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Product Service

C E R T I F I C A T E

No. B 057396 0612 Rev. 00

Holder of Certificate: **XP Power LLC.**
15641 Red Hill Avenue, Suite 100
Tustin CA 92780
USA

Certification Mark:

Product: **Power supply**

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 095-72158160-000

Valid until: 2025-07-21

Date, 2020-07-27

(Antony Young-Taylor)

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

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Model(s): GCS150PSxxKyy, GCS150PSxxyy, GCS180PSxxyy Series (where xx can be number between 12 and 48 for main output voltage, yy is "-C", "-TF", "-EF" or blank and may be preceded by "-R"; all "-" considered optional; may also be provided with additional suffix "SF" or "S").

Brand Name: **XP**

Parameters:

Input Voltage:	100-240 VAC
Input Frequency:	50/60 Hz
Input Current:	GCS150PSxxKyy, GCS150PSxxyy Series: 1.8 A GCS180PSxxyy Series: 2.2 A
Output Voltage:	See next page Approved models and output ratings.
Output Current:	See next page Approved models and output ratings.
Protection Class:	Can be installed in Class I or Class II end product.
Maximum Altitude:	0-5000 m
Ambient Temperature:	See next page Approved models and output ratings.

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POWER SUPPLY

General Product information:

Models covered in this report are open frame power supplies intended to be used in Medical Electrical Equipment. Units are intended for building in Class I or Class II end-products.

Approved models and output ratings:

Series	Max. Output		Convection Cooled		Forced cooled (7 CFM)	
	Vdc	A	Output power W	Max. ambient	Output power W	Max. ambient
GCS150PS12	10.1-13.5	12.5	110	50 °C	150	50 °C
GCS150PS15	13.6-17	10.0	110	50 °C	150	50 °C
GCS150PS18	17.1-21	8.3	110	50 °C	150	50 °C
GCS150PS24	21.1-26	6.3	110	50 °C	150	50 °C
GCS150PS28	26.1-31	5.4	110	50 °C	150	50 °C
GCS150PS33	31.1-33	4.5	110	50 °C	150	50 °C
GCS150PS36	33.1-42	4.2	110	50 °C	150	50 °C
GCS150PS48	42.1-54	3.2	110	50 °C	150	50 °C
GCS150PS12-K	10.1-13.5	12.5	150	40 °C	150	50 °C
GCS150PS15-K	13.6-17	10.0	150	40 °C	150	50 °C
GCS150PS18-K	17.1-21	8.3	150	40 °C	150	50 °C
GCS150PS24-K	21.1-26	6.3	150	40 °C	150	50 °C
GCS150PS28-K	26.1-31	5.4	150	40 °C	150	50 °C
GCS150PS33-K	31.1-33	4.5	150	40 °C	150	50 °C
GCS150PS36-K	33.1-42	4.2	150	40 °C	150	50 °C
GCS150PS48-K	42.1-54	3.2	150	40 °C	150	50 °C
GCS180PS12	10.1-13.5	15.0	150	50 °C	180	50 °C
GCS180PS15	13.6-17	12.0	150	50 °C	180	50 °C
GCS180PS18	17.1-21	10.0	150	50 °C	180	50 °C
GCS180PS24	21.1-26	7.5	150	50 °C	180	50 °C
GCS180PS28	26.1-31	6.4	150	50 °C	180	50 °C
GCS180PS33	31.1-33	5.5	150	50 °C	180	50 °C
GCS180PS36	33.1-42	5.0	150	50 °C	180	50 °C
GCS180PS48	42.1-54	3.75	150	50 °C	180	50 °C

Suffix:

C: unit provided with cover,
R: unit provided with Remote inhibit,
TF: unit provided with top fan,
EF: unit provided with end fan,
Unit without suffix “C”, “TF” or “EF” are open frame models (without cover).
SF: unit provided with single pole fusing,
S: unit provided with screw terminal block,
Unit with “K” in model No. can operate at full power at an ambient of 40°C.

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Conditions of Acceptability:

When installing the equipment, all requirements of the standards and the manufacturer's specifications must be met.

- Fire/ Mechanical/ Electrical Enclosure to be provided as part of the end product.
- This power supply has been evaluated as a continuous operation, ordinary equipment and has not been evaluated for use in the presence of a flammable anesthetic mixture with air, oxygen, or nitrous oxide. The output circuits have not been evaluated for direct patient connection (Type B, BF or CF).
- The end product shall ensure that the requirements related to accompanying documents, clause 7.9, are met.
- The output connectors are not acceptable for field connections; they are only intended for connection to mating connectors of the end-use equipment.
- Model GCS180PSxx series: Power supply provides the following MOPP (means of patient protection): two MOPP based upon a working voltage 298 Vrms, 528 Vpk between Primary to Secondary, one MOPP based upon a working voltage 250 Vrms, 353 Vpk between Primary and Earth/Enclosure, two MOPP based upon a working voltage 48Vdc between secondary to floated earth trace on PWB for BF output consideration, one MOPP based upon a working voltage 250 Vrms between secondary and earthing trace or chassis for BF output consideration.
- Model GCS150PSxx series: Power supply provides the following MOPP (means of patient protection): two MOPP based upon a working voltage 287 Vrms, 509 Vpk between Primary to Secondary, one MOPP based upon a working voltage 244 Vrms, 356 Vpk between Primary and Earth/Enclosure, two MOPP based upon a working voltage 48Vdc between secondary to floated earth trace on PWB for BF output consideration, one MOPP based upon a working voltage 250 Vrms between secondary and earthing trace or chassis for BF output consideration.
- Units provided with single fuse in Line side, end product to determine the need for additional double pole fusing as part of the end product.
- When installed in end product, the power supply shall be mounted in a manner that sufficient clearance and Creepage distance between the primary sides of power supply and protectively earthed accessible conductive parts. In addition, when installed in a Class I end product, the protective bonding terminal of the power supply shall be reliably connected to the main protective earthing terminal of the end product.
- When installed in a Class II end product, the power supply shall be mounted in a manner that provides sufficient clearance and creepage distance between the hazardous parts and accessible conductive parts.
- Proper bonding to the Class I end-product main protective earthing termination is required (via mounting holes on the PCB), unless for Class II applications. For Class II applications the primary side mounting pads are isolated from accessible conductive chassis by Reinforced Insulation
- Forced-air cooling with cover at 7 CFM shall be provided with the end product in order to achieve maximum power output.
- Repeat of leakage current testing and consideration of non-frequency weighted leakage current (clause 8.7.3e) to be considered as part of the end product.
- The product was not investigated to the following standards or clauses: Biocompatibility (ISO 10993-1), Clause 14, Programmable Electronic Systems, Electromagnetic Compatibility (IEC 60601-1-2).

Tested according to: EN 60601-1:2006/A12:2014

Production Facility(ies): 059061, 059319, 071712, 089850

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