



中国国家强制性产品认证证书

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

证书编号: 2003020907000080

申请人名称及所在地:

深圳辉力电子有限公司
广东省深圳市宝安区73区c7厂房

商标: FSP, SPI, A-Open

制造商: 全汉企业股份有限公司

生产企业名称及所在地:

深圳辉力电子有限公司 (B190080)
深圳市宝安区73区C7厂房

产品名称和系列、规格、型号: 开关电源

FSP460-60PFN

产品标准和技术要求:

GB4943-2001, GB9254-1998, GB17625.1-1998

上述产品符合强制性产品认证实施要求, 特发此证。

证书的生效日期: 二〇〇三年三月七日

《证书》的有效性靠定期的监督获得支持

中心主任:

童克球





FSP GROUP, INC.

No. 22, Jianguo E. Rd., Taoyuan City, Taiwan, R.O.C.
TEL: +886 3 375 9888 FAX: +886 3 375 6966

CE Declaration of Conformity

Supplier:

Name: FSP Group Inc.
Address: No. 22, Jianguo E. Rd., Taoyuan City, Taiwan, R.O.C.

Manufacturer:

Name: SHENZHEN HUILI ELECTRONICS CO., LTD.
Address: BLK C, BLDG7, COUNTY 73, BAO'AN
SHENZHEN, GUANGDONG, CHINA
Name: FORTRON/SOURCE (CHINA) CORP.
Address: BUILDING #25, ZONE 37, BAOAN DISTRICT
SHENZHEN, GUANGDONG, P.R. CHINA
Name: WELLEX TECHNOLOGY CO., LTD.
Address: ZHENLIAN BUILDING, COUNTY 74, BAOAN
SHENZHEN, GUANGDONG, P.R. CHINA
Name: FORTRON/SOURCE (CHINA) CORP.
Address: F2, THE 2ND INDUSTRIAL AREA OF MABU
XIXIANG, BAOAN, SHENZHEN, P.R. CHINA

Declares that :

Product Name: Switching Power Supply
Model Number: FSP460-60PFNXX (X=0-9, A-Z or blank)

Complies with the following:

Standards	Directives
EN60950: 1992: A1+A2+A3+A4 +A11	73/23/EEC: CE 94 + 93/68/EEC
EN 55022: 1998, Class B	(Low Voltage Directive)
EN61000-3-2: 1995 + A1: 1998 + A2: 1998, Class A	89/336/EEC + 92/31/EEC
EN61000-3-3: 1995	(EMC Directive)
EN 55024: 1998	
IEC61000-4-2: 1995	IEC61000-4-3: 1995
IEC61000-4-4: 1995	IEC61000-4-5: 1995
IEC61000-4-6: 1996	IEC61000-4-8: 1993
IEC61000-4-11: 1994	

Signature: _____

Print Name: Allen Cheng

Title: President

Date: _____

Place: Taoyuan, Taiwan



FSP GROUP, INC.

No. 22, Jianguo E. Rd., Taoyuan City, Taiwan, R.O.C.

TEL: +886 3 375 9888 FAX: +886 3 375 6966

CE Declaration of Conformity (continuation)

Standards:	Tested By:	Test Report No.:
EN 60950: 1992: A1+A2+A3+A4 +A11	LVD: Nemko Oslo	2000 43181
EN 55022: 1998, Class B	EMC: ADVANCE TECHNOLOGY CORP.	CE90011603
EN61000-3-2: 1995 + A1: 1998 + A2: 1998, Class A	ADVANCE TECHNOLOGY CORP.	CE90011603
EN 61000-3-3: 1995	ADVANCE TECHNOLOGY CORP.	CE90011603
EN 55024:1998		
IEC 61000-4-2:1995	ADVANCE TECHNOLOGY CORP.	CE90011603
IEC 61000-4-3:1995	ADVANCE TECHNOLOGY CORP.	CE90011603
IEC 61000-4-4:1995	ADVANCE TECHNOLOGY CORP.	CE90011603
IEC 61000-4-5:1995	ADVANCE TECHNOLOGY CORP.	CE90011603
IEC 61000-4-6:1996	ADVANCE TECHNOLOGY CORP.	CE90011603
IEC 61000-4-8:1993	ADVANCE TECHNOLOGY CORP.	CE90011603
IEC 61000-4-11:1994	ADVANCE TECHNOLOGY CORP.	CE90011603

Signature: Allen Cheng
Print Name: Allen Cheng
Title: President

Date: 6. 4. 2002
Place: Taoyuan, Taiwan



CSA INTERNATIONAL

Certificate of Compliance

Certificate: 1338305

Master Contract: 188668 (LR 111897)

Project: 1338305

Date Issued: July 17, 2002

Issued to: **FSP Group Inc.**
No. 22, Jianguo E. Rd.,
Taoyuan City, 330
Taiwan

The products listed below are eligible to bear the CSA Mark shown, with adjacent indicator "C" and "US".



Issued by: Sherman Bau, P. Eng.

