	24V			
	RATED CURRENT	1.25A	1A	0.42A	0.33A	0.23A			
	CURRENT RANGE Note.2	0 ~ 1.25A	0 ~ 1A	0 ~ 0.42A	0 ~ 0.33A	0 ~ 0.23A			
	PEAK CURRENT	1.38A	1.1A	0.46A	0.36A	0.25A			
	RATED POWER	4.1W	5W	5W	5W	5.5W			
OUTPUT	PEAK LOAD(10sec.) Note.3		5.5W	5.5W	5.4W	6W			
	RIPPLE & NOISE (max.) Note.4		100mVp-p	150mVp-p	150mVp-p	180mVp-p			
	VOLTAGE TOLERANCE Note.5		±2.5%	±2.5%	±2.5%	±2.5%			
	LINE REGULATION	±0.3%	±0.3%	±0.3%	±0.3%	±0.3%			
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	SETUP, RISE TIME	1000ms, 30ms/230VAC	1000ms, 30ms	/115VAC at full load	•	'			
	HOLD UP TIME (Typ.)	40ms/230VAC 12ms	s/115VAC at full load	d					
	() . ,	80 ~ 264VAC 113V~	~370VDC						
	FREQUENCY RANGE	47 ~ 440Hz	0,0100						
		74%	78%	80%	81%	82%			
INPUT	EFFICIENCY (Typ.)	**		00%	0170	0270			
	AC CURRENT (Typ.)		230VAC						
	INRUSH CURRENT (Typ.)	COLD START 25A/115	VAC 45A/230\	/AC					
	LEAKAGE CURRENT (max.) Note.7	Touch current <80μA/26	4VAC						
		110% ~ 180% rated output	ut power						
	OVERLOAD	Protection type: Hiccup r	mode, recovers auto	omatically after fault conditi	on is removed				
PROTECTION		3.8 ~ 5V	5.8 ~ 6.8V	13.8 ~ 16.2V	17.3 ~ 20.3V	27.6 ~ 32.4V			
	OVER VOLTAGE	Protection type : Shut off	o/p voltage_clampi	ng by zener diode					
	OVER TEMPERATURE			overs automatically after ter	nnerature does down				
		-40 ~ +85°C (Refer to "De		overs automationly after ter	ilperature goes down				
	WORKING TEMP.								
	WORKING HUMIDITY	20 ~ 90% RH non-conder							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +100°C, 10 ~ 95% RH non-condensing							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)							
	SOLDERING TEMPERATURE	Wave soldering: 265°C,5s (max.); Manual soldering: 390°C,3s (max.)							
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes							
	OPERATING ALTITUDE Note.8								
	SAFETY STANDARDS	IEC 60601-1:2005+A1,TUV BS EN/ EN 60601-1:2006+A1+A12+A2,ANSI/AAMI ES60601-1:2005+A2 CAN/CSA C22.2 No. 60601-1:2014+A2,EAC TP TC 004 approved; Design refer to BS EN/EN60335-1(by request)							
				TP TC 004 approved;Design	n refer to BS EN/EN603	35-1(by request)			
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP							
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC							
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500	OVDC / 25°C / 70% F	RH					
		Parameter		Standard	Test Le	evel / Note			
		Conducted		BS EN/EN55011 (CISPR11)	Class B	}			
	EMC EMISSION	Radiated		BS EN/EN55011 (CISPR11)	Class B	}			
		Harmonic Current		BS EN/EN61000-3-2	Class A				
0.4.5531/.0		Voltage Flicker		BS EN/EN61000-3-3					
SAFETY &		BS EN/EN55035, BS EN/EN							
EMC		Parameter		Standard	Toot Lo	evel / Note			
(Note 9)									
		ESD		BS EN/EN61000-4-2		, 15KV air ; Level 4, 8KV contact			
		RF field susceptibility		BS EN/EN61000-4-3		, 10V/m(80MHz~2.7GHz)			
		. ,		DO ENTENDADO 4 4		Table 9, 9~28V/m(385MHz~5.78GHz			
	EMC IMMUNITY	EFT bursts		BS EN/EN61000-4-4	Level 3				
		Surge susceptibility		BS EN/EN61000-4-5	Level 3	, 1KV/Line-Line			
		Conducted susceptibilit	у	BS EN/EN61000-4-6	Level 3	Level 3, 10V			
		Magnetic field immunity	,	BS EN/EN61000-4-8		, 30A/m			
		Voltage dip, interruption	1	BS EN/EN61000-4-11		100% dip 1 periods, 30% dip 25 period			
	MTDE					nterruptions 250 periods			
OTHERS	MTBF DIMENSION	9337.3K hrs min. Telco 45.7*25.4*21.5mm (L*W*	•		//IL-HDBK-217F (25°C)				
UINEKS		· · · · · · · · · · · · · · · · · · ·	•) IIICII					
	PACKING	0.035Kg; 270pcs/10.5Kg	/0.94CUF1						
NOTE	No minimum load required. 3.3% Duty cycle maximum v Ripple & noise are measure Tolerance: includes set up Derating may be needed ur Touch current was measure	0.035Kg; 270pcs/10.5Kg/0.94CUFT wentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. ithin every 30 seconds. Average output power should not exceed the rated power at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47μF parallel capacitor. olerance, line regulation and load regulation. Here low input voltages. Please check the derating curve for more details. If from primary input to DC output. Trating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(650 red a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still uidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." meanwell.com//Upload/PDF/EMI_statement_en.pdf)							



■ Block Diagram

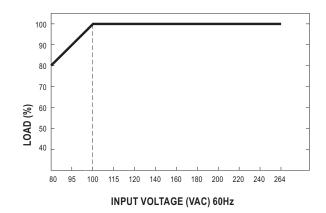
fosc: 100KHz



■ Derating Curve

100 80 40 20 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 85 (HORIZONTAL) AMBIENT TEMPERATURE (°C)

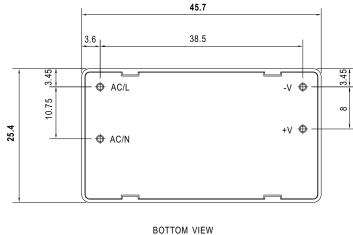
■ Output Derating VS Input Voltage

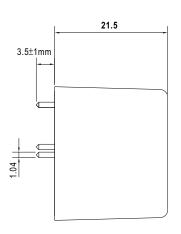




(Unit: mm , tolerance ± 0.5mm)

Case No.222A





VIEW SIDE VIEW

■ Installation Manual





















- 1.8"x1" compact size
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- Suitable for BF application with appropriate system consideration
- No load power consumption<0.075W
- Extremely low leakage current
- Wide operating temp. range -30 ~ +85°C
- EMI class B for class

 configuration
- Protections: Short circuit / Overload / Over voltage / Over temperature
- No minimum load required
- 3 years warranty

Applications

- · Portable medical device
- Mobile clinical workstation
- Medical computer monitor
- Medical examination instrument

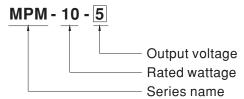
GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

MPM-10 is a 10W high density and small size (45.7*25.4*21.5mm) AC/DC module type medical grade power supply series offered in pin type. It features the operation for 80~264VAC, a low no load power consumption less than 0.075W, a high efficiency up to 84%, Class II (no FG) double insulation, outstanding dissipation and high lifespan thanks to the interior potting, 5G anti-vibration, high EMC performance, 4KVAC isolation, etc. The design observes IEC/BS EN/EN60601-1 and ANSI/AAMI ES60601-1 version three with 2xMOPP level and ultra-low leakage current (<80 μ A). It is very suitable for BF (patient contact) type medical device or relevant equipment.

Model Encoding





SPECIFICATION

IODEL		MPM-10-3.3	MPM-10-5	MPM-10-12	MPM-10-15	MPM-10-24			
	DC VOLTAGE	3.3V	5V	12V	15V	24V			
	RATED CURRENT	2.5A	2A	0.85A	0.67A	0.42A			
	CURRENT RANGE Note.2	0 ~ 2.5A	0 ~ 2A	0 ~ 0.85A	0 ~ 0.67A	0 ~ 0.42A			
	PEAK CURRENT	2.75A	2.2A	0.94A	0.74A	0.46A			
	RATED POWER	8.3W	10W	10.2W	10W	10W			
	PEAK LOAD(10sec.) Note.3	9W	11W	11.3W	11.1W	11W			
	RIPPLE & NOISE (max.) Note.4		100mVp-p	180mVp-p	180mVp-p	200mVp-p			
UTPUT	VOLTAGE TOLERANCE Note.5	· · · · · · · · · · · · · · · · · · ·	±2.5%	±2.5%	±2.5%	±2.5%			
	LINE REGULATION	±0.3%	±0.3%	±0.3%	±0.3%	±0.3%			
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	SETUP, RISE TIME	1000ms, 30ms/230VAC	1000ms, 30ms/	115VAC at full load					
	HOLD UP TIME (Typ.)		/115VAC at full load						
	() ,		~370VDC						
	FREQUENCY RANGE	47 ~ 440Hz	0.0120						
	EFFICIENCY (Typ.)	78%	81%	83%	83%	84%			
IPUT	AC CURRENT (Typ.)	111	230VAC	0070	0070	0470			
	INRUSH CURRENT (Typ.)	COLD START 25A/115		/A.C					
	LEAKAGE CURRENT (max.) Note.7			AC .					
	ELAKAGE GOKKERT (IIIax.) Note.1	110% ~ 180% rated outp							
	OVERLOAD		•	matically after fault conditio	n is ramayad				
		71 1		13.8 ~ 16.2V		27.6 - 22.41/			
ROTECTION	OVER VOLTAGE	3.8 ~ 5V	5.8 ~ 6.8V		17.3 ~ 20.3V	27.6 ~ 32.4V			
		Protection type : Shut off		<u> </u>	, ,				
	OVER TEMPERATURE	,,		vers automatically after tem	perature goes down				
	WORKING TEMP.	-30 ~ +85°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +100°C, 10 ~ 95% RH non-condensing							
NVIRONMENT	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)							
	SOLDERING TEMPERATURE								
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes							
	OPERATING ALTITUDE Note.8	5000 meters IEC 60601-1:2005+A1,TUV BS EN/ EN 60601-1:2006+A1+A12+A2,ANSI/AAMI ES60601-1:2005+A2							
	SAFETY STANDARDS	1		1-1:2006+A1+A12+A2,ANS TP TC 004 approved;Design					
	ISOLATION LEVEL	Primary-Secondary: 2xM	IOPP						
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC							
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 50	0VDC / 25°C / 70% F	RH					
		Parameter	:	Standard	Test Leve	I / Note			
		Conducted	1	BS EN/EN55011 (CISPR11)	Class B				
	EMC EMISSION	Radiated		BS EN/EN55011 (CISPR11)	Class B	Class B			
		Harmonic Current	1	BS EN/EN61000-3-2	Class A				
AFETY &		Voltage Flicker	1	BS EN/EN61000-3-3					
MC		BS EN/EN55035, BS EN/EN60601-1-2							
lvic lote 9)		Parameter	:	Standard	Test Leve	Test Level / Note			
		ESD		BS EN/EN61000-4-2	Level 4, 1	5KV air ; Level 4, 8KV contac			
		RF field susceptibility	1	BS EN/EN61000-4-3		0V/m(80MHz~2.7GHz) ~28V/m(385MHz~5.78GHz			
		EFT bursts		BS EN/EN61000-4-4					
	EMC IMMUNITY	Surge susceptibility		BS EN/EN61000-4-5		Level 3, 2KV Level 3, 1KV/Line-Line			
		Conducted susceptibility		BS EN/EN61000-4-6	-	Level 3, 10V			
		Magnetic field immunity	,	BS EN/EN61000-4-8	Level 4, 3				
						1 periods, 30% dip 25 period			
	MTDE	Voltage dip, interruption		BS EN/EN61000-4-11		rruptions 250 periods			
	MTBF		•		IL-HDBK-217F (25°C)				
	DIMENSION	45.7*25.4*21.5mm (L*W		" Inch					
THERS	PACKING	0.035Kg; 270pcs/10.5Kg/0.94CUFT							

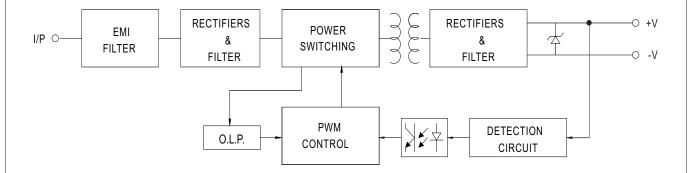
NOTE

- 3. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power
- 4. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 µF & 47 µF parallel capacitor.
- 5. Tolerance: includes set up tolerance, line regulation and load regulation.
- 6. Derating may be needed under low input voltages. Please check the derating curve for more details.
- 7. Touch current was measured from primary input to DC output.
- 8. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft),
- 9. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
- % Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx



