

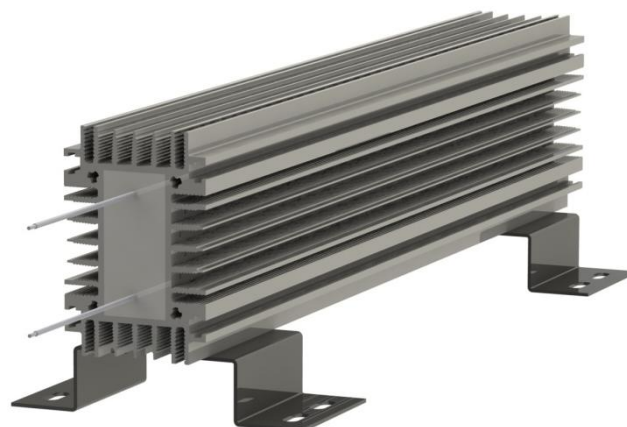


## ALUMINIUM HOUSED RESISTOR

## PHBR

The PHBR series of wire wound resistors are made of aluminium section and they can be used in application where space is at a premium. They are designed to absorb high power overloads and are well suited for braking application. This high impulse absorption capability makes them well suited for use in power electronic circuits like frequency convertors, servo drives and robotic controls.

Forced air cooling can significantly improve the performance of the resistor. Multiple mounting options are available to help customers optimise usage and space.



### GENERAL SPECIFICATION

Resistor Type	PHBR
Tolerance	±5%, ±10%
Maximum Operating Voltage $V_{AC}$ (f=50 Hz)	690 VAC
Maximum Operating Voltage $V_{DC}$	1100 VDC
Insulation Resistance	>20 MΩ
Dielectric Strength (f=50Hz, 1 Min)	3500VAC for 1 Minute Between Terminal and Aluminium Body
TCR	≤ 200ppm/°C
Resistor Element	Wire Wound
Cable(L)	300 mm Standard; Insulated; 600V; 200°C
Resistor Body	Anodized Extruded Aluminium Profile
Ingress Protection Level	IP54
Mounting Style	Mounting feet, screws & washers are supplied in a kit form and user can fit it as per mounting requirements in their application
Suggested Resistor Mounting Orientation in Cabinet	<div>Horizontal Orientation</div> <div>Vertical Orientation (Cable end should be at the bottom)</div>

### TECHNICAL DATA

Type	Power @ 40°C		Resistance Range (Ω)	L (mm)	L1 (mm)
	In Watts	Max Temp Rise (°C)*			
PHBR315	315	265	4.7 – 1000	175	75
PHBR400	400	270	4.7 – 1000	225	125
PHBR525	525	275	4.7 – 1000	295	195
PHBR650	650	280	4.7 – 1000	365	265
PHBR1000	1000	285	4.7 – 1000	425	325
PHBR1230	1230	295	4.7 – 1000	525	425
PHBR1475	1475	305	4.7 – 1000	625	525
PHBR1700	1700	310	4.7 – 1000	725	625

\*Typical temperature when resistor is mounted vertically and is not attached to a cooling heat sink.

