MEAN WELL

Your Reliable Power Partner

Medical Power Supply

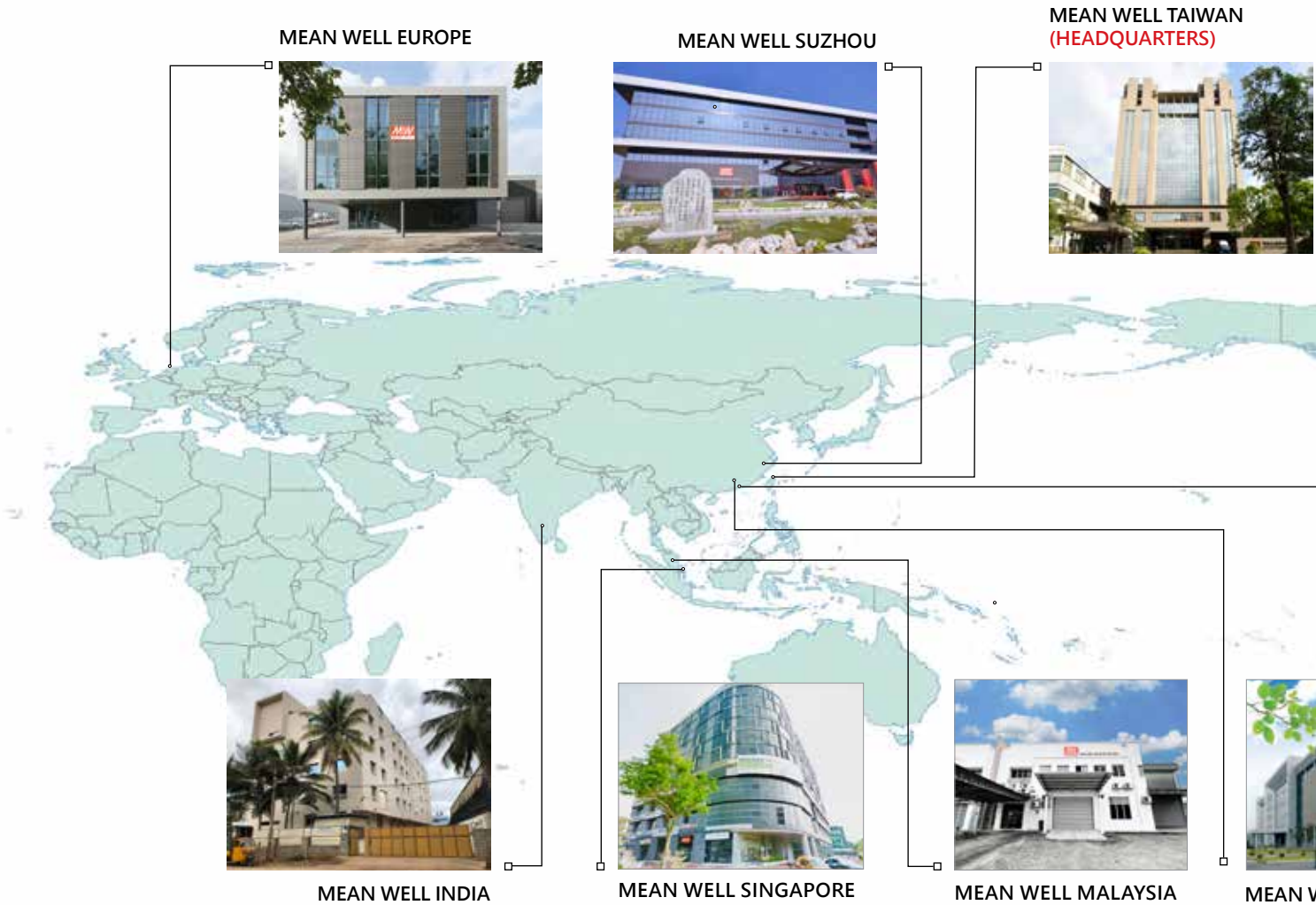
AC/DC Switching Power Supplies & DC/DC Converters

2020 / March

Company Profile

Established in 1982, MEAN WELL is a leading standard switching power supply manufacturers in the world. MEAN WELL headquarters is in New Taipei Industrial Park, Taiwan, branches and sales offices at Guangzhou, Shenzhen, Suzhou in China, California USA, and Netherlands in the EU. Five production bases in New Taipei City (Taiwan), Huadu District in Guangzhou, Suzhou City in China, Bangalore in India and Kansas City in USA. The product lines include AC/DC switching power supplies, DC/DC converters, waterproof LED drivers, adaptors, DC/AC inverters and battery chargers. We have over 10,000 standard models widely used in medical, automation, communication, LED lighting, display, and office automation fields.

The whole product lines have supplied more than 80 series and 500 models in total for customers to choose, covering 1~1200W and offering 3~55V single/multiple output voltages. We have devoted to developing green medical power supplies, thus unveils the energy-saving medical power supplies in compliance with DoE Level VI.



The medical power supplies of MEAN WELL not only comply with IEC60601-1 3rd version but also possess 2xMOPP and MOOP levels, providing the highest level of isolation protection that are suitable to be applied to type BF (patient contact) devices. The whole product line all passes the international safety regulations — UL/CUL/TUV/EAC/CB/CE/FCC and electromagnetic compatibility (EMC) testing thus further assure the safety for usage that is suitable for household medical devices and various medical apparatuses used in the hospital .

With more than 40 years of experience in R&D and production of standard power supplies, MEAN WELL has twelve product categories covering more than 10,000 models, to provide "One Stop Shopping" power solutions. Every product in the MEAN WELL range is the result of rigid procedures governing design, design verification test (DVT), design quality test (DQT), component selection, pilot-run production, and mass production.

With more than 200 distributors globally, the MEAN WELL products are distributed to over 80 countries worldwide. The small size orders can expect delivery within 24 hours without MOQ requirement. If you are looking for switching power supply with high reliability, good quality, reasonable price and full series products which can satisfy your various demands, MEAN WELL, a total solution provider, is definitely your first choice!

MEAN WELL USA

WELL GUANGZHOU

MEAN WELL HONG KONG

Reliable Quality

The brand name "MEAN WELL" is defined as "have good intentions". We strongly believe that the product quality is the life of power supply manufacturer. "To become the reliable power partner" has been the motivation for MEAN WELL to grow continuously.

In 1994, MEAN WELL acquired the ISO9001 certification and began to implement the total quality management (TQM) system, which are audited by TUV annually to continuous review and improvement. In April 2013, MEAN WELL acquired the ISO14000 certification and obtained the OHSAS18001 system (ESH, environmental safety and health) in 2015, to take the concept of environmental protection into action, and expect to create a safe and healthy life.

OHSAS18001

ISO9001

ISO14000

MEAN WELL medical power supply products comply with UL/CUL/ TUV/CB/EAC/CE/FCC certificates, including ANSI/AAMI ES60601-1/ ES60601-1-11, TUV EN60601-1/ EN60601-1-11, TPTC004, IEC60601-1, EN55011, EN55032.

MEAN WELL has a complete quality management system. To ensure product quality, 100% burn-in test, function test and pressure test have been applied in manufacturing process, while the MIL-105E sampling method used in IQC, PCBQC (semi-finished products testing) and FQC phases. In the R&D stage, MEAN WELL quality engineers customize the "Test Plan" for each product, to complete the verifications of DFMEA, DVT/DQT, ORT, EMC, drop test, vibration test, thermal shock test, and reliability test.

In production stage, the product engineers co-work with process engineers to review the pilot run, semi-finished products quality control, process checking, finished product quality control, and the feedback analysis as well as the production problems occurred.

Product Range

AC/DC
External Adaptor

- 6~220W
- 5~48V
- Level VI
- Various style
- MOPPx2 & BF rated

Series	Page
GSM, GEM	7-12

AC/DC
Open Frame Type

- 30~500W
- 3.3~48V
- Complete size range
- 1~4 output
- MOPPx2 & BF rated

Series	Page
RPS, RPD, RPT, MPQ	13-16

AC/DC
On Board Type

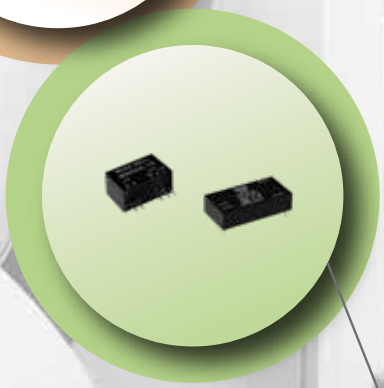
- 5~90W
- 3.3~48V
- PCB mount
- Small size
- MOPPx2 & BF rated
- -40~+85°C operating temp.

Series	Page
MPM, MFM	17-20

AC/DC
Enclosed Type

- 100~1200W
- 3~55V
- 1U height
- -40~+70°C operating temp.
- 5 years warranty

Series	Page
NMP, RPS-C, MSP	21-24



DC/DC
Converter

- 1~20W
- ±10% & 2:1 V_{in}
- SIP7 & 2"x1" package
- Single & Dual output
- Low leakage current <2~5μA
- 6KVdc I/O isolation

Series	Page
MDS, MDD	25-27


Ultrasound Scanner


Operation Room

The Difference between MOPP and MOOP in IEC 60601-1 3rd

In 2005, the International Electrotechnical Commission (IEC) published the third edition of medical safety standard (IEC60601-1: 2005), to replace the original second edition (IEC60601-1: 1998). The main difference between the 2nd edition and 3rd edition is the insulation level. The 2nd edition is divided into BI (Basic Isolation), SI (Supplementary Isolation), DI (Double Isolation) and RI (Reinforced Isolation), and the 3rd edition of new IEC60601-1 is divided into two categories of MOPP and MOOP.

The major impact of 3rd edition is the distinction made between operator and patient. As result, Means of Protection (MOP) was introduced and it is further categorized into 2 different classifications, which are Means of Patient Protection (MOPP) and Means of Operator Protection (MOOP).

It is the responsibility of the medical product manufacturer to determine the likelihood of a patient coming into contact, and decide whether patient protection (MOPP) or operator protection (MOOP) to use. If the medical devices come into contact with patients, they must meet the insulation requirements of MOPP.

In either case, the insulation between PRIMARY to SECONDARY must meet at least 2 x MOP and at least 1 x MOP between PRIMARY to protective earth (FG) at normal conditions. It is shown on Figure 1.

