

SERIES: FSC-S30**DESCRIPTION:** ac-dc converter**Features**

- Encapsulated compact case
- High efficiency
- Universal input
- Built in EMI filter
- 100kHz fixed frequency
- Fixed output voltage
- Thermal shutdown
- Short circuit protection
- Low output ripple and noise
- Isolated output
- 2 year warranty-



| model number | input voltage | output voltage | power max. | ripple & noise max. | efficiency (%) |
|--------------|--------------------------|----------------|------------|---------------------|----------------|
| FSC-S30-3R3U | AC 85-264V / DC 110-340V | 3.3V @ 6.0A | 19.8 W | 80 mVp-p | 78 |
| FSC-S30-5U | AC 85-264V / DC 110-340V | 5V @ 6.0A | 30 W | 80 mVp-p | 80 |
| FSC-S30-12U | AC 85-264V / DC 110-340V | 12V @ 2.5A | 30 W | 120 mVp-p | 83 |
| FSC-S30-15U | AC 85-264V / DC 110-340V | 15V @ 2.0A | 30 W | 150 mVp-p | 83 |
| FSC-S30-24U | AC 85-264V / DC 110-340V | 24V @ 1.25A | 30 W | 200 mVp-p | 86 |

INPUT

| parameter | conditions/description | min | nom | max | units |
|-----------------|--|-----|---------|------|-------|
| input frequency | | 47 | (50-60) | 440 | Hz |
| input voltage | | 85 | | 264 | VAC |
| | | 110 | | 340 | VDC |
| input current | AC input of 110 VAC | | | 0.49 | A |
| | AC input of 220 VAC | | | 0.25 | A |
| inrush current | measured at 110 VAC at full load, cold start | | | 30 | A |
| | measured at 220 VAC at full load, cold start | | | 60 | A |
| leakage current | measured at 110 VAC | | | 0.5 | mA |
| | measured at 220 VAC | | | 0.75 | mA |

OUTPUT

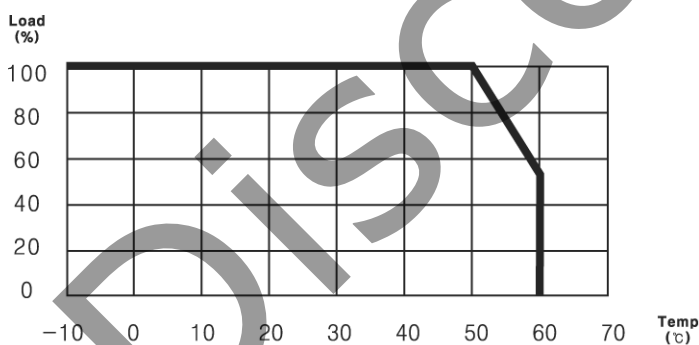
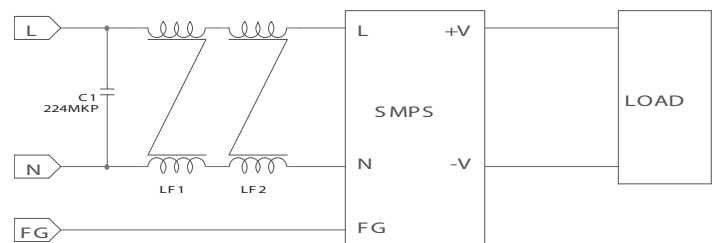
| parameter | conditions/description | min | nom | max | units |
|-------------------------|------------------------|-----|-----|-----|-------|
| voltage tolerance | | -2% | | +2% | |
| | | -3% | | +3% | |
| ripple and noise | | -1% | | +1% | |
| line regulation | | -1% | | +1% | |
| load regulation | | -1% | | +1% | |
| dynamic load regulation | | -3% | | +3% | |
| temperature drift | | -1% | | +1% | |
| rise time | | | | 400 | ms |
| hold-up time | | 10 | | | ms |

SERIES: FSC-S30**DESCRIPTION:** ac-dc converter**PROTECTION CIRCUIT**

| parameter | conditions/description |
|---------------------|--|
| output over current | works at over 105% of the rating and recovers automatically. |
| over temperature | 145 °C |

