

PART NUMBER: FSK-S15 series

DESCRIPTION: switching power supply

features

- UL, C-UL, CB, CE Marking
- encapsulated compact case
- high efficiency
- universal input
- surface mounting technology
- built in EMI filter
- inrush current limit
- 67kHz 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 (%) |
|--------------|--------------------------|----------------|------------|---------------------|----------------|
| FSK-S15-3R3U | AC 85-264V / DC 110-340V | 3.3V @ 3.0A | 9.9 W | 80 mVp-p | 75 |
| FSK-S15-5U | AC 85-264V / DC 110-340V | 5V @ 3.0A | 15.0 W | 80 mVp-p | 75 |
| FSK-S15-12U | AC 85-264V / DC 110-340V | 12V @ 1.3A | 15.6 W | 120 mVp-p | 78 |
| FSK-S15-15U | AC 85-264V / DC 110-340V | 15V @ 1.0A | 15.0 W | 150 mVp-p | 78 |
| FSK-S15-24U | AC 85-264V / DC 110-340V | 24V @ 0.65A | 15.6 W | 200 mVp-p | 78 |

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 | | | 0.31 | A |
| | AC input of 220 VAC | | | 0.16 | 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% | |
| 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 |

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PROTECTION CIRCUIT

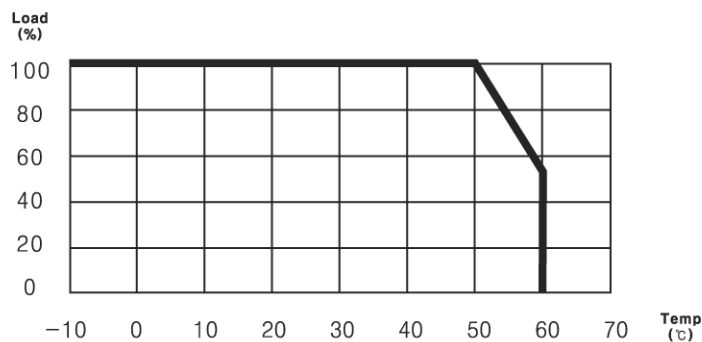
| parameter | conditions/description |
|---------------------|--|
| output over current | works at over 105% of the rating and recovers automatically. |
| over temperature | 145 °C |

GENERAL

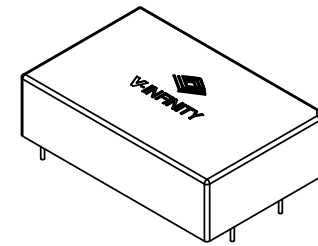
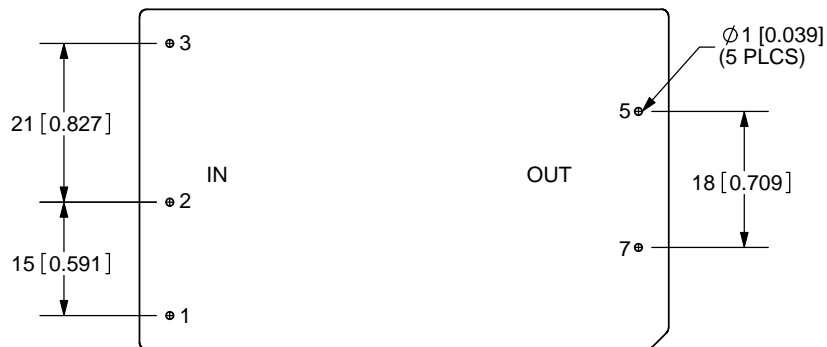
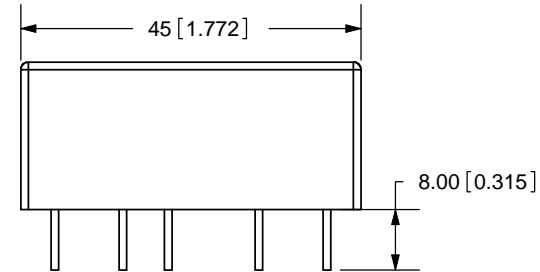
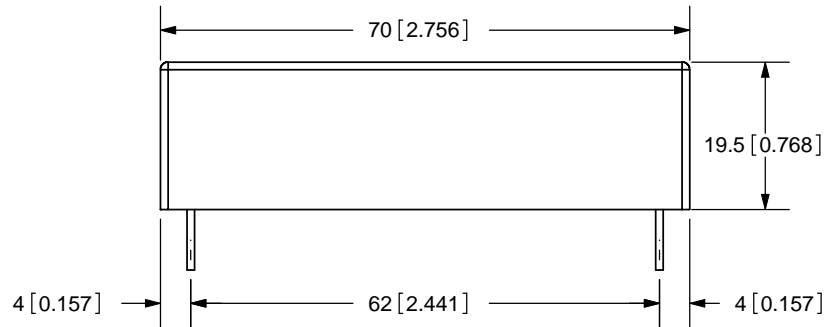
| parameter | conditions/description | min | nom | max | units |
|-------------------------------|--|------|-----|-----|-------|
| operating temp. | | -10 | | 60 | °C |
| storage temp. | | -20 | | 70 | °C |
| operating humid. | non-condensing | 20% | | 90% | RH |
| storage humid. | non-condensing | 20% | | 90% | RH |
| isolation voltage (HI-POT) | applied for 1 minute, 10mA 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, CB(IEC 60950), CE(EN60950) | | | | |
| EMC ¹ | EN61204-3 class B, EN 61000-3-3, EN 61000-3-2 (through TUV) | | | | |
| warranty | standard warranty length | | | 2 | years |

NOTE: 1. to meet the standard of EN61204-3 class B, use the external noise filter between L and N (refer to manual)

DERATING CURVE



| REV. | DESCRIPTION | DATE |
|------|--|------------|
| A | NEW DRAWING | 9/11/2006 |
| B | corrected pin 5 and 7 output assignments | 11/24/2008 |



Scale 1:2

TOLERANCE:
±0.3mm UNLESS OTHERWISE
SPECIFIED



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PIN ASSIGNMENTS

| Pin Number | Single Output |
|------------|---------------|
| 1 | FG |
| 2 | AC (N) |
| 3 | AC (L) |
| 4 | No Pin |
| 5 | +Vout |
| 6 | No Pin |
| 7 | -Vout |
| 8 | No Pin |

| | | |
|------------------------|--------------|--------------------|
| TITLE: AC-DC CONVERTER | | REV: B |
| PART NO. FSK-S15 | | UNITS: MM [INCHES] |
| DRAWN BY: JMS | APPROVED BY: | SCALE: 1:1 |

PC FILE NAME:
FSK-S15

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Notes:
1. All dimensions are in mm [inches]
2. Weight: 100g or less