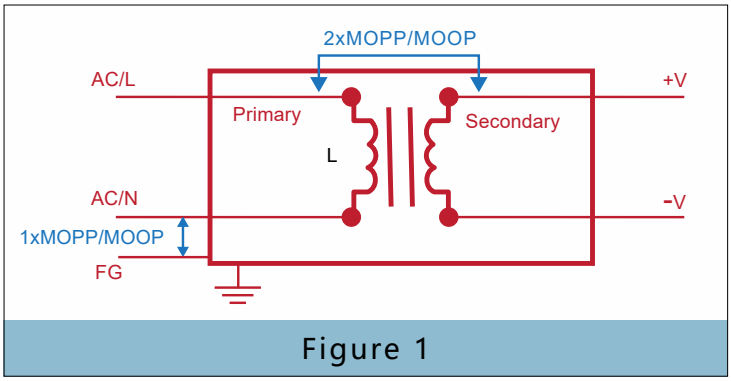


Figure 1

A power supplies that meet 2 x MOPP standards provide the highest level of protection. It can be advantageous to specify a 2 x MOPP power supply because it can cover most of medical applications.


Medical Bed

Ambulance

AC/DC External Adaptor

6~220W

Features

- Various styles:
  Desktop or wall-mounted
  Fixed or interchangeable input plug
- Output voltage from 5V to 48V available
- Class I & II models available
- ANSI/AAMI ES60601-1-11, EN60601-1-11
  household medical regulations
- Medical safety approved (2xMOPP)
- Suitable for BF application with appropriate system consideration (except GSM40A~220A)
- Various DC plug type for choice
- Low leakage current<50~100μA
- No load power consumption<0.075~0.15W
- Energy efficiency Level VI
  (6W and 18~60W 5~9V for Level V)
- High operating temperature up to 70°C
- Other DC plug options are available
- Comply with EISA 2007/DoE, NRCan, AU/NZ MEPS, EU ErP and meet CoC version 5
- 3 years warranty

Class I Class II (except for A-type) (except for U-type)

▲ **GEM06I/12I**
73.9x 39x 48.5mm

▲ **GEM18I/30I/40I/60I**
75.5x 39.1x 56.2mm

■ Wall-mounted (Interchangeable Type/Class II) — 6W

Order No. (main body)	Output	Effi.
GEM06I05-USB	5V, 1.20A	70%
GEM06I05-P1J	5V, 1.20A	70%
GEM06I06-P1J	6V, 1.00A	74%
GEM06I07-P1J	7.5V, 0.80A	74%
GEM06I09-P1J	9V, 0.66A	76%
GEM06I12-P1J	12V, 0.50A	76%
GEM06I15-P1J	15V, 0.40A	79%
GEM06I18-P1J	18V, 0.33A	79%
GEM06I24-P1J	24V, 0.25A	80%

■ Wall-mounted (Interchangeable Type/Class II) — 12W

Order No. (main body)	Output	Effi.
GEM12I05-USB	5V, 2.40A	80%
GEM12I05-P1J	5V, 2.40A	80%
GEM12I07-P1J	7.5V, 1.60A	82%
GEM12I09-P1J	9V, 1.33A	82%
GEM12I12-P1J	12V, 1.00A	82.5%
GEM12I15-P1J	15V, 0.80A	84%
GEM12I18-P1J	18V, 0.66A	85%
GEM12I24-P1J	24V, 0.50A	85%
GEM12I48-P1J	48V, 0.25A	87%

■ Wall-mounted (Interchangeable Type/Class II) — 18W

Order No. (main body)	Output	Effi.
GEM18I05-P1J	5V, 3.00A	80%
GEM18I09-P1J	9V, 2.00A	84%
GEM18I12-P1J	12V, 1.50A	84%
GEM18I15-P1J	15V, 1.20A	84%
GEM18I18-P1J	18V, 1.00A	84%
GEM18I24-P1J	24V, 0.75A	85%
GEM18I48-P1J	48V, 0.38A	87%

■ Wall-mounted (Interchangeable Type/Class II) — 30W

Order No. (main body)	Output	Effi.
GEM30I05-P1J	5V, 4.00A	82%
GEM30I07-P1J	7.5V, 3.33A	86%
GEM30I09-P1J	9V, 3.33A	87%
GEM30I12-P1J	12V, 2.50A	87%
GEM30I15-P1J	15V, 2.00A	87%
GEM30I18-P1J	18V, 1.66A	88%
GEM30I24-P1J	24V, 1.25A	88.5%
GEM30I48-P1J	48V, 0.625A	90%

■ Wall-mounted (Interchangeable Type/Class II) — 40W

Order No. (main body)	Output	Effi.
GEM40I05-P1J	5V, 5.00A	84%
GEM40I09-P1J	9V, 4.00A	87%
GEM40I12-P1J	12V, 3.33A	88%
GEM40I15-P1J	15V, 2.66A	88%
GEM40I18-P1J	18V, 2.22A	88%
GEM40I24-P1J	24V, 1.66A	89%
GEM40I48-P1J	48V, 0.83A	90.5%

■ Wall-mounted (Interchangeable Type/Class II) — 60W

Order No. (main body)	Output	Effi.
GEM60I05-P1J	5V, 6.00A	80%
GEM60I07-P1J	7.5V, 6.00A	85%
GEM60I09-P1J	9V, 5.50A	87%
GEM60I12-P1J	12V, 4.50A	88%
GEM60I15-P1J	15V, 4.00A	88%
GEM60I18-P1J	18V, 3.33A	88%
GEM60I24-P1J	24V, 2.50A	88%
GEM60I48-P1J	48V, 1.25A	90%

AC/DC External Adaptor 6~220W

▲ **GSM06U**
66x 32x 42.5mm

▲ **GSM06E**
66x 32x 42.5mm

▲ **GSM12U**
62.2x 27.4x 45.5mm

▲ **GSM12E**
62.2x 27.4x 45.5mm

Wall-mounted (Class II) – 6W

Order No.	Output	Effi.
GSM06☐05-P1J	5V, 1.20A	68%
GSM06☐06-P1J	6V, 1.00A	74%
GSM06☐07-P1J	7.5V, 0.80A	74%
GSM06☐09-P1J	9V, 0.66A	76%
GSM06☐12-P1J	12V, 0.50A	77%
GSM06☐15-P1J	15V, 0.40A	79%
GSM06☐18-P1J	18V, 0.33A	80%
GSM06☐24-P1J	24V, 0.25A	82%

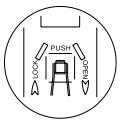
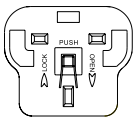
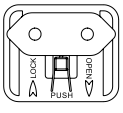
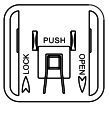
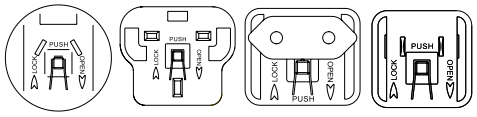
☐ = U/E ; U: American 2P, E: European 2P

Wall-mounted (Class II) – 12W

Order No.	Output	Effi.
GSM12☐05-USB	5V, 2.40A	80%
GSM12☐05-P1J	5V, 2.40A	80%
GSM12☐07-P1J	7.5V, 1.60A	82%
GSM12☐09-P1J	9V, 1.33A	82%
GSM12☐12-P1J	12V, 1.00A	82.5%
GSM12☐15-P1J	15V, 0.80A	84%
GSM12☐18-P1J	18V, 0.66A	85%
GSM12☐24-P1J	24V, 0.50A	85%
GSM12☐48-P1J	48V, 0.25A	87%

☐=U/E ; U: American 2P, E: European 2P

Interchangeable AC Plug Specifically for GEM Series

Type	Single Unit				Mixed Four Type
AC Plug Order No.	AC Plug-AU2	AC Plug-UK2	AC Plug-EU2	AC Plug-US2	AC Plug-Mix2
Mechanical					
	Australian Type	U.K. Type	European Type	U.S. Type	

Note: Main body unit and AC plug should be ordered separately; The main body needs to be used along with any of the AC plug.

▲ **GSM18B/25B/36B**
79x 54x 33mm

▲ **GSM18U/25U/36U**
79x 54x 33mm

▲ **GSM18E/25E/36E**
79x 54x 33mm

▲ **GSM60U**
75.5x 32x 47.5mm

▲ **GSM60E**
75.5x 32x 47.5mm

GSM Introduction

■ Desktop/Wall-mounted (Class II) – 18W

Order No.	Output	Effi.
GSM18☐05-P1J	5V, 3.00A	80%
GSM18☐07-P1J	7.5V, 2.00A	83%
GSM18☐09-P1J	9V, 2.00A	84%
GSM18☐12-P1J	12V, 1.50A	85%
GSM18☐15-P1J	15V, 1.20A	85.5%
GSM18☐18-P1J	18V, 1.00A	86%
GSM18☐24-P1J	24V, 0.75A	87%
GSM18☐48-P1J	48V, 0.375A	88%

☐=B/U/E ; B: IEC320-C8, U: American 2P, E: European 2P

■ Desktop/Wall-mounted (Class II) – 36W

Order No.	Output	Effi.
GSM36☐05-P1J	5V, 4.50A	80%
GSM36☐07-P1J	7.5V, 4.32A	83%
GSM36☐09-P1J	9V, 4.00A	84%
GSM36☐12-P1J	12V, 3.00A	86%
GSM36☐15-P1J	15V, 2.40A	87%
GSM36☐18-P1J	18V, 2.00A	87%
GSM36☐24-P1J	24V, 1.50A	87%
GSM36☐48-P1J	48V, 0.75A	88%

☐=B/U/E ; B: IEC320-C8, U: American 2P, E: European 2P

■ Desktop/Wall-mounted (Class II) – 25W

Order No.	Output	Effi.
GSM25☐05-P1J	5V, 4.00A	80%
GSM25☐07-P1J	7.5V, 2.93A	83%
GSM25☐09-P1J	9V, 2.77A	84%
GSM25☐12-P1J	12V, 2.08A	86%
GSM25☐15-P1J	15V, 1.66A	86%
GSM25☐18-P1J	18V, 1.38A	86%
GSM25☐24-P1J	24V, 1.04A	87%
GSM25☐48-P1J	48V, 0.52A	88%

☐=B/U/E ; B: IEC320-C8, U: American 2P, E: European 2P

■ Wall-mounted (Class II) – 60W

Order No.	Output	Effi.
GSM60☐05-P1J	5V, 6.00A	80.0%
GSM60☐07-P1J	7.5V, 6.00A	85.0%
GSM60☐09-P1J	9V, 5.50A	87.0%
GSM60☐12-P1J	12V, 4.50A	88.0%
GSM60☐15-P1J	15V, 4.00A	88.0%
GSM60☐18-P1J	18V, 3.33A	88.0%
GSM60☐24-P1J	24V, 2.50A	88.0%
GSM60☐48-P1J	48V, 1.25A	90.0%

