

PART NUMBER: VGS-75-XX

DESCRIPTION: switching power supply

features

- green design, no-load power consumption <0.5 W
- universal ac input / full range
- short circuit, overload, over-voltage, brown-out (low ac input voltage) protected
- cooling by free air convection
- LED indicator for power on
- 105°C long life electrolytic capacitors
- high operating temperature up to 70°C
- able to withstand 5G vibration
- high efficiency, long life, high reliability
- 2 year warranty



| MODEL | input voltage | | output voltage (V dc) | output current range (A) | dc output power (W) | ripple & noise max. ² (mV) | efficiency typ. (%) |
|------------|---------------|--------------|-----------------------|--------------------------|---------------------|---------------------------------------|---------------------|
| | range (V dc) | range (V ac) | | | | | |
| VGS-75-3.3 | 125~373 | 88~264 | 3.3 | 0~15 | 49.5 | 80 | 73 |
| VGS-75-5 | 125~373 | 88~264 | 5 | 0~15 | 75 | 80 | 81 |
| VGS-75-12 | 125~373 | 88~264 | 12 | 0~6 | 75 | 120 | 87 |
| VGS-75-15 | 125~373 | 88~264 | 15 | 0~5 | 75 | 120 | 87 |
| VGS-75-24 | 125~373 | 88~264 | 24 | 0~3.2 | 76.8 | 120 | 88 |
| VGS-75-48 | 125~373 | 88~264 | 48 | 0~1.6 | 76.8 | 200 | 90 |

INPUT

| parameter | conditions/description | min | nom | max | units |
|---------------------|-------------------------|-----|-----|-----|-------|
| input voltage range | | 125 | | 373 | V dc |
| | | 88 | | 264 | V ac |
| input current | at 115 V ac | | 2 | | A |
| | at 230 V ac | | 1 | | A |
| inrush current | at 230 V ac, cold start | | 40 | | A |

- notes:
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.

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OUTPUT

| parameter | conditions/description | min | nom | max | units |
|------------------------------|---|------|-------|--|--------|
| voltage tolerance | 3.3 V | -3 | | +3 | % |
| | 5 V | -2 | | +2 | % |
| | 12 V, 15 V, 24 V, 48 V | -1 | | +1 | % |
| voltage adjust range | | -10 | | +10 | % |
| ripple & noise (20MHz BW) | 3.3 V, 5 V | | | 80 | mV RMS |
| | 12 V, 15 V, 24 V | | | 120 | mV RMS |
| | 48 V | | | 200 | mV RMS |
| setup rise hold time | setup: 800 ms, rise: 50 ms / 230 V ac hold: >32 ms / 230 V ac, >10 ms / 115 V ac | | | setup: 1000 ms, rise: 65 ms / 115 V ac | |
| temperature coefficient | at 0~50°C | | ±0.03 | | %/°C |
| short circuit protection | continuous | | | | |
| line regulation ³ | | -0.5 | | +0.5 | % |
| load regulation ⁴ | 3.3 V | -2 | | +2 | % |
| | 5 V | -1 | | +1 | % |
| | 12 V, 15 V, 24 V, 48 V | -0.5 | | +0.5 | % |
| over voltage protection | latch-off mode | 115 | | 140 | % |
| over current protection | hiccup mode, auto recovery | 110 | | | % |

ISOLATION SPECIFICATIONS

| parameter | conditions/description | min | nom | max | units |
|----------------------|----------------------------|-------------|-----|-----|-------------|
| isolation voltage | input/output, for 1 minute | 3000 (4242) | | | V ac (V dc) |
| | input/case, for 1 minute | 1500 (2121) | | | V ac (V dc) |
| | output/case, for 1 minute | 500 (707) | | | V ac (V dc) |
| isolation resistance | | 100 | | | MΩ |

ENVIRONMENTAL

| parameter | conditions/description | min | nom | max | units |
|-----------------------|--|-----|-----|-----|-------|
| storage temperature | | -40 | | 85 | ° C |
| operating temperature | | -25 | | 70 | ° C |
| operating humidity | | 20 | | 90 | % |
| vibration | 10~500 Hz, 5 G, 10 minutes, 1 cycle (1 hour each axis) | | | | |

SAFETY & EMI

| parameter | conditions/description | min | nom | max | units |
|------------------|---|-----|-----|-----|-------|
| safety approvals | UL/cUL 60950-1, TUV EN60950-1 approved | | | | |
| EMI standard | EN55022: 1998+A1: 2000+A2: 2003 class B | | | | |
| EMC | EN61000-3-2: 2000+A2: 2005 class A, EN61000-3-3: 1995+A1: 2001, EN61204-3: 2000, EN50204: 1998+A1: 2001+A2: 2003 light industry level, criteria A | | | | |
| RoHS compliant | yes | | | | |
| leakage current | at 240 V ac | | | 2 | mA |

