



SERIES: VDRS-20

DESCRIPTION: 20 W MINI POWER SUPPLY

FEATURES

- universal AC input
- installs on DIN rail
- brown out protection
- short circuit, over load, over voltage protection
- long life 105°C electrolytic capacitors
- operating temperature up to 70°C
- can withstand 5G of vibration
- true DC OK signal output
- meets EISA / efficiency level IV regulations



| MODEL | output voltage | | output current | | output wattage | ripple | efficiency level | MTBF (MIL-HDBK-217F) |
|------------|-------------------|--|----------------|------------|----------------|-----------------|------------------|-------------------------|
| | nominal (V dc) | | min (A) | max (A) | max (W) | max. (mVp-p) | | |
| VDRS-20-12 | 12 | | 0 | 1.7 | 20.4 | 100 | IV | 120400 hours |
| VDRS-20-15 | 15 | | 0 | 1.4 | 21 | 100 | IV | 131300 hours |
| VDRS-20-24 | 24 | | 0 | 1 | 24 | 120 | IV | 125900 hours |

*full load, 230 Vac input, measured at 20MHz bandwidth with a 47 and 0.1 uF parallel cap on the output



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INPUT

| parameter | conditions/description | min | nom | max | units |
|---------------------|--|-----|-----|------|-------|
| input voltage range | derating may be needed under low input voltages; consult the derating curve for more details (page 3) | 88 | | 264 | V ac |
| | | 124 | | 370 | V dc |
| frequency range | | 47 | | 63 | Hz |
| rated input current | 115 V ac | | | 0.45 | A |
| | 230 V ac | | | 0.32 | A |
| inrush current | 115 V ac | | | 20 | A |
| | 230 V ac | | | 40 | A |
| leakage current | 230 V ac | | | 1 | mA |

OUTPUT

| parameter | conditions/description | min | nom | max | units |
|-------------------------|--|-----|-----|-----|-------|
| line regulation | | | ±1 | | % |
| load regulation | | | ±1 | | % |
| voltage tolerance | includes setup tolerance, line and load regulation | | ±1 | | % |
| over voltage protection | latch-off mode | 115 | | 150 | % |
| over load protection | constant current limit, auto recovery | 102 | | | % |

SAFETY & EMI

| parameter | conditions/description | min | nom | max | units |
|-----------------------|--|-----|-----|------|-------|
| HI-POT | input to output for 1 minute | | | 4242 | V dc |
| | input to case for 1 minute | | | 2121 | V dc |
| insulation resistance | input to output at 500 V dc | 100 | | | MΩ |
| safety approvals | UL 508, TUV EN60950-1, UL1310 NEC class 2 compliant | | | | |
| EMI standard | EN55022: 2006 class B, EN61204-3: 2000, EN61000-6-3:2007 | | | | |
| RoHS compliant | yes | | | | |
| LPS power supply | yes | | | | |
| power good | open collector | | | 40 | mA |

