



**SERIES: VDRS-60**

**DESCRIPTION: 60 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's of vibration
- true DC OK signal output
- meets EISA / efficiency level IV regulations



| MODEL      | output voltage    | output current |            | output wattage | ripple          | efficiency level |
|------------|-------------------|----------------|------------|----------------|-----------------|------------------|
|            | nominal<br>(V dc) | min<br>(A)     | max<br>(A) | max<br>(W)     | max.<br>(mVp-p) |                  |
| VDRS-60-12 | 12                | 0              | 5          | 60             | 100             | IV               |
| VDRS-60-15 | 15                | 0              | 4          | 60             | 100             | IV               |
| VDRS-60-24 | 24                | 0              | 2.5        | 60             | 120             | IV               |
| VDRS-60-48 | 48                | 0              | 1.25       | 60             | 180             | IV               |

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

**SERIES: VDRS-60****DESCRIPTION: 60 W MINI POWER SUPPLY****INPUT**

| parameter           | conditions/description                                                                                   | min | nom | max | units |
|---------------------|----------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| input voltage range | derating may be needed under low input voltages;<br>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                                                                                                 |     |     | 1.3 | A     |
|                     | 230 V ac                                                                                                 |     |     | 0.6 | A     |
| inrush current      | 115 V ac                                                                                                 |     |     | 30  | A     |
|                     | 230 V ac                                                                                                 |     |     | 60  | 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,<br>UL1310 NEC class 2 compliant             |     |     |      |       |
| EMI standard          | EN55022: 2006 class B, EN (EN61204-3: 2000,<br>EN61000-6-3: 2007)) |     |     |      |       |
| RoHS compliant        | yes                                                                |     |     |      |       |
| LPS power supply      | yes                                                                |     |     |      |       |
| power good            | relay contact (30 V dc/1 A, 120 V ac/ 1 A)                         |     |     |      |       |

**ENVIRONMENTAL**

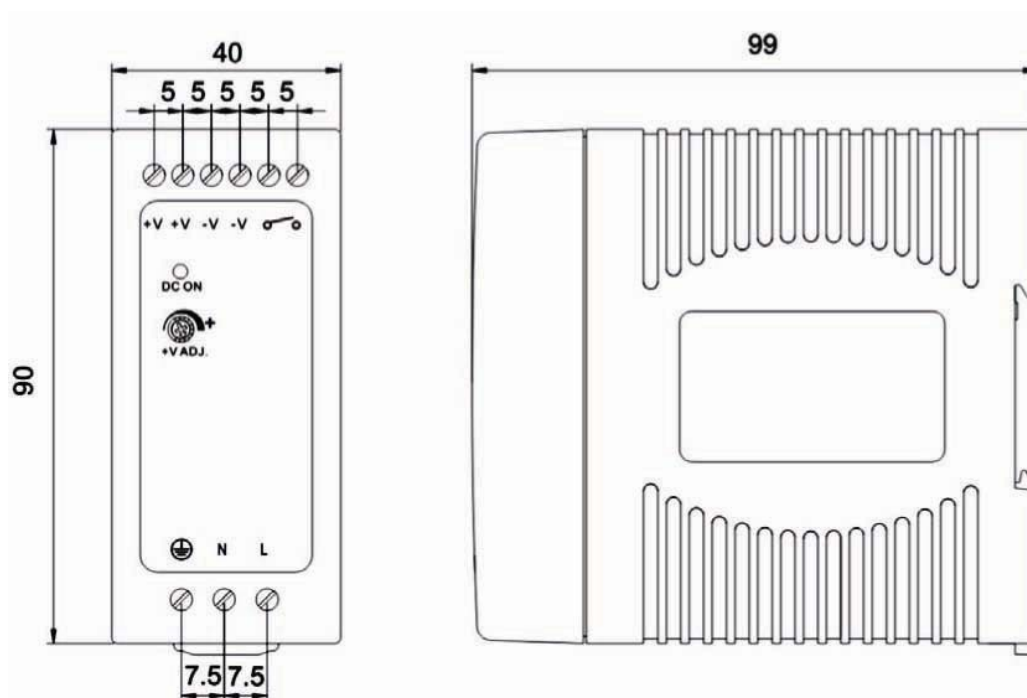
| parameter               | conditions/description | min | nom  | max | units |
|-------------------------|------------------------|-----|------|-----|-------|
| operating temperature   |                        | -20 |      | 70  | °C    |
| operating humidity      |                        | 20  |  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



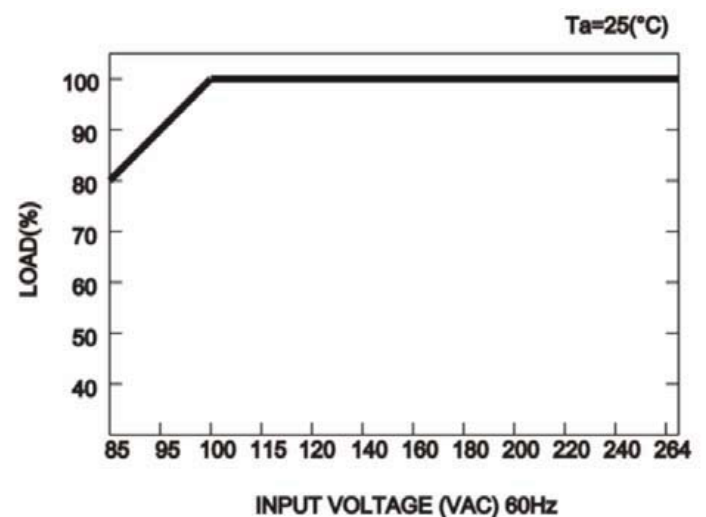
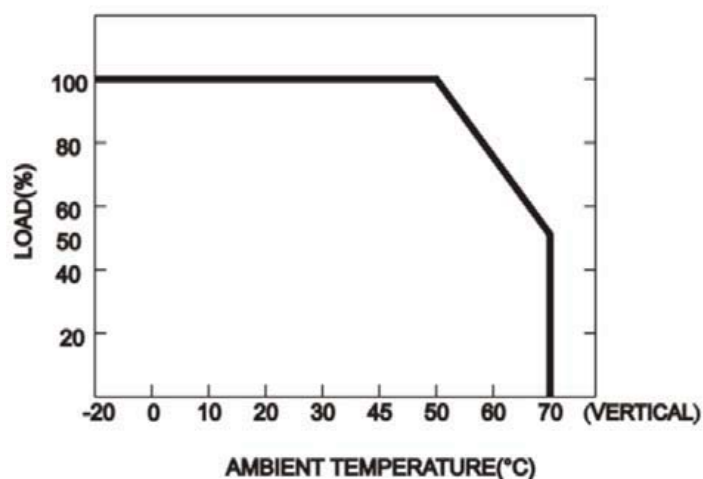
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## MECHANICAL DRAWING



## DERATING CURVE





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## ACTIVE DC SIGNAL

|                        |                                                             |
|------------------------|-------------------------------------------------------------|
| Contact Close          | When the output voltage reaches the adjusted output voltage |
| Contact Open           | When the output voltage drop below 90% output voltage       |
| Contact Ratings (max.) | 30V / 1A resistive load                                     |

## BLOCK DIAGRAM

