

SM700

Compact switch mode rectifier,
constant power output,
with wide AC input
for world-wide Telecom applications

Rating: 15A at 48Vdc



Key Features:

- Constant power output: 700W at 48Vdc, reducing the number of modules needed in the system
- Space saving and compact due to its power density and format (450W / I, 1U high)
- Robust due to its very wide operating input voltage range (80 to 300Vac)
- Wide operating temperature range - 10°C to + 70°C with full thermal management
- Reliable operation due to advanced self-protection (input, output, temperature current, power) and high MTBF
- Automatic stop on high and low mains voltage with automatic re-start
- Self-protection against high temperature conditions via automatic output power current (power) de-rating
- Fan speed control & monitoring-low noise, extended lifetime fan
- Fan monitoring with alarm signaling when failed. Easy fan removal for maintenance purposes



>> SM700

- Sine wave input (PFC) and high efficiency (89%) to reduce installation and operation costs
- Easy to operate: compact, light, hot pluggable, clear indications by LED, adjustment free, ready to use
- Control & alarm functions for remote management
- Float temperature compensation and output voltage control input for optimum battery charging via the system digital control module - increases battery life
- CE marked and UL compliant

For use with controllers and communication interfaces:

ACM1D, ACM1000 & NCS

For use in systems:

MPS700-Series

SPECIFICATION

Compact switch mode rectifier, constant output power, with wide AC input for world-wide Telecom applications

| INPUT | |
|---------------------------------|--|
| Nominal input voltage lines | 208, 220, 230, 240Vac without adjustment |
| Input voltage range | 187-280Vac, (output power according features below) 80-187Vac (with output power de-rating between 80 and 187Vac) 3.6A at 230Vac |
| Nominal current | 3.6A at 230Vac |
| Nominal frequency | 50/60Hz |
| Number of phases | Single phase |
| Power factor | 0.99 |
| Total harmonic distortion (THD) | <5% |
| Inrush current | <10A peak |

| OUTPUT | |
|------------------------------|--|
| Nominal voltage | 48Vdc |
| Output voltage control range | 42-58Vdc |
| Maximum power | At 230Vac - 10%, + 20% - 700W up to Tamb = 45°C - 560W up to + 55°C <250 mV peak to peak (30 MHz Bandwidth) |
| Nominal current | 13A at 55Vdc |
| Maximum current | 15A at 48Vdc |
| Current sharing | ±5% |
| Efficiency | 89% |
| Line and load regulation | <1% |
| Ripple and noise | <2mV rms psophometric weighted , <20mV rms unweighted, <250mV peak to peak (30MHz Bandwidth) |
| Transient response | 5% for load variations from 10% to 90% or 90% to 10%, recovery to normal regulation limits in 5ms |

SPECIFICATION

| PROTECTION | |
|-------------------------------|--|
| Input protection | Hot pluggable, inrush current limitation, soft-start, fuse on phase and neutral, VDR surge protection devices. Automatic stop above 300Vac with automatic re-start before 285Vac Automatic stop under 80Vac with automatic re-start before 95Vac |
| Output protection | Hot pluggable, electronic short circuit protection, output power limit, reverse polarity protection |
| Output overvoltage protection | Selective DC overvoltage shutdown |
| Thermal protection | Automatic power de-rating on high temperature |

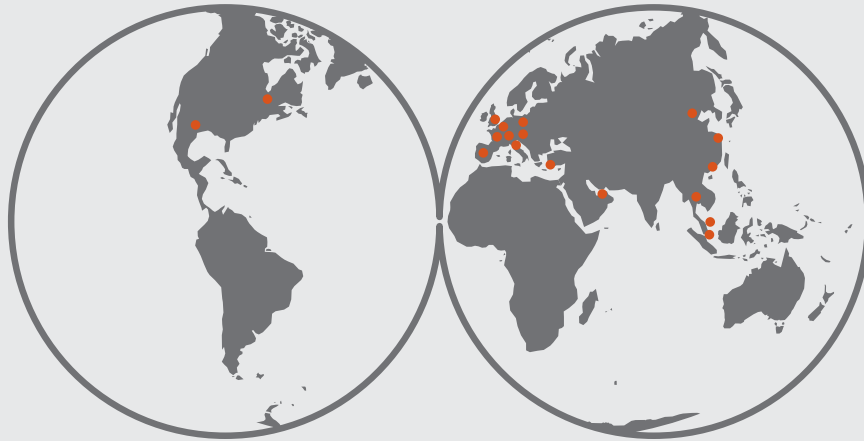
| ALARMS AND INDICATORS | |
|------------------------|---|
| Alarms | Mains fail, rectifier fail, control loop fail / rectifier in fall back operation, DC overvoltage shutdown, output voltage present, fan fail |
| Front panel indicators | Green LED: DC output "OK" Red LED: mains fail, rectifier fail, fan fail |

| MECHANICAL SPECIFICATION | |
|--------------------------|---|
| Dimensions | 43.6mm H (1U), 145mm W, 254mm D (minimum cabinet depth: 300mm) |
| Weight | 1.7kg |
| Ingress protection | IP20 |
| Mounting | Horizontal 1U, 3 rectifiers across 19" or ETSI rack |
| Connections | Hot pluggable with rear connection |

| ENVIRONMENTAL | |
|-----------------------|--|
| Cooling | Forced air cooling with electronic speed control |
| Operating temperature | - 10°C to + 70°C full power up to 45°C, apply de-rating criteria between + 45°C and + 70°C |
| Storage temperature | - 40°C to + 85°C |
| Humidity | 10% to 95% RH non-condensing |
| Acoustic noise | < 55dB(A) |

| STANDARDS | |
|------------------|--|
| Safety | EN60950-1 |
| EMC | Emission: EN 55022 Class B - EN61000-3.2/3.3 - EN61000-6.3/6.4 Immunity: EN61000-6.1/6.2 - ANSI C62.41 |
| Telecom networks | EN300 386 - EN300 132-2 |
| Environment | EN300 019 (Transportation, storage and operation) ROHS Directive on Restriction of use of certain Hazardous Substances WEEE directive on Waste Electrical and Electronic Equipment |
| Acoustic noise | ETS 300753 |
| Approvals | CE, UL |

| AVAILABLE CONFIGURATIONS | |
|--------------------------|---------------------------|
| Product reference | In 48Vdc version SM700-48 |



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