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America

# CERTIFICATE

**No. B 16 04 57396 425**

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

**Production Facility(ies):** 93389

**Certification Mark:**

**Product:** Converter
(DC / DC Converter)

**Model(s):** IMM01xxSyyy, IMM01xxDyyy
(where xx is 05 or 12 representing input voltage;
yyy is 3V3 or 03, 05, 12 or 15 representing output voltage)

**Parameters:**

| | |
|---|---|
| Rated Input Voltage: | 4.5 -9 VDC or 9-18 VDC |
| Protection Class: | End product dependent |
| Elevation for Use: | 0-5000 m above sea level |
| Temperature, Ambient: | 60°C max with full load |

See attachment for additional input and output ratings
and Conditions of Acceptability.

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

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. See also notes overleaf.

**Test report no.:** 095-72115939-000

**Valid until:** 2021-04-18


**Date,** 2016-04-20





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# FOR XP POWER LLC

## DC / DC CONVERTER

**Approved models, Input and Output Ratings:**

IMM01xxSyyy and IMM01xxDyyy,
xx=05: nominal input voltage range 4.5-9 Vdc;
xx=12: nominal input voltage range 9-18 Vdc;
yyy = 3V3 or 03, 05, 12 or 15 representing output voltage.

**Input and Output Ratings @ 60°C:**
IMM0105S3V3: In: 4.5-9 Vdc, 337 mA; Out: 3.3 Vdc, 303 mA;
IMM0105S05: In: 4.5-9 Vdc, 337 mA; Out: 5 Vdc, 200 mA;
IMM0105S12: In: 4.5-9 Vdc, 327 mA; Out: 12 Vdc, 83 mA;
IMM0105S15: In: 4.5-9 Vdc, 327 mA; Out: 15 Vdc, 67 mA.

IMM0112S3V3: In: 9-18 Vdc, 163 mA; Out: 3.3 Vdc, 303 mA;
IMM0112S05: In: 9-18 Vdc, 163 mA; Out: 5 Vdc, 200 mA;
IMM0112S12: In: 9-18 Vdc, 150 mA; Out: 12 Vdc, 83 mA;
IMM0112S15: In: 9-18 Vdc, 150 mA; Out: 15 Vdc, 67 mA.

IMM0105D03: In: 4.5-9 Vdc, 337 mA; Out: ±3.3 Vdc, 150 mA;
IMM0105D05: In: 4.5-9 Vdc, 337 mA; Out: ±5 Vdc, 100 mA;
IMM0105S12: In: 4.5-9 Vdc, 327 mA; Out: ±12 Vdc, 42 mA;
IMM0105S15: In: 4.5-9 Vdc, 327 mA; Out: ±15 Vdc, 33 mA.

IMM0112D03: In: 9-18 Vdc, 163 mA; Out: ±3.3 Vdc, 150 mA;
IMM0112D05: In: 9-18 Vdc, 163 mA; Out: ±5 Vdc, 100 mA;
IMM0112S12: In: 9-18 Vdc, 150 mA; Out: ±12 Vdc, 42 mA;
IMM0112S15: In: 9-18 Vdc, 150 mA; Out: ±15 Vdc, 33 mA.

**Conditions of Acceptability:**

When installed in an end-product, consideration must be given to the following:

- This power supply has been judged on the basis of the required creepage and clearances for 1 MOPP based on a working voltage of 250Vrms, 354Vpk between input and output circuits at an altitude of 5000m.
- The unit is a DC/DC converter and not evaluated for the separation to SUPPLY MAINS; suitable MAINS separation shall be provided during final installation.
- Temperature, Leakage Current, Protective Earthing Dielectric Voltage Withstand and Interruption of the Power Supply tests should be considered as part of the end product evaluation.
- The output circuit has not been evaluated for connecting to Applied Parts. For end products intended to connect to Applied Parts, suitable evaluation should be considered.

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- Consideration should be given to measuring the temperature on power electronic components and transformer windings when the power supply is installed in the end-use equipment. The end-use product shall ensure that the power supply is used within its ratings.
- The end-product evaluation shall ensure that the requirements related to Accompanying Documents, Clause 7.9 are met.
- End product Risk Management Process to include consideration of requirements specific to the Power Supply.
- End product Risk Management Process to consider the need for simultaneous fault condition testing.
- End product to determine the acceptability of risk in conjunction to insulation to resistance to heat, moisture, and dielectric strength.
- End product to determine the acceptability of risk in conjunction to the Leakage of Liquids as part of the power supply.
- End product to determine the acceptability of risk in conjunction to the selection of components as it pertains to the intended use, essential performance, transport, storage conditions as part of the power supply.
- The products were tested on a 20 A branch circuit. If used on a branch circuit greater than this, additional testing may be necessary.
- Scope of Power Supply evaluation defers the following clauses to the be determined as part of the end product: Clause 7.5 (Safety Signs), Clause 7.9 (Accompanying Documents), Clause 9 (ME Hazard), Clause 10 (Radiation), Clause 14 (PEMS), Clause 16 (ME Systems) and Clause 17 (Electromagnetic Compatibility).