RELIABILITY

mean time before failure (MTBF) 620,300 hours compliance, standard: MIL-HDBK-217F

GENERAL SPECIFICATIONS

| | |
|------------|-------------------------|
| dimensions | 129 x 98 x 38 mm |
| packaging | 0.45 kg; 30 pcs / 15 kg |

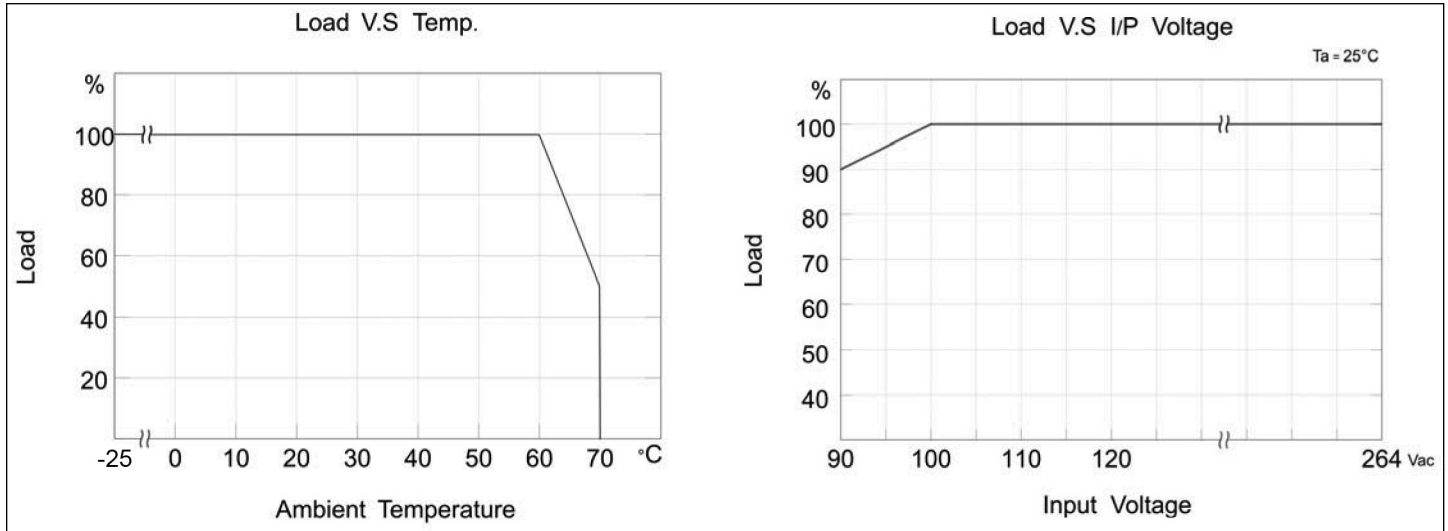
notes:
 3. measured from high line to low line at full load
 4. measured from full load to zero to 100% load at nominal input



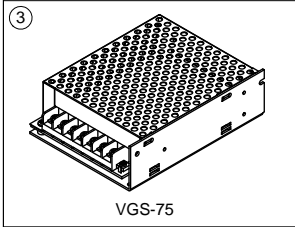
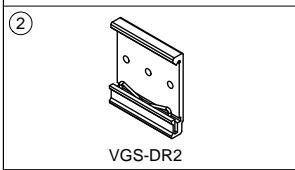
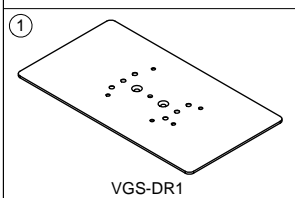
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DE-RATING CURVES



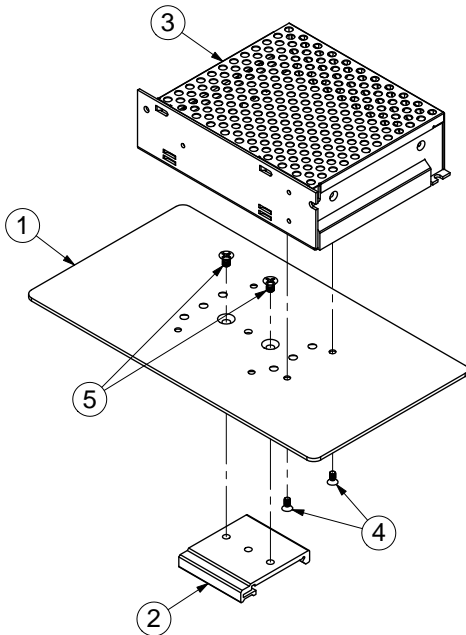
DIN RAIL MOUNTING OPTIONS



PC FILE NAME:
VGS-75-DIN-RAIL

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| REV. | DESCRIPTION | DATE |
|------|-------------|-----------|
| A | NEW DRAWING | 6/22/2009 |