Authorized by: Fred Mark
Director, Far East Operation

PRODUCTS

CLASS 5311 03 - COMPONENT TYPE POWER SUPPLIES - For Canadian Certification
CLASS 5311 83 - COMPONENT TYPE POWER SUPPLIES - For US Certification

Component type power supplies intended for use with Information Technology and Business Equipment, where the suitability of the combination is to be determined by the CSA International.

Model FSP460-60PFNXX, cord-connected, input rated 100-240 V ac (autoranging), 50-60 Hz, 10 A; DC output classification level 3, rated +3.3 V, 27.0 A; +5 V, 29.0 A; +12 V I/O, 15.0 A; +12 V CPU, 16.5 A; +5 Vsb, 2.0 A; -5 V (optional), 0.3 A; -12 V, 0.8 A. (Max. 460 W for total power; and Max. 200 W for +3.3 and +5 V dc output combination). Provided with an optional AC output receptacle, output rated 100-240 V ac, 2.0 A.

Note: The "X" in the model designations may be any alphanumeric character or blank denoting minor mechanical options, system configuration options and/or safety extra low voltage secondary circuit options.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No 950-95	-	Safety of Information Technology Equipment, Including Electrical Business Equipment
UL 1950, Third Edition	-	Safety of Information Technology Equipment, Including Electrical Business Equipment

The "C" and "US" indicator adjacent to the CSA Mark signifies that the product has been evaluated to the applicable ANSI/UL and CSA Standards, for use in the U.S. and Canada. This includes products eligible to bear the NRTL indicator. NRTL, i.e. Nationally Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration (OSHA) to laboratories which have been recognized to perform certification to U.S. Standards.



CSA INTERNATIONAL

Supplement to Certificate of Compliance

Certificate: 1338305

Master Contract: 188668 (LR 111897)

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
1338305	July 17, 2002	Original Certification



GSA INTERNATIONAL

FIELD AUTHORIZATION LETTER

FAL Number: 188668-1338305

Date: July 08, 2002

Client: Mr. Mike Lin
FSP Group Inc.
No. 22, Jianguo E. Rd.
Taoyuan City 330
Taiwan

Subject: Component Type Power Supplies, Model FSP460-60PFNXX

Factories:

F1 (Contact: 4552044) Fortron/Source (China) Corp.
Bldg 25 Zone 37, Baoan County, Shenzhen, Guangdong 518000, China

F2 (Contact: 4552045) Fortron/Source (China) Corp.
2nd Industrial Park Mabu, Xi Xiang, Baoan, Shenzhen, Guangdong 518104, China

F3 (Contact: 4557320) Shenzhen Huili Electronic Co., Ltd.
Bldg 7 Blk C, County 73, Bao An, Shenzhen, Guangdong 518100, China

F4 (Contact: 4568437) Wellex Technology Company Limited
Zhenlan Bldg County 74, Baoan, Shenzhen, Guangdong 518100, China

F5 (Contact: 4665894) ZhongHan Electronics (Shenzhen) Co. Ltd.
JuYuan Industrial Zone, TangWei Village FuYong Town, BaoAn District, Shenzhen,
Guangdong, China

Dear Mr. Lin,

This is to confirm that the evaluation of the subject equipment has been successfully completed. You are therefore authorized, on an interim basis, to apply the CSA marking shown below to subject products that comply with the applicable certification requirement.

This authorization is valid for 30 days from the date of issue, and will be replaced within that period by a formal Certification of Compliance issued from a CSA office.



CSA INTERNATIONAL

FIELD AUTHORIZATION LETTER

FAL No. 188668-1338305 Continue Sheet(s)

Certification Requirements:

CAN/CSA-C22.2 No. 950-95 - Safety of Information Technology Equipment, Including
Electrical Business Equipment

UL 1950, Third Edition - Safety of Information Technology Equipment, Including
Electrical Business Equipment

Authorized Marking(s)



The C-US indicator and/or the relevant standards appear adjacent to the CSA Mark

The "C" and "US" indicator adjacent to the CSA Mark signifies that the product has been evaluated to the applicable ANSI/UL and CSA Standards, for use in the U.S. and Canada. This includes products eligible to bear the NRTL indicator. NRTL, i.e. Nationally Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration (OSHA) to laboratories which have been recognized to perform certification to U.S. Standards

Required Factory Tests: See Bi-Nat CSA 950/UL 1950 Design Manual (Ver. 1.6) for details of test required.