☐=U/E ; U: American 2P, E: European 2P

■ Medical / Hospital Grade AC Power Cord

Order No.: YP18+YC12

AC/DC External Adaptor 6~220W

▲ **GSM40/60 A/B**
125x 50x 31.5mm

▲ **GSM90 A/B**
145x 60x 32mm

▲ **GSM120 A/B**
167x 67x 35mm

▲ **GSM160 A/B**
175x 72x 35mm

▲ **GSM220 A/B**
210x 85x 46mm

Desktop – 40W

Order No.	Output	Effi.
GSM40☐05-P1J	5V, 5.00A	81.0%
GSM40☐07-P1J	7.5V, 5.34A	85.5%
GSM40☐09-P1J	9V, 4.45A	86.0%
GSM40☐12-P1J	12V, 3.34A	88.0%
GSM40☐15-P1J	15V, 2.67A	88.5%
GSM40☐18-P1J	18V, 2.22A	89.5%
GSM40☐24-P1J	24V, 1.67A	90.0%
GSM40☐48-P1J	48V, 0.84A	91.0%

☐=A/B ; A: IEC320-C14/Class I, B: IEC320-C8/Class II

Desktop – 60W

Order No.	Output	Effi.
GSM60☐05-P1J	5V, 6.00A	81.5%
GSM60☐07-P1J	7.5V, 6.00A	86.0%
GSM60☐09-P1J	9V, 6.00A	87.5%
GSM60☐12-P1J	12V, 5.00A	88.0%
GSM60☐15-P1J	15V, 4.00A	88.5%
GSM60☐18-P1J	18V, 3.33A	89.0%
GSM60☐24-P1J	24V, 2.50A	90.0%
GSM60☐48-P1J	48V, 1.25A	91.5%

☐=A/B ; A: IEC320-C14/Class I, B: IEC320-C8/Class II

Desktop – 90W

Order No.	Output	Effi.
GSM90☐12-P1M	12V, 6.67A	88.0%
GSM90☐15-P1M	15V, 6.00A	89.0%
GSM90☐19-P1M	19V, 4.74A	89.0%
GSM90☐24-P1M	24V, 3.75A	90.0%
GSM90☐48-P1M	48V, 1.87A	91.0%

☐=A/B ; A: IEC320-C14/Class I, B: IEC320-C8/Class II

Desktop – 120W

Order No.	Output	Effi.
GSM120☐12-R7B	12V, 8.5A	88.0%
GSM120☐15-R7B	15V, 7.00A	89.0%
GSM120☐20-R7B	20V, 6.00A	89.0%
GSM120☐24-R7B	24V, 5.00A	90.0%
GSM120☐48-R7B	48V, 2.50A	91.5%

☐=A/B ; A: IEC320-C14/Class I, B: IEC320-C8/Class II

Desktop – 160W

Order No.	Output	Effi.
GSM160☐12-R7B	12V, 11.5A	90.0%
GSM160☐15-R7B	15V, 9.6A	91.0%
GSM160☐20-R7B	20V, 8.0A	92.5%
GSM160☐24-R7B	24V, 6.67A	93.0%
GSM160☐48-R7B	48V, 3.34A	94.0%

☐=A/B ; A: IEC320-C14/Class I, B: IEC320-C8/Class II

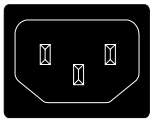
Desktop – 220W

Order No.	Output	Effi.
GSM220A12-R7B	12V, 15.0A	90.0%
GSM220A15-R7B	15V, 13.4A	90.0%
GSM220A20-R7B	20V, 11.0A	92.0%
GSM220A24-R7B	24V, 9.20A	93.5%
GSM220A48-R7B	48V, 4.60A	94.5%

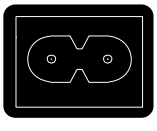
☐=A/B ; A: IEC320-C14/Class I, B: IEC320-C8/Class II

AC inlet

A TYPE



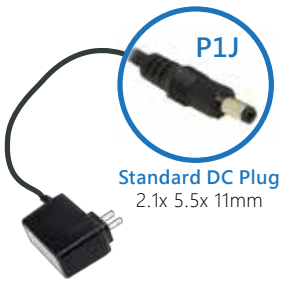
B TYPE



Changeable DC Plug Selection Guide

· Flexible solution for small quantity
· Easy modification for different size of DC plug
· Off-the-shelf and no MOQ

※ If you can't find the required DC plug in this table, please contact MEAN WELL's sales reps.

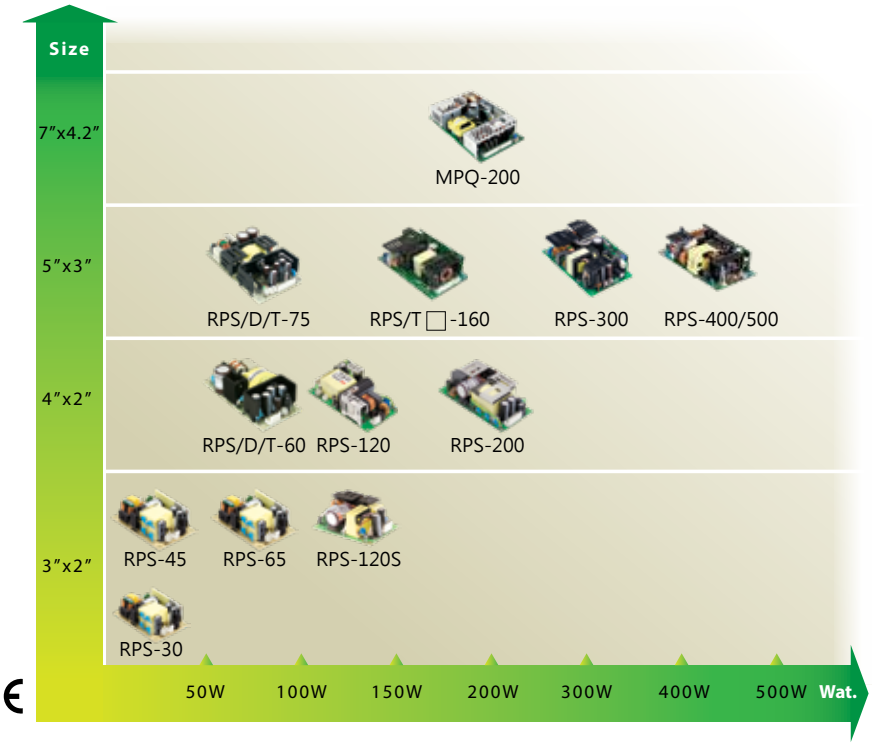
Adaptor	Changeable DC Plug	Assembly Illustration (Example)
Model No. GST18~60 GSM06~60 GEM06~60 GE12~40 SGA12~60 GS06/15 OWA60U/E 	**Ordering No.**  DC PLUG-P1J-P1I 2.1x 5.5x 9.5mm DC PLUG-P1J-P1M 2.5x 5.5x 11mm DC PLUG-P1J-P1L 2.5x 5.5x 9.5mm DC PLUG-P1J-P3A 0.7x 2.35x 11mm DC PLUG-P1J-P3B 1.7x 4.0x 11mm DC PLUG-P1J-P3C 1.7x 4.75x 11mm  DC PLUG-P1J-P1IR 2.1x 5.5x 9.5mm DC PLUG-P1J-P1MR 2.5x 5.5x 11mm DC PLUG-P1J-P1LR 2.5x 5.5x 9.5mm DC PLUG-P1J-P1JR 2.1x 5.5x 11mm  DC PLUG-P1J-R6B KYCON KPPX-3P DC PLUG-P1J-R7B KYCON KPPX-4P DC PLUG-P1J-R1B 5PIN DIN	
Model No. GST90~120 GSM90 	**Ordering No.**  DC PLUG-P1M-P1J 2.1x 5.5x 11mm  DC PLUG-P1M-P1JR 2.1x 5.5x 11mm	
Model No. GST120~220 GSM120~220 OWA90U/120U 	**Ordering No.**  DC PLUG-R7BF-P1J 2.1x 5.5x 11mm DC PLUG-R7BF-P1M 2.5x 5.5x 11mm	

AC/DC Open Frame Type

30~500W

Features

- Complete size for choice:
  3"x2", 4"x2", 5"x3", 7"x4.2"
- Single and multiple outputs
- Medical safety approved (2xMOPP)
- Suitable for BF application with appropriate system consideration (except RPS/D/T-75)
- Class I & II models available
- Low leakage current<100~300μA
- No load power consumption<0.1~0.75W
- Remote ON/OFF , remote sense ,
  5V standby output ,12V auxiliary output,
  P.G./P.F. signal for selected models
- 3 years warranty



▲ **RPS-30/45/65**
76.2x 50.8x 24mm
(3" x2")

▲ **RPS-120S**
76.2x 50.8x 28mm
(3" x2")

▲ **RPS/D/T□-60**
101.6x 50.8x 29mm
(4" x2")

▲ **RPS-120**
101.6x 50.8x 29mm
(4" x2")

30W: Single Output — Class II

Model No.	Output (Rated/Peak)	Effi.
RPS-30-3.3	3.3V, 6A / 6.60A	80.0%
RPS-30-5	5V, 6A / 6.60A	82.0%
RPS-30-7.5	7.5V, 4A / 4.40A	84.0%
RPS-30-12	12V, 2.5A / 2.75A	88.0%
RPS-30-15	15V, 2A / 2.20A	89.0%
RPS-30-24	24V, 1.25A / 1.375A	89.5%
RPS-30-48	48V, 0.625A / 0.687A	92.0%

45W: Single Output — Class II

Model No.	Output (Rated/Peak)	Effi.
RPS-45-3.3	3.3V, 8A / 8.80A	80.5%
RPS-45-5	5V, 8A / 8.80A	83.0%
RPS-45-7.5	7.5V, 5.4A / 5.95A	85.0%
RPS-45-12	12V, 3.8A / 4.18A	88.0%
RPS-45-15	15V, 3A / 3.30A	89.0%
RPS-45-24	24V, 1.9A / 2.10A	90.0%
RPS-45-48	48V, 0.94A / 1.03A	91.0%

65W: Single Output — Class II

Model No.	Output (Rated/Peak)	Effi.
RPS-65-3.3	3.3V, 10A / 11A	80.0%
RPS-65-5	5V, 10A / 11A	84.0%
RPS-65-7.5	7.5V, 8A / 8.80A	85.0%
RPS-65-12	12V, 5.42A / 5.96A	88.0%
RPS-65-15	15V, 4.34A / 4.77A	89.0%
RPS-65-24	24V, 2.71A / 2.98A	90.0%
RPS-65-48	48V, 1.36A / 1.49A	91.0%

