



MEAN WELL Green Adaptors Comply with ErP Regulation

2010.07.30

Published on 2009.10.31, Official Journal of the European Union, Commission Regulation (EC) announced that EuP directive (Energy-Using Product Directive, 2005/32/EC) was replaced by ErP directive (Energy-related Products, 2009/125/EC). The implementing directive (EC/278/2009) for ErP directive requires all external adaptors enter the European Union should comply with energy-saving criteria as below in two steps and then the manufacturer can declare CE compliance. The first step which will come into force on 2010.04.26 requires for:

- The no-load condition power consumption shall not exceed 0.5W ($P_o \leq 250W$)
- Average active efficiency shall not be less than

Output Power ~ P_o	Average Active Efficiency (%)
$P_o < 1W$	$0.50 \cdot P_o$
$1W \leq P_o \leq 51W$	$0.09 \cdot \ln(P_o) + 0.50$
$P_o > 51W$	0.85

The second step which will come into force on 2011.04.26 requires for:

- The no-load condition power consumption shall not exceed 0.3W ($P_o \leq 51W$) or 0.5W ($51W < P_o \leq 250W$)
- Average active efficiency shall not be less than the following limits:

Output Power ~ P_o	Average Active Efficiency (%) (Output Voltage $\geq 6V$)	Average Active Efficiency (%) (Output Voltage $< 6V$)
$P_o \leq 1W$	$0.48 \cdot (P_o) + 0.14$	$0.497 \cdot (P_o) + 0.067$
$1W < P_o \leq 51W$	$0.063 \cdot \ln(P_o) + 0.622$	$0.075 \cdot \ln(P_o) + 0.561$
$P_o > 51W$	0.87	0.86

MEAN WELL has announced the introduction of full series 6~220W green adaptors that comply with the requirement of “STEP 2” of ErP regulation and certified by the third party ~ S.G.S.. With certificate and related technical documents ready, we renewed the CE declaration for all of the compliance product series. Please refer to the “**Compliance List of ErP External Power Supply**” below and you can get more idea about our green adaptors with energy-saving concepts.

Compliance List of ErP External Power Supply

2010.07.30.

Model Series	5V	7.5V	9V	12V	15V	18V	19V	20V	24V	28V	48V
GS06	○	○	○	○	○	○	-----	-----	○	-----	○
GS12	○	○	○	○	○	○	-----	-----	○	-----	-----
GE12	○	○	○	○	○	○	-----	-----	○	-----	-----
GS15	○	○	○	○	○	○	-----	-----	○	-----	○
GS18	○	○	○	○	○	○	-----	-----	○	○	○
GE18	○	○	○	○	○	○	-----	-----	○	-----	○
GE24	○	○	○	○	○	○	-----	-----	○	-----	○
GS25	○	○	○	○	○	○	-----	-----	○	○	○
GS40	○	○	○	○	○	○	-----	-----	○	-----	○
GS60	○	○	○	○	○	○	-----	-----	○	-----	○
GS90	-----	-----	-----	○	○	-----	○	-----	○	-----	○
GS120	-----	-----	-----	○	○	-----	-----	○	○	-----	○
AS-120P	-----	-----	-----	◎	◎	-----	-----	◎	○	-----	○
GS160	-----	-----	-----	○	○	-----	-----	○	○	-----	○
GS220	-----	-----	-----	○	○	-----	-----	○	○	-----	○

◎: Pass ErP step 1 only ○: Pass ErP step 2 ----- : Not available

VERIFICATION OF COMPLIANCE

to the requirements of

ErP Directive 2009/125/EC

Verification Report No. : EL/2009/C0009C
 Product Name : External power supply

Model Series	Model number Table
GS160A	GS160A12, GS160A15, GS160A20, GS160A24, GS160A48.
GS18A	GS18A05, GS18A07, GS18A09, GS18A12, GS18A15, GS18A18, GS18A24, GS18A28, GS18A48. A: IEC320-C14 Inlet (Class I).
GS18B	GS18B05, GS18B07, GS18B09, GS18B12, GS18B15, GS18B18, GS18B24, GS18B28, GS18B48. B: IEC320-C8 Inlet (Class II).
GS18E	GS18E05, GS18E07, GS18E09, GS18E12, GS18E15, GS18E18, GS18E24, GS18E28, GS18E48. E: European type plug.
GS25A	GS25A05, GS25A07, GS25A09, GS25A12, GS25A15, GS25A18, GS25A24, GS25A28, GS25A48. A: IEC320-C14 Inlet (Class I).
GS25B	GS25B05, GS25B07, GS25B09, GS25B12, GS25B15, GS25B18, GS25B24, GS25B28, GS25B48. B: IEC320-C8 Inlet (Class II).
GS25E	GS25E05, GS25E07, GS25E09, GS25E12, GS25E15, GS25E18, GS25E24, GS25E28, GS25E48. E: European type plug.
GS40A	GS40A05, GS40A07, GS40A09, GS40A12, GS40A15, GS40A18, GS40A24, GS40A48. A: IEC320-C14 Inlet (Class I).
GS60A	GS60A05, GS60A07, GS60A09, GS60A12, GS60A15, GS60A18, GS60A24, GS60A48. A: IEC320-C14 Inlet (Class I).
GS90A	GS90A12, GS90A15, GS90A19, GS90A24, GS90A48. A: IEC320-C14 Inlet (Class I).
GS220A	GS220A12, GS220A15, GS220A20, GS220A24, GS220A48. A: IEC320-C14 Inlet (Class I).
AS-120P	AS-120P-24, AS-120P-48.

