



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

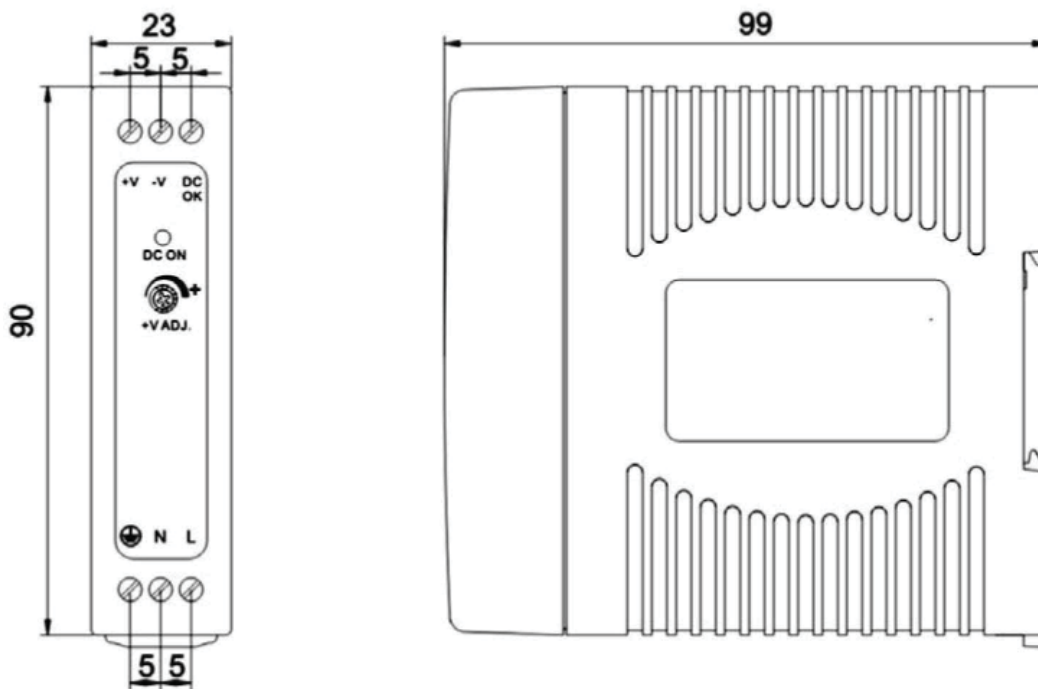
parameter	conditions/description	min	nom	max	units
operating temperature		-20		70	°C
operating humidity		20		90	%
storage temperature		-40		85	°C
storage humidity		10		95	%
cooling	natural convection				
temperature coefficient	0 ~ 50°C		0.03		%/°C



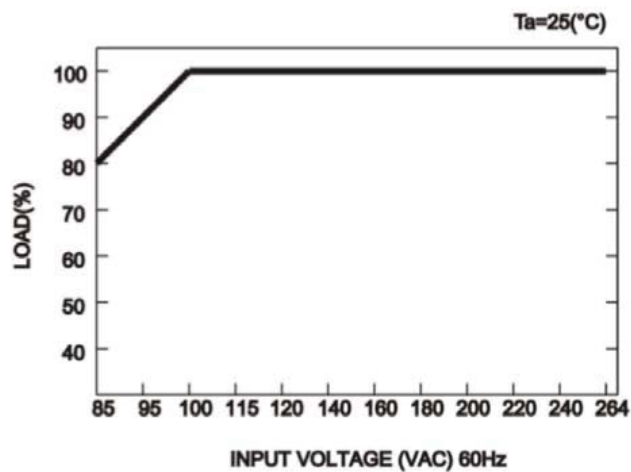
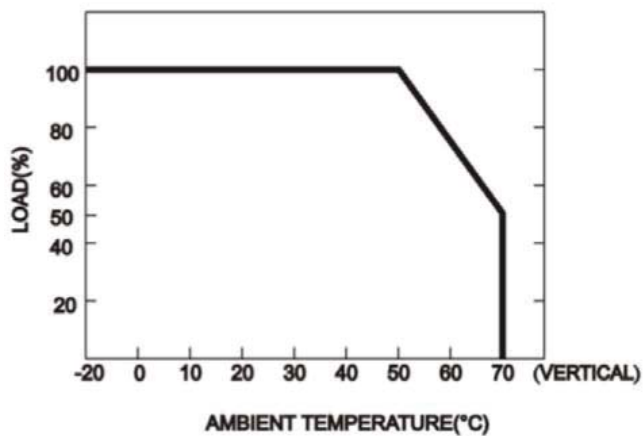
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MECHANICAL DRAWING



DERATING CURVE



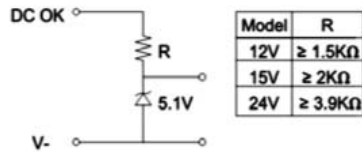


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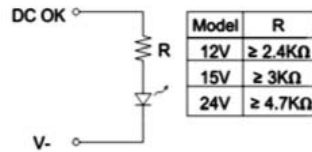
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ACTIVE DC SIGNAL

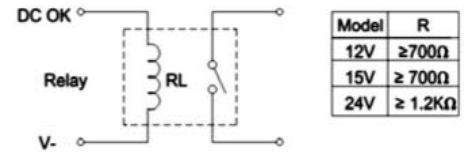
(a) 5V signal



(b) LED



(c) Relay



BLOCK DIAGRAM