120W: Single Output — Class I or II

Model No.	Output (Rated/Peak)	Effi.
RPS-120S-12	12V, 9.5A / 11.8A	91.0%
RPS-120S-15	15V, 7.6A / 9.5A	92.0%
RPS-120S-24	24V, 5A / 6.25A	93.0%
RPS-120S-27	27V, 4.44A / 5.55A	94.0%
RPS-120S-48	48V, 2.5A / 3.125A	93.5%

60W: Single Output — Class I

Model No.	Output (Rated/Peak)	Effi.
RPS-60-3.3	3.3V, 10A / 11A	74.0%
RPS-60-5	5V, 10A / 11A	79.0%
RPS-60-12	12V, 5A / 5.5A	83.0%
RPS-60-15	15V, 4A / 4.4A	84.0%
RPS-60-24	24V, 2.5A / 2.75A	85.0%
RPS-60-48	48V, 1.25A / 1.375A	86.0%

60W: Dual Output — Class I

Model No.	Output	Effi.	Max.
RPD-60A	5V, 0.5~5.5A 12V, 0.1~2.2A	78%	54W
RPD-60B	5V, 0.5~3.85A 24V, 0.1~1.65A	82%	59W

60W: Triple Output — Class I

Model No.	Output	Effi.	Max.
RPT-60A	5V, 0.5~4.4A 12V, 0.1~2.2A -5V, 0.1~0.55A	77%	51W
RPT-60B	5V, 0.5~4.4A 12V, 0.1~2.2A -12V, 0.1~0.55A	78%	55W
RPT-60C	5V, 0.5~4.4A 15V, 0.1~1.65A -15V, 0.1~0.55A	79%	55W
RPT-60D	5V, 0.5~3.85A 24V, 0.1~1.1A 12V, 0.1~0.55A	79%	52W
RPT-6003	3.3V, 0.5~5.5A 5V, 0.3~3.3A 12V, 0.1~0.77A	75%	44W

120W: Single Output — Class I or II

Model No.	Output (Convection/10CFM)	Effi.
RPS-120-12	12V, 7A / 10A	89.0%
RPS-120-15	15V, 5.6A / 8A	89.0%
RPS-120-24	24V, 3.5A / 5A	90.0%
RPS-120-27	27V, 3.15A / 4.5A	90.0%
RPS-120-48	48V, 1.75A / 2.5A	91.0%

AC/DC Open Frame Type 30~500W

▲ **RPS-200**
101.6x 50.8x 29mm
(4" x2")

▲ **RPS/D/T-75**
127x 76.2x 31mm
(5" x3")

▲ **RPS/T-160**
127x 76.2x 34.6mm
(5" x3")

75W: Single Output — Class I

Model No.	Output (Rated/23.5CFM)	Effi.
RPS-75-3.3	3.3V, 15A / 20A	73%
RPS-75-5	5V, 14A / 18.7A	78%
RPS-75-12	12V, 6.3A / 8.3A	82%
RPS-75-15	15V, 5A / 6.7A	83%
RPS-75-24	24V, 3.2A / 4.2A	85%
RPS-75-36	36V, 2.1A / 2.8A	86%
RPS-75-48	48V, 1.6A / 2.1A	86%

75W: Dual Output — Class I

Model No.	Output	Effi.	Max.
RPD-75A	5V, 1.0~9.5A 12V, 0.3~4.0A	77%	96W
RPD-75B	5V, 1.0~6.8A 24V, 0.2~2.7A	79%	99W

75W: Triple Output — Class I

Model No.	Output	Effi.	Max.
RPT-75A	5V, 0.6~8.0A 12V, 0.2~4.0A -5V, 0.1~1.0A	76%	93W
RPT-75B	5V, 0.6~8.0A 12V, 0.2~4.0A -12V, 0.1~1.0A	77%	100W
RPT-75C	5V, 0.6~8.0A 15V, 0.1~3.0A -15V, 0.1~1.0A	77%	100W
RPT-75D	5V, 0.6~7.0A 24V, 0.1~2.0A 12V, 0.1~1.0A	79%	95W
RPT-7503	3.3V, 0.7~7.0A 5V, 0.0~8.0A 12V, 0.0~1.5A	74%	81W

200W: Single Output — Class I or II

Model No.	Output (Convection/10CFM)	Effi.
RPS-200-12	12V, 11.7A / 16.7A	93.0%
RPS-200-15	15V, 9.4A / 13.4A	93.5%
RPS-200-24	24V, 5.9A / 8.4A	94.0%
RPS-200-27	27V, 5.3A / 7.5A	94.0%
RPS-200-48	48V, 3A / 4.2A	95.0%

160W: Single Output — Class I

Model No.	Output (Convection/20.5CFM)	Effi.
RPS☐-160-5	5V, 20A / 30A	86%
RPS☐-160-12	12V, 9.1A / 12.9A	87%
RPS☐-160-15	15V, 7.3A / 10.3A	87%
RPS☐-160-24	24V, 4.6A / 6.5A	87%
RPS☐-160-48	48V, 2.3A / 3.25A	88%

☐= blank, G; blank: basic function,
G: with 5Vsb/0.8A & no load power consumption< 0.75W

160W: Triple Output — Class I

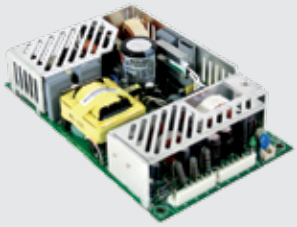
Model No.	Output	Effi.	Max.
RPT☐-160A	5V, 0.6~14A 12V, 0.2~5.5A -5V, 0.1~1.0A	84%	145W
RPT☐-160B	5V, 0.6~14A 12V, 0.2~5.0A -12V, 0.1~1.0A	84%	146W
RPT☐-160C	5V, 0.6~14A 15V, 0.1~3.6A -15V, 0.1~1.0A	83%	143W
RPT☐-160D	5V, 0.3~11A 12V, 0.2~5.0A 24V, 0.15~1.2A	83%	148W

☐= blank, G; blank: basic function,
G: with 5Vsb/0.8A & no load power consumption< 0.75W

▲ **RPS-300**
127x 76.2x 35mm
(5" x3")

▲ **RPS-400**
127x 76.2x 35mm
(5" x3")

▲ **RPS-500**
127x 76.2x 41mm
(5" x3")



▲ **MPQ-200**
177.8x 107.2x 35.5mm
(7" x4.2")

300W: Single Output — Class I

Model No.	Output (Convection/20.5CFM)	Effi.
RPS-300-12	12V, 16.67A / 25A	90.0%
RPS-300-15	15V, 13.33A / 20A	90.0%
RPS-300-24	24V, 8.33A / 12.5A	92.5%
RPS-300-27	27V, 7.4A / 11.12A	93.0%
RPS-300-48	48V, 4.17A / 6.25A	93.0%

400W: Single Output — Class I or II

Model No.	Output (Convection/25CFM)	Effi.
RPS-400-12	12V, 20.8A / 33.3A	91.5%
RPS-400-15	15V, 16.7A / 26.7A	92.0%
RPS-400-18	18V, 13.9A / 22.3A	93.0%
RPS-400-24	24V, 10.5A / 16.7A	93.0%
RPS-400-27	27V, 9.3A / 14.9A	93.5%
RPS-400-36	36V, 7A / 11.2A	94.0%
RPS-400-48	48V, 5.3A / 8.4A	94.0%

500W: Single Output — Class I or II

Model No.	Output (Convection/25CFM)	Effi.
RPS-500-12	12V, 41.6A / 26.7A	91.0%
RPS-500-15	15V, 33.3A / 21.3A	92.0%
RPS-500-18	18V, 27.8A / 17.8A	92.5%
RPS-500-24	24V, 20.8A / 13.4A	93.0%
RPS-500-27	27V, 18.5A / 11.9A	93.5%
RPS-500-36	36V, 13.9A / 8.9A	94.0%
RPS-500-48	48V, 10.4A / 6.7A	94.0%

200W: Quad Output — Class I

Model No.	Output	Effi.	Max.
MPQ-200B	5V, 3.0~18A 12V, 0.7~8.4A -5V, 0.0~2.4A -12V, 0.0~2.4A	78%	193W
MPQ-200C	5V, 3.0~18A 15V, 0.5~6.0A -5V, 0.0~2.4A -15V, 0.0~2.4A	78%	190W
MPQ-200D	5V, 3.0~18A 24V, 0.3~3.6A 12V, 0.0~2.4A -12V, 0.0~2.4A	79%	195W
MPQ-200F	5V, 3.0~18A 24V, 0.3~3.3A 15V, 0.0~2.4A -15V, 0.0~2.4A	81%	200W

AC/DC
On Board Type

5~90W

Features

- Small PCB mount models
- Output voltage from 3.3V to 48V available
- Medical safety approved (2xMOPP)
- Suitable for BF application with appropriate system consideration
- Class II power unit
- Peak power up to 110%
- EMI class B without additional components
- Low leakage current<80~300μA
- No load power consumption<0.075~0.1W
- -40~+85°C operating temperature
- Screw terminal type available (30~90W only)
- 3 years warranty

▲ **MFM-05/10**
42x 22.3x 20.5mm

▲ **MFM-15/20**
49x 23.8x 23mm

▲ **MFM-30**
65.5x 35x 23mm

MPM/MFM Introduction

5W: Single Output — Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MFM-05-3.3	3.3V, 1.25A / 1.38A	74%
MFM-05-5	5V, 1.00A / 1.10A	80%
MFM-05-12	12V, 0.42A / 0.46A	80%
MFM-05-15	15V, 0.33A / 0.36A	81%
MFM-05-24	24V, 0.23A / 0.25A	82%

10W: Single Output — Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MFM-10-3.3	3.3V, 2.50A / 2.75A	78%
MFM-10-5	5V, 2.00A / 2.20A	81%
MFM-10-12	12V, 0.85A / 0.94A	83%
MFM-10-15	15V, 0.67A / 0.74A	83%
MFM-10-24	24V, 0.42A / 0.46A	84%

15W: Single Output — Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MFM-15-3.3	3.3V, 3.50A / 3.85A	83.5%
MFM-15-5	5V, 3.00A / 3.30A	85.5%
MFM-15-12	12V, 1.25A / 1.38A	86.5%
MFM-15-15	15V, 1.00A / 1.10A	87.0%
MFM-15-24	24V, 0.63A / 0.69A	86.5%

20W: Single Output — Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MFM-20-3.3	3.3V, 4.50A / 4.95A	81%
MFM-20-5	5V, 4.00A / 4.40A	85%
MFM-20-12	12V, 1.80A / 1.98A	85.5%
MFM-20-15	15V, 1.40A / 1.54A	87%
MFM-20-24	24V, 0.90A / 0.99A	87%