- Production-line Dielectric Voltage-Withstand Test: Cl 5.3.2.
 - For Grounded Units (Class I or Class 2) rated above 130 V and up to 250 V;
- Transformers:
 - For Safety Isolating Transformers in Grounded or Double Insulated Units rated more than 130 V and up to 250 V.
- Production-Line Earthing-Continuity Test Ref. Cl 7.2 of ANSI/UL 1950(1993)

Issued By: _____

Sherman Bau
Sherman Bau, P. Eng.
CSA International - Toronto

cc: Fred Mark, Director, Far East Operation
CSA Vancouver, Engineering
CTS Taiwan, Engineering
CCIC, Inspection (China)

178 Rexdale Boulevard, Toronto, ON, Canada M9W 1R3

Telephone: 416.747.4000 1.800.463.6727 Fax: 416.747.4149 www.csa-international.org

Certificate of Compliance

We, **ADVANCE DATA TECHNOLOGY CORP.**, hereby certify that:

The product : Switching Power Supply

Brand Name : FSP, SPI, AOpen

Model No. : FSP460-60PFN

Applicant : SPI ELECTRONIC CO., LTD.

One sample of the designation has been tested in our facility on May 17 ~ 24, 2002. The data, data evaluation, represented in our report no.: **C910506A08**, are true and accurate representation of the measurements of the sample's emission characteristics under the conditions in following

Standards: EN55022: 1998, Class B

CISPR 22: 1997, Class B

AS/NZS 3548: 1995+A1: 1997+A2: 1997, Class B



Fred Chen / Manager

Issue Date: July 11, 2002



ADVANCE DATA TECHNOLOGY CORP.

Head office: 47, 14th Lin, Chiapao Tsuen, Lin Kou, Taipei, Taiwan, R.O.C
ADT CORP. TEL:(02)2605-2180 FAX:(02)2605-2943 <http://www.adt.com.tw> e-mail:service@adt.com.tw

One sample of the designation has been tested in our facility on May 17 ~ 24, 2002. The data, data evaluation, represented in our report no.: **D910506A08**, are true and accurate representation of the measurements of the sample's emission characteristics under the conditions in following

Standards: FCC Part 15, Subpart B, Class B

CISPR 22: 1997, Class B

ANSI C63.4-1992



Fred Chen / Manager

Issue Date: May 24, 2002



ADVANCE DATA TECHNOLOGY CORP.

Head office: 47, 14th Lin, Chiapao Tsuen, Lin Kou, Taipei, Taiwan, R.O.C
ADT CORP. TEL:(02)2605-2180 FAX:(02)2605-2943 <http://www.adt.com.tw> e-mail:service@adt.com.tw

Certificate of Compliance

We, **ADVANCE DATA TECHNOLOGY CORP.**, hereby certify that:

The product : Switching Power Supply

Brand Name : FSP, SPI

Model No. : FSP460-60PFN

Applicant : SPI ELECTRONIC CO., LTD.

One sample of the designation has been tested in our facility on May 17 ~ 24, 2002. The data, data evaluation, represented in our report no.: **D910506A08**, are true and accurate representation of the measurements of the sample's emission characteristics under the conditions in following

Standards: FCC Part 15, Subpart B, Class B

CISPR 22: 1997, Class B

ANSI C63.4-1992



Fred Chen / Manager

Issue Date: May 24, 2002



ADVANCE DATA TECHNOLOGY CORP.

Head office: 47, 14th Lin, Chiapao Tsuen, Lin Kou, Taipei, Taiwan, R.O.C
TEL:(02)2605-2180 FAX:(02)2605-2943 <http://www.adt.com.tw> /e-mail:service@adt.com.tw

Certificate of Compliance

We, **ADVANCE DATA TECHNOLOGY CORP.**, hereby certify that:

The product : Switching Power Supply

Brand Name : FSP, SPI, AOpen

Model No. : FSP460-60PFN

Applicant : SPI ELECTRONIC CO., LTD.

One sample of the designation has been tested in our facility on May 17 ~ 24, 2002. The data, data evaluation, represented in our report no.: **D910506A08**, are true and accurate representation of the measurements of the sample's emission characteristics under the conditions in following

Standards: FCC Part 15, Subpart B, Class B
CISPR 22: 1997, Class B
ANSI C63.4-1992



Fred Chen / Manager

Issue Date: May 24, 2002



ADVANCE DATA TECHNOLOGY CORP.

Head office: 47, 14th Lin, Chiapao Tsuen, Lin Kou, Taipei, Taiwan, R.O.C
TEL: (02)2605-2180 FAX: (02)2605-2943 <http://www.adt.com.tw> e-mail: service@adt.com.tw


CERTIFICATE No. P02100800

Accredited Certificate (ref. NA-PROD 016)