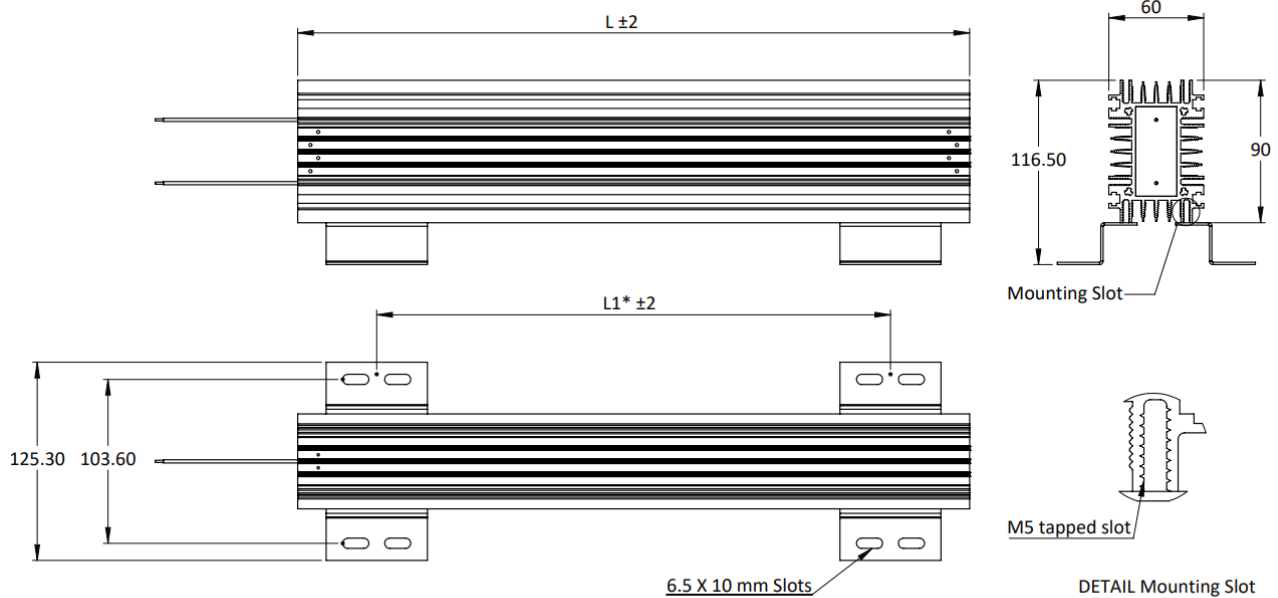


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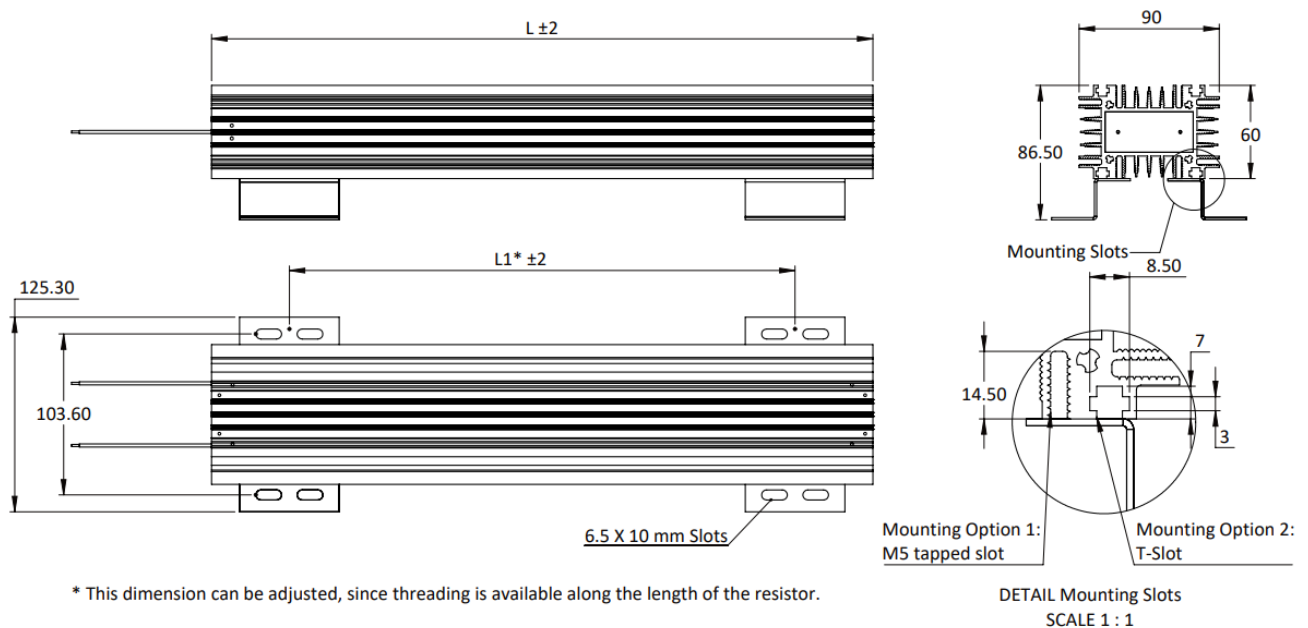
### COMPONENT DRAWING:

#### 1. Vertical Mounting Style



\*This dimension can be adjusted, since threading is available along the length of the resistor.

#### 2. Horizontal Mounting Style



\* This dimension can be adjusted, since threading is available along the length of the resistor.



## ALUMINIUM HOUSED RESISTOR

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### PULSE LOADS RATING<sup>1,2</sup>