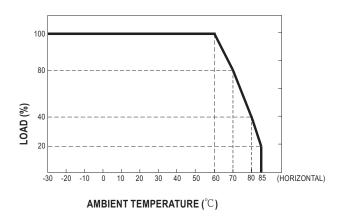
■ Block Diagram

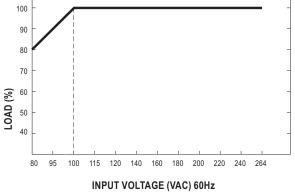
fosc: 100KHz



■ Derating Curve

■ Output Derating VS Input Voltage

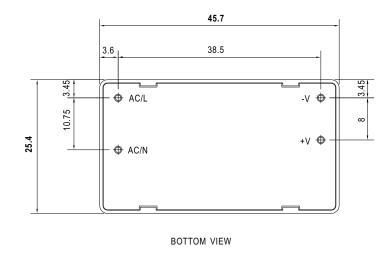


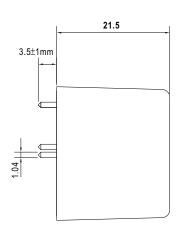




(Unit: mm , tolerance ± 0.5mm)

Case No.222A





SIDE VIEW

■ Installation Manual

























BS EN/EN60335-1 ANSI/AAMI ES60601-1 BS EN/EN60601-1 IEC60601-1 TPTC00-

Features

- 2.06"x1.07" compact size
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- Suitable for BF application with appropriate system consideration
- No load power consumption<0.1W
- Extremely low leakage current
- Wide operating temp. range -40 ~ +85°C
- EMI class B for class ${\rm I\hspace{-.1em}I}$ configuration
- Protections:
 Short circuit / Overload / Over voltage / Over temperature
- · No minimum load required
- · 3 years warranty

Applications

- · Portable medical device
- Mobile clinical workstation
- Medical computer monitor
- Medical examination instrument

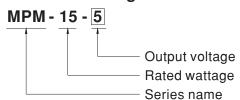
■ GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

MPM-15 is a 15W high density and small size (52.4*27.2*24mm) AC/DC module type medical power supply series offered in pin type. It features the operation for $80\sim264VAC$, a low no load power consumption less than 0.1W, a high efficiency up to 87%, Class II (no FG) double insulation, outstanding dissipation and high lifespan thanks to the interior potting, 2G anti-vibration, high EMC performance, 4KVAC isolation, etc. The design observes IEC/BS EN/EN60601-1 and ANSI/AAMI ES60601-1 version three with 2xMOPP level and ultra-low leakage current ($<80~\mu$ A). It is very suitable for BF (patient contact) type medical device or relevant equipment.

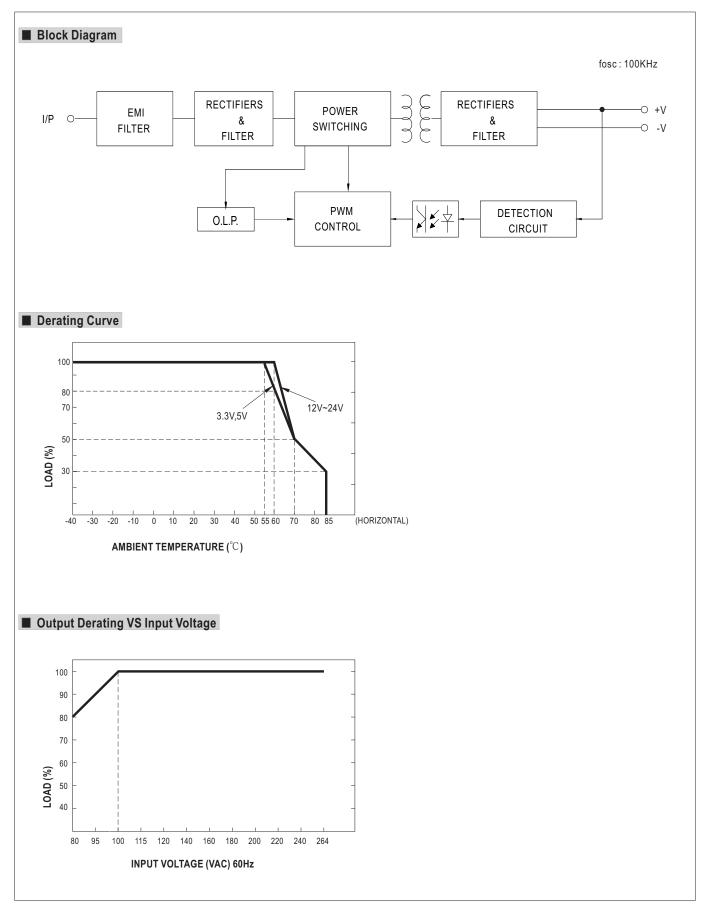
■ Model Encoding





MODEL		MPM-15-3.3	MPM-15-5	MPM-15-12	MPM-15-15	MPM-15-24			
	DC VOLTAGE	3.3V	5V	12V	15V	24V			
	RATED CURRENT	3.5A	3A	1.25A	1A	0.63A			
	CURRENT RANGE Note.2	0 ~ 3.5A	0 ~ 3A	0 ~ 1.25A	0 ~ 1A	0 ~ 0.63A			
	PEAK CURRENT	3.85A	3.3A	1.38A	1.1A	0.69A			
	RATED POWER	11.6W	15W	15W	15W	15.1W			
		12.7W	16.5W	16.6W	16.5W	16.6W			
	RIPPLE & NOISE (max.) Note.4		150mVp-p	150mVp-p	180mVp-p	180mVp-p			
DUTPUT	VOLTAGE TOLERANCE Note.5		±2.0%	±2.0%	±2.0%	±2.0%			
	LINE REGULATION	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%			
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%			
	SETUP, RISE TIME	1500ms, 30ms/230VAC		/115VAC at full load					
	HOLD UP TIME (Typ.)	40ms/230VAC 10ms	s/115VAC at full load	d					
	VOLTAGE RANGE Note.6	80 ~ 264VAC 113V	~370VDC						
	FREQUENCY RANGE	47 ~ 440Hz							
NEUT	EFFICIENCY (Typ.)	83.5%	85.5%	86.5%	87%	86.5%			
NPUT	AC CURRENT (Typ.)	0.6A/115VAC 0.3A/	230VAC	<u> </u>	,				
	INRUSH CURRENT (Typ.)	COLD START 20A/1	15VAC 45A/2	230VAC					
	LEAKAGE CURRENT (max.) Note.7								
	ELANTAGE GOTTLETT (max.) Note.7	110% ~ 150% rated output							
	OVERLOAD		•						
		7		omatically after fault condition					
PROTECTION	OVER VOLTAGE	3.8 ~ 5V	5.8~ 6.8V	13.8 ~ 16.2V	17.3 ~ 20.3V	27.6 ~ 32.4V			
	OVER VOLINGE	Protection type : Shut off	o/p voltage, clampi	ng by zener diode					
	OVER TEMPERATURE	Protection type : Shut do	wn o/p voltage, reco	overs automatically after ten	nperature goes down				
	WORKING TEMP.	-40 ~ +85°C (Refer to "De	erating Curve")						
	WORKING HUMIDITY	20 ~ 90% RH non-conder	nsing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	$-40 \sim +85^{\circ}$ C, $10 \sim 95\%$ RH non-condensing							
	TEMP. COEFFICIENT	±0.03%°C (0~60°C)							
	SOLDERING TEMPERATURE	, ,	5e (may): Manual	soldering: 300°C 3s (may)				
	VIBRATION	Wave soldering: 265°C,5s (max.); Manual soldering: 390°C,3s (max.)							
	OPERATING ALTITUDE Note.8	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
	SAFETY STANDARDS ISOLATION LEVEL	CAN/CSA C22.2 No. 60	601-1:2014+A2,IE 5-1:2012+A11+A13	1601-1:2006+A1+A12+A2, C 60335-1:2010/AMD2:20 3+A1+A14+A2+A15 ,EAC	116,	2005/A2:2021,			
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC							
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C/70% RH							
		Parameter		Standard	Test Lev	el / Note			
		Conducted emission		BS EN/EN55011 (CISPR11)	Class B				
	EMC EMISSION	Radiated emission		BS EN/EN55011 (CISPR11)	Class B				
		Harmonic current		BS EN/EN61000-3-2	Class A				
				BS EN/EN61000-3-3					
SAFETY &		Voltage flicker		D3 LIV/LIV0 1000-3-3					
EMC		BS EN/EN55035, BS EN/EN		0	T	1/11/			
(Note.9)		Parameter		Standard		el / Note			
		ESD		BS EN/EN61000-4-2	Level 4,	15KV air ; Level 4, 8KV contact			
		RF field susceptibility		BS EN/EN61000-4-3	Level 3,	10V/m(80MHz~2.7GHz)			
		TXI IIelu susceptibility		DO 214/21401000 4 0	Table 9, 9	9~28V/m(385MHz~5.78GHz)			
		EFT bursts		BS EN/EN61000-4-4	Level 3, 2	Level 3, 2KV			
	EMC IMMUNITY	Surge susceptibility		BS EN/EN61000-4-5	Level 3,	Level 3, 1KV/Line-Line			
		Conducted susceptibilit	V	BS EN/EN61000-4-6	Level 3,	10V			
		Magnetic field immunity	-	BS EN/EN61000-4-8	-				
		Voltage dip, interruption	(oltage dip_interruption PS_EN/ENG1000 4.14		o 1 periods, 30% dip 25 periods, erruptions 250 periods				
	MTBF	7319.8K hrs min. Telco	ordia SR-332 (Bello	ore); 1210.0K hrs min. N	//IL-HDBK-217F (25°C)				
OTHERS	DIMENSION	52.4*27.2*24mm (L*W*H) or 2.06"*1.07"*0.9	94" inch					
	PACKING	0.056Kg; 240pcs/14.4Kg	/0.94CUFT						
NOTE	All parameters NOT specia No minimum load required. 3. 33% Duty cycle maximum v Ripple & noise are measure Tolerance: includes set up Derating may be needed ui	within every 30 seconds. and at 20MHz of bandwidth tolerance, line regulation	Average output por n by using a 12" tw and load regulation lease check the de	wer should not exceed the risted pair-wire terminated on.	rated power. with a 0.1 μ F & 47 μ F p	arallel capacitor.			

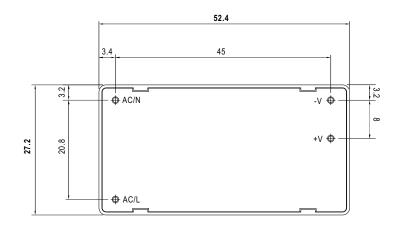


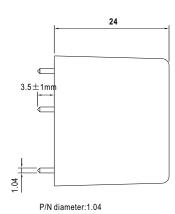




(Unit: mm , tolerance ± 0.5 mm)

Case No.219A





BOTTOM VIEW

SIDE VIEW

■ Installation Manual







20W High Reliable Green Medical Encapsulated Type



















BS EN/EN60335-1 ANSI/AAMI ES60601-1 BS EN/EN60601-1 IEC60601-1 TPTC004

Features

- 2.06"x1.07" compact size
- · Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- Suitable for BF application with appropriate system consideration
- No load power consumption<0.1W
- Extremely low leakage current
- Wide operating temp. range -35 ~ +85°C
- Protections:
 - Short circuit / Overload / Over voltage / Over temperature
- No minimum load required
- 3 years warranty

Applications

- · Portable medical device
- Mobile clinical workstation
- Medical computer monitor
- · Medical examination instrument

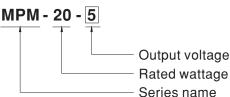
GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

MPM-20 is a 20W high density and small size (52.4*27.2*24mm) AC/DC module type medical power supply series offered in pin type. It features the operation for 80~264VAC, a low no load power consumption less than 0.1W, a high efficiency up to 87%, Class II (no FG) double insulation, outstanding dissipation and high lifespan thanks to the interior potting, 2G anti-vibration, high EMC performance, 4KVAC isolation, etc. The design observes IEC/BS EN/EN60601-1 and ANSI/AAMI ES60601-1 version three with 2xMOPP level and ultra-low leakage current (<80 μ A). It is very suitable for BF (patient contact) type medical device or relevant equipment.

