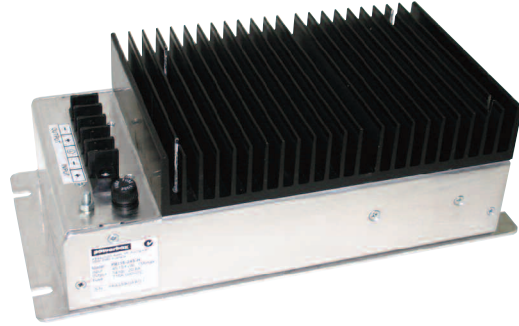


# PB315 Series

626 WATTS ROLLING STOCK HEADLIGHT CONTROLLER

## FEATURES

- Designed to control two locomotive sealed beam headlights, Type GE350PAR56/SP-75.
- Meets EN50155 for operating conditions and EN50121 for EMC / EMI.
- High temp operation without additional heatsinking.
- Ruggedised mechanically for shock and vibration. Input protection against spikes, bursts & high ripple.
- No vent holes, PCB conformal coated. Protection against dust / moisture.



## SPECIFICATIONS

INPUT	
Input voltage	72V <sub>in</sub> (45-101V <sub>dc</sub> ) or 110V <sub>in</sub> (66-154V <sub>dc</sub> )
Input current	16A at 72V <sub>in</sub> , 12A at 110V <sub>in</sub>
Inrush Current	16A at 72V <sub>in</sub> , 25A at 110V <sub>in</sub>
DC ripple factor	15%

OUTPUT	
Voltage	High beam = 68V <sub>dc</sub> , Low beam 72V <sub>in</sub> = 32V <sub>dc</sub> , Low beam 110V <sub>in</sub> = 25V <sub>dc</sub>
Current	High beam = 9.2A, Low beam 72V <sub>in</sub> = 6.6A, Low beam 110V <sub>in</sub> = 6.0A
Continuous power	626W max
Ripple voltage	200mV p-p
Line regulation	0.5% at full load
Load regulation	1.5% from 0 to full load

OPERATING SPECIFICATIONS	
Efficiency	93% at full load typical
Power dissipated	50W at full load typical
Isolation	Input to Chassis - 2400V <sub>dc</sub> Input to Output - 3800V <sub>dc</sub> Output to Chassis - 750V <sub>dc</sub>
Temperature	Up to 50C ambient at full load. Derate linearly from 50C full load to 80C zero load
Cooling	Natural convection. No additional cold plate or heatsinking required

PROTECTION	
Input reverse polarity	Indefinite. Series diode on input
High input ripple	Indefinite. Series diode on input
Input overvoltage	Approx 108V <sub>dc</sub> for 72V <sub>in</sub> , 168V <sub>dc</sub> for 110V <sub>in</sub> , Auto Recovery
Output overcurrent	115% of nominal. Auto recovery
Output short circuit	Indefinite. Auto recovery
Output overvoltage	125% nominal, Input cycled off & on to reset
Over temperature	105C internal temperature. Auto restart

Pollution protection	PD3 as per IEC60077-1
Ingress protection	IP40 as per AS1939
Rated impulse withstand volts	Input 2.5kV, Output 0.8kV as per IEC60077-1

CONTROLS AND ALARMS	
High/low beam	High beam for control signal < 20V <sub>dc</sub> Low beam for 20V <sub>dc</sub> < control signal < 154V <sub>dc</sub>
On/Off (for 110V <sub>in</sub> only)	Unit disabled for control signal < 20V <sub>dc</sub> Unit enabled for 20V < control signal < 154V <sub>dc</sub>
Headlight Fail	Volt free contact closes under failure conditions

MECHANICAL	
Enclosure	Chassis Mount Aluminium
Dimensions	322L x 150W x 102H including heatsink
Weight	4.0 kg
Terminations	Screw Terminals as standard. Other terminals such as Cage Clamp, Fastons available on request

STANDARDS	
Safety	Meets IEC60077-1, AS/NZS 60950-2000
EMC / EMI	Meets EN50121-3-2:2000 and EN50155
Electrical service conditions	Meets EN50155