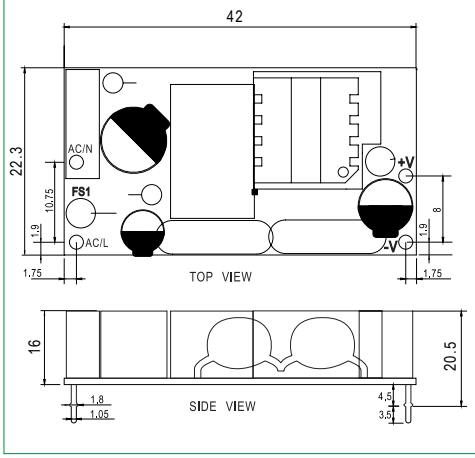
30W: Single Output — Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MFM-30-3.3	3.3V, 6.00A / 7.8A	82.5%
MFM-30-5	5V, 6.00A / 6.9A	86.5%
MFM-30-12	12V, 2.50A / 2.9A	90%
MFM-30-15	15V, 2.00A / 2.3A	89%
MFM-30-24	24V, 1.30A / 1.5A	90%
MFM-30-48	48V, 0.63A / 0.73A	91%

Mechanical Specification for MFM Series

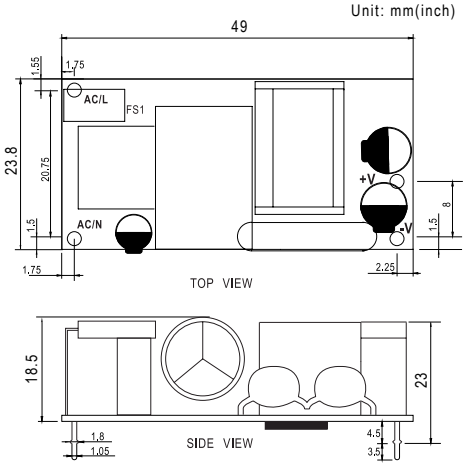
MFM-05/10 Series

Unit: mm(inch)



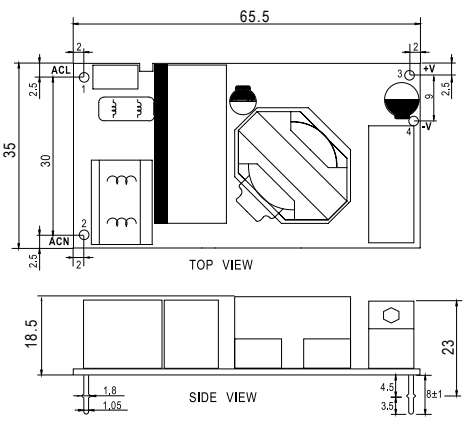
MFM-15/20 Series

Unit: mm(inch)



MFM-30 Series

Unit: mm(inch)



AC/DC On Board Type 5~90W

▲ **MPM-05/10**
45.7x 25.4x 21.5mm

▲ **MPM-15/20**
52.4x 27.2x 24mm

MPM/MFM Introduction

5W: Single Output – Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MPM-05-3.3	3.3V, 1.25A / 1.38A	74%
MPM-05-5	5V, 1.00A / 1.10A	80%
MPM-05-12	12V, 0.42A / 0.46A	80%
MPM-05-15	15V, 0.33A / 0.36A	81%
MPM-05-24	24V, 0.23A / 0.25A	82%

15W: Single Output – Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MPM-15-3.3	3.3V, 3.50A / 3.85A	83.5%
MPM-15-5	5V, 3.00A / 3.30A	85.5%
MPM-15-12	12V, 1.25A / 1.38A	86.5%
MPM-15-15	15V, 1.00A / 1.10A	87%
MPM-15-24	24V, 0.63A / 0.69A	86.5%

10W: Single Output – Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MPM-10-3.3	3.3V, 2.50A / 2.75A	78%
MPM-10-5	5V, 2.00A / 2.20A	81%
MPM-10-12	12V, 0.85A / 0.94A	83%
MPM-10-15	15V, 0.67A / 0.74A	83%
MPM-10-24	24V, 0.42A / 0.46A	84%

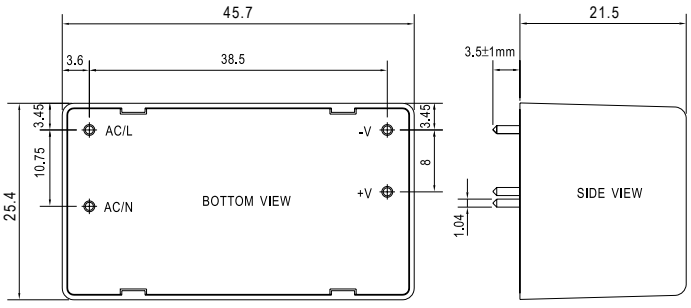
20W: Single Output – Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MPM-20-3.3	3.3V, 4.50A / 4.95A	81%
MPM-20-5	5V, 4.00A / 4.40A	85%
MPM-20-12	12V, 1.80A / 1.98A	85.5%
MPM-20-15	15V, 1.40A / 1.54A	87%
MPM-20-24	24V, 0.90A / 0.99A	87%

Mechanical Specification for MPM Series

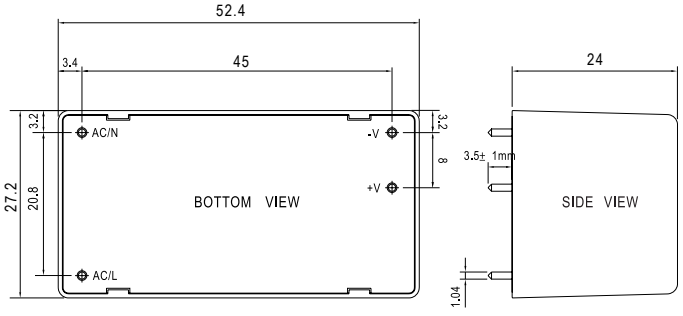
MPM-05/10 Series

Unit: mm(inch)



MPM-15/20 Series

Unit: mm(inch)



▲ **MPM-30**
69.5x 39x 24mm

▲ **MPM-30-xST**
91x 39.5x 28.5mm

▲ **MPM-45/65/90**
87x52x 29.5mm

▲ **MPM-45/65/90-xST**
109x 52x 33.5mm

■ 30W: Single Output – Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MPM-30-3.3☐	3.3V, 6.00A / 7.8A	82.5%
MPM-30-5☐	5V, 6.00A / 6.9A	86.5%
MPM-30-12☐	12V, 2.50A / 2.9A	90%
MPM-30-15☐	15V, 2.00A / 2.3A	89%
MPM-30-24☐	24V, 1.30A / 1.5A	90%
MPM-30-48☐	48V, 0.63A / 0.73A	91%

☐= blank, ST;
Blank: PCB mounting, ST: Screw terminal style

■ 65W: Single Output – Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MPM-65-5☐	5V, 10A / 11A	86.5%
MPM-65-12☐	12V, 5.42A / 5.96A	92.5%
MPM-65-15☐	15V, 4.33A / 4.77A	92.5%
MPM-65-24☐	24V, 2.71A / 2.98A	93.0%
MPM-65-48☐	48V, 1.36A / 1.49A	92.0%

☐= blank, ST;
Blank: PCB mounting, ST: Screw terminal style

■ 45W: Single Output – Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MPM-45-5☐	5V, 8.0A / 8.80A	88.0%
MPM-45-12☐	12V, 3.75A / 4.13A	91.5%
MPM-45-15☐	15V, 3.0A / 3.30A	92.5%
MPM-45-24☐	24V, 1.88A / 2.10A	92.5%
MPM-45-48☐	48V, 0.94A / 1.05A	92.0%

☐= blank, ST;
Blank: PCB mounting, ST: Screw terminal style

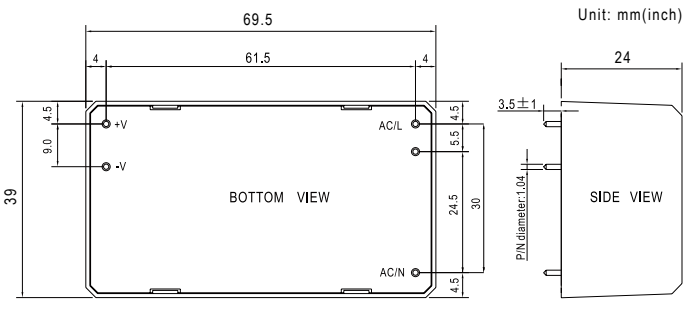
■ 90W: Single Output – Class II

Model No.	Output (Rated/Peak 10 sec.)	Effi.
MPM-90-12☐	12V, 6.7A / 7.37A	92.0%
MPM-90-15☐	15V, 5.67A / 6.23A	92.5%
MPM-90-24☐	24V, 3.75A / 4.13A	93.0%
MPM-90-48☐	48V, 1.88A / 2.07A	93.0%

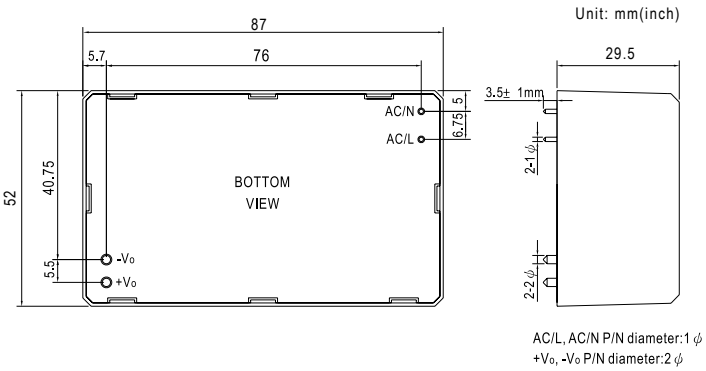
☐= blank, ST;
Blank: PCB mounting, ST: Screw terminal style

■ Mechanical Specification for MPM Series

MPM-30 Series



MPM-45/65/90 Series



AC/DC Enclosed Type

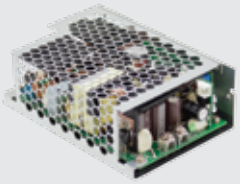
100~1200W

Features

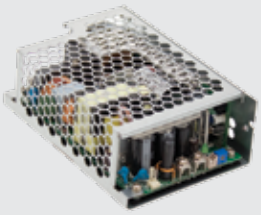
- Medical safety approved
  (2xMOPP for NMP/RPS-C series, MOOP level for MSP series)
- Suitable for BF application (NMP/RPS-C series)
- Output voltage from 3V to 55V available
- Class I power unit
- Low leakage current<100~450μA
- No load power consumption<0.3~0.8W
- Built-in remote ON/OFF, remote sense, current sharing, 5V standby output, 12V auxiliary output, DC OK signal for selected models
- -40~+70℃ wide operating temperature
- 5 years warranty for NMP/MSP series
  3 years warranty for RPS-C series