Model Encoding





20W High Reliable Green Medical Encapsulated Type

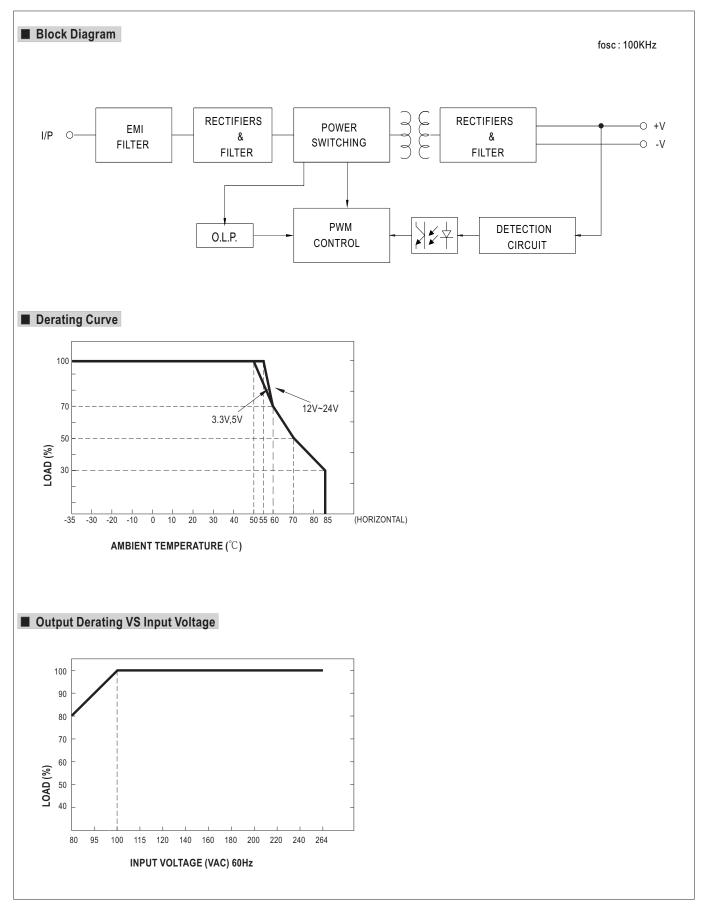
MODEL		MPM-20-3.3	MPM-20-5	MPM-20-12	MPM-20)-15	MPM-20-24		
	DC VOLTAGE	3.3V	5V	12V	15V		24V		
	RATED CURRENT	4.5A	4A	1.8A	1.4A		0.9A		
	CURRENT RANGE Note.2	0 ~ 4.5A	0 ~ 4A	0 ~ 1.8A	0 ~ 1.4A		0 ~ 0.9A		
	PEAK CURRENT	4.95A	4.4A	1.98A	1.54A		0.99A		
	RATED POWER	14.9W	20W	21.6W	21W		21.6W		
	PEAK LOAD(10sec.) Note.3	16.3W	22W	23.8W	23.1W		23.8W		
	RIPPLE & NOISE (max.) Note.4	150mVp-p	150mVp-p	150mVp-p	180mVp)-D	180mVp-p		
OUTPUT	VOLTAGE TOLERANCE Note.5		±2.0%	±2.0%	±2.0%	•	±2.0%		
	LINE REGULATION	±0.5%	±0.5%	±0.3%	±0.3%		±0.3%		
	LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%		±0.5%		
	SETUP, RISE TIME	1500ms, 30ms/230VAC	1500ms, 30m	s/115VAC at full load					
	HOLD UP TIME (Typ.)	40ms/230VAC 10ms	s/115VAC at full loa	ad					
	() , ,	80 ~ 264VAC 113V	~370VDC						
	FREQUENCY RANGE	47 ~ 440Hz							
	EFFICIENCY (Typ.)	81%	85%	85.5%	87%		87%		
NPUT	AC CURRENT (Typ.)		V230VAC	00.070	0170		01 70		
	INRUSH CURRENT (Typ.)			5A/230VAC					
	LEAKAGE CURRENT (max.) Note.7			JA/230 VAC					
	LEARAGE OURILLY (IIIax.) NOTe./	,							
	OVERLOAD	110% ~ 150% rated outp		tomatically after fault condit	ion is removed				
				13.8 ~ 16.2V	17.3 ~ 2	20.21/	27.6 ~ 32.4V		
PROTECTION	OVER VOLTAGE	3.8 ~ 5V	5.8 ~ 6.8V		17.3~2	20.37	27.0 ~ 32.4 V		
	OVED TEMPED ATURE	Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut down o/p voltage, recovers automatically after temperature goes down							
	OVER TEMPERATURE	- 71	1 0 ,	covers automatically after te	mperature goes	down			
	WORKING TEMP.	-35 ~ +85°C (Refer to "D	,						
	WORKING HUMIDITY	20 ~ 90% RH non-conde							
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing							
	TEMP. COEFFICIENT	±0.03%/°C (0~55°C)							
	SOLDERING TEMPERATURE	Wave soldering: 265°C,5s (max.); Manual soldering: 390°C,3s (max.)							
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes							
	OPERATING ALTITUDE Note.8	5000 meters IEC 60601-1:2005+A1,TUV BS EN/ EN 60601-1:2006+A1+A12+A2,ANSI/AAMI ES60601-1:2005/A2:2021,							
	SAFETY STANDARDS	CAN/CSA C22.2 No. 60601-1:2014+A2,IEC 60335-1:2010/AMD2:2016, Dekra BS EN/ EN 60335-1:2012+A11+A13+A1+A14+A2+A15 ,EAC TP TC 004 approved							
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP							
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC							
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 50	0VDC / 25°C / 70%	RH					
		Parameter		Standard		Test Level / N	lote		
		Conducted emission		BS EN/EN55011 (CISPR11)	Class B			
	EMC EMISSION	Radiated emission		BS EN/EN55011 (CISPR11)	Class B			
		Harmonic current		BS EN/EN61000-3-2	,	Class A			
CAFETY		Voltage flicker		BS EN/EN61000-3-3					
SAFETY &		BS EN/EN55035, BS EN/EN	I60601_1_2						
EMC (Note.9)		Parameter	100001-1-2	Standard		Test Level / N	lote		
,,		ESD		BS EN/EN61000-4-2			air; Level 4, 8KV contac		
						Level 3, 10V/m(80MHz~2.7GHz)			
		RF field susceptibility		BS EN/EN61000-4-3		Table 9, 9~28V/m(385MHz~5.78GHz			
		EFT bursts		BS EN/EN61000-4-4		Level 3, 2KV	(000///12 0.700/12)		
	EMC IMMUNITY	Surge susceptibility		BS EN/EN61000-4-5		Level 3, 2KV	l ine-l ine		
		Conducted susceptibility	tv	BS EN/EN61000-4-6		Level 3, 10V	LING-LING		
		Magnetic field immunity	•	BS EN/EN61000-4-8		Level 4, 30A/r	m		
		Voltage dip, interruption		BS EN/EN61000-4-11		100% dip 1 pe	eriods, 30% dip 25 periods otions 250 periods		
	MTBF	7319.8K hrs min. Telc	ordia SR-332 (Rol	lcore) ; 1210.0K hrs min.	MIL-HDBK-217F		poouo		
OTHERS	DIMENSION	52.4*27.2*24mm (L*W*H			WIL-1100K-21/F	(200)			
CHIERO		,	,	.01					
	PACKING 1. All parameters NOT special	0.056Kg; 240pcs/14.4Kg		out rotod load and OF°C . (ambient t	roturo			
NOTE	No minimum load required. 3.33% Duty cycle maximum v Ripple & noise are measure Tolerance : includes set up	within every 30 seconds. and at 20MHz of bandwidth tolerance, line regulation	Average output point by using a 12" to and load regulation	ower should not exceed the wisted pair-wire terminated on.	e rated power. with a 0.1 μ F 8		el capacitor.		
	Derating may be needed up Touch current was measure The ambient temperature d The power supply is consider.	ed from primary input to E erating of 3.5° C/1000m w	DC output. vith fanless model:	s and of $5^{\circ}\text{C}/1000\text{m}$ with fa	ın models for op	•	,		

9. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."

Product Liability Disclaimer: For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

(as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)

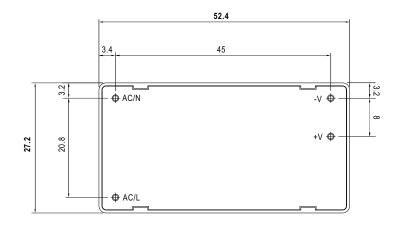


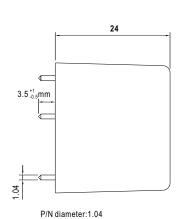




(Unit: mm , tolerance ± 0.5mm)

Case No.219A





BOTTOM VIEW

SIDE VIEW

■ Installation Manual

























ANSI/AAMI ES60601-1 BS EN/EN60601-1 IEC60601-1

MNSI/AAMII ES00001-1 BS EIN/EIN00001-1 IEC00001-1

Features

- 2.73"x1.53" compact size
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- Suitable for BF application with appropriate system consideration
- No load power consumption<0.075W
- Extremely low leakage current
- Wide operating temp. range -40 ~ +85°C
- EMI class B for class Ⅱ configuration
- Protections: Short circuit / Overload / Over voltage
- No minimum load required
- 3 years warranty

Applications

- · Portable medical device
- · Mobile clinical workstation
- Medical computer monitor
- · Medical examination instrument

■ GTIN CODE

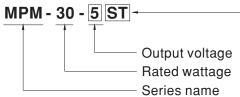
MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

MPM-30 is a 30W high density and small size (69.5x39x24mm) AC/DC module type medical power supply series offered in pin type. It features the operation for $80\sim264VAC$, a low no load power consumption less than 0.075W, a high efficiency up to 91%, Class II (no FG) double insulation, outstanding dissipation and high lifespan thanks to the interior potting, high EMC performance, 4KVAC isolation, etc. PCB mounting style model(Blank) meet the anti-vibration demand up to 2G and screw terminal style model (ST) meet the anti-vibration demand up to 5G .

The design observes IEC/BS EN/EN60601-1 and ANSI/AAMI ES60601-1 version three with 2xMOPP level and ultra-low leakage current ($<80~\mu$ A). It is very suitable for BF (patient contact) type medical device or relevant equipment. In addition to PCB mounting style,MPM-30 series also offers the screw terminal style model (ST).

■ Model Encoding



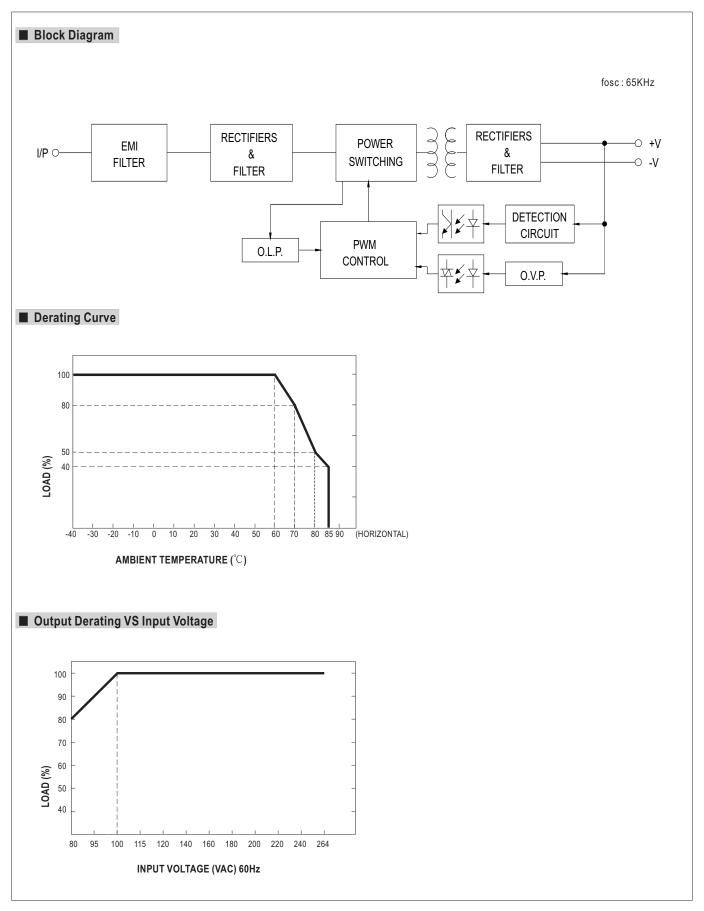
Blank: PCB mounting style ST: Screw terminal style



