

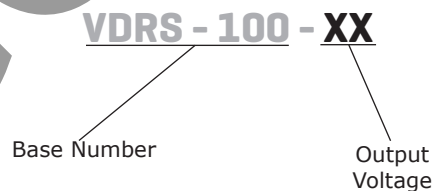
SERIES: VDRS-100 | DESCRIPTION: AC-DC DIN RAIL
FEATURES

- up to 96 W continuous power
- DIN Rail power supplies
- universal input (88~264 Vac / 124~370 Vdc)
- single output from 12~48 Vdc
- over voltage, over load, over temperature, and short circuit protections
- UL 1310, UL 508, and TUV safety approvals
- long life electrolytic capacitors
- efficiency up to 88%



| MODEL | output voltage (Vdc) | output current max (A) | output power max (W) | ripple and noise ¹ max (mVp-p) | efficiency (%) |
|-------------|-------------------------|---------------------------|-------------------------|--|-------------------|
| VDRS-100-12 | 12 | 7.5 | 90 | 180 | 87 |
| VDRS-100-15 | 15 | 6.4 | 96 | 180 | 87 |
| VDRS-100-24 | 24 | 4 | 96 | 180 | 88 |
| VDRS-100-48 | 48 | 2 | 96 | 250 | 87 |

Note: 1. At full load, 230 Vac input, measured at 20MHz bandwidth with a 47 μ F and 0.1 μ F parallel capacitors on the output.
2. All specifications are measured at Ta=25°C, 230 Vac input voltage, and rated output load unless otherwise specified.

PART NUMBER KEY


INPUT

| parameter | conditions/description | min | typ | max | units |
|----------------|------------------------|------|-----|------|-------|
| voltage | | 88 | | 264 | Vac |
| | | 124 | | 370 | Vdc |
| frequency | | 47 | | 63 | Hz |
| current | 115 Vac | | | 1.1 | A |
| | 230 Vac | | | 0.55 | A |
| inrush current | 115 Vac, cold start | | | 30 | A |
| | 230 Vac | | | 60 | A |
| power factor | at 115 Vac, full load | 0.98 | | | |
| | at 230 Vac, full load | 0.92 | | | |

OUTPUT

| parameter | conditions/description | min | typ | max | units |
|-------------------------|-----------------------------------|-----|-------|-----|-------|
| line regulation | | | | ±1 | % |
| load regulation | | | | ±2 | % |
| temperature coefficient | (0 ~ 50°C) | | ±0.03 | | %/°C |
| hold-up time | at 115 Vac, cold start | 16 | | | ms |
| | at 230 Vac, cold start | 32 | | | ms |
| adjustability | adjustable with built-in trim pot | | | ±10 | % |

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|--------------------------|--|-----|-----|-----|-------|
| over voltage protection | latch-off mode | 115 | | 150 | % |
| over load protection | constant current limiting, automatically recovers after fault condition is removed | 102 | | | % |
| short circuit protection | output shut down and auto restart | | | | |

SAFETY & COMPLIANCE

| parameter | conditions/description | min | typ | max | units |
|----------------------|--|-----|-----|-------|-------|
| isolation voltage | input to output for 1 minute | | | 3,000 | Vac |
| | input to case for 1 minute | | | 1,500 | Vac |
| isolation resistance | input to output, input to case, output to case, 500 Vdc | 100 | | | MΩ |
| safety approvals | UL 508, TUV EN 60950-1, UL 1310 ¹ NEC class 2 compliant | | | | |
| EMI/EMC ² | EN 55022 : 2006(Class B), EN 61204-3: 2000, EN 61000-6-3: 2007, EN 61000-3-2,3 :2006, EN 55024, EN 61204-3: 2000, EN 61000-6-1: 2007 (EN 61000-4-2,3,4,5,6,8,11) | | | | |
| leakage current | at 230 Vac | | | 1 | mA |
| RoHS | 2011/65/EU | | | | |

Note: 1. UL 1310 only for 24 & 48 Vdc output models.
2. The power supply is considered a component which will be installed into final equipment. The final equipment still must be tested to meet the necessary EMC directives.