Order No. 200228134

Applicant	FSP Group Inc. No. 22, Jianguo E. Rd. Taoyuan City TAIWAN R.O.C.
Manufacturer	FSP Group Inc. No. 22, Jianguo E. Rd. Taoyuan City TAIWAN R.O.C.
Factory	Refer to page 3
Group 63 92000	Build-in power supplies
Model/type	FSP460-60PFN
Data	10A 100-240V 50-60Hz
Other specification	Cl. I, power supply for building-in. AC-output optional: 2A 100-240V. DC-outputs: 27.0A +3.3V, 29.0A +5V, 15.0A +12.0V I/O, 16.5A +12V CPU, 2.0A +5Vsb, 0.3A -5V, 0.8A -12V. Max. output power is 460W, +3.3V & +5V output is 200W max. The dots in model name can be A to Z, 0 to 9 or blank, for marketing purpose only
The changes concern	Addition of one new brand name
The above product is certified according to the following standard(s)	Safety std.: EN 60950 (1992) A1/A2/A3/A4/A11, including possible listed national conditions/deviations for Norway.
Validity	The addendum together with the original certificate, and possible previous addendum/addenda, documents conformity with the standards shown. The certification is valid as long as the applicable conditions are complied with, and provided that any changes to the product are notified to Nemko for acceptance prior to implementation. New standards or amendments to the standards may imply that the product design must be updated and/or that re-testing and re-certification is necessary.
Additional information	Additional information on page 2
Variants	This addendum also covers variants with Position No. from 001 to 002 See next page(s)

Date of issue 11 July 2002


signature
Lars Hjerpseth
Head of section


signature
Lene Martinsen

Nemko AS
P.O. Box 73, Blindern
N-0314 Oslo, Norway

Office address
Gaustadalléen 30
Oslo

Telephone
+47 22 96 03 30
Enterprise number:

Fax
+47 22 96 05 50
NO 974404532

CERTIFICATE No. P02100800

Accredited Certificate (ref. NA-PROD 016)

Order No. 200228134

Group 63 92000
Position No
Model/type
Data
Other specification

Build-in power supplies
001
FSP460-60PFN.
10A 100-240V 50-60Hz
BRAND NAME: SPI
Cl. I, power supply for building-in.
AC-output optional: 2A 100-240V.
DC-output: 27.0A +3.3V, 29.0A +5V, 15.0A +12.0V I/O, 16.5A +12V CPU,
2.0A +5Vsb, 0.3A -5V, 0.8A -12V.
Max. output power is 460W. +3.3V & +5V output is 200W max.
The dots in model name can be A to Z, 0 to 9 or blank, for marketing purpose only

Group 63 92000
Position No
Model/type
Data
Other specification

Build-in power supplies
002
FSP460-60PFN.
10A 100-240V 50-60Hz
BRAND NAME: Aopen
Cl. I, power supply for building-in.
AC-output optional: 2A 100-240V.
DC-output: 27.0A +3.3V, 29.0A +5V, 15.0A +12.0V, 16.5A +12V CPU,
2.0A +5Vsb, 0.3A -5V, 0.8A -12V.
Max. output power is 460W. +3.3V & +5V output is 200W max.
The dots in model name can be A to Z, 0 to 9 or blank, for marketing purpose only

Additional information:

The above certified equipment complies with current technical standard(s) in Norway regarding safety, as far as this can be checked. Compliance with requirements regarding building-in, protection against electric shock and Electromagnetic Compatibility (EMC) must be checked when the equipment is built-in a completed product or forms a part of a complete system. It should be noted that by marketing of equipment subject to official registration in Norway, the party responsible for the marketing shall be registered by the Norwegian Directorate for Product- and Electrical Safety.

Date of Issue 11 July 2002

signature

Lars Hjerpseth
Head of section

signature

Lene Martinsen

Nemko AS
P.O. Box 73, Bilindern
N-0314 Oslo, Norway

Office address
Gaustadalléen 30
Oslo

Telephone
+47 22 96 03 30
Enterprise number:

Fax
+47 22 96 05 50
NO 974404532

CERTIFICATE No. P02100800

Accredited Certificate (ref. NA-PROD 016)

Order No. 200228134

Factories:

