Installation Manual

- **Type**：**Enclosed Type Switching Power Supply**
  (Families: CSP, ENP, G3, G5, HSP, LRS, MSP, NE, NES, PFC, PSP, PSPA, RS, RSP, RST, SE, SPV, UHP, USP)

- **Introduction**

  Enclosed type switching power supplies possess a metal or plastic case for covering their internal PCB and will be installed inside the case of the end system. Mean Well's enclosed type power supplies include 2 different groups of power supplies, with built-in fan and without built-in fan, depending on their rated power or design concept.

- **Installation**

  （1）Before any installation or maintenance work, please disconnect your system from the utility. Ensure that it can't be re-connected inadvertently!

  （2）Keep enough insulation distance between mounting screws and internal components of power supplies. Please refer to case drawing on specifications to receive the maximum length of mounting screw.

  （3）Mounting orientations other than standard orientation or operate under high ambient temperature may increase the internal component temperature and will require a de-rating in output current. Please refer to the specification sheets to receive the optimum mounting position and information about the de-rating curve.

  （4）Fans and ventilation holes must be kept free from any obstructions. Also a 10-15 cm clearance must be kept when the adjacent device is a heat source.

  （5）Input and Output terminal

Terminal Screw / Series	Screw Size	Suggested Torque
RSP-750 / 1000 / 1500 / 2000 / 2400 / 3000 SE-450 / 1000 / 1500 HEP-600 · HRP-300 · HRPG-300 · MSP-300 SP-480 · SP-750 · SPV-1500 · USP-500 · RST-10000	M4	10-12kgf-cm
HRP-075 / 100 / 150 / 200 · HRPG-150 / 200 LRS-035 / 050 / 075 / 100 / 150 / 150F / 200 / 350 MSP-100 / 200 NED-035 / 050 / 075 / 100 · NET-035 / 050 / 075 NES-025 / 035 / 050 / 075 / 100 / 150 / 200 / 350 QP-200 / 320 / 375 RD-050 / 065 / 085 / 125 · RID-050 / 065 / 085 / 125 RS-035 / 050 / 075 / 100 / 150 RSP-075 / 100 / 150 / 200 / 320 SP-075 / 100 / 150 / 200 / 240 / 320 · SPV-150/300 SE-100 / 200 / 350 · HSP-250 · PSP-600	M3.5	8-10 kgf-cm
RSP-1600 RD-035 · RT-050 / 065 / 085 / 125 RQ-050 / 065 / 085 / 125 TP-075 / 100 / 150 · QP-100 / 150 RS-015 / 025 NES-015 · USP-150	M3	6-8 kgf-cm
ERP-350 HDP-190 / 240 NEL-200 / 300	#6	8-10 kgf-cm
ENP-120 / 180 / 240 / 360	M2.6	4-5 kgf-cm

Installation Manual

Series \ Terminal Screw	Input		Output	
	Screw Size	Suggested Torque	Screw Size	Suggested Torque
HRP-450 / 600 HRPG-450 / 600 MSP-450 / 600 / 1000 SE-600	M3	6-8kgf-cm	M4	10-12kgf-cm
HSP-150 / 200 /300 HSN-200 / 300	M3	6-8kgf-cm	M3.5	8-10kgf-cm
RSP-500	M3.5	8-10kgf-cm	M4	10-12kgf-cm
RST-5000	M4	10-12kgf-cm	M8	10-12kgf-cm
NEL-400	#6	8-10kgf-cm	M3	8-10kgf-cm
UHP-200(R) / 350(R)	M3	5kgf-cm	M3.5	8kgf-cm
UHP-200A	M3.5	13kgf-cm	M3.5	8kgf-cm
CSP-3000	M4	10-12kgf-cm	M6	13kgf-cm
UHP-500(R) / 750 / 1000	M3	5kgf-cm	M4	10-12kgf-cm

（6）Torque can be various due to different material, please refer to the following chart.

A Recommend torque for aluminum：

Size of screw (Imperial units)	Recommend torque (kgf-cm)
3-56	2.3±20%
4-40	3.0±20%
4-48	3.3±20%
5-40	4.5±20%
5-44	4.7±20%
6-32	5.6±20%
6-40	6.3±20%
8-32	10.4±20%
8-36	10.8±20%

Size of screw (Metric Units)	Recommend torque (kgf-cm)
M2.5	2.2±20%
M3	4.1±20%
M3.5	6.5±20%
M4	9.7±20%
M5	19.5±10%
M6	33.1±10%
M7	55.3±10%
M8	80.6±10%

Installation Manual

B Recommend torque for iron：

Size of screw (Imperial units)	Recommend torque (kgf-cm)
3-56	5.0±20%
4-40	6.9±20%
4-48	7.0±20%
5-40	9.4±20%
5-44	9.9±20%
6-32	12.0±20%
6-40	13.4±20%
8-32	21.8±20%
8-36	23.0±20%

Size of screw (Metric Units)	Recommend torque (kgf-cm)
M2.5	4.6±20%
M3	8.8±20%
M3.5	13.7±20%
M4	20.4±20%
M5	41.1±10%
M6	69.1±10%
M7	117.5±10%
M8	169.4±10%

If above mentioned is not enough due to special application，Nylok Blue Patch screw is recommend, and extra torque can be added if needed.