IODEL		MPM-30-3.3	MPM-30-5□	MPM-30-12	MPM-30-15 □	MPM-30-24□	MPM-30-48□			
	DC VOLTAGE	3.3V	5V	12V	15V	24V	48V			
	RATED CURRENT	6A	6A	2.5A	2A	1.3A	0.63A			
	CURRENT RANGE Note.2	0 ~ 6A	0 ~ 6A	0 ~ 2.5A	0 ~ 2A	0 ~ 1.3A	0 ~ 0.63A			
	PEAK CURRENT	7.8A	6.9A	2.9A	2.3A	1.5A	0.73A			
	RATED POWER	19.8W	30W	30W	30W	31.2W	30.2W			
		25.7W	34.5W	34.8W	34.5W	36W	35W			
	RIPPLE & NOISE (max.) Note.4		80mVp-p	120mVp-p	120mVp-p	200mVp-p	200mVp-p			
UTPUT	VOLTAGE TOLERANCE Note.5		±2.0%	±2.0%	±2.0%	±2.0%	±2.0%			
	LINE REGULATION	±0.5%		±0.5%			±0.5%			
			±0.5%		±0.5%	±0.5%				
	LOAD REGULATION	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%			
	SETUP, RISE TIME	500ms, 30ms/230\		ms/115VAC at full load						
	HOLD UP TIME (Typ.)	40ms/230VAC	12ms/115VAC at fu	III load						
		80 ~ 264VAC								
	FREQUENCY RANGE	47 ~ 63Hz								
IPUT	EFFICIENCY (Typ.)	82.5%	86.5%	90%	89%	90%	91%			
• .	AC CURRENT (Typ.)	0.75A/115VAC	0.5A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START	25A/115VAC 4	15A/230VAC						
	LEAKAGE CURRENT (max.) Note.7	Touch current <80	μA/264VAC							
		115% ~ 165% rate	d output power							
	OVERLOAD	Protection type : H	liccup mode, recover	s automatically after fa	ult condition is remove	ed				
ROTECTION		3.5 ~ 4.5V	5.3 ~ 6.8V	12.6 ~ 16.2V	15.8 ~ 20.3V	25.2 ~ 32.4V	50.4 ~ 64V			
	OVER VOLTAGE	Protection type : S	hut down o/p voltage	e, re-power on to recove	er					
	WORKING TEMP.	-40 ~ +85°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing								
NVIRONMENT	TEMP. COEFFICIENT	±0.03%/°C (0~60°C)								
NVIKONWENT	SOLDERING TEMPERATURE	Wave soldering: 265°C,5s (max.); Manual soldering: 390°C,3s (max.)								
		Blank:10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
	VIBRATION	ST:10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes								
	OPERATING ALTITUDE Note.8	V 11								
		IEC 60601-1:2005+A1,TUV BS EN/ EN 60601-1:2006+A1+A12+A2.ANSI/AAMI ES60601-1:2005+A2,								
	SAFETY STANDARDS			2,EAC TP TC 004 appro			equest)			
	ISOLATION LEVEL	Primary-Secondary: 2xMOPP								
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC								
	ISOLATION RESISTANCE	I/P-O/P:100M Ohr	ns / 500VDC / 25°C/	70% RH						
		Parameter		Standard		Test Level / Note				
		Conducted		BS EN/EN55011 (CISPR11)	Class B				
	EMC EMISSION	Radiated		BS EN/EN55011 (CISPR11)	Class B				
		Harmonic Curren	t	BS EN/EN61000-	3-2	Class A				
ACETY 0		Voltage Flicker BS EN/EN61000-3-3								
AFETY &		BS EN/EN55035, BS EN/EN60601-1-2								
MC Note 9)		Parameter		Standard		Test Level / Note				
		ESD		BS EN/EN61000-	4-2	Level 4, 15KV air ; Level 4, 8KV conta				
		LOD		DO LIVEIVO 1000	BS EN/EN01000-4-2					
		RF field susceptib	oility	BS EN/EN61000-	BS EN/EN61000-4-3		Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz)			
		EFT bursts		BS EN/EN61000-	BS EN/EN61000-4-4		Level 3, 2KV			
	EMC IMMUNITY	Surge susceptibil	itv		BS EN/EN61000-4-5		Level 3, 1KV/Line-Line			
		Conducted susce	•		BS EN/EN61000-4-5 BS EN/EN61000-4-6		Level 3, 10V			
		Magnetic field im	. ,	BS EN/EN61000-		Level 4, 30A/m				
		Magnetic held iiii	inumity	DO LIV/LIVO 1000-	1 -0		10 20% din 25 norio			
		Voltage dip, inter	ruption	BS EN/EN61000-	4-11	100% dip i period	ds, 30% dip 25 perio is 250 periods			
	MTBF	6325.8K hrs min.	Telcordia SR-332	(Bellcore); 778.9K hrs	min. MIL-HDBK-21					
	DIMENSION			, , , , , , , , , , , , , , , , , , ,			H) or 3.58"*1.55"*1.12"			
THERS		PCB mounting style:69.5*39*24mm (L*W*H) or 2.73"*1.53"*0.94" inch Screw terminal style:91*39.5*28.5mm (L*W*H) or 3.58"*1.55"*1.12								
THERS	PACKING	PCB mounting sty	le:0.102Kg;144pcs/1	5 7Kg/0 97CUFT	Screw terminal etvl	e :0.12Kg;120pcs/14.9	Ka/0 74CHFT			

- 3. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.
- 4. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μ F & 47 μ F parallel capacitor.
- 5. Tolerance: includes set up tolerance, line regulation and load regulation.
- 6. Derating may be needed under low input voltages. Please check the derating curve for more details.
- 7. Touch current was measured from primary input to DC output.
- 8. The ambient temperature derating of $3.5^{\circ}\text{C}/1000\text{m}$ with fanless models and of $5^{\circ}\text{C}/1000\text{m}$ with fan models for operating altitude higher than 2000m(6500ft).
- 9. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
- ** Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx



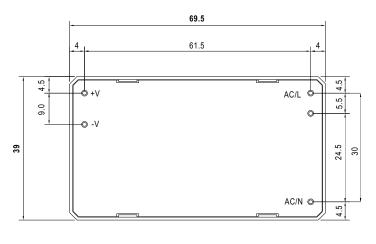




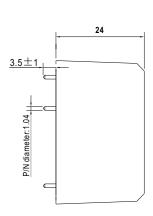
(Unit: mm , tolerance ± 1mm)

• MPM-30 (PCB mounting style)

Case No.IRM30

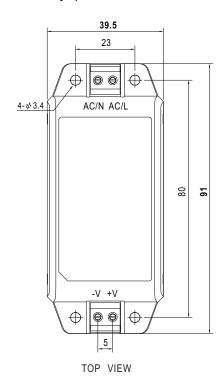


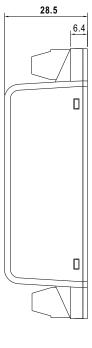
BOTTOM VIEW



SIDE VIEW

• MPM-30-ST (Screw terminal style)





SIDE VIEW

■ Installation Manual









(MPM-45)

(MPM-45-xxST)



















- 3.43"x2.05" compact size
- PCB chassis or screw terminal mounting version
- · Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- Suitable for BF application with appropriate system consideration
- No load power consumption<0.1W
- Extremely low leakage current
- Wide operating temp. range -30 ~ +80°C
- EMI Class B without additional components
- Isolation Class II
- Protections: Short circuit / Overload / Over voltage
- No minimum load required
- Operating altitude up to 4000 meters (Note.7)
- 50W peak(10 sec.)
- · 3 years warranty

Applications

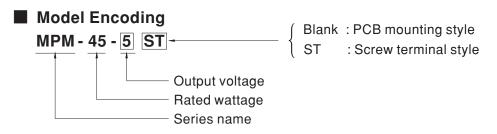
- · Portable medical device
- Mobile clinical workstation
- Medical computer monitor
- Medical examination instrument

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

MPM-45 is a 45W high density and small size (87x52x29.5mm) AC/DC PCB-mount type medical grade power supply. It features the operation for 80~264VAC, a low no load power consumption less than 0.1W, a high efficiency up to 92.5%, Class II (no FG) double insulation, outstanding dissipation, 2~5G anti-vibration by model, high EMC performance, 4KVAC isolation, etc. The design observes IEC/BS EN/EN60601-1 and ANSI/AAMI ES60601-1 version three with 2 x MOPP level and ultra-low leakage current (<100µA). It is very suitable for BF (patient contact) type medical device or relevant equipment.