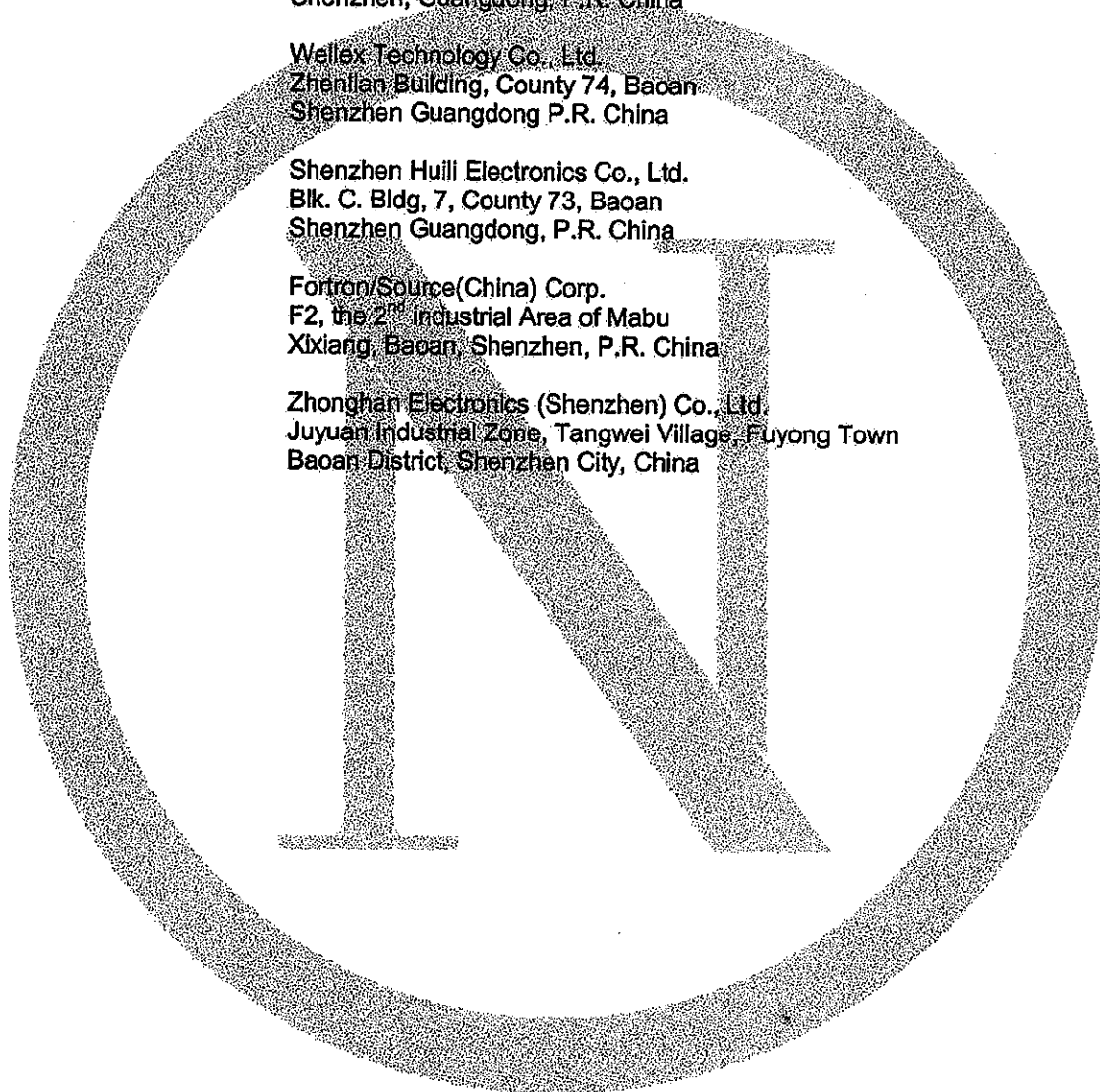
Fortron/Source(China) Corp.
Building #25, Zone 37, Baoan District
Shenzhen, Guangdong, P.R. China

Wellax Technology Co., Ltd.
Zhenlian Building, County 74, Baoan
Shenzhen Guangdong P.R. China

Shenzhen Huili Electronics Co., Ltd.
Blk. C. Bldg, 7, County 73, Baoan
Shenzhen Guangdong, P.R. China

Fortron/Source(China) Corp.
F2, the 2nd Industrial Area of Mabu
Xixiang, Baoan, Shenzhen, P.R. China

Zhonghan Electronics (Shenzhen) Co., Ltd.
Juyuan Industrial Zone, Tangwei Village, Fuyong Town
Baoan District, Shenzhen City, China



Date of issue 11 July 2002

Lars Hjerpseth

signature

Lars Hjerpseth
Head of section

Lene Martinsen

signature

Lene Martinsen

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P.O. Box 73, Blindern
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Office address
Gaustadalléen 30
Oslo

Telephone
+47 22 96 03 30
Enterprise number:

Fax
+47 22 96 05 50
NO 974404532

Zertifikat

Certificate



Zertifikat Nr. Certificate No.
R 50013245

Blatt Page
0001

Ihr Zeichen Client Reference	Unser Zeichen Our Reference	Ausstellungsdatum Date of Issue (day/mo/yr)
RH	ZTW1-LMW- 10003519 001	20.05.2002

Genehmigungsinhaber License Holder
Sparkle Power Inc.
1000 Rock Ave.,
SAN JOSE, CA 95131
USA

Fertigungsstätte Manufacturing Plant
Hauptzertifikatsinhaber Original license holder
332245
FSP Group Inc.

Prüfzeichen Test Mark

Geprüft nach Tested acc. to
EN 60950:1992+A1+A2+A3+A4+A11



Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Einbau-Schaltnetzteil (Switching Power Supply)

Bezeichnung (Type Designation)	: FSP460-60PFNXX	1
X steht für (stands for)	: 0-9, A-Z oder (or) freibleibend (blank)	1
Nennspannung (Rated Voltage)	: AC 100-240V, 50-60Hz	
Nennstrom (Rated Current)	: 10A	
Schutzklasse (Protection Class)	: I	
max. Umgebungstemperatur (max. Ambient Temperature)	: 50°C	
Verschmutzungsgrad (Pollution Degree)	: 2	

Fortsetzung Blatt (continued on page) 02



2

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product fulfills above-mentioned-requirements, the production is subject to surveillance.