Part Number	Power Rating (In Watts)	Resistance Value (In $\Omega$ )	Pulse Load Rating (W) @ 40C Ambient, Cycle Time = 120 Sec		
			1 Sec	5 Sec	40 Sec
PHBR315	315	4.7	12000	2700	900
PHBR315	315	6.8	12000	2700	900
PHBR315	315	10	12000	2700	900
PHBR315	315	15	12000	2700	900
PHBR315	315	22	10800	2600	900
PHBR315	315	33	9500	2500	900
PHBR315	315	47	9100	2400	900
PHBR315	315	68	7500	2400	900
PHBR315	315	100	7000	2400	900
PHBR400	400	4.7	17500	5200	1150
PHBR400	400	6.8	17500	5200	1150
PHBR400	400	10	17800	5200	1150
PHBR400	400	15	17500	5200	1150
PHBR400	400	22	17250	5200	1150
PHBR400	400	33	16500	5000	1150
PHBR400	400	47	16500	4200	1050
PHBR400	400	68	12000	3200	1000
PHBR400	400	100	9500	3200	1000
PHBR525	525	4.7	30300	8300	1600
PHBR525	525	6.8	30500	8300	1600
PHBR525	525	10	25500	7400	1600
PHBR525	525	15	25000	7500	1600
PHBR525	525	22	25000	7600	1600
PHBR525	525	33	25000	7500	1600
PHBR525	525	47	25000	7600	1600
PHBR525	525	68	22500	6000	1450
PHBR525	525	100	22500	5600	1450
PHBR650	650	4.7	38400	11300	2400
PHBR650	650	6.8	38400	11400	2400
PHBR650	650	10	33000	11200	2400
PHBR650	650	15	35000	11300	2400
PHBR650	650	22	28000	10000	2400
PHBR650	650	33	35000	10500	2400
PHBR650	650	47	35000	10500	2400
PHBR650	650	68	32000	10500	2400
PHBR650	650	100	28000	10500	2400
PHBR1000	1000	4.7	40500	12900	2900
PHBR1000	1000	6.8	40500	12900	2900
PHBR1000	1000	10	39000	12900	2900
PHBR1000	1000	15	37500	12900	2900
PHBR1000	1000	22	35000	12900	2900
PHBR1000	1000	33	36500	12000	2700
PHBR1000	1000	47	41000	12000	2700
PHBR1000	1000	68	39000	12000	2700
PHBR1000	1000	100	35000	11000	2700
PHBR1230	1230	4.7	55000	16100	3600
PHBR1230	1230	6.8	55000	16100	3600
PHBR1230	1230	10	49100	15000	3600
PHBR1230	1230	15	46000	15000	3600
PHBR1230	1230	22	47000	15500	3600
PHBR1230	1230	33	41000	15000	3600
PHBR1230	1230	47	46000	15000	3600
PHBR1230	1230	68	49100	15000	3600
PHBR1230	1230	100	49100	15000	3600



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PULSE LOADS RATING <sup>1,2</sup>					
Part Number	Power Rating (In Watts)	Resistance Value (In $\Omega$ )	Pulse Load Rating (W) @ 40C Ambient, Cycle Time = 120 Sec		
			1 Sec	5 Sec	40 Sec
PHBR1475	1475	4.7	70000	19600	4400
PHBR1475	1475	6.8	70000	19600	4400
PHBR1475	1475	10	60600	17500	4400
PHBR1475	1475	15	55000	16500	4400
PHBR1475	1475	22	60000	17500	4400
PHBR1475	1475	33	49000	16000	4200
PHBR1475	1475	47	49000	16000	4200
PHBR1475	1475	68	60600	16500	4200
PHBR1475	1475	100	60600	16500	4200
PHBR1700	1700	4.7	105000	23400	5200
PHBR1700	1700	6.8	105000	23400	5200
PHBR1700	1700	10	75000	23400	5200
PHBR1700	1700	15	74000	23400	5200
PHBR1700	1700	22	72000	23400	5000
PHBR1700	1700	33	63000	23400	5000
PHBR1700	1700	47	68000	23400	5000
PHBR1700	1700	68	68000	23400	5000
PHBR1700	1700	100	65000	23400	5000

<sup>1</sup> Resistor tested in Vertical Orientation.

<sup>2</sup> Pulse Rating is specified based on 10,000 cycles test.

## ORDERING CODE:

PEC Type	Ohmic Value	Tolerance	Packing	Release	Termination	Cable Length	Mounting Hardware <sup>#</sup>
PHBR(xxxx)	10 $\Omega$ – 10R 1500 $\Omega$ – 1K5 2000 $\Omega$ – 2K	5%-J 10%-K	Bulk - B	Standard-X	Cable - C Special - M	Standard-X Custom-M-Length	Mounting Feet - MH

<sup>#</sup> mounting hardware consists of mounting feet with necessary screws & washers, which are supplied as a kit for assembly at site.

## Example:

FULL PART NUMBER: PHBR650-6R8-JBXCX-MH



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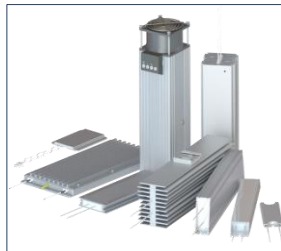
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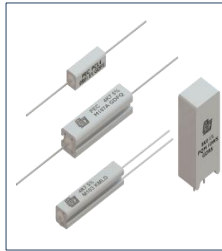
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Aluminium Heaters & Resistors



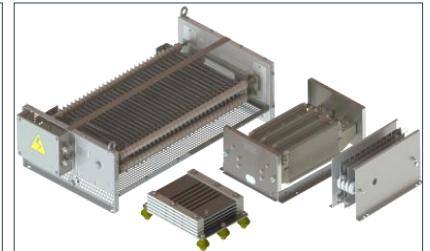
Tubular Power Resistor



Boat & Ceramic Case Resistors



Load Bank



Traction Resistors