Applicant : MEAN WELL ENTERPRISES CO., LTD.
 Address of Applicant : NO. 28, WU-CHUAN 3RD ROAD, WU KU IND. PARK, TAIPEI HSIEN, TAIWAN ,248
 TDF Number : EL/2009/C0009T-01, EL/2009/C0011T-01, EL/2009/C0012T-01, EL/2009/C0013T-01, EL/2009/C0014T-01, EL/2009/C0015T-01, EL/2009/C0016T-01, EL/2009/C0017T-01
 Test Report Number : EL/2009/C0009, EL/2009/C0011, EL/2009/C0012, EL/2009/C0013, EL/2009/C0014, EL/2009/C0015. EL/2009/C0016. EL/2009/C0017
 Date of Issued : 2010/01/06
 Applicable Standards : COMMISSION REGULATION (EC) No 278/2009 of 6 April 2009

Conclusion

Based upon a review of the Test Report(s) and the Technical Documentation File, the apparatus is deemed to comply with the below requirements of:

Energy-Related Products Directive 2009/125/EC (recasts and supersedes 2005/32/EC)
Ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies EC No. 278/2009,
Annex I, Two years after this Regulation has come into force.

Note : This verification is only valid for the apparatus and configuration described and in conjunction with the technical data detailed above.

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion an EC Declaration of Conformity and compliances with all relevant EC Directives.

Authorized Signatory:



SGS TAIWAN LTD.
Steven Chiou
Director



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
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VERIFICATION OF COMPLIANCE

to the requirements of
ErP Directive 2009/125/EC

Verification Report No. : EL/2009/C0010C
 Product Name : External power supply

Model number Table		
Model Name		Variant types `E, U` description
GS12E05	GS12U05	E: European type plug(Class II)
GS12E07	GS12U07	
GS12E09	GS12U09	
GS12E12	GS12U12	U: US type plug(Class II)
GS12E15	GS12U15	
GS12E18	GS12U18	
GS12E24	GS12U24	

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 TDF Number : EL/2009/C0010T
 Test Report Number : EL/2009/C0010
 Date of Issued : 2010/06/30
 Applicable Standards : COMMISSION REGULATION (EC) No 278/2009 of 6 April 2009

Conclusion

Based upon a review of the Test Report(s) and the Technical Documentation File, the apparatus is deemed to comply with the below requirements of:

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Ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies EC No. 278/2009,
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VERIFICATION OF COMPLIANCE

to the requirements of
ErP Directive 2009/125/EC

Verification Report No. : EL/2009/C0018C
 Product Name : External power supply

Model number Table	
Model Name	Variant types "A, X" description
GS120A15	A:IEC320-C14 Inlet (Class I) X=12,15,20,24,48
GS120A20	
GS120A12	
GS120A24	
GS120A48	

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 TDF Number : EL/2009/C0018T
 Test Report Number : EL/2009/C0018
 Date of Issued : 2010/06/30
 Applicable Standards : COMMISSION REGULATION (EC) No 278/2009 of 6 April 2009

Conclusion

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Ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies EC No. 278/2009,
Annex I, two years after this Regulation has come into force.

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EC-Conformity Declaration

For the following equipment :

Product Name: AC/DC Switching Adaptor

Model Designation: GSXAY (X=40 or 60)(Y=05/07/09/12/15/18/24/48)

is herewith confirmed to comply with the requirements set out in the Council Directive, the following standards were applied :

Low Voltage Directive (2006/95/EC) :

EN60950-1:2006+A11:2009 TUV certificate No : R50127275

Electromagnetic Compatibility Directive (2004/108/EC) :

EMI (Electro-Magnetic Interference)

Conducted emission / Radiated emission

EN55022:2006+A1:2007

Class B

EN55011:2007+A2:2007 (Group 1)

Class B

EN61000-6-3:2007

Harmonic current EN61000-3-2:2006

Voltage flicker EN61000-3-3:1995+A1:2001+A2:2005

EMS (Electro-Magnetic Susceptibility)

EN55024:1998+A1:2001+A2:2003 EN61204-3:2000 EN61000-6-1:2007

ESD air EN61000-4-2:1995+A1:1998+A2:2001 Level 3 8KV

ESD contact EN61000-4-2:1995+A1:1998+A2:2001 Level 2 4KV

RF field susceptibility EN61000-4-3:2006 Level 2 3V/m

EFT bursts EN61000-4-4:2004 Level 2 1KV/5KHz

Surge susceptibility EN61000-4-5:2006 Level 3 1KV/Line-Line 2KV/Line-Earth

Conducted susceptibility EN61000-4-6:2007 Level 2 3V

Magnetic field immunity EN61000-4-8:1993+A1:2001 Level 2 3A/m

Voltage dip, interruption EN61000-4-11:2004 >95% dip 0.5 periods 30% dip 25 periods >95% interruptions 250 periods

Keyed carrier immunity ENV50204:1995 Level 2 3V/m 900MHz

Note:

The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

For guidance on how to perform these EMC tests, please refer to TDF (Technical Documentation File).

Energy-Related Products Directive (2009/125/EC) :

Ecodesign requirements for no-load condition electric power consumption and average active efficiency of external power supplies EC No.278/2009

This Declaration is effective from serial number EB01xxxxxx

Person responsible for marking this declaration :

Mean Well Enterprises Co., Ltd.

(Manufacturer Name)

28, Wu-Chuan 3rd Road, Wu Ku Ind. Park, Taipei Hsien, Taiwan R.O.C.

(Manufacturer Address)

Johnny Huang/Senior Verification Engineer :

(Name / Position)

(Signature)

Ted Cheng/Product Manager :

(Name / Position)

(Signature)

Taiwan

(Place)

Jan 10th.2011

(Date)