Zertifizierungsstelle

TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln

Tel.:(+49/221)8 06 - 13 71 Fax:(+49/221)8 06 - 39 35 e-mail: Althoff@de.tuv.com

Dipl.-Ing. W. Hsu

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50013245

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0001

Ihr Zeichen *Client Reference*
RH

Unser Zeichen *Our Reference*
ZTW1-LMW- 10003519 001

Ausstellungsdatum
20.05.2002

Date of Issue
(day/mo/yr)

Genehmigungsinhaber *License Holder*
Sparkle Power Inc.
1000 Rock Ave.,
SAN JOSE, CA 95131
USA

Fertigungsstätte *Manufacturing Plant*
Hauptzertifikatsinhaber *Original license holder*
332245
FSP Group Inc.

Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*
EN 60950:1992+A1+A2+A3+A4+A11



Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Einbau-Schaltnetzteil (Switching Power Supply)

Bezeichnung (Type Designation)	: FSP460-60PFNXX	1
X steht für (stands for)	: 0-9, A-Z oder (or) freibleibend (blank)	1
Nennspannung (Rated Voltage)	: AC 100-240V, 50-60Hz	
Nennstrom (Rated Current)	: 10A	
Schutzklasse (Protection Class)	: I	
max. Umgebungstemperatur (max. Ambient Temperature)	: 50°C	
Verschmutzungsgrad (Pollution Degree)	: 2	

Fortsetzung Blatt (continued on page) 02



2

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product fulfills above-mentioned-requirements, the production is subject to surveillance.

Zertifizierungsstelle

TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln

Tel.:(+49/221)8 06 - 13 71 Fax:(+49/221)8 06 - 39 35 e-mail: Althoff@de.tuv.com

Dipl.-Ing. W. Hsu

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50013245

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0002

Ihr Zeichen *Client Reference*
RH

Unser Zeichen *Our Reference*
ZTW1-LMW- 10003519 001

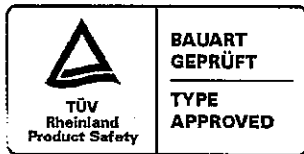
Ausstellungsdatum *Date of Issue*
20.05.2002 (day/mo/yr)

Genehmigungsinhaber *License Holder*
Sparkle Power Inc.
1000 Rock Ave.,
SAN JOSE, CA 95131
USA

Fertigungsstätte *Manufacturing Plant*
Hauptzertifikatsinhaber *Original license holder*
332245
FSP Group Inc.

Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*
EN 60950:1992+A1+A2+A3+A4+A11



Zertifiziertes Produkt (*Geräteidentifikation*)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Einbau-Schaltnetzteil (Switching Power Supply)

wie Blatt (as page) 01

Fortsetzung (Continuation)

Ausgänge: DC 3.3V/27.0A, 5V/29.0A, 12V I/O/15.0A,
(Outputs) 12V CPU/16.5A, 5Vsb/2.0A, -5V/0.3A (optional)
-12V/0.8A

max. Ausgangsleistung für +3.3V & +5V: 200W
(max. Output Power for +3.3V & +5V)

max. Ausgangsleistung : 460W
(max. Output Power)

Vermerke: Primär- und Sekundärkreise sind gemäß
Verfahren 1 und 2 nach Abschnitt 2.3 getrennt.

Der Einbau muß gemäß der zugehörigen Einbauanweisung
erfolgen. (Remarks: Primary and secondary circuits are
separated according to method 1 and 2 of clause 2.3.
The installation has to be carried out according to the
attached installation instruction.)



Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product
fulfills above-mentioned requirements, the production is subject to surveillance.

Zertifizierungsstelle

TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln

Tel.:(+49/221)8 06 - 13 71 Fax:(+49/221)8 06 - 39 35 e-mail: Althoff@de.tuv.com

Dipl.-Ing. W. Hsu

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50013245

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0002

Ihr Zeichen *Client Reference*
RH

Unser Zeichen *Our Reference*
ZTW1-LMW- 10003519 001

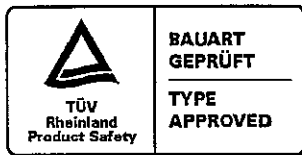
Ausstellungsdatum *Date of Issue*
20.05.2002
(day/mo/yr)

Genehmigungsinhaber *License Holder*
Sparkle Power Inc.
1000 Rock Ave.,
SAN JOSE, CA 95131
USA

Fertigungsstätte *Manufacturing Plant*
Hauptzertifikatsinhaber *Original license holder*
332245
FSP Group Inc.