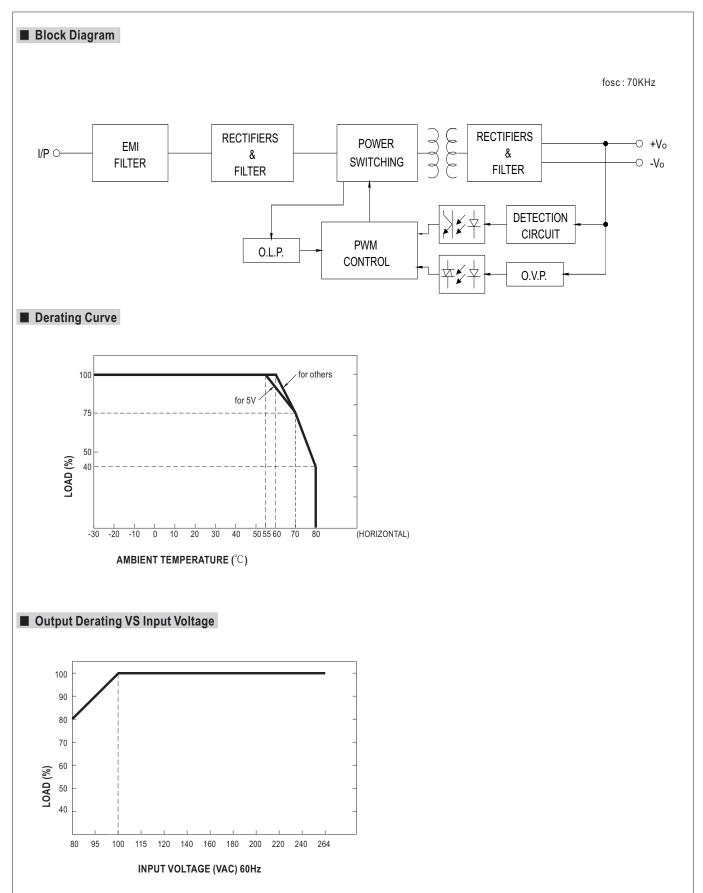




45W AC-DC High Reliable PCB-Mount Green Medical Power Module MPM-45 series

			MPM-45-5		MPM-45-12	MPM-45-1	5	MPM-45-24		MPM-45-48	
	DC VOLTA	GE	5V		12V	15V		24V		48V	
		Peak(10 sec.)	8.8A		4.13A	3.3A		2.1A		1.05A	
	CURRENT	Convection	8A		3.75A	3A		1.88A		0.94A	
	RATED	Peak(10 sec.)Note.2			49.5W	49.5W		50.4W		50.4W	
		Convection	40W		45W	45W		45.1W		45.1W	
		IOISE (max.) Note.3	-		120mVp-p	120mVp-p		200mVp-p		240mVp-p	
OUTPUT		OLERANCE Note.4			±2.0%	±2.0%		±2.0%		±2.0%	
	LINE REGU		±0.5%		±0.5%	±0.5%		±0.5%		±0.5%	
	LOAD REG		±1.0%	2001/40	±1.0%	±0.5%		±0.5%		±0.5%	
	SETUP, RIS		1000ms, 30ms/2			/115VAC at full load					
	HOLD UP T	,	50ms/230VAC		/115VAC at full loa	ıd					
	VOLTAGE I			113 ~ 37	OVDC						
	FREQUENC	CY RANGE	47 ~ 63Hz								
INPUT	EFFICIENC	Y (Typ.)	88%		91.5%	92.5%		92.5%		92%	
• .	AC CURRE	NT (Typ.)	1.2A/115VAC	0.6A/2	230VAC						
	INRUSH CU	JRRENT (Typ.)	COLD START	30A/11	15VAC 60A/23	30VAC					
	LEAKAGE C	URRENT (max.) Note.6	Touch current <	<100 μA/2	64VAC						
			115% ~ 135% ra	ated outpu	ıt power						
	OVERLOAD	0	Protection type	: Hiccup r	node, recovers aut	omatically after faul	t condition is a	emoved			
PROTECTION			5.3 ~ 7.2V		12.6 ~ 16.2V	15.8 ~ 20.3	3V	25.2 ~ 32.4V		50.4 ~ 64.8V	
	OVER VOL	TAGE		: Shut dov	wn o/p voltage. re-r	power on to recover					
	OVERTER	//PERATURE	31		1 0 / 1	e-power on to recov	ver				
	WORKING		-30 ~ +80°C (Re		1 0 /	,					
	WORKING		20 ~ 90% RH no		,						
	STORAGE		-40 ~ +85°C	JII-conder	ising						
			1 1 1	co°C)							
ENVIRONMENT	TEMP. COE		±0.03%/°C (0 ~ 60°C)								
	SOLDERIN	G TEMPERATURE	Wave soldering: 265°C,5s (max.); Manual soldering: 390°C,3s (max.)								
	VIBRATION	I	Blank:10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
			ST:10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes								
	OPERATIN	G ALTITUDE Note.7	4000 meters / OVC II IEC 60601-1:2005+A1, TUV BS EN/ EN 60601-1:2006+A1+A12+A2, ANSI/AAMI ES60601-1:2005+A2								
	SAFETY ST	ANDARDS									
			CAN/CSA C22.2	2 No. 606	01-1:2014+A2, EA	601-1:2006+A1+A12 C TP TC 004 approv					
	ISOLATION	ILEVEL	CAN/CSA C22.2 Primary-Second	2 No. 6060 dary: 2xM	01-1:2014+A2, EA						
	ISOLATION WITHSTAN	I LEVEL D VOLTAGE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC	2 No. 6060 dary: 2xM	01-1:2014+A2, EA(OPP	C TP TC 004 approv					
	ISOLATION WITHSTAN	I LEVEL	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O	2 No. 6060 dary: 2xM	01-1:2014+A2, EA(OPP 0VDC / 25°C / 70%	C TP TC 004 approv		fer to BS EN/EN	60335-1((by request)	
	ISOLATION WITHSTAN	I LEVEL D VOLTAGE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter	2 No. 6060 dary: 2xM	01-1:2014+A2, EA(OPP OVDC / 25°C / 70%	C TP TC 004 approv RH Standard	ed; Design re	fer to BS EN/EN	60335-1(Level / N	(by request)	
	ISOLATION WITHSTAN ISOLATION	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted	2 No. 6060 dary: 2xM	01-1:2014+A2, EA(OPP 0VDC / 25°C / 70%	C TP TC 004 approv RH Standard BS EN/EN55011 (Cl	ed; Design re	Fer to BS EN/EN(60335-1(Level / N	(by request)	
	ISOLATION WITHSTAN	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated	2 No. 6060 dary: 2xMo	01-1:2014+A2, EA(OPP OVDC / 25°C / 70%	RH Standard BS EN/EN55011 (CI	ed; Design re	Test Class Class	Level / N	(by request)	
	ISOLATION WITHSTAN ISOLATION	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre	2 No. 6060 dary: 2xMo	01-1:2014+A2, EA(OPP OVDC / 25°C / 70%	RH Standard BS EN/EN55011 (CI BS EN/EN61000-3-	ed; Design re	Fer to BS EN/EN(Level / N	(by request)	
SAFETY &	ISOLATION WITHSTAN ISOLATION	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated	2 No. 6060 dary: 2xMo	01-1:2014+A2, EA(OPP OVDC / 25°C / 70%	RH Standard BS EN/EN55011 (CI	ed; Design re	Test Class Class	Level / N	(by request)	
	ISOLATION WITHSTAN ISOLATION	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre	2 No. 6060 dary: 2xMo	01-1:2014+A2, EA(OPP 0VDC / 25°C / 70%	RH Standard BS EN/EN55011 (CI BS EN/EN61000-3-	ed; Design re	Test Class Class	Level / N	(by request)	
EMC	ISOLATION WITHSTAN ISOLATION	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker	2 No. 6060 dary: 2xMo	01-1:2014+A2, EA(OPP 0VDC / 25°C / 70%	RH Standard BS EN/EN55011 (CI BS EN/EN61000-3-	ed; Design re	Test Class Class Class	Level / N	(by request)	
SAFETY & EMC (Note 8)	ISOLATION WITHSTAN ISOLATION	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503:	2 No. 6060 dary: 2xMo	01-1:2014+A2, EA(OPP OVDC / 25°C / 70% EN60601-1-2	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3-	ISPR11) ISPR11) 2	Test Class Class Class Test	Level / N 6 B 6 A	(by request)	
EMC	ISOLATION WITHSTAN ISOLATION	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD	2 No. 6060 dary: 2xM Ohms / 500 ent	01-1:2014+A2, EA(OPP OVDC / 25°C / 70%	RH Standard BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4-	ISPR11) ISPR11) ISPR13	Test Class Class Class Test Level	Level / N 6 B 6 A Level / N 4, 15KV	lote	
EMC	ISOLATION WITHSTAN ISOLATION	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter	2 No. 6060 dary: 2xM Ohms / 500 ent	01-1:2014+A2, EA(OPP OVDC / 25°C / 70%	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3-	ISPR11) ISPR11) ISPR13	Test Class Class Class Level Level	Level / N 6 B 6 B 6 A Level / N 4, 15 KV 3, 10 V/r	lote Vair ; Level 4, 8KV contact	
EMC	ISOLATION WITHSTAN ISOLATION EMC EMISS	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD	2 No. 6060 dary: 2xM Ohms / 500 ent	01-1:2014+A2, EA(OPP 0VDC / 25°C / 70% EN60601-1-2	RH Standard BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4-	ISPR11) ISPR11) 2 3	Test Class Class Class Class Level Level Table	Level / N 6 B 6 B 6 A Level / N 4, 15 KV 3, 10 V/r	lote Vair; Level 4, 8KV contacting (80MHz~2.7GHz)	
EMC	ISOLATION WITHSTAN ISOLATION	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep	2 No. 6060 dary: 2xM Dhms / 500 ent 5, BS EN/	01-1:2014+A2, EA(OPP OVDC / 25°C / 70% EN60601-1-2	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4- BS EN/EN61000-4-	ISPR11) ISPR11) 2 3	Test Class Class Class Level Level Level Level Level	Level / N 6 B 6 B 6 A Level / N 4, 15KV 3, 10V/r 9, 9~28' 3, 2KV	lote Vair; Level 4, 8KV contacting (80MHz~2.7GHz)	
EMC	ISOLATION WITHSTAN ISOLATION EMC EMISS	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts	2 No. 6060 dary: 2xM Dhms / 500 ent 5, BS EN/	01-1:2014+A2, EA(OPP OVDC / 25°C / 70% EN60601-1-2	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4- BS EN/EN61000-4- BS EN/EN61000-4-	SPR11) ISPR11) 2 3 4 5	Test Class Class Class Level Level Level Level Level Level Level	Level / N 6 B 6 B 6 A Level / N 4, 15KV 3, 10V/r 9, 9~28' 3, 2KV 3, 1KV//	lote lote /air; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz	
EMC	ISOLATION WITHSTAN ISOLATION EMC EMISS	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus	2 No. 6060 dary: 2xM the state of the state	01-1:2014+A2, EA(OPP OVDC / 25°C / 70% EN60601-1-2	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4-	SPR11) SPR11) 2 3 4 5 6	Test Class Class Class Level	Level / N 6 B 6 B 6 A Level / N 4, 15KV 3, 10V/r 9, 9~28' 3, 2KV 3, 1KV/r 3, 10V	lote lote /air ; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz Line-Line	
EMC	ISOLATION WITHSTAN ISOLATION EMC EMISS	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus	2 No. 6060 dary: 2xM ohms / 500 ent 5, BS EN/ billity billity ceptibility mmunity	01-1:2014+A2, EA(OPP 0VDC / 25°C / 70% EN60601-1-2	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4- BS EN/EN61000-4- BS EN/EN61000-4- BS EN/EN61000-4- BS EN/EN61000-4-	SPR11) SPR11) 2 3 4 5 6	Test Class Class Class Level	Level / N 6 B 6 A Level / N 4, 15 KV 3, 10 V/r 9, 9~28' 3, 2 KV 13, 1 KV/r 13, 10 V 4, 30 A/r	Note Note Vair; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz) Line-Line	
EMC	ISOLATION WITHSTAN ISOLATION EMC EMISS	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus	2 No. 6060 dary: 2xM ohms / 500 ent 5, BS EN/ billity billity ceptibility mmunity	01-1:2014+A2, EA(OPP 0VDC / 25°C / 70% EN60601-1-2	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4-	ISPR11) ISPR11) 2 3 4 5 6 8	Test Class Class Class Class Level	Level / N 6 B 6 A Level / N 4, 15 kV 3, 10 V/r 9, 9 ~ 28' 3, 2 kV 3, 1 kV //r 3, 10 V 4, 30 A/r 6 dip 0.5	lote lote /air ; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz Line-Line	
EMC	ISOLATION WITHSTAN ISOLATION EMC EMISS	I LEVEL D VOLTAGE I RESISTANCE	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus: Magnetic field i	2 No. 6060 dary: 2xM ohms / 500 ent 5, BS EN/ bility ceptibility mmunity erruption	01-1:2014+A2, EA(OPP OVDC / 25°C / 70% EN60601-1-2	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4-	SPR11 SPR1	Test Class Class Class Level	Level / N 6 B 6 A Level / N 4, 15 kV 3, 10 V/r 9, 9 ~ 28' 3, 2 kV 3, 1 kV //r 3, 10 V 4, 30 A/r 6 dip 0.5	lote lote /air; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz) Line-Line m periods, 30% dip 25 perio	
EMC (Note 8)	ISOLATION WITHSTAN ISOLATION EMC EMISS	I LEVEL D VOLTAGE I RESISTANCE SION	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interest in the susceptil 4590.4K hrs min	2 No. 6060 dary: 2xM ohms / 500 ent 5, BS EN/ bility ceptibility mmunity erruption n. Telco	01-1:2014+A2, EA(OPP 0VDC / 25°C / 70% EN60601-1-2	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-4-	USPR11) USPR11] USPR11	Test Class Class Class Level Level Level Level Level Level Level S95% BK-217F (25°C)	Level / N is B is B is A Level / N 4, 15kV 3, 10V/r 9, 9~28' 3, 2kV 3, 1kV/l 3, 10V 4, 30A/r o dip 0.5 interrup	lote lote /air; Level 4, 8KV contacm(80MHz~2.7GHz) V/m(385MHz~5.78GHz) Line-Line m periods, 30% dip 25 periotions 250 periods	
EMC Note 8)	EMC IMMU MTBF DIMENSION	I LEVEL D VOLTAGE I RESISTANCE SION	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interpretations	2 No. 6060 dary: 2xM ohms / 500 ent 5, BS EN/ bility ceptibility mmunity erruption n. Telcc	01-1:2014+A2, EA(OPP OVDC / 25°C / 70% EN60601-1-2 ordia SR-332 (Bello 52*29.5mm (L*W*)	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-4-	ISPR11) ISPR11) 2 3 4 5 6 8 8 111 in. MIL-HD w terminal sty	Test Class	Level / N is B is B is A Level / N 4, 15kV 3, 10V/r 9, 9~28' 3, 2kV 3, 1kV/l 4, 30A/r o dip 0.5 interrup	lote lote /air; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz) Line-Line m periods, 30% dip 25 periotions 250 periods	
EMC Note 8)	EMC IMMU MTBF DIMENSION DISOLATION EMC IMMU	I LEVEL D VOLTAGE I RESISTANCE SION NITY	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interpretation of the suscep Herrich Surge Susceptil Conducted sus Magnetic field i Voltage dip, interpretation of the suscep PCB mounting services of the susception of the su	2 No. 6060 dary: 2xM ohms / 500 ent 5, BS EN/ bility ceptibility munity erruption c. Telcostyle: 87* style: 0.18	01-1:2014+A2, EA(OPP OVDC / 25°C / 70% EN60601-1-2 ordia SR-332 (Bello 52*29.5mm (L*W*H) 185Kg;60pcs/12.1Kg	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4- STANDARD STAND	ISPR11) ISPR11) 2 3 4 5 6 8 11 in. MIL-HD w terminal sty w terminal sty	Test Class	Level / N is B is B is A Level / N 4, 15kV 3, 10V/r 9, 9~28' 3, 2kV 3, 1kV/l 4, 30A/r o dip 0.5 interrup	lote lote /air; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz) Line-Line m periods, 30% dip 25 periotions 250 periods	
EMC (Note 8)	EMC IMMU MTBF DIMENSION All para	I LEVEL D VOLTAGE I RESISTANCE SION NITY meters NOT specia	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interest of the susceptil 4590.4K hrs mire PCB mounting second area.	2 No. 6060 dary: 2xM ohms / 500 ent 5, BS EN/ bility ceptibility mmunity erruption a. Telcostyle: 87*; style: 0.18 e measuri	01-1:2014+A2, EA(OPP 0VDC / 25°C / 70% EN60601-1-2 ordia SR-332 (Bello 52*29.5mm (L*W*F) 128 (L*W*F) 128 (Bello 4 230VAC input de at 230VAC inp	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-4- Core); 563.4K hrs midly Scree g/0.94CUFT Scree ut, rated load and 2	ISPR11) ISPR11) ISPR11) 2 3 4 5 6 8 4 11 in. MIL-HD w terminal sty w terminal sty	Test Class Class	Level / N is B is B is A Level / N 4, 15kV 3, 10V/r 9, 9~28' 3, 2kV 3, 1kV/l 4, 30A/r o dip 0.5 interrup	lote lote /air; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz) Line-Line m periods, 30% dip 25 periotions 250 periods	
EMC	EMC IMMU MTBF DIMENSION 1. All para 2. 33% Du	I LEVEL D VOLTAGE I RESISTANCE SION NITY	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interpretation of the susceptil 4590.4K hrs mir PCB mounting s PCB mounting s Illy mentioned are within every 30 s	ent 5, BS EN/ bility ceptibility munity erruption 1. Telco style: 87*: style: 0.18 e measure econds. A	01-1:2014+A2, EA(OPP OVDC / 25°C / 70% EN60601-1-2 FN60601-1-2 ordia SR-332 (Bello 52*29.5mm (L*W*H 55Kg;60pcs/12.1Kg ed at 230VAC input Average output po	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-4- Core); 563.4K hrs midly Scree g/0.94CUFT Scree ut, rated load and 2 ower should not exceptions.	ISPR11) ISPR11	Test Class Class Class Class Class Class Class Level Level	Level / N 6 B 6 B 6 A Level / N 4, 15KV 3, 10V/r 9, 9~28' 3, 2KV 3, 1KV/r 3, 10V 4, 30A/r 6 dip 0.5 o interrup	lote lote /air; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz Line-Line m periods, 30% dip 25 periotions 250 periods (V*H)	
EMC (Note 8)	EMC IMMU MTBF DIMENSION PACKING 1. All para 2. 33% Du 3. Ripple 8	I LEVEL D VOLTAGE I RESISTANCE SION NITY meters NOT specialty cycle maximum	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interpretation of the conduction of the conductio	2 No. 6060 dary: 2xM chms / 500 ent 5, BS EN/ bility ceptibility munity erruption n. Telco style: 87* et eneasure econds. / coandwidth	01-1:2014+A2, EA(OPP OVDC / 25°C / 70% EN60601-1-2 EN60601-1-2 ordia SR-332 (Bello 52*29.5mm (L*W*H 35Kg;60pcs/12.1Kg ed at 230VAC inpl Average output po by using a 12" tw	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4- CORED (S) 563.4K hrs minus (S) 560.94 (CUFT Screen); 563.4K hrs minus (S) 560.94 (CUFT Screen); 560.94 (CU	ISPR11) ISPR11	Test Class Class Class Class Class Class Class Level Level	Level / N 6 B 6 B 6 A Level / N 4, 15KV 3, 10V/r 9, 9~28' 3, 2KV 3, 1KV/r 3, 10V 4, 30A/r 6 dip 0.5 o interrup	lote lote /air; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz Line-Line m periods, 30% dip 25 periotions 250 periods (V*H)	
EMC (Note 8)	EMC IMMU MTBF DIMENSION 1. All para: 2. 33% Du. 3. Ripple 8 4. Tolerant 5. Derating	I LEVEL D VOLTAGE I RESISTANCE SION Meters NOT special ty cycle maximum & noise are measured in the control of the control o	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interpretation of the conduction of the conductio	2 No. 6060 dary: 2xM ohms / 500 ent 5, BS EN/ otibility bility ceptibility mmunity erruption n. Telco style: 87*: style: 0.18 eeconds. / bandwidth egulation oltages. P	O1-1:2014+A2, EACOPP OVDC / 25°C / 70% OVDC / 25°C / 70% EN60601-1-2 Ordia SR-332 (Bellot 52*29.5mm (L*W*) ASKg;60pcs/12.1Kg ed at 230VAC inproved at 230VAC inproved at 230VAC inproved by using a 12" two and load regulatio lease check the delease check the del	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-4- Core); 563.4K hrs mid H) Scree g/0.94CUFT Scree ut, rated load and 22 uwer should not excivisted pair-wire termin.	ISPR11) ISPR11) 2 3 4 5 6 8 -11 in. MIL-HD iw terminal sty w terminal sty seed the rated ininated with a	Test Class Class Class Class Class Class Class Level Level	Level / N 6 B 6 B 6 A Level / N 4, 15KV 3, 10V/r 9, 9~28' 3, 2KV 3, 1KV/r 3, 10V 4, 30A/r 6 dip 0.5 o interrup	lote lote /air; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz Line-Line m periods, 30% dip 25 periotions 250 periods (V*H)	
EMC (Note 8)	EMC IMMU MTBF DIMENSION 1. All para: 2. 33% Du. 3. Ripple & 4. Toleran; 5. Derating 6. Touch of	NUTY Meters NOT special ty cycle maximum is noise are measure includes set up gray be needed usurrent was measure usurrent was measure.	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus: Magnetic field i Voltage dip, into 4590.4K hrs min PCB mounting s PCB mounting s ly mentioned and seed at 20MHz of betolerance, line render low input voiced from primary is	ent 5, BS EN/ billity ceptibility mmunity erruption 1. Telco style: 0.18 e measure econds. A coandwidth egulation biltages. P input to D	O1-1:2014+A2, EACOPP OVDC / 25°C / 70% EN60601-1-2 EN60601-1-2 ordia SR-332 (Bellot 52*29.5mm (L*W*H 55Kg;60pcs/12.1Kg ed at 230VAC inprediction and load regulatio lease check the decouput.	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4- Core); 563.4K hrs midly Screeg/0.94CUFT Screeut, rated load and 2 ower should not exceivated pair-wire termin. erating curve for more	ISPR11) ISPR11) 2 3 4 5 6 8 11 in. MIL-HD w terminal sty w terminal sty ceed the rated ninated with a pre details.	Test Class Level Leve	Level / N is B is B is A Level / N 4, 15KV 3, 10V/r 9, 9~28' 3, 2KV 3, 1KV/l 3, 10V 4, 30A/r b dip 0.5 c interrup	Note Note Vair; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz Line-Line m periods, 30% dip 25 periods V*H) (g/0.56CUFT	
EMC (Note 8)	EMC IMMU MTBF DIMENSION 1. All para 2. 33% Du 3. Ripple 8 4. Tolerand 5. Derating 6. Touch c 7. The am	NITY meters NOT specially cycle maximum & noise are measured in the company of t	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interpretation of the second of the	2 No. 6060 dary: 2xM ohms / 500 ent 5, BS EN/ billity ceptibility mmunity erruption n. Telco style: 87*: seconds. / ceandwidth egulation olttages. P input to D 1000m w	O1-1:2014+A2, EACOPP OVDC / 25°C / 70% OVDC / 25°C / 70% EN60601-1-2 Ordia SR-332 (Bellot 52*29.5mm (L*W*) SSKg;60pcs/12.1Kg ed at 230VAC inpraverage output po in by using a 12" two and load regulatio lease check the decouput. iith fanless models	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-4- Core); 563.4K hrs midlen of the core of the	ISPR11) ISPR11) ISPR11) 2 3 4 5 6 8 11 in. MIL-HD w terminal sty w terminal sty seed the rateconinated with a ore details.	Test Class Class Class Class Class Class Class Level Leve	Level / N B B B B A 15KV 3, 10V/r 9, 9~28' 3, 2KV 3, 1KV/l 3, 10V 4, 30A/r b dip 0.5 o interrup mm (L*V cs/11.3K F paralle	Note Note Vair; Level 4, 8KV contaction (80MHz~2.7GHz) V/m(385MHz~5.78GHz) Line-Line m periods, 30% dip 25 periods V*H) (g/0.56CUFT) el capacitor.	
EMC (Note 8)	EMC IMMU MTBF DIMENSION 1. All para 2. 33% Du 3. Ripple 8 4. Tolerani 5. Derating 6. Touch c 7. The am 8. The pow	I LEVEL D VOLTAGE I RESISTANCE SION Numeters NOT specially cycle maximum is a noise are measured certically be needed unurrent was measured bient temperature over supply is considered.	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interpretation of the conducted are within every 30 separated at 20MHz of to tolerance, line freder low input voled from primary interesting of 3.5°C/lered a compone	ent 5, BS EN/ billity ceptibility munity erruption Telco style: 0.18 e measure econds. A begulation bitages. P input to D 1000m went which	O1-1:2014+A2, EACOPP OVDC / 25°C / 70% OVDC / 25°C / 70% EN60601-1-2 Ordia SR-332 (Bellot 52*29.5mm (L*W*H 35Kg;60pcs/12.1Kg ed at 230VAC inproved Average output po in by using a 12" two and load regulatio lease check the do Coutput ith fanless models will be installed interested will be installed interested inter	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-3- Standard BS EN/EN61000-4- Core); 563.4K hrs mi H) Scree g/0.94CUFT Scree ut, rated load and 2 gover should not exceivated pair-wire term in erating curve for motor a final equipment to	ISPR11) ISPR11) ISPR11) 2 3 4 5 6 8 11 in. MIL-HD isw terminal sty w terminal sty w terminal sty ced the rated innated with a bore details. with fan moo t. The final ed	Test Class C	Level / N B B B B A 15KV 3, 10V/r 9, 9~28' 3, 2KV 3, 1KV/l 3, 10V 4, 30A/r o dip 0.5 interrup mm (L*V cs/11.3K F paralle g altitude e re-con	Note Note Note Vair; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz) Line-Line m periods, 30% dip 25 periotions 250 periods V*H) Ig/0.56CUFT el capacitor.	
EMC (Note 8)	EMC EMISS EMC EMISS EMC IMMU MTBF DIMENSION PACKING 1. All para 2. 33% Du 3. Ripple 8 4. Toleranu 5. Derating 6. Touch of 7. The am 8. The power meets E	NITY meters NOT specially cycle maximum and noise are measured includes set up and be needed under the was measured to the measured was reasonable to the measured was reasonable to the measured was reasonable to the more supply is considered.	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interpretation of the conduction of the conductio	ent 5, BS EN/ bility ceptibility munity erruption Telco style: 87*: candwidth egulation oltages. P input to D 1000m w ent which w to perfo	O1-1:2014+A2, EACOPP OVDC / 25°C / 70% OVDC / 25°C / 70% EN60601-1-2 EN60601-1-2 Ordia SR-332 (Bello 52*29.5mm (L*W*) SKg;60pcs/12.1Kg ed at 230VAC input Average output po to by using a 12" two and load regulatio lease check the defect output. The selection of the selecti	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-4- BS EN/E	ISPR11) ISPR11) ISPR11) 2 3 4 5 6 8 11 in. MIL-HD isw terminal sty w terminal sty w terminal sty ced the rated innated with a bore details. with fan moo t. The final ed	Test Class C	Level / N B B B B A 15KV 3, 10V/r 9, 9~28' 3, 2KV 3, 1KV/l 3, 10V 4, 30A/r o dip 0.5 interrup mm (L*V cs/11.3K F paralle g altitude e re-con	Note Note Note Vair; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz) Line-Line m periods, 30% dip 25 periotions 250 periods V*H) Ig/0.56CUFT el capacitor.	
EMC Note 8)	EMC IMMU MTBF DIMENSION 1. All para 2. 33% Du 3. Ripple 8 4. Toleranu 5. Derating 6. Touch of 7. The am 8. The poor meets E (as available)	I LEVEL D VOLTAGE I RESISTANCE SION Numeters NOT specially cycle maximum is a noise are measured certically be needed unurrent was measured bient temperature over supply is considered.	CAN/CSA C22.2 Primary-Second I/P-O/P:4KVAC I/P-O/P:100M O Parameter Conducted Radiated Harmonic Curre Voltage Flicker BS EN/EN5503: Parameter ESD RF field suscep EFT bursts Surge susceptil Conducted sus Magnetic field i Voltage dip, interpretation of the second of the	ent 5, BS EN/ bility ceptibility munity erruption Telco style: 87*; bandwidth egulation oltages. P iniput to D 1000m w whoth which w to perfo //Upload/F	O1-1:2014+A2, EACOPP OVDC / 25°C / 70% OVDC / 25°C / 70% EN60601-1-2 EN60601-1-2 Ordia SR-332 (Bello 52*29.5mm (L*W*) SKg;60pcs/12.1Kg ed at 230VAC input poor by using a 12" two and load regulatio lease check the direction of the couptuit of the couptuit ith fanless models will be installed intermities EMC tes PDF/EMI_statemer	RH Standard BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN55011 (CI BS EN/EN61000-3- BS EN/EN61000-4- BS EN/E	ISPR11) ISPR11	Test Class Class Class Class Class Level	Level / N B B B A Level / N C B C B C A Level / N C B C B C A Level / N C B C B C B C C B C C C C C C C C C C C C C C C C C	Note Note Note Vair; Level 4, 8KV contact m(80MHz~2.7GHz) V/m(385MHz~5.78GHz) Line-Line m periods, 30% dip 25 periotions 250 periods V*H) Ig/0.56CUFT el capacitor.	