Class I Class II BF rated (NMP/RPS-C) 1xMOOP (MSP) 2xMOPP (NMP/RPS-C) (NMP/RPS-C)

▲ **RPS-120/200-x-C**
103.4x 62x 40mm



▲ **RPS-300-x-C**
130x 86x 43mm



▲ **RPS-400/500-x-C**
130x 86x 43mm

▲ **RPS-400/500-x-TF**
130x 86x 66.5mm

▲ **RPS-400/500-x-SF**
160x 86x 43mm

120W: Single Output — Class I

Model No.	Output (Convection/10CFM)	Effi.
RPS-120-12-C	12V, 7A / 10A	89.0%
RPS-120-15-C	15V, 5.6A / 8A	89.0%
RPS-120-24-C	24V, 3.5A / 5A	90.0%
RPS-120-27-C	27V, 3.15A / 4.5A	90.0%
RPS-120-48-C	48V, 1.75A / 2.5A	91.0%

200W: Single Output — Class I

Model No.	Output Convection/20.5CFM)	Effi.
RPS-200-12-C	12V, 11.7A / 16.7A	93.0%
RPS-200-15-C	15V, 9.4A / 13.4A	93.5%
RPS-200-24-C	24V, 5.9A / 8.4A	94.0%
RPS-200-27-C	27V, 5.3A / 7.5A	94.0%
RPS-200-48-C	48V, 3A / 4.2A	95.0%

300W: Single Output — Class I

Model No.	Output (Convection/20.5CFM)	Effi.
RPS-300-12-C	12V, 16.67A / 25A	90.0%
RPS-300-15-C	15V, 13.33A / 20A	90.0%
RPS-300-24-C	24V, 8.33A / 12.5A	92.5%
RPS-300-27-C	27V, 7.4A / 11.12A	93.0%
RPS-300-48-C	48V, 4.17A / 6.25A	93.0%

400W: Single Output — Class I

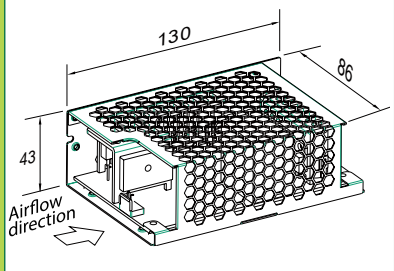
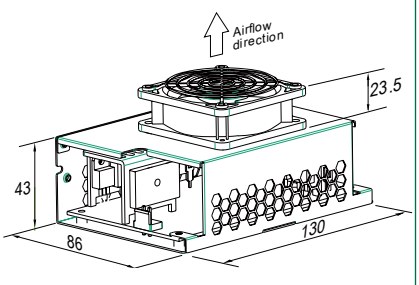
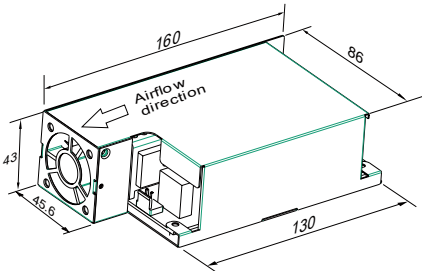
Model No.	Output (Convection/25CFM)	Effi.
RPS-400-12□	12V, 20.8A / 33.3A	91.5%
RPS-400-15□	15V, 16.7A / 26.7A	92.0%
RPS-400-18□	18V, 13.9A / 22.3A	93.0%
RPS-400-24□	24V, 10.5A / 16.7A	93.0%
RPS-400-27□	27V, 9.3A / 14.9A	93.5%
RPS-400-36□	36V, 7A / 11.2A	94.0%
RPS-400-48□	48V, 5.3A / 8.4A	94.0%

□=-C, -TF, -SF;
-C: Enclosed type, -TF: Top fan with cover, -SF: Side fan with cover

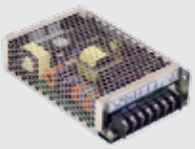
500W: Single Output — Class I

Model No.	Output (Convection/25 CFM)	Effi.
RPS-500-12□	12V, 26.7A / 41.6A	91.5%
RPS-500-15□	15V, 21.3A / 33.3A	92.0%
RPS-500-18□	18V, 17.8A / 27.8A	93.0%
RPS-500-24□	24V, 13.4A / 20.8A	93.0%
RPS-500-27□	27V, 11.9A / 18.5A	93.5%
RPS-500-36□	36V, 8.9A / 13.9A	94.0%
RPS-500-48□	48V, 6.7A / 10.4A	94.0%

□=-C, -TF, -SF;
-C: Enclosed type, -TF: Top fan with cover, -SF: Side fan with cover

	RPS-400/500-C	RPS-400/500-TF	RPS-400/500-SF
Without Fan Watt	250W/320W	---	---
With Fan Watt	400W/500W	400W/500W	400W/500W
Case Drawing			

AC/DC Enclosed Type 100~1200W



▲ **MSP-100**
159x 97x 38mm

▲ **MSP-200**
199x 98x 38mm

▲ **MSP-300**
199x 105x 41mm

▲ **MSP-450**
218x 105x 41mm

▲ **MSP-600/1000**
218x 105x 63.5mm

100W: Single Output – Class I

Model No.	Output	Effi.
MSP-100-3.3	3.3V, 20A	78.0%
MSP-100-5	5V, 17A	83.0%
MSP-100-7.5	7.5V, 13.5A	84.0%
MSP-100-12	12V, 8.5A	87.5%
MSP-100-15	15V, 7A	88.0%
MSP-100-24	24V, 4.5A	88.5%
MSP-100-36	36V, 2.9A	89.0%
MSP-100-48	48V, 2.2A	90.0%

200W: Single Output – Class I

Model No.	Output	Effi.
MSP-200-3.3	3.3V, 40A	80.0%
MSP-200-5	5V, 35A	84.0%
MSP-200-7.5	7.5V, 26.7A	86.0%
MSP-200-12	12V, 16.7A	88.0%
MSP-200-15	15V, 13.4A	88.0%
MSP-200-24	24V, 8.4A	88.0%
MSP-200-36	36V, 5.7A	89.0%
MSP-200-48	48V, 4.3A	89.0%

300W: Single Output – Class I

Model No.	Output	Effi.
MSP-300-3.3	3.3V, 60A	80.0%
MSP-300-5	5V, 60A	82.0%
MSP-300-7.5	7.5V, 40A	86.0%
MSP-300-12	12V, 27A	88.0%
MSP-300-15	15V, 22A	88.0%
MSP-300-24	24V, 14A	87.0%
MSP-300-36	36V, 9A	88.0%
MSP-300-48	48V, 7A	89.0%

450W: Single Output – Class I

Model No.	Output	Effi.
MSP-450-3.3	3.3V, 90A	80.0%
MSP-450-5	5V, 90A	83.0%
MSP-450-7.5	7.5V, 60A	86.5%
MSP-450-12	12V, 37.5A	88.0%
MSP-450-15	15V, 30A	89.0%
MSP-450-24	24V, 18.8A	88.0%
MSP-450-36	36V, 12.5A	89.0%
MSP-450-48	48V, 9.5A	89.5%

600W: Single Output – Class I

Model No.	Output	Effi.
MSP-600-3.3	3.3V, 120A	78.5%
MSP-600-5	5V, 120A	82.0%
MSP-600-7.5	7.5V, 80A	86.0%
MSP-600-12	12V, 53A	88.0%
MSP-600-15	15V, 43A	88.0%
MSP-600-24	24V, 27A	88.0%
MSP-600-36	36V, 17.5A	89.0%
MSP-600-48	48V, 13A	89.0%

1000W: Single Output – Class I

Model No.	Output	Effi.
MSP-1000-12	12V, 80A	91.5%
MSP-1000-15	15V, 64A	92.0%
MSP-1000-24	24V, 42A	93.0%
MSP-1000-48	48V, 21A	94.0%

(NMP1K2)

▲ **NMP650**
250x 89x 41mm

▲ **NMP1K2**
250x 127x 41mm

NMP Introduction

NMP Series SPEC

NMP Short Form

Output Configeration Guide

NMP □□□-□ □ □ □ □ □ □-□□

SLOT 1 SLOT 2 SLOT 3 SLOT 4 SLOT 5 SLOT 6

650/1K2(650W/1200W)

Parallel or option code

For NMP1K2 only

MS-240 : 1-SLOT isolated single output (240W max.)

Picture	Item Code	Output	Vdc adj.	Tol.	R&N.	Max.
	C	5V, 0~36A	3~6V	±2%	100mV	180W
	E	12V, 0~20A	6~15V	±1%	150mV	240W
	H	24V, 0~10A	15~30V	±1%	150mV	240W
	K	48V, 0~5A	30~55V	±1%	250mV	240W

Telecommunication

X-ray and
Image Diagnostic Machine

Automation Robot Arms

DC/DC Converter

1~20W

Features

- Various package: SIP7, DIP
- Low patient leakage current <2μA~5μA
- 2 x MOOP / 2 x MOPP
- 6KVDC / 4.2KVAC or 4KVAC high I/O isolation
- Different input range (±10%, 2:1)
- ANSI/AAMI ES60601-1 medical safety approved
- -40~+90°C operating temperature
- 3 years warranty

2xMOOP (1~2W) 2xMOPP (15~20W) (1~2W)

▲ **MDS01/02**
19.5x 9.8x 12.5mm
(0.77" x 0.39" x 0.49")

▲ **MDD01/02**
19.5x 9.8x 12.5mm
(0.77" x 0.39" x 0.49")

■ MDS01: 1W Single Output

Model No.	Vin	Output	Effi.
MDS01L-03	5V (4.5~5.5V)	3.3V, 303mA	73%
MDS01L-05	5V (4.5~5.5V)	5V, 200mA	78%
MDS01L-12	5V (4.5~5.5V)	12V, 84mA	77%
MDS01L-15	5V (4.5~5.5V)	15V, 67mA	75%
MDS01M-05	12V (10.8~13.2V)	5V, 200mA	78%
MDS01M-12	12V (10.8~13.2V)	12V, 84mA	82%
MDS01M-15	12V (10.8~13.2V)	15V, 67mA	83%
MDS01N-05	24V (21.6~26.4V)	5V, 200mA	77%
MDS01N-12	24V (21.6~26.4V)	12V, 84mA	79%
MDS01N-15	24V (21.6~26.4V)	15V, 67mA	79%