Prüfzeichen *Test Mark*

Geprüft nach *Tested acc. to*
EN 60950:1992+A1+A2+A3+A4+A11



Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Einbau-Schaltnetzteil (Switching Power Supply)

wie Blatt (as page) 01
Fortsetzung (Continuation)
Ausgänge: DC 3.3V/27.0A, 5V/29.0A, 12V I/O/15.0A,
(Outputs) 12V CPU/16.5A, 5Vsb/2.0A, -5V/0.3A (optional)
-12V/0.8A
max. Ausgangsleistung für +3.3V & +5V: 200W
(max. Output Power for +3.3V & +5V)
max. Ausgangsleistung : 460W
(max. Output Power)
Vermerke: Primär-und Sekundärkreise sind gemäß
Verfahren 1 und 2 nach Abschnitt 2.3 getrennt.
Der Einbau muß gemäß der zugehörigen Einbauanweisung
erfolgen. (Remarks: Primary-and secondary circuits are
separated according to method 1 and 2 of clause 2.3.
The installation has to be carried out according to the
attached installation instruction.)



Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product
fulfills above-mentioned-requirements, the production is subject to surveillance.

Zertifizierungsstelle

TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln

Tel.:(+49/221)8 06 - 13 71 Fax:(+49/221)8 06 - 39 35 e-mail: Althoff@de.tuv.com

Dipl.-Ing. W. Hsu

Zertifikat

Certificate



Zertifikat Nr. Certificate No.
R 50015268

Blatt Page
0001

Ihr Zeichen Client Reference
SAF02028

Unser Zeichen Our Reference
ZTW1-WHL- 10003519 002

Ausstellungsdatum
12.07.2002

Date of Issue
(day/month)

Genehmigungsinhaber License Holder
Aopen Incorporated
3F, No.19-8, San Chung Road
NAN KANG AREA, TAIPEI 115
TAIWAN, R.O.C.

Fertigungsstätte Manufacturing Plant
Hauptzertifikatsinhaber Original license holder
332245
FSP Group Inc.

Prüfzeichen Test Mark

Geprüft nach Tested acc. to
EN 60950:1992+A1+A2+A3+A4+A11



Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Einbau-Schaltnetzteil (Switching Power Supply)

Bezeichnung (Type Designation)	: FSP460-60PFNXX	1
X steht für (stands for)	: 0-9, A-Z oder (or) freibleibend (blank)	1
Nennspannung (Rated Voltage)	: AC 100-240V, 50-60Hz	
Nennstrom (Rated Current)	: 10A	
Schutzklasse (Protection Class)	: I	
max. Umgebungstemperatur (max. Ambient Temperature)	: 50°C	
Verschmutzungsgrad (Pollution Degree)	: 2	

Fortsetzung Blatt (continued on page) 02



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Zertifizierungsstelle

TÜV Rheinland Product Safety GmbH, Am Grauen Stein, D-51105 Köln

Tel.:(+49/221)8 06 - 13 71 Fax:(+49/221)8 06 - 39 35 e-mail: Althoff@de.tuv.com

Dipl.-Ing. A. Klinker

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 50015268

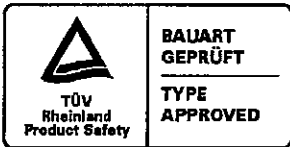
Blatt *Page*
0002

Ihr Zeichen <i>Client Reference</i>	Unser Zeichen <i>Our Reference</i>	Ausstellungsdatum	<i>Date of Issue</i> (day/mo/yr)
SAF02028	ZTW1-WHL- 10003519 002	12.07.2002	

Genehmigungsinhaber *License Holder*
Aopen Incorporated
3F, No.19-8, San Chung Road
NAN KANG AREA, TAIPEI 115
TAIWAN, R.O.C.

Fertigungsstätte *Manufacturing Plant*
Hauptzertifikatsinhaber *Original license holder*
332245
FSP Group Inc.

Prüfzeichen *Test Mark*



Geprüft nach *Tested acc. to*
EN 60950:1992+A1+A2+A3+A4+A11

Zertifiziertes Produkt *(Geräteidentifikation)*
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Einbau-Schaltnetzteil (Switching Power Supply)

wie Blatt (as page) 01
Fortsetzung (Continuation)

Ausgänge : DC 3.3V/27.0A, 5V/29.0A, 12V I/O/15.0A,
(Outputs) 12V CPU/16.5A, 5Vsb/2.0A, -5V/0.3A (optional)
-12V/0.8A

max. Ausgangsleistung für +3.3V & +5V : 200W
(max. Output Power for +3.3V & +5V)

max. Ausgangsleistung : 460W
(max. Output Power)

Vermerke : Primär-und Sekundärkreise sind gemäß
Verfahren 1 und 2 nach Abschnitt 2.3 getrennt.
Der Einbau muß gemäß der zugehörigen Einbauanweisung
erfolgen. (Remarks : Primary-and secondary circuits are
separated according to method 1 and 2 of clause 2.3.
The installation has to be carried out according to the
attached installation instruction.)



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Dipl.-Ing. A. Klinker

Zertifikat

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Zertifikat Nr. Certificate No.
R 50015268

Blatt Page
0001

Ihr Zeichen Client Reference
SAF02028

Unser Zeichen Our Reference
ZTW1-WHL- 10003519 002

Ausstellungsdatum
12.07.2002

Date of Issue
(day/month/year)

Genehmigungsinhaber License Holder
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3F, No.19-8, San Chung Road
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TAIWAN, R.O.C.

