

BAP319R SERIES

Rail DC/DC Converters Single Output: 500 Watts



General Specifications

Input Voltage	24VDC (17 ~ 34) 36VDC (22 ~ 51) 48VDC (29 ~ 67) 72VDC (42 ~ 101) 96VDC (58~135) 110VDC (66 ~ 154)
	• Other voltages on request
Input Protection	Reverse polarity protection. Inrush current limiting & Input Fuse
Isolation	Input - Output 3000vdc Input – Chassis 1500vdc Output – Chassis 1500vdc
Efficiency	Model dependent , typically 80-90%
Output voltage	See tables
Output Power	500 watts
Voltage Adjust.	Customer specified
Immunity	EN50155 & EN50121-3-2 EN61000-4-2 ESD EN61000-4-3 RF Immunity EN61000-4-4 Fast Transients EN50155 Surge & Voltage variations EN61000-4-6 Conducted Immunity
EMI	EN5022 Class B Conducted & Radiated
Switching Freq.	55kHz ±5kHz
Regulation	±% Line / Load combined
Dynamic Response	Max ±5% deviation for 10% - 50% load step with 1msec recovery
Ripple & Noise	Typically 1% pk-pk or 0.2% RMS of output voltage (20MHZ BW)
Overload Protection	Rectanular current limiting, with short-circuit protection
Overvoltage Protection	Double regularor loop
Operating Temp.	-25°C to +55°C cold plate temperature at 100% load, +70°C at 60% load
Cooling	Conduction cooling via base plate to customer chassis or heatsink & natural convection
Environmental Protection	Ruggedized & Conformal coating of PCB's
Shock & Vibration	IEC61373 Cat 1 A & B and Cat 2
Humidity	5-95% non-condensing, higher ration option
MTBF	>150,000 hrs

Features

- Designed to rail standards EN50155 & EN50121
- Wide input range
- Rugged design for on-board train applications
- Convection cooled: No fans
- Fully isolated input – output 3000VDC
- Over voltage protection
- Overload and short circuit protection
- MTBF > 200,000hrs
- Specials input / output combinations on request.
- Any output from 12vdc ~ 130vdc possible
- **N+1 Redundancy** option

Description

The **BAP319R** series dc/dc converters are an upgraded product from the very popular and mature BAP industrial grade product, with, field proven reliability over 20 years. These units are specifically designed for rolling stock / rail applications and can be manufactured to customer specifications with total flexibility to match customer requirements.

Units are supplied with conformal coating of PCB's and a high level of ruggedization for shock & vibration to IEC 61373

Designed for a wide range of i input voltage options from 24 ~ 168vdc and any output voltage from 24 ~ 130VDC

Options

Redundancy	Units can be supplied with built-in isolation diode for use in N+1 Redundancy / parallel applications
Alarm	Voltage Free Relay contacts for monitoring DC output
Output Voltage	Any output voltage options from 12 ~ 130VDC
Terminals	Customer specified connectors