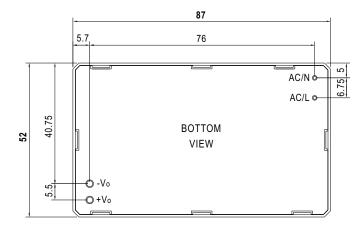


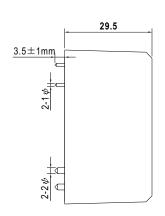


(Unit: mm , tolerance ± 1mm)

• PCB mounting style (MPM-45)

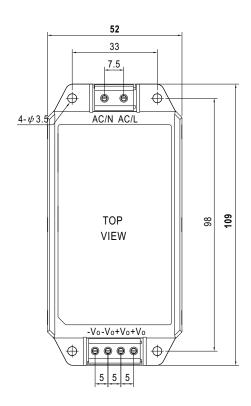
Case No.IRM60

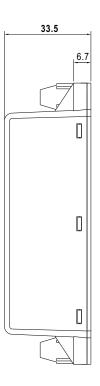




AC/L, AC/N P/N diameter: 1 ψ +Vo, -Vo P/N diameter:2 ψ

Screw terminal style (MPM-45-xxST)





■ Installation Manual











(MPM-65)

(MPM-65-xxST)



















- 3.43"x2.05" compact size
- PCB chassis or screw terminal mounting version
- · Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- Suitable for BF application with appropriate system consideration
- No load power consumption<0.1W
- Extremely low leakage current
- Wide operating temp. range -30 ~ +80°C
- EMI Class B without additional components
- Isolation Class II
- Protections: Short circuit / Overload / Over voltage
- No minimum load required
- Operating altitude up to 4000 meters (Note.7)
- 71W peak(10 sec.)
- · 3 years warranty

Applications

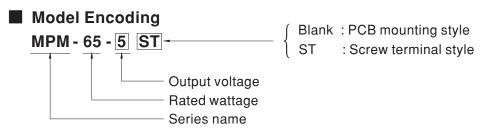
- · Portable medical device
- Mobile clinical workstation
- Medical computer monitor
- Medical examination instrument