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Prüfzeichen Test Mark



Geprüft nach Tested acc. to
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Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Einbau-Schaltnetzteil (Switching Power Supply)

Bezeichnung (Type Designation)	: FSP460-60PFNXX	1
X steht für (stands for)	: 0-9, A-Z oder (or) freibleibend (blank)	1
Nennspannung (Rated Voltage)	: AC 100-240V, 50-60Hz	
Nennstrom (Rated Current)	: 10A	
Schutzklasse (Protection Class)	: I	
max. Umgebungstemperatur (max. Ambient Temperature)	: 50°C	
Verschmutzungsgrad (Pollution Degree)	: 2	

Fortsetzung Blatt (continued on page) 02



2

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Tel.:(+49/221)8 06 - 13 71 Fax:(+49/221)8 06 - 39 35 e-mail: Althoff@de.tuv.com

Dipl.-Ing. A. Klinker

Zertifikat

Certificate



Zertifikat Nr. Certificate No.
R 50015268

Blatt Page
0002

Ihr Zeichen Client Reference
SAF02028

Unser Zeichen Our Reference
ZTW1-WHL- 10003519 002

Ausstellungsdatum Date of Issue
12.07.2002 (day/mo/yr)

Genehmigungsinhaber License Holder
Aopen Incorporated
3F, No.19-8, San Chung Road
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TAIWAN, R.O.C.

Fertigungsstätte Manufacturing Plant
Hauptzertifikatsinhaber Original license holder
332245
FSP Group Inc.

Prüfzeichen Test Mark

Geprüft nach Tested acc. to
EN 60950:1992+A1+A2+A3+A4+A11



Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

Einbau-Schaltnetzteil (Switching Power Supply)

wie Blatt (as page) 01
Fortsetzung (Continuation)

Ausgänge : DC 3.3V/27.0A, 5V/29.0A, 12V I/O/15.0A,
(Outputs) 12V CPU/16.5A, 5Vsb/2.0A, -5V/0.3A (optional)
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(max. Output Power for +3.3V & +5V)

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(max. Output Power)

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The installation has to be carried out according to the
attached installation instruction.)



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Tel.:(+49/221)8 06 - 13 71 Fax:(+49/221)8 06 - 39 35 e-mail: Althoff@de.tuv.com

Dipl.-Ing. A. Klinker



Underwriters Laboratories Inc.

2600 N.W. Lake Road
Camas, WA 98607-8542
(360) 817-5500
FAX No. (360) 817-6000

NOTICE OF AUTHORIZATION TO APPLY THE UL MARK

E190414, 02CA03542

May 20, 2002

FSP Group Inc
22 Jianguo Rd
Taoyuan City, Taiwan

Attention: Mr. Mike Lin

Fax: 9.011.886.3.375.6966

Reference: File E190414, Project 02CA03542

Subject: USB, CNR - Switching Power Supply, Model FSP460-60PFNXX; where X may be any alphanumeric character or blank.

Dear Mr. Mike Lin:

We have completed our engineering investigation under the above project number and find the product complies with the applicable requirements.

This letter temporarily supplements the UL Follow-Up Service Inspection Procedure and serves as authorization to apply the UL Recognition Mark and the UL Recognition Mark for Canada to the above products which are constructed as described below:

Identical to models described in the UL Follow-Up Service Inspection Procedure,
File E190414, Volume 1.

To provide the manufacturer with the intended authorization to use the UL Mark, the addressee must send a copy of this Notice and all attached material to each manufacturing location. This authorization is effective for 90 days only from the date of this Notice. Records covering the product are now being prepared and will be sent to you in the near future.

cc: 351386

E190414, 02CA03542
May 20, 2002
Page 2

Products produced which bear the UL Mark shall be identical to those which were evaluated by UL and found to comply with UL's requirements. Products produced which bear the C-UL Mark shall be identical to those which were evaluated by UL and found to comply with Canadian requirements. If changes in construction are discovered, authorization to use the UL Mark may be withdrawn and may have to be revised (in the field or at the manufacturer's facility) to bring them into compliance with UL's requirements. If changes in construction are discovered, authorization to use the C-UL Mark may be withdrawn and products that bear the C-UL Mark may have to be revised (in the field or at the manufacturer's facility) to bring them into compliance with Canadian requirements.

Follow-Up Service - The costs associated with Follow-Up Service to cover such things as the Annual Maintenance Fee, Inspection and Follow-Up Testing Fees (if applicable) are above and beyond the cost of this project. To learn more information associated with Follow-Up Service please visit our web site at www.ul.com/faq/followup.html.

Should you have any questions, please do not hesitate to contact me.

Best regards,

Reviewed by:



David Heath
Associate Project Engineer
Conformity Assessment Services
Tel: (360) 817-5696
Fax: (360) 817-6242
E-mail: David.A.Heath@us.ul.com



Gregory Ray
Senior Project Engineer
Conformity Assessment Services

cc: 351386