■ MDD01: 1W Dual Output

Model No.	Vin	Output	Effi.
MDD01L-05	5V (4.5~5.5V)	±5V, ±100mA	79%
MDD01L-09	5V (4.5~5.5V)	±9V, ±56mA	81%
MDD01L-12	5V (4.5~5.5V)	±12V, ±42mA	77%
MDD01L-15	5V (4.5~5.5V)	±15V, ±34mA	77%
MDD01M-05	12V (10.8~13.2V)	±5V, ±100mA	78%
MDD01M-09	12V (10.8~13.2V)	±9V, ±56mA	82%
MDD01M-12	12V (10.8~13.2V)	±12V, ±42mA	75%
MDD01M-15	12V (10.8~13.2V)	±15V, ±34mA	76%
MDD01N-05	24V (21.6~26.4V)	±5V, ±100mA	77%
MDD01N-09	24V (21.6~26.4V)	±9V, ±56mA	79%
MDD01N-12	24V (21.6~26.4V)	±12V, ±42mA	77%
MDD01N-15	24V (21.6~26.4V)	±15V, ±34mA	77%

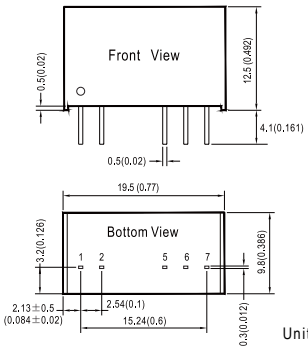
■ MDS02: 2W Single Output

Model No.	Vin	Output	Effi.
MDS02L-05	5V (4.5~5.5V)	5V, 400mA	77%
MDS02L-12	5V (4.5~5.5V)	12V, 167mA	80%
MDS02L-15	5V (4.5~5.5V)	15V, 133mA	79%
MDS02M-05	12V (10.8~13.2V)	5V, 400mA	75%
MDS02M-12	12V (10.8~13.2V)	12V, 167mA	83%
MDS02M-15	12V (10.8~13.2V)	15V, 133mA	84%
MDS02N-05	24V (21.6~26.4V)	5V, 400mA	80%
MDS02N-12	24V (21.6~26.4V)	12V, 167mA	83%
MDS02N-15	24V (21.6~26.4V)	15V, 133mA	85%

■ MDD02: 2W Dual Output

Model No.	Vin	Output	Effi.
MDD02L-05	5V (4.5~5.5V)	±5V, ±200mA	78%
MDD02L-09	5V (4.5~5.5V)	±9V, ±111mA	81%
MDD02L-12	5V (4.5~5.5V)	±12V, ±83mA	78%
MDD02L-15	5V (4.5~5.5V)	±15V, ±67mA	79%
MDD02M-05	12V (10.8~13.2V)	±5V, ±200mA	78%
MDD02M-09	12V (10.8~13.2V)	±9V, ±111mA	83%
MDD02M-12	12V (10.8~13.2V)	±12V, ±83mA	83%
MDD02M-15	12V (10.8~13.2V)	±15V, ±67mA	82%
MDD02N-05	24V (21.6~26.4V)	±5V, ±200mA	77%
MDD02N-09	24V (21.6~26.4V)	±9V, ±111mA	83%
MDD02N-12	24V (21.6~26.4V)	±12V, ±83mA	82%
MDD02N-15	24V (21.6~26.4V)	±15V, ±67mA	82%

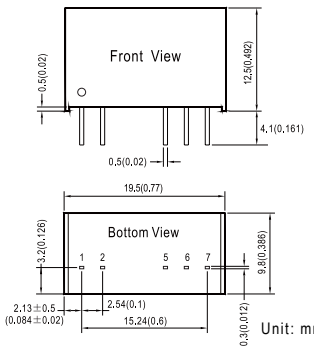
MDS01 & MDD01



Pin-Out		
Pin No.	MDS01 (single output)	MDD01 (Dual output)
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
7	No Pin	Common
6	+Vout	+Vout

Unit: mm(inch)

MDS02 & MDD02



Pin-Out		
Pin No.	MDS02 (single output)	MDD02 (Dual output)
1	+Vin	+Vin
2	-Vin	-Vin
5	-Vout	-Vout
7	No Pin	Common
6	+Vout	+Vout

Unit: mm(inch)

DC/DC Converter 1~20W

▲ **MDS15**
50.8x 25.4x12mm
(2" x 1" x 0.47")

▲ **MDS20**
50.8x 25.4x12mm
(2" x 1" x 0.47")

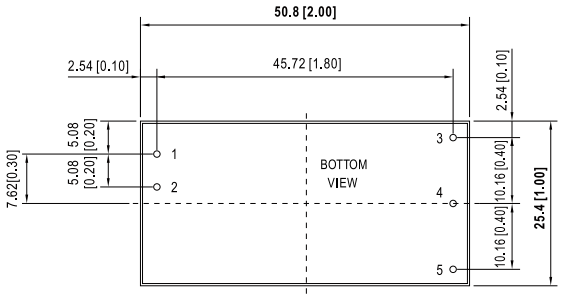
MDS15: 15W Single Output

Model No.	Vin	Output	Effi.
MDS15A-05	12V (9~18V)	5V, 3000mA	85%
MDS15A-12	12V (9~18V)	12V, 1250mA	88%
MDS15A-15	12V (9~18V)	15V, 1000mA	87%
MDS15A-24	12V (9~18V)	24V, 625mA	85%
MDS15B-05	24V (18~36V)	5V, 3000mA	87%
MDS15B-12	24V (18~36V)	12V, 1250mA	87%
MDS15B-15	24V (18~36V)	15V, 1000mA	86%
MDS15B-24	24V (18~36V)	24V, 625mA	87%
MDS15C-05	48V (36~75V)	5V, 3000mA	86%
MDS15C-12	48V (36~75V)	12V, 1250mA	87%
MDS15C-15	48V (36~75V)	15V, 1000mA	89%
MDS15C-24	48V (36~75V)	24V, 625mA	88%

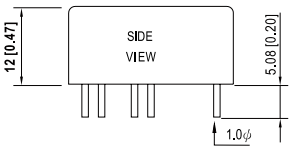
MDS20: 20W Single Output

Model No.	Vin	Output	Effi.
MDS20A-05	12V (9~18V)	5V, 4000mA	86%
MDS20A-12	12V (9~18V)	12V, 1670mA	89%
MDS20A-15	12V (9~18V)	15V, 1333mA	88%
MDS20A-24	12V (9~18V)	24V, 833mA	88%
MDS20B-05	24V (18~36V)	5V, 4000mA	86%
MDS20B-12	24V (18~36V)	12V, 1670mA	88%
MDS20B-15	24V (18~36V)	15V, 1333mA	88%
MDS20B-24	24V (18~36V)	24V, 833mA	89%
MDS20C-05	48V (36~75V)	5V, 4000mA	86%
MDS20C-12	48V (36~75V)	12V, 1670mA	89%
MDS20C-15	48V (36~75V)	15V, 1333mA	88%
MDS20C-24	48V (36~75V)	24V, 833mA	90%

MDS15/20



Unit: mm(inch)



Pin No.	Pin-Out
1	+Vin
2	-Vin
3	+Vout
4	No Pin
5	- Vout

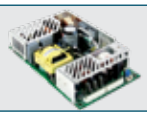
Application

Selection Guide

AC/DC External Adaptor

Type	Picture	Model	Input Voltage (VAC)	Output Voltage (VDC)	Dimension (LxWxH) (mm)	Insulation
Interchangeable		GEM06I	80~264	5 , 6, 7.5 , 9 , 12 , 15 , 18 , 24	73.9 x 39 x 48.5	Class II
		GEM12I		5 , 7.5 , 9 , 12 , 15 , 18 , 24 , 48		
		GEM18I		5 , 9 , 12 , 15 , 18 , 24 , 48	75.5 x 39.1 x 56.2	
		GEM30I		5 , 7.5, 9 , 12 , 15 , 18 , 24 , 48		
		GEM40I		5 , 9 , 12 , 15 , 18 , 24 , 48		
		GEM60I		5 , 7.5, 9 , 12 , 15 , 18 , 24 , 48		
Wall-mounted		GSM06U/E	80~264	5 , 6 , 7.5 , 9 , 12 , 15 , 18 , 24	66 x 32 x 42.5	Class II
		GSM12U/E		5 , 7.5 , 9 , 12 , 15 , 18 , 24 , 48	62.2 x 27.4 x 45.5	
		GSM18U/E			79 x 54 x 33	
		GSM25U/E				
		GSM36U/E				
		GSM60U/E			75.5x 32x 47.5	
Desktop		GSM18B	80~264	5 , 7.5 , 9 , 12 , 15 , 18 , 24 , 48	79 x 54 x 33	A Type: Class I
		GSM25B				
		GSM36B				
		GSM40A/B			125 x 50 x 31.5	
		GSM60A/B				
		GSM90A/B		12 , 15 , 19 , 24 , 48	145 x 60 x 32	B Type: Class II
		GSM120A/B		12 , 15 , 20 , 24 , 48	167 x 67 x 35	
		GSM160A/B			175 x 72 x 35	
		GSM220A/B			210 x 85 x 46	

AC/DC Open Frame Type

Size	Picture	Model	Output Power (W)		Input Voltage (VAC)	Output Voltage (VDC)	Dimension (LxWxH) (mm)	Insulation
			Fan	Fanless				
3" x 2"		RPS-30	-	30	80~264	3.3 , 5 , 7.5 , 12 , 15 , 24 , 48	76.2 x 50.8 x 24	Class II
		RPS-45	-	45				
		RPS-65	-	65				
		RPS-120S	-	120		12 , 15 , 24 , 27 , 48		
4" x 2"		RPS-60	-	60	90~264	3.3 , 5 , 12 , 15 , 24 , 48	101.6 x 50.8 x 29	Class I
		RPD-60				5 / 12 , 5 / 24		
		RPT-60				3.3 , ±5 , ±12 , ±15 , 24		
		RPS-120	120	84	80~264	12 , 15 , 24 , 27 , 48		Class I Class II
		RPS-200	200	140				
5" x 3"		RPS-75	100	75	90~264	3.3 , 5 , 12 , 15 , 24 , 36 , 48	127 x 76.2 x 31	Class I
		RPD-75				5 / 12 , 5 / 24		
		RPT-75				3.3 , ±5 , ±12 , ±15 , 24		
		RPS-160	160	110		5 , 12 , 15 , 24 , 48	127 x 76.2 x 34.6	
		RPT-160	150	100		±5, ±12, ±15 , 24		
		RPS-300	300	200		12 , 15 , 24 , 27, 48	127 x 76.2 x 35	
		RPS-400	400	250	80~264	12 , 15 , 18 , 24 , 27, 36 , 48		
		RPS-500	500	320		12 , 15 , 18 , 24 , 27, 36 , 48	127 x 76.2 x 40	
7" x 4.2"		MPQ-200	-	200	90~264	±5 , ±12 , ±15 , 24	177.8 x 107.2 x 35.5	Class I