GENERAL

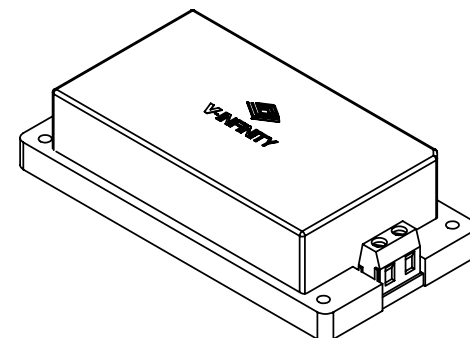
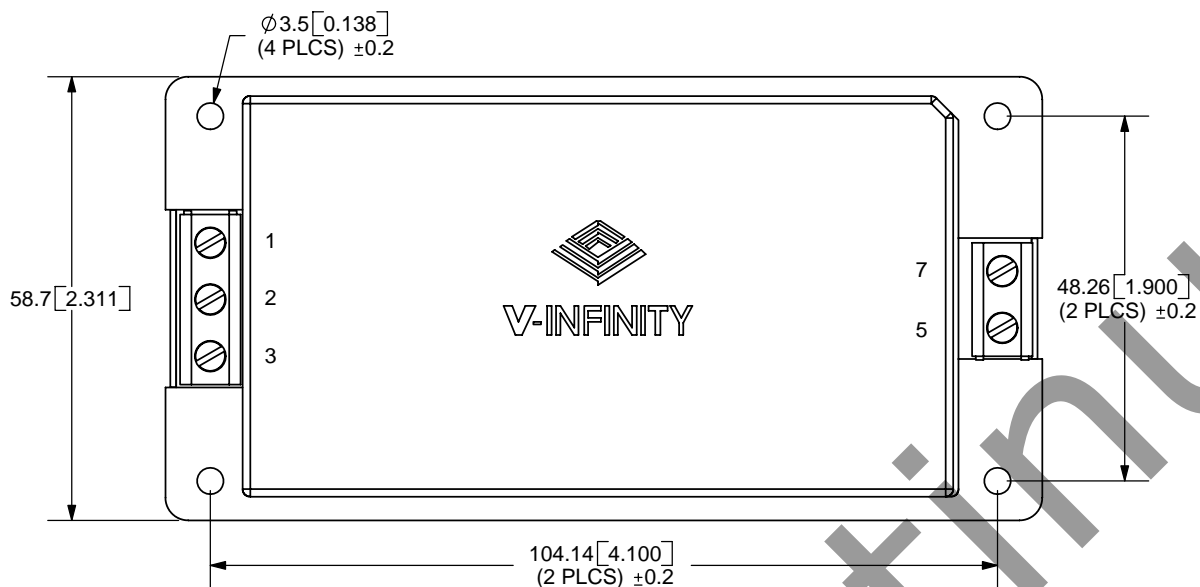
| parameter | conditions/description | min | nom | max | units |
|-------------------|---|------|-----|-----|-------|
| operating temp. | | -10 | | 60 | °C |
| storage temp. | | -20 | | 70 | °C |
| operating humid. | non-condensing | 20% | | 90% | RH |
| storage humid. | non-condensing | 20% | | 90% | RH |
| isolation voltage | applied for 1 minute, 10mA | | | | |
| (HI-POT) | primary to secondary, 500 Vdc @ 100 MΩ | 3000 | | | VAC |
| vibration | at 10G 3 minute period | 10 | | 55 | Hz |
| impact | 50G for 11mS, once on each X, Y, Z axis | | | | |
| MTBF | 3.0×10^5 | | | | hours |
| RoHS | yes | | | | |
| safety | approved to UL60950(E222889), CSA C22.2 NO.60950, CE(EN60950) - through tuv | | | | |
| warranty | standard warranty length | | | 2 | years |

DERATING CURVE**EXTERNAL EMI FILTER**

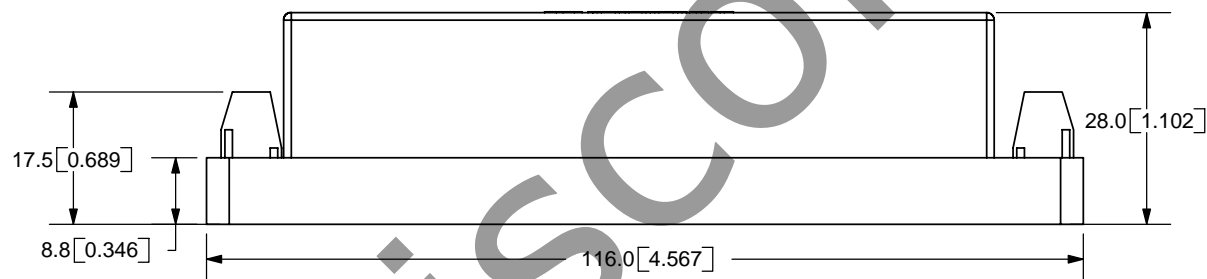
C1 = 220nF / 275Vac, X2 Capacitor

LF1 = 20mH Common Mode Line Filter, Toroidal core ϕ 14.0mmLF2 = 20mH Common Mode Line Filter, Toroidal core ϕ 14.0mm

| REV. | DESCRIPTION | DATE |
|------|-------------|-----------|
| A | NEW DRAWING | 9/11/2007 |



SCALE: 1:2



TOLERANCE:
±0.5mm UNLESS OTHERWISE
SPECIFIED



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PIN ASSIGNMENTS

- 1. FG
- 2. AC (N)
- 3. AC (L)
- 5. +Vout
- 7. -Vout

| | | |
|------------------------|--------------------|------------|
| TITLE: AC-DC CONVERTER | | REV: A |
| PART NO. FSC-S30 | UNITS: MM [INCHES] | |
| DRAWN BY: ZRJ | APPROVED BY: | SCALE: 1:1 |