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Description

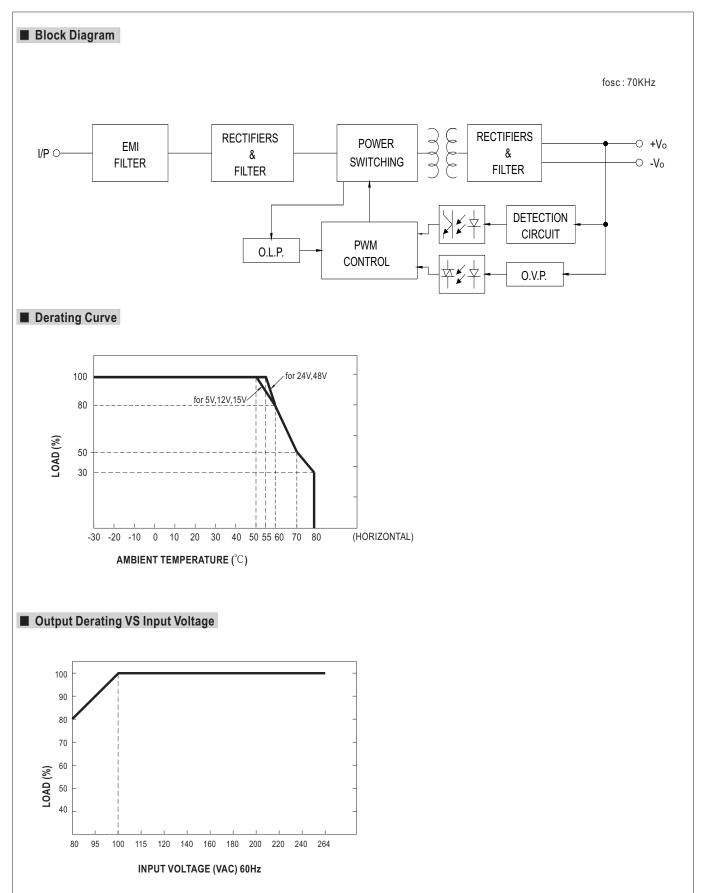
MPM-65 is a 65W high density and small size (87x52x29.5mm) AC/DC PCB-mount type medical grade power supply. It features the operation for 80~264VAC, a low no load power consumption less than 0.1W, a high efficiency up to 93%, Class II (no FG) double insulation, outstanding dissipation, 2~5G anti-vibration by model, high EMC performance, 4KVAC isolation, etc. The design observes IEC/BS EN/EN60601-1 and ANSI/AAMI ES60601-1 version three with 2 x MOPP level and ultra-low leakage current (<100µA). It is very suitable for BF (patient contact) type medical device or relevant equipment.





MODEL			MPM-65-5	MPM-65-12	MPM-65-15	MPM-65-24	MPM-65-48		
	DC VOLTAC	GE	5V	12V	15V :	24V	48V		
	CURRENT	Peak(10 sec.)	11A	5.96A	4.77A	2.98A	1.49A		
	CORRENT	Convection	10A	5.42A	4.33A	2.71A	1.36A		
	RATED	Peak(10 sec.)Note.2	55W	71.5W	71.6W	71.5W	71.5W		
	POWER	Convection	50W	65W	65W	65W	65.3W		
OUTPUT	RIPPLE & N	IOISE (max.) Note.3	80mVp-p	120mVp-p	120mVp-p	200mVp-p	240mVp-p		
OUIFUI	VOLTAGE T	OLERANCE Note.4	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%		
	LINE REGU	ILATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	LOAD REG	ULATION	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%		
	SETUP, RIS	E TIME	1000ms, 30ms/230VAC	1000ms, 30ms/115V	AC at full load				
	HOLD UP T	IME (Typ.)	50ms/230VAC 12ms	/115VAC at full load					
	VOLTAGE F	RANGE Note.5	80 ~ 264VAC 113 ~ 37	OVDC					
	FREQUENC	CY RANGE	47 ~ 63Hz						
	EFFICIENC	Y (Typ.)	86.5%	92.5%	92.5%	93%	92%		
INPUT	AC CURRE	NT (Typ.)	1.5A/115VAC 1A/23	0VAC					
	INRUSH CU	JRRENT (Typ.)	COLD START 30A/11	5VAC 65A/230VA	2				
	LEAKAGE C	URRENT (max.) Note.6	Touch current <100 μA/2	64VAC					
			115% ~ 135% rated outpu						
	OVERLOAD)		•	cally after fault condition is rer	noved			
PROTECTION			5.3 ~ 7.2V	12.6 ~ 16.2V		25.2 ~ 32.4V	50.4 ~ 64.8V		
. NOTEOTION	OVER VOLT	TAGE	Protection type : Shut dov						
	OVER TEN	MPERATURE	Protection type : Shut do						
	WORKING		-30 ~ +80°C (Refer to "De		ver on to recover				
	WORKING		20 ~ 90% RH non-conder	,					
	STORAGE		-40 ~ +85°C	9					
	TEMP. COE		±0.03%/°C (0~50°C)						
ENVIRONMENT		G TEMPERATURE	$\pm 0.03\%$ ($0 \sim 50$ C) Wave soldering: 265° C,5s (max.); Manual soldering: 390° C,3s (max.)						
			Blank:10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes						
	VIBRATION	I	ST:10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes						
	OPERATING	G ALTITUDE Note.7							
	-			UV BS EN/ EN 60601-1:	2006+A1+A12+A2, ANSI/AAM	II ES60601-1:2005+A2)		
	SAFETY ST	ANDARDS	CAN/CSA C22.2 No. 60601-1:2014+A2, EAC TP TC 004 approved; Design refer to BS EN/EN60335-1(by request)						
	ISOLATION	LEVEL	Primary-Secondary: 2xMOPP						
	WITHSTAN	D VOLTAGE	I/P-O/P:4KVAC						
	ISOLATION	RESISTANCE	I/P-O/P:100M Ohms / 500	VDC / 25°C / 70% RH					
			Parameter	Stan	dard	Test Level / I	Note		
			Conducted	BS E	N/EN55011 (CISPR11)	Class B			
	EMC EMISS	SION	Radiated	BS E	N/EN55011 (CISPR11)	Class B			
			Harmonic Current	BS E	N/EN61000-3-2	Class A			
SAFETY &			Voltage Flicker	BS E	N/EN61000-3-3				
EMC			BS EN/EN55035, BS EN/	EN60601-1-2					
(Note 8)			Parameter	Stan	dard	Test Level / I	Note		
			ESD	BS E	N/EN61000-4-2	Level 4, 15K\	/ air ; Level 4, 8KV contact		
			RF field susceptibility	BS E	N/EN61000-4-3		m(80MHz~2.7GHz)		
				DO E	N/FN04000 4 4		3V/m(385MHz~5.78GHz)		
	EMC IMMUI	NITY	EFT bursts		N/EN61000-4-4	Level 3, 2KV	0.1.1.		
			Surge susceptibility		N/EN61000-4-5	Level 3, 1KV/	Line-Line		
			Conducted susceptibility		N/EN61000-4-6	Level 3, 10V			
			Magnetic field immunity	BS E	N/EN61000-4-8	Level 4, 30A/			
			Voltage dip, interruption		N/EN61000-4-11	>95% interrup	periods, 30% dip 25 periods, ptions 250 periods		
	MTBF			ordia SR-332 (Bellcore) ;		K-217F (25°C)			
OTHERS	DIMENSION	N	PCB mounting style : 87*	,		: 109*52*33.5mm (L*\	,		
	PACKING			0	CUFT Screw terminal style	· .	Kg/0.56CUFT		
NOTE	2. 33% Du 3. Ripple 8 4. Tolerand 5. Derating 6. Touch c 7. The aml 8. The pow	ty cycle maximum of noise are measure ce : includes set up gray be needed upperent was measure bient temperature diver supply is considered.	within every 30 seconds. A get at 20MHz of bandwidth tolerance, line regulation ander low input voltages. Ped from primary input to Derating of 3.5°C/1000m wered a component which	Average output power so by using a 12" twisted and load regulation. It is check the derating C output. It fanless models and will be installed into a fi	ed load and 25°C of ambient hould not exceed the rated p pair-wire terminated with a 0 g curve for more details. of 5°C/1000m with fan model nal equipment. The final equipasse refer to "EMI testing of a series of the content of th	ower. 1.1 μ F & 47 μ F paralle Is for operating altitude ipment must be re-core	e higher than 2000m(6500ft) nfirmed that it still		
		-	v.meanwell.com//Upload/F						
		Liability Disclaimer	: For detailed information	n, please refer to https://	www.meanwell.com/serviceD	Disclaimer.aspx			
						File	Name:MPM-65-SPEC 2024-10-30		





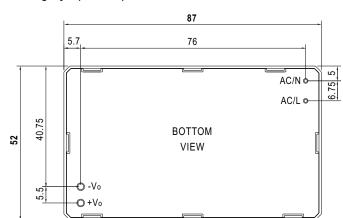
Case No.IRM60

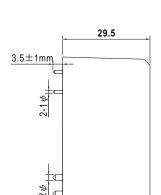


■ Mechanical Specification

(Unit: mm , tolerance ± 1mm)

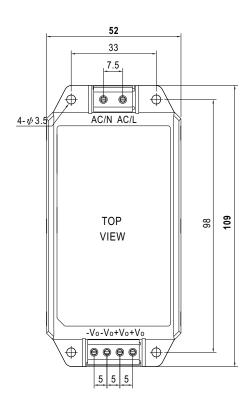
• PCB mounting style (MPM-65)

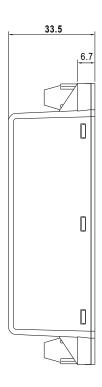




AC/L, AC/N P/N diameter:1 ψ +Vo, -Vo P/N diameter:2 ψ

• Screw terminal style (MPM-65-xxST)





■ Installation Manual





























- 3.43"x2.05" compact size
- · PCB, chassis or screw terminal mounting version
- · Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- · Suitable for BF application with appropriate system consideration
- No load power consumption<0.1W
- Extremely low leakage current
- Wide operating temp. range -30 ~ +80°C
- · EMI Class B without additional components
- Isolation Class II
- Protections: Short circuit / Overload / Over voltage
- No minimum load required
- Operating altitude up to 4000 meters (Note.7)
- 100W peak(10 sec.)
- · 3 years warranty

Applications

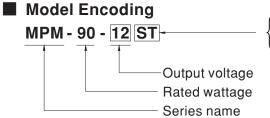
- · Portable medical device
- Mobile clinical workstation
- Medical computer monitor
- · Medical examination instrument

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Description

MPM-90 is a 90W high density and small size (87x52x29.5mm) AC/DC PCB-mount module type medical grade power supply. It features the operation for 80~264VAC, a low no load power consumption less than 0.1W, a high efficiency up to 93%, Class II (no FG) double insulation, outstanding dissipation, 2~5G anti-vibration by model, high EMC performance, 4KVAC isolation, etc. The design observes IEC/BS EN/ EN60601-1 and ANSI/AAMI ES60601-1 version three with 2 x MOPP level and ultra-low leakage current (<100µA). It is very suitable for BF (patient contact) type medical device or relevant equipment.