ENVIRONMENTAL

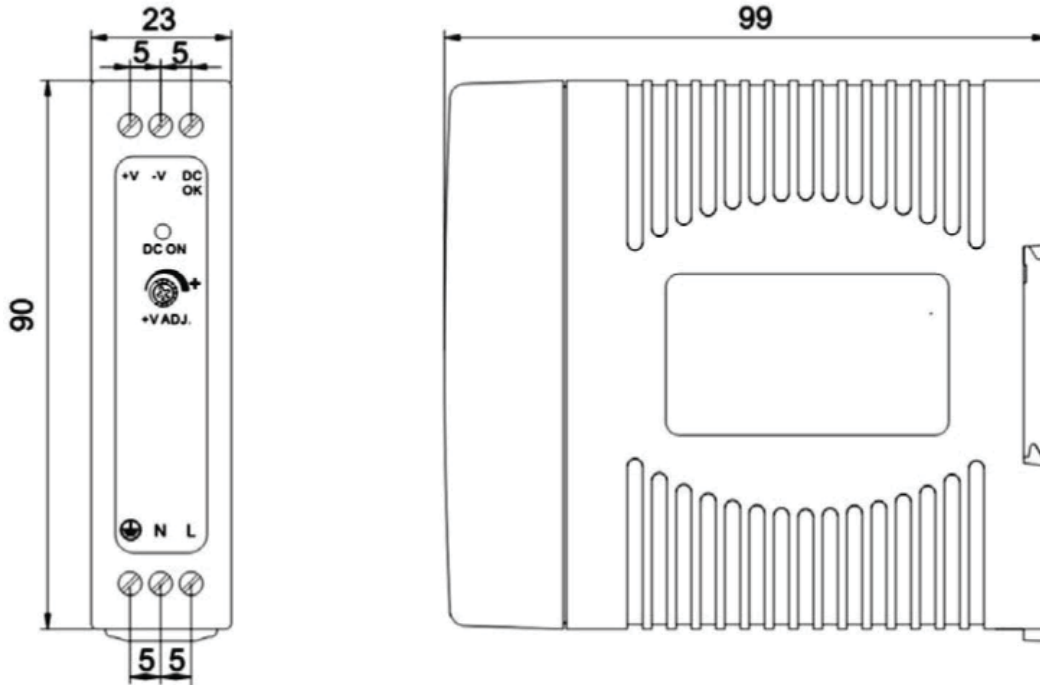
| parameter | conditions/description | min | nom | max | units |
|-------------------------|------------------------|-----|------|-----|-------|
| operating temperature | | -20 | | 70 | °C |
| operating humidity | | 20 | | 90 | % |
| storage temperature | | -40 | | 85 | °C |
| storage humidity | | 10 | | 95 | % |
| cooling | natural convection | | | | |
| temperature coefficient | 0 ~ 50°C | | 0.03 | | %/°C |



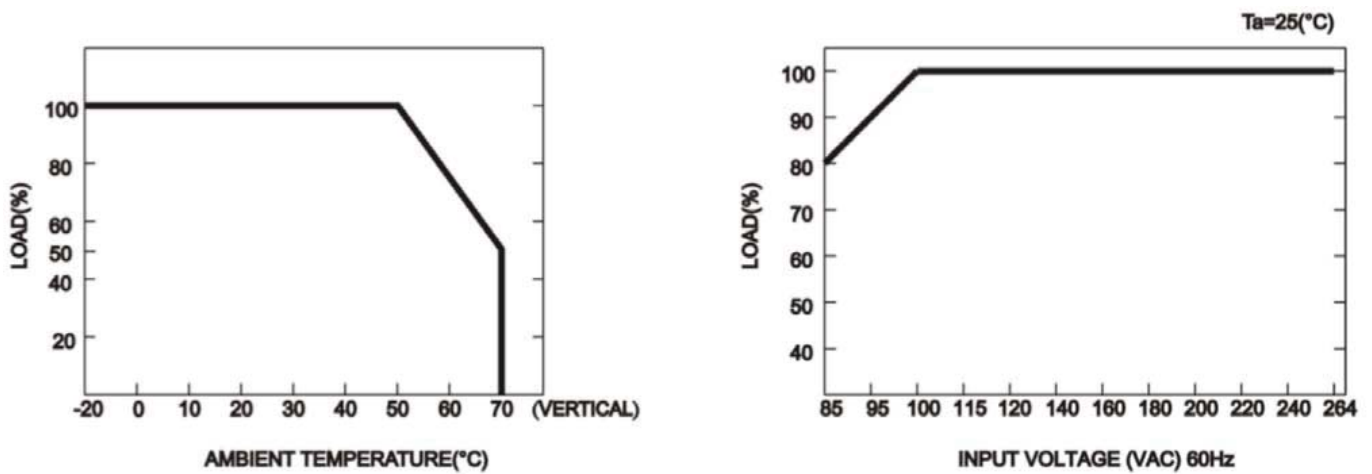
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MECHANICAL DRAWING



DERATING CURVE



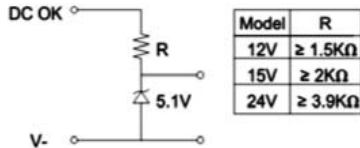


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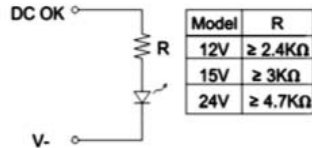
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ACTIVE DC SIGNAL

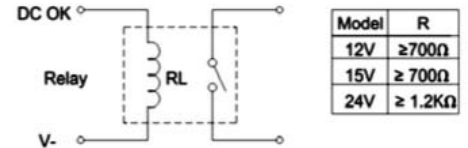
(a)5V signal



(b)LED



(c)Relay



BLOCK DIAGRAM