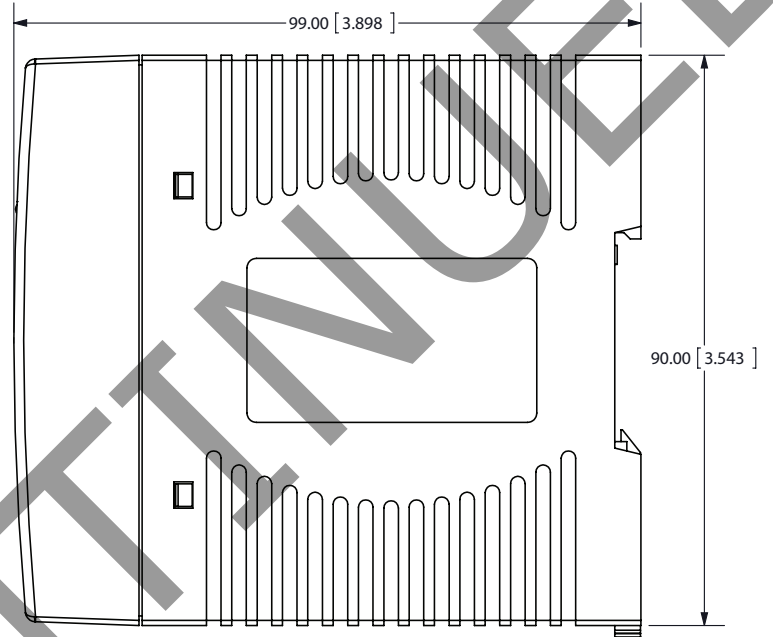
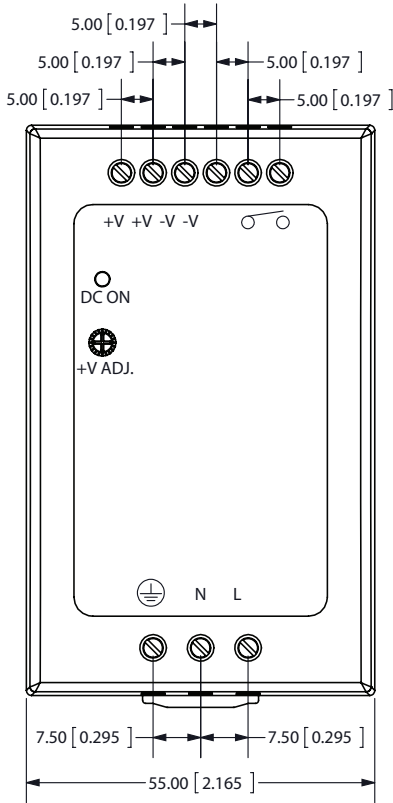
ENVIRONMENTAL

| parameter | conditions/description | min | typ | max | units |
|-----------------------|---|-----|-----|-----|-------|
| operating temperature | see derating curves | -20 | | 70 | °C |
| storage temperature | | -40 | | 85 | °C |
| operating humidity | non-condensing | 20 | | 90 | % |
| storage humidity | | 10 | | 95 | % |
| vibration | (10 ~ 500 Hz, 1 hour per axis, 3 hours total) | | 5 | | Grms |

MECHANICAL DRAWING

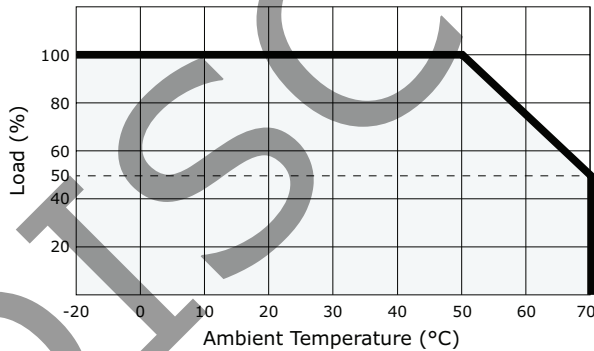
units: mm

use with TS35/7.5 or TS35/15 rails

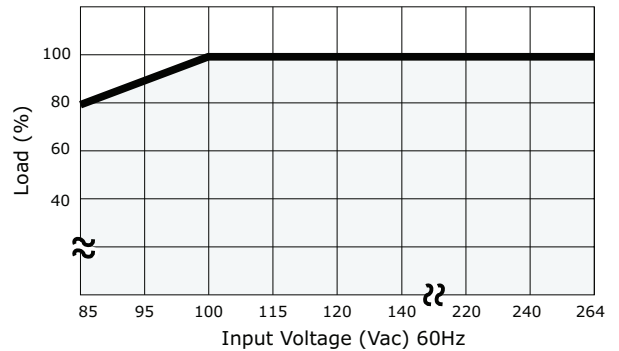


DERATING CURVES

Output Power vs. Ambient Temperature



Output Power vs. Input Voltage (at 25°C)



ACTIVE DC SIGNAL - RELAY CONTACT

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

REVISION HISTORY

| rev. | description | date |
|------|--|------------|
| 1.0 | initial release | 06/03/2010 |
| 1.01 | new template applied | 08/18/2011 |
| 1.02 | V-Infinity branding removed, drawing updated | 08/23/2012 |
| 1.03 | updated datasheet | 01/10/2017 |

The revision history provided is for informational purposes only and is believed to be accurate.



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