AC/DC On Board Type

Picture	Model	Output Power (W)		Input Voltage (VAC)	Output Voltage (VDC)	Dimension (LxWxH) (mm)	Insulation
		Rated	Peak (10 sec.)				
	MFM-05	5	5.5W	80~264	3.3 , 5 , 12 , 15 , 24	42 x 22.3 x 20.5	Class II
	MFM-10	10	11W				
	MFM-15	15	16.5W			49 x 23.8 x 23	
	MFM-20	20	23.8W				
	MFM-30	30	35W		3.3 , 5 , 12 , 15 , 24 , 48	65.5 x 35 x 23	
	MPM-05	5	5.5W	80~264	3.3 , 5 , 12 , 15 , 24	45.7 x 25.4 x 21.5	Class II
	MPM-10	10	11W				
	MPM-15	15	16.5W			52.4 x 27.2 x 24	
	MPM-20	20	23.8W				
	MPM-30	30	35W			69.5 x 39 x 24	
	MPM-45	45	50.4W		5 , 12 , 15 , 24, 48	87x 52x 29.5	
	MPM-65	65	71.5W				
	MPM-90	90	99.2W		12 , 15 , 24, 48		
	MPM-30-xST	30	35W	80~264	3.3 , 5 , 12 , 15 , 24 , 48	91 x 39.5 x 28.5	Class II
	MPM-45-xST	45	50.4W		5 , 12 , 15 , 24 , 48	109 x 52 x 33.5	
	MPM-65-xST	65	71.5W				
	MPM-90-xST	90	99.2W		12 , 15 , 24 , 48		

AC/DC Enclosed Type

Picture	Model	Output Power (W)		Input Voltage (VAC)	Output Voltage (VDC)	Dimension (LxWxH) (mm)	Insulation
		Fan	Fanless				
	NMP650	650	-	90~264	5 , 12 , 24 , 48	250 x 89 x 41	Class I
	NMP1K2	1200	-			250 x 127 x 41	
	RPS-120-x-C	120	90	80~264	12 , 15 , 24 , 27 , 48	103.4 x 62 x 40	Class I
	RPS-200-x-C	200	140				
	RPS-300-x-C	300	200	90~264		130 x 86 x 43	
	RPS-400-x-C	400	250	80~264	12 , 15 , 18 , 24 , 27 , 36, 48	130 x 86x 43	
	RPS-400-x-TF	400	-			130 x 86 x 66.5	
	RPS-400-x-SF	400	-			160 x 86 x 43	
	RPS-500-x-C	500	320			130 x 86x 43	
	RPS-500-x-TF	500	-			130 x 86 x 66.5	
	RPS-500-x-SF	500	-			160 x 86 x 43	
	MSP-100	-	100	85~264	3.3 , 5 , 7.5 , 12 , 15 , 24 , 36 , 48	159 x 97 x 38	Class I
	MSP-200	-	200			199 x 98 x 38	
	MSP-300	300	-			199 x 105 x 41	
	MSP-450	450	-			218 x 105 x 41	
	MSP-600	600	-			218 x 105 x 63.5	
	MSP-1000	1000	-		12 , 15 , 24 , 48		

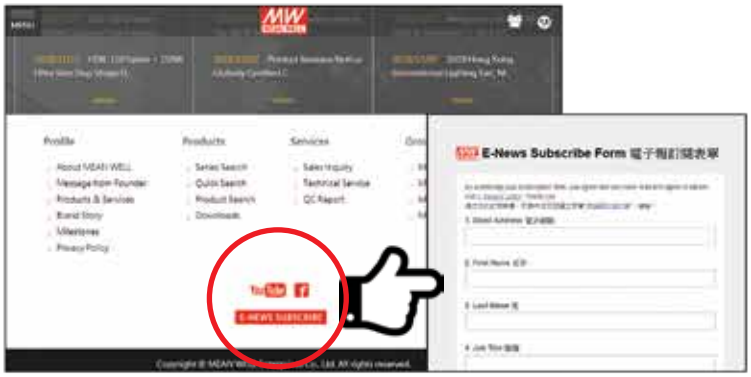
DC/DC Converter

Picture	Model	Rated Power (W)	Input Voltage (VDC)	Output Voltage (VDC)	Dimension (LxWxH) (mm)
	MDS01	1	L : 4.5 ~ 5.5 M: 10.8 ~ 13.2 N: 21.6 ~ 26.4	3.3 , 5 , 12 , 15	19.5 x 9.8 x 12.5 (0.77" x 0.39" x 0.49")
	MDS02	2		5 , 12 , 15	
	MDD01	1		±5 , ±9 , ±12 , ±15	
	MDD02	2			
	MDS15	15	A: 9 ~ 18 B: 18 ~ 36 C: 36 ~ 75	5 , 12 , 15, 24	50.8 x 25.4 x 12 (2" x 1" x 0.47")
	MDS20	20			

Media Kit

MEAN WELL E-news

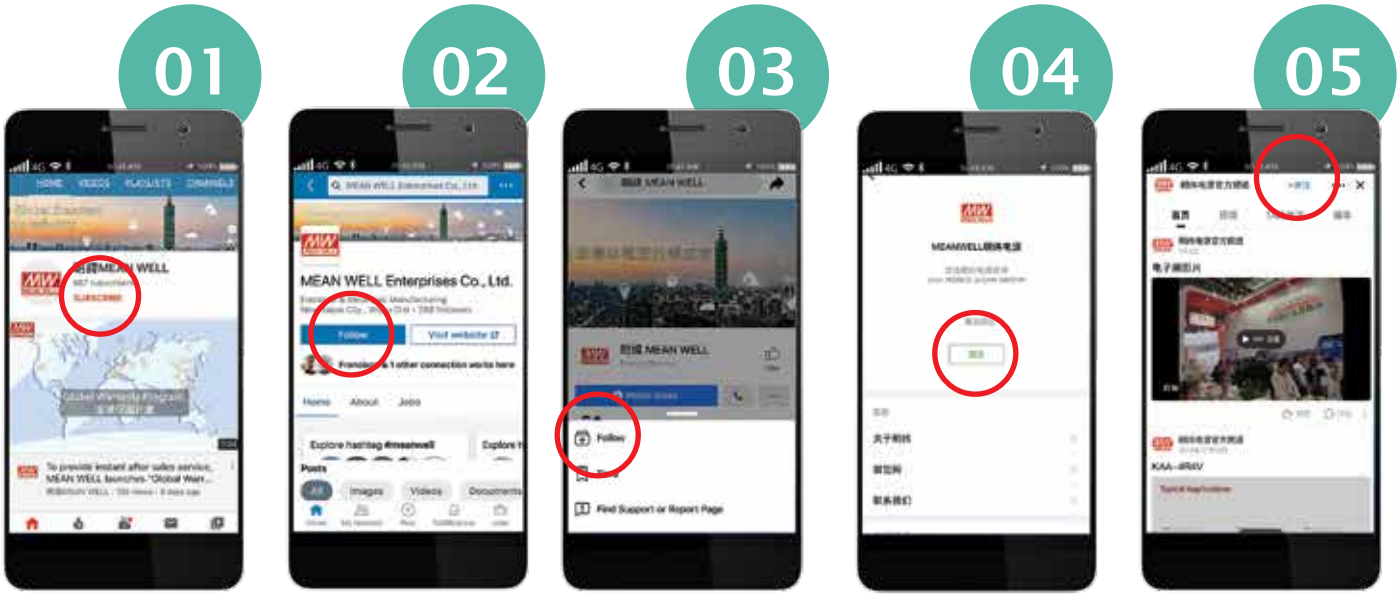
Find the "SUBSCRIBE" at the footer of MEAN WELL website. Fill in the E-News Subscribe Form, and last click the "SUBSCRIBE". Then, our confirmation e-mail will be sent to you.



MEAN WELL NEWS APP

Install MEAN WELL NEWS APP, and you won't miss our lastest news.

Social Media



01 YouTube

- Scan the QR code
- Press "SUBSCRIBE" button
- Turn on the bell. So you won't miss any videos.

02 LinkedIn

- Scan the QR code
- Navigate into MEAN WELL page and "Following" us.

03 Facebook

- Scan the QR code
- Find the icon ··· and choose "FOLLOW"
- Don't forget to "Like" us.

04 WeChat

- Search offical account "MEAN WELL" in WeChat APP
- Click the "FOLLOW" button

05 YouKu

- Scan the QR code
- Press the "SUBSCRIBE" button on the top

Taiwan (Headquarters)
MEAN WELL ENTERPRISES CO., LTD.
No. 28, Wuquan 3rd Road, Wugu District,
New Taipei City, Taiwan, 24891
Tel +886-2-2299-6100(rep.)
e-mail info@meanwell.com
Web www.meanwell.com

U.S.A.
MEAN WELL USA, INC.
44030 Fremont Blvd., Fremont, CA 94538, U.S.A.
Tel +1-510-683-8886
e-mail info@meanwellusa.com
Web www.meanwellusa.com

Europe
MEAN WELL EUROPE N.V.
Langs de Werf 8, 1185XT Amstelveen, the Netherlands
Tel +31-20-758-6000
e-mail info@meanwell.eu
Web www.meanwell.eu

info@meanwell.com
www.meanwell.com

China
MEAN WELL (GUANGZHOU) ELECTRONICS CO., LTD.
No.11, Jingu South Road, Huadong Town, Huadu District,
Guangzhou, Guangdong, China
Tel +86-20-3773-7100 / 400-800-3608(sales)
+86-755-2359-1630(Shengzhen Office)

SUZHOU MEAN WELL TECHNOLOGY CO., LTD.
No.269, Changping Road, Huangdai Town, Xiangcheng District,
Suzhou, Jiangsu Province, China
Tel +86-512-6508-8600
+86-10-5200-1817(Beijing Office)
+86-28-8546-8628(Chengdu Office)
e-mail info@meanwell.cc **Web** www.meanwell.cc

MEAN WELL (HONG KONG) HOLDING LIMITED
Unit 1112, 11/F., Concordia Plaza, 1 Science Museum Road, Tsim
Sha Tsui, Kowloon, Hong Kong
Tel +852-2643-9098
e-mail vickiho@meanwell.com.hk

INDIA
MEAN WELL INDIA ELECTRONICS PRIVATE LIMITED
Plot No. 9C, GF-1F, Peenya Industrial Area, 2nd Phase,
Chokkasandra Main Road, Bengaluru-560058
Tel +91-8068728613
e-mail info@meanwellindia.com