TOLERANCE:
±0.3mm UNLESS OTHERWISE
SPECIFIED

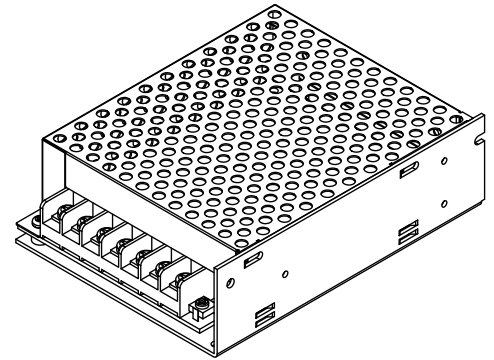
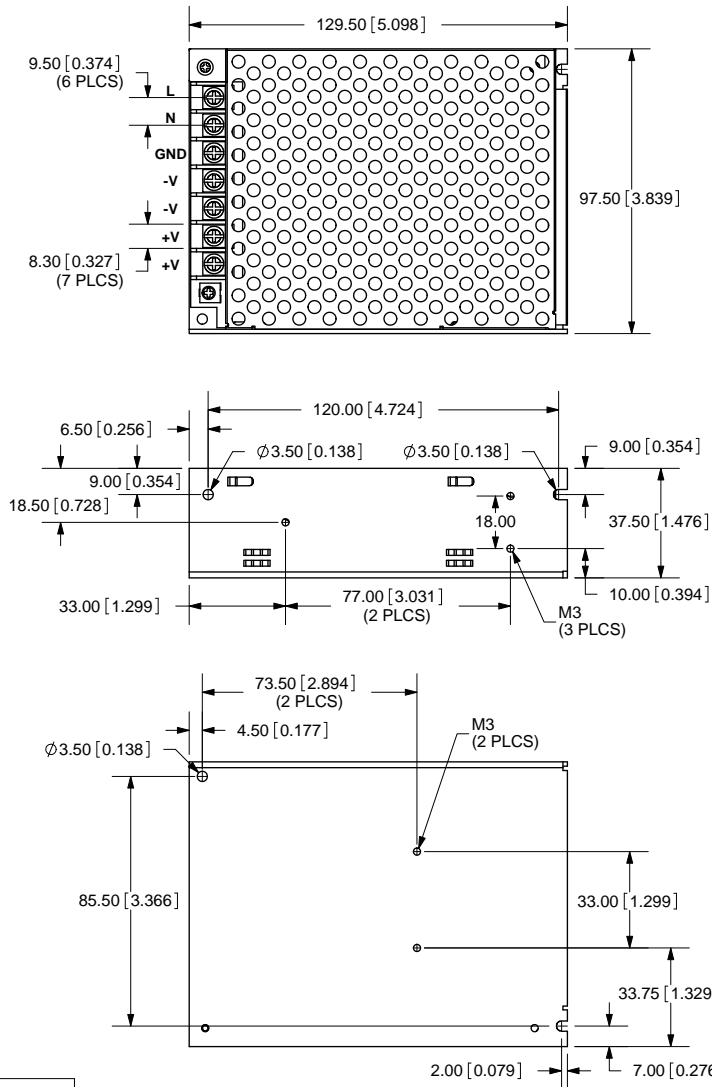


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| | | |
|------------------------------------|--------------------|------------|
| TITLE: VGS-75 DIN RAIL ACCESSORIES | | REV: A |
| PART NO. VGS-75-DIN-RAIL | UNITS: MM [INCHES] | |
| DRAWN BY: ZRJ | APPROVED BY: | SCALE: 1:5 |

| REV. | DESCRIPTION | DATE |
|------|-------------|-----------|
| A | NEW DRAWING | 1/22/2009 |



NOTE: TERMINAL BLOCK SCREWS
#6-32 (7 PLCS)

TOLERANCE:
±0.3mm UNLESS OTHERWISE
SPECIFIED



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| | | |
|-------------------------------|--------------------|------------|
| TITLE: SWITCHING POWER SUPPLY | | REV: A |
| PART NO. VGS-75-XX | UNITS: MM [INCHES] | |
| DRAWN BY: ZRJ | APPROVED BY: | SCALE: 1:2 |

PC FILE NAME:
VGS-75-XX

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