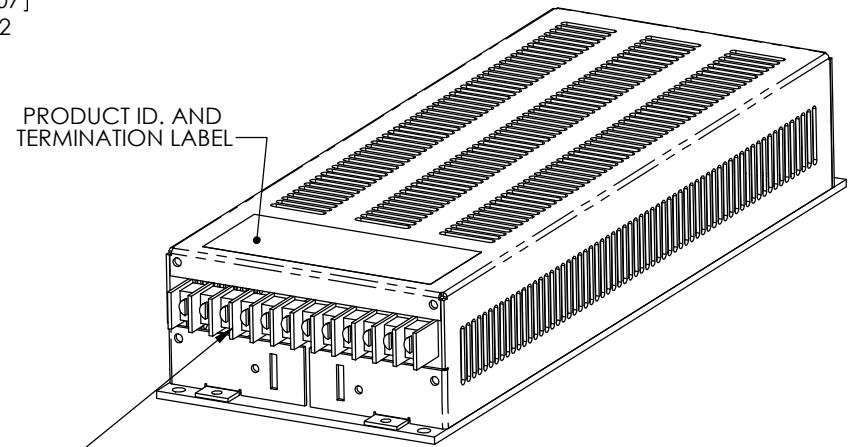
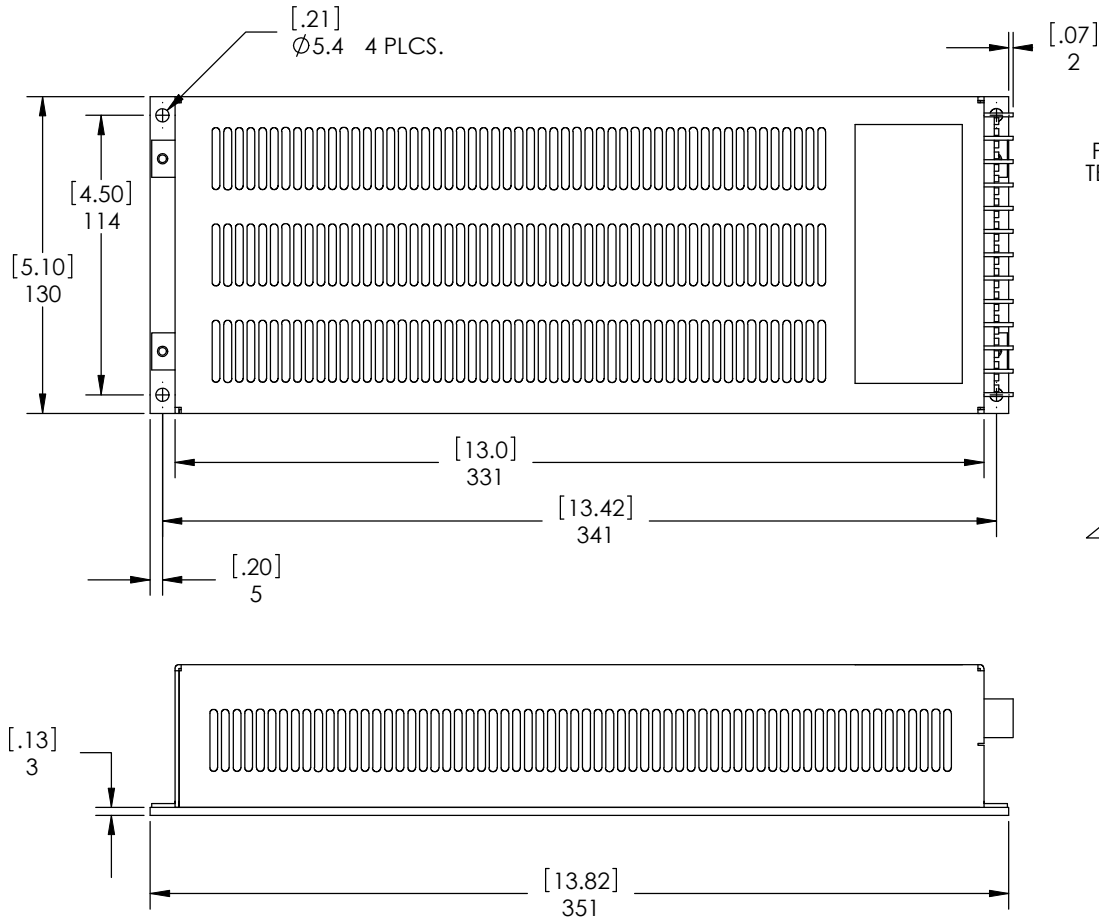
Model	Input Options V	Standard Outputs		Power W
		V	A	
BAP319R	24V, 36V 48V,72V 96V,110V	24V	20.0A	500W
		48V	10.0A	
		110V	4.5A	

- Final part numbers will be factory allocated to reflect customer input & output requirements. Any output 12 ~ 130vdc is available

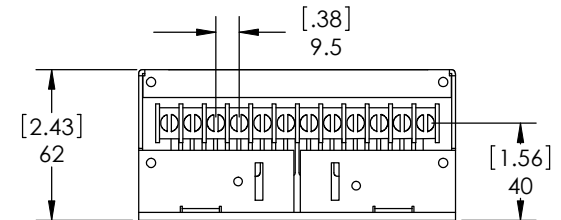
LED / Indicator	Visible through side cooling slots
Alarm output	Optional
Connector	12 pole barrier-type terminal block with 3/8"spacing. (optional cover)
Dimensions	130 x 67 x 351mm (F4) W x H x L (includes terminal block & mounting flanges)
Weight	2kg

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12 POLE CURTIS 38000 SERIES BARRIER TYPE OF TERMINAL WITH 3/8" SPACING
TORQUE: 9 in.-lbs



DIMENSIONS ARE IN MILLIMETERS
[INCHES] TOLERANCES ON
DECIMALS: XXX ± 0.2mm
 XX ± 0.3mm
ANGLES: ± 2°
FRACTIONS: ± 0.4mm
UNLESS OTHERWISE STATED

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Title: OUTLINE DRAWING

Model No: F4 PACKAGE