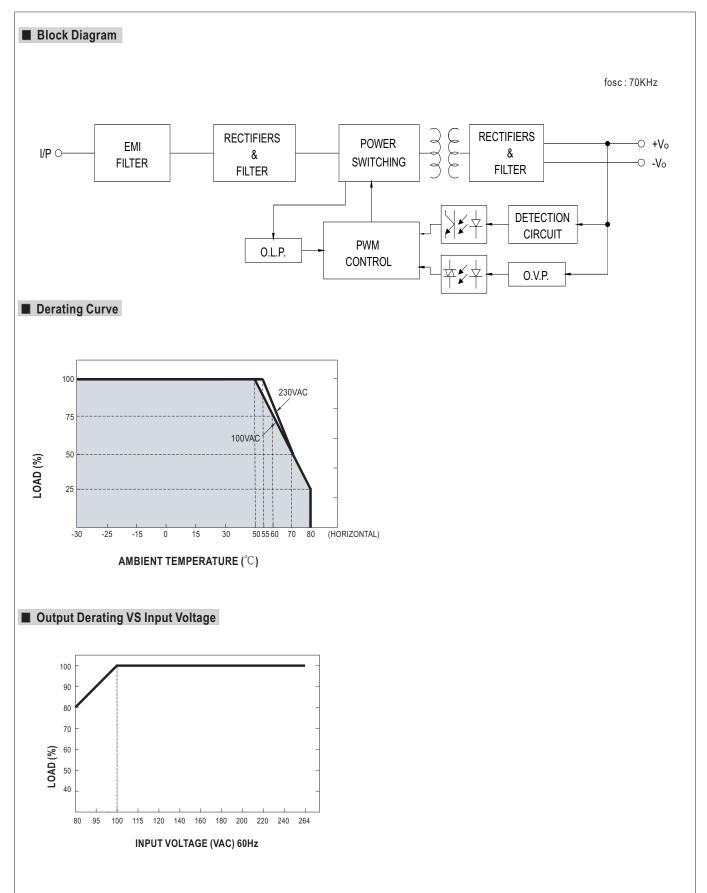


Blank: PCB mounting style ST: Screw terminal style

90W AC-DC High Reliable PCB-Mount Green Medical Power Module MPM-90 series

			MPM-90-12	MPM-90-15	MPM-90-24	MPM-90-48			
	DC VOLTAG	SE .	12V	15V	24V	48V			
	CURRENT	Peak(10 sec.)	7.37A	6.23A	4.13A	2.07A			
	CORRENT	Convection	6.7A	5.67A	3.75A	1.88A			
		Peak(10 sec.)Note.2	88.4W	93.5W	99W	99.2W			
	POWER	Convection	80.4W	85.05W	90W	90.2W			
OUTPUT	RIPPLE & N	OISE (max.) Note.3	120mVp-p	150mVp-p	200mVp-p	240mVp-p			
	VOLTAGE T	OLERANCE Note.4		±2.0%	±2.0%	±2.0%			
	LINE REGU		±0.5%	±0.5%	±0.5%	±0.5%			
	LOAD REG		±1.0%	±0.5%	±0.5%	±0.5%			
	SETUP, RIS		1000ms, 30ms/230VAC	1000ms, 30ms/115VAC at full	l load				
	HOLD UP T		30ms/230VAC	10ms/115VAC at full load					
	VOLTAGE F		80 ~ 264VAC 113 ~ 370V	'DC					
	FREQUENC		47 ~ 63Hz	T	T	T			
INPUT	EFFICIENC		92%	92.5%	93%	93%			
	AC CURRE	() (1.9A/115VAC 1.1A/230						
		RRENT (Typ.)	COLD START 30A/115V						
	LEAKAGE CI	JRRENT (max.) Note.6							
	OVERLOAD)	115% ~ 160% rated output p		u facult and dition in unuscound				
			21 1	le, recovers automatically afte		F0.4. C4.0V			
PROTECTION	OVER VOLT	TAGE	12.6 ~ 16.2V	15.8 ~ 20.3V o/p voltage, re-power on to red	25.2 ~ 32.4V	50.4 ~ 64.8V			
	OVEDTEN	IDEDATUDE							
	WORKING	IPERATURE TEMP	-30 ~ +80°C (Refer to "Derat	n o/p voltage, re-power on to	recover				
	WORKING		20 ~ 90% RH non-condensir	,					
	STORAGE		-40 ~ +85°C	19					
	TEMP. COE		±0.03%/°C (0~50°C)						
ENVIRONMENT		G TEMPERATURE	$\pm 0.03\%$ ($\cup \sim 50$ C) Wave soldering: 265° C,5s (max.); Manual soldering: 390° C,3s (max.)						
			Blank:10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes						
	VIBRATION		ST:10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes						
	OPERATING	G ALTITUDE Note.7							
	SAFETY ST	ANDADDS	IEC 60601-1:2005+A1, TUV	BS EN/ EN 60601-1:2006+A1	+A12+A2, ANSI/AAMI ES60	0601-1:2005+A2			
				1:2014+A2, EAC TP TC 004 a	pproved; Design refer to BS	EN/EN60335-1(by request)			
	ISOLATION		Primary-Secondary: 2xMOP	P					
		D VOLTAGE	I/P-O/P:4KVAC	0 105°C 17001 PH					
	ISOLATION	RESISTANCE	I/P-O/P:100M Ohms / 500VE			Took Lovel / Note			
			Conducted	Standard BS EN/EN550	11 (CISDD11)	Test Level / Note Class B			
	EMC EMISS		Radiated		,	Class B			
	EINIC EINISS	ION				Close P			
	1	ION	- 10.010.0		11 (CISPR11)	Class B			
		SION	Harmonic Current	BS EN/EN610	000-3-2	Class B Class A			
SAFETY &		SION	Harmonic Current Voltage Flicker	BS EN/EN610 BS EN/EN610	000-3-2				
EMC		SION	Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN	BS EN/EN610 BS EN/EN610 60601-1-2	000-3-2	Class A			
		ion	Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter	BS EN/EN610 BS EN/EN610 60601-1-2 Standard)00-3-2)00-3-3	Class A Test Level / Note			
EMC		ion	Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD	BS EN/EN610 BS EN/EN610 60601-1-2 Standard BS EN/EN610	000-3-2 000-3-3 000-4-2	Class A			
EMC		ion	Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter	BS EN/EN610 BS EN/EN610 60601-1-2 Standard	000-3-2 000-3-3 000-4-2	Class A Test Level / Note Level 4, 15KV air ; Level 4, 8KV contact			
EMC	EMC IMMUR		Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD	BS EN/EN610 BS EN/EN610 60601-1-2 Standard BS EN/EN610	000-3-2 000-3-3 000-4-2 000-4-3	Class A Test Level / Note Level 4, 15KV air ; Level 4, 8KV contact Level 3, 10V/m(80MHz~2.7GHz)			
EMC	EMC IMMUI		Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD RF field susceptibility	BS EN/EN610 BS EN/EN610 60601-1-2 Standard BS EN/EN610 BS EN/EN610	000-3-2 000-3-3 000-4-2 000-4-3 000-4-4	Class A Test Level / Note Level 4, 15KV air ; Level 4, 8KV contact Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz)			
EMC	EMC IMMU		Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD RF field susceptibility EFT bursts	BS EN/EN610 BS EN/EN610 60601-1-2 Standard BS EN/EN610 BS EN/EN610 BS EN/EN610	000-3-2 000-3-3 000-4-2 000-4-3 000-4-4 000-4-5	Class A Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz) Level 3, 2KV Level 3, 1KV/Line-Line Level 3, 10V			
EMC	EMC IMMUI		Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD RF field susceptibility EFT bursts Surge susceptibility	BS EN/EN610 BS EN/EN610 60601-1-2 Standard BS EN/EN610 BS EN/EN610 BS EN/EN610 BS EN/EN610 BS EN/EN610	000-3-2 000-3-3 000-4-2 000-4-3 000-4-4 000-4-5 000-4-6	Class A Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz) Level 3, 2KV Level 3, 1KV/Line-Line Level 3, 10V Level 4, 30A/m			
EMC			Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD RF field susceptibility EFT bursts Surge susceptibility Conducted susceptibility Magnetic field immunity Voltage dip, interruption	BS EN/EN610 BS EN/EN610 60601-1-2 Standard BS EN/EN610	000-3-2 000-3-3 000-4-2 000-4-3 000-4-4 000-4-5 000-4-6 000-4-8	Class A Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz) Level 3, 2KV Level 3, 1KV/Line-Line Level 3, 10V Level 4, 30A/m >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods			
EMC (Note 8)	MTBF	NITY	Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD RF field susceptibility EFT bursts Surge susceptibility Conducted susceptibility Magnetic field immunity Voltage dip, interruption 4548.9K hrs min. Telcordi	BS EN/EN610 BS EN/EN610 60601-1-2 Standard BS EN/EN610	000-3-2 000-3-3 000-4-2 000-4-3 000-4-5 000-4-6 000-4-8 000-4-11 hrs min. MIL-HDBK-217F	Class A Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz) Level 3, 2KV Level 3, 1KV/Line-Line Level 3, 10V Level 4, 30A/m >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods (25°C)			
EMC	MTBF DIMENSION	NITY	Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD RF field susceptibility EFT bursts Surge susceptibility Conducted susceptibility Magnetic field immunity Voltage dip, interruption 4548.9K hrs min. Telcordi PCB mounting style: 87*52*	BS EN/EN610 BS EN/EN610 60601-1-2 Standard BS EN/EN610	000-3-2 000-3-3 000-4-2 000-4-3 000-4-4 000-4-5 000-4-6 000-4-8 000-4-11 hrs min. MIL-HDBK-217F Screw terminal style : 109*	Class A Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz) Level 3, 2KV Level 3, 1KV/Line-Line Level 3, 10V Level 4, 30A/m >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods (25°C) 52*33.5mm (L*W*H)			
EMC (Note 8)	MTBF DIMENSION PACKING	NITY	Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD RF field susceptibility EFT bursts Surge susceptibility Conducted susceptibility Magnetic field immunity Voltage dip, interruption 4548.9K hrs min. Telcordi PCB mounting style: 87*52* PCB mounting style: 0.197K	BS EN/EN610 BS EN/EN610 60601-1-2 Standard BS EN/EN610	000-3-2 000-3-3 000-4-2 000-4-3 000-4-4 000-4-5 000-4-6 000-4-8 000-4-11 hrs min. MIL-HDBK-217F Screw terminal style : 109* Screw terminal style : 0.219	Class A Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz) Level 3, 2KV Level 3, 1KV/Line-Line Level 3, 10V Level 4, 30A/m >95% dip 0.5 periods, 30% dip 25 periods, 95% interruptions 250 periods : (25°C) 52*33.5mm (L*W*H) DKg;50pcs/12Kg/0.56CUFT			
EMC (Note 8)	MTBF DIMENSION PACKING 1. All parar 2. 33% Du 3. Ripple & 4. Tolerand 5. Derating 6. Touch c 7. The amt 8. The pow meets E	meters NOT special ty cycle maximum in noise are measures: includes set up in may be needed ulurrent was measure bient temperature of the resupply is consider the considered of the considered the considered of the considered the co	Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD RF field susceptibility EFT bursts Surge susceptibility Conducted susceptibility Magnetic field immunity Voltage dip, interruption 4548.9K hrs min. Telcordi PCB mounting style: 87*52* PCB mounting style: 0.197K Illy mentioned are measured within every 30 seconds. Aveed at 20MHz of bandwidth by tolerance, line regulation and moder low input voltages. Plea ed from primary input to DC elerating of 3.5°C/1000m with lered a component which will guidance on how to perform	BS EN/EN610 BS EN	100-3-2 100-3-3 100-3-3 100-4-2 100-4-3 100-4-4 100-4-5 100-4-6 100-4-8 100-4-11 11 11 11 11 11 11 11 11 11 11 11 11	Class A Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz) Level 3, 2KV Level 3, 1KV/Line-Line Level 3, 10V Level 4, 30A/m >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods (25°C) 52*33.5mm (L*W*H) OKG;50pcs/12Kg/0.56CUFT Berature. 47 μ F parallel capacitor.			
EMC (Note 8)	MTBF DIMENSION PACKING 1. All parar 2. 33% Du 3. Ripple 8 4. Tolerand 5. Derating 6. Touch c 7. The aml 8. The pow meets E (as avail	meters NOT special ty cycle maximum is noise are measure includes set up may be needed ulurrent was measuroient temperature diver supply is considit MC directives. For able on https://www.	Harmonic Current Voltage Flicker BS EN/EN55035, BS EN/EN Parameter ESD RF field susceptibility EFT bursts Surge susceptibility Conducted susceptibility Magnetic field immunity Voltage dip, interruption 4548.9K hrs min. Telcordi PCB mounting style: 87*52* PCB mounting style: 0.197K Illy mentioned are measured within every 30 seconds. Ave ed at 20MHz of bandwidth by tolerance, line regulation and the low input voltages. Plea ed from primary input to DC elerating of 3.5°C/1000m with lered a component which will guidance on how to perform w.meanwell.com//Upload/PDF	BS EN/EN610 BS EN	$100-3-2$ $100-3-2$ $100-3-3$ $100-4-2$ $100-4-3$ $100-4-4$ $100-4-5$ $100-4-6$ $100-4-6$ $100-4-11$ hrs min. MIL-HDBK-217F Screw terminal style : 109* Screw terminal style : 0.219 and 25°C of ambient temper of exceed the rated power. The terminated with a 0.1 μ F for more details.	Class A Test Level / Note Level 4, 15KV air; Level 4, 8KV contact Level 3, 10V/m(80MHz~2.7GHz) Table 9, 9~28V/m(385MHz~5.78GHz) Level 3, 2KV Level 3, 1KV/Line-Line Level 3, 10V Level 4, 30A/m >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods (25°C) 52*33.5mm (L*W*H) OKG;50pcs/12Kg/0.56CUFT Perature. & 47 μ F parallel capacitor.			



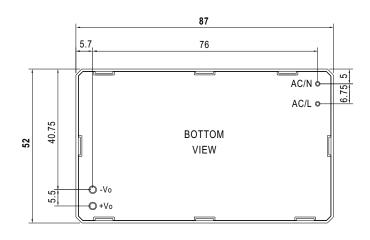


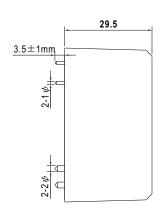


(Unit: mm , tolerance \pm 1mm)

• PCB mounting style (MPM - 90)

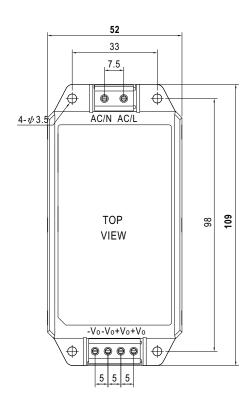
Case No.IRM60

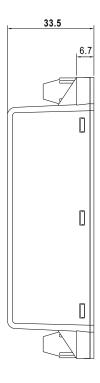




AC/L, AC/N P/N diameter:1 ψ +Vo, -Vo P/N diameter:2 ψ

• Screw terminal style (MPM-90-xxST)





■ Installation Manual