（7）Recommended wires are shown as below.

AWG	18	16	14	12	10	8
Rated Current of Equipment (Amp)	6A	6-10A	10-16A	16-25A	25-32A	32-40A
Cross-section of Lead(mm^2)	0.75	1.00	1.5	2.5	4	6
Note: Current each wire carries should be de-rated to 80% of the current suggested above when using 5 or more wires connected to the unit.						

Make sure that all strands of each stranded wire enter the terminal connection and the screw terminals are securely fixed to prevent poor contact.

（8）For other information about the products, please refer to www.meanwell.com for details.

- **Warning / Caution !!**

（1）Risk of electrical shock and energy hazard. All failure should be examined by a qualified technician. Please do not remove the case of the power supply by yourself!

（2）Please do not install power supplies in places with high moisture or near the water.

（3）Please do not install power supplies in places with high ambient temperature or near fire source. The maximum ambient temperature please refer to their specifications.

（4）Output current and output wattage must not exceed the rated values on specifications.

（5）The ground(FG) must be connected to earth ground.

（6）All MW's PSUs are designed in accordance with EMC regulations and the related test reports are available by request. Since they are belong to component power supplies and will be installed inside system enclosure, when they are integrated into a system, the EMC characteristics of the end system must be re-verified again.

Installation Manual

（7）This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(a) This device may not cause harmful interference, and
(b) this device must accept any interference received, including interference that may cause undesired operation.operation.

（8）For series of LRS, NES, PSP, PSPA, RD, RSP, RS, SE that certified with BSMI approvals, flammability of V1 or above is required for surrounding equipment and operation of this equipment in a residential environment could cause radio interference.

Manufacturer：
MEAN WELL ENTERPRISES Co., LTD.
No.28, Wuquan 3rd Rd., Wugu Dist.,
New Taipei City 24891, Taiwan
Tel: +886-2-2299-6100
Web: www.meanwell.com

Branch Office：

China
MEAN WELL (GUANGZHOU) ENTERPRISES Co., LTD.
2F, A Building, Yuean Industry Park, Huangcun,Dongpu Yown, Tianhe District, Gungzhou, China
Post Code:510660
Tel: +86-20-2887-1200
Web: www.meanwell.com.cn

China
MEAN WELL (GUANGZHOU) ENTERPRISES Co., LTD.
No.11, Jingu South Road, Huadong Town, Huadu Distric, Guangzhou, Gungzhou, China
Tel: +86-20-3773-7100
Web: www.meanwell.com.cn

China
SUZHOU MEAN WELL TECHNOLOGY Co., LTD.
No.77, Jian-Ming Rd. Dong-Qiao, Pan-Yang Ind. Park, Huang-Dai Town, Xiang-Cheng District, Suzhou, Jiang-Su, China
Post Code:215152
Tel: +86-512-6508-8600
Web: www.meanwell.cc

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

Europe
MEAN WELL EUROPE B.V.
Langs de Werf 8, 1185XT Amstelveen, The Netherlands
Tel: +31-20-758-6000
Web: www.meanwell.eu

MEAN WELL ENTERPRISES CO., LTD.
No.28, Wuquan 3rd Rd., Wugu Dist., New Taipei City 24891,Taiwan (R.O.C.)
Tel:+886-2-2299-6100
Fax:+886-2-2299-6200
E-mail:info@meanwell.com
http://www.meanwell.com

Declaration of China RoHS Conformity

In order to reduce the impacts on the environment and take the more responsibility for protecting the earth, MEAN WELL is confirming and announcing the conformity to China RoHS, an Administrative Measures for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products.

Environment Friendly Use Period Label

	Observing SJT 11364-2014, Marking for the Restricted Use of Hazardous Substances in Electronic and Electrical Products Observing SJ/Z 11388-2009, General Guidelines of Environment-friendly Use Period of Electronic Information Products Appendix B, adopting table look-up to verify the Environment Friendly Use Period

Names and Contents of Hazardous Substances Lists

Part Name	Hazardous Substances					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr^{6+})	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
PCB and its components	X	O	X	O	O	O
Metal structure parts	X	O	O	O	O	O
Plastic structure parts	O	O	O	O	O	O
Accessories	O	O	O	O	O	O
Cables	X	O	O	O	O	O

O: The concentration of the hazardous substances within the homogeneous material of that product is less than the concentration limits set by GB/T 26572-2011.
X: The concentration of the hazardous substances within the homogeneous material of that product is over the concentration limits set by GB/T 26572-2011; however, it follows the standard advised by 2011/65/EU.