

Overview of the ALPHA resistor family (IP00-IP65)



Power: 60-410W	Power: 85W - 1.7kW	Power: 410W - 12kW	Power: 445W-15kW	Power: 860W-25kW
	9-150kJ @5s	25-550kJ @5s	80kJ-2.5MJ @5s	6.4kJ-1.1MJ @5s
- Applications	- Applications	- Applications	- Applications	- Applications
Charge / Discharge	High Pulse load	High Pulse load	High Pulse load	Short recovery time
Brake	Brake	Brake	Brake	Brake
Filter	Filter	Filter	Medium voltage	Filter
Charge / Discharge	Charge / High Pulse	Charge / High Pulse	Charge / High Pulse	High Pulse

Other resistor types from Danotherm (IP00-IP65)



Multi purpose	Outdoor & Marine	Filter	Medium & HV	Filter & load
Power: 100W-5kW	Power: 1-500kW	Power: 4-200kW	Power: 500W->	Power: 5kW-1MW
Ceramic wirewound	Steel tube	Wirewound	Steel grid	Steel tube

Official Danotherm dealer

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ATE EN 16.509.R3
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RB Wirewound Resistors

- Excellent heat conduction
- Can be used with and without external heatsink
- Strong housing
- Optimized construction with high thermal conduction
- Optimized winding for uniform heat distribution
- Marking at top surface for easy identification
- All internal electrical connections are welded

Type	Nominal Power		Ohm Value Range		Voltage Max. [V]	Insulation Voltage [VAC] @ 1 min.	Weight [g]	Nominal Heatsink temp.* [°C]
	Heatsink [W]	Without [W]	Min. [Ω]	Max. [Ω]				
RB10	12	6	0.01	10k	265	1500	6	80
RB25	25	12.5	0.01	18k	550	2500	14	100
RB50	50	20	0.01	68k	1250	2500	35	120
RB75	75	35	0.1	50k	1400	3500	85	120
RB101	100	40	0.1	70k	1900	3500	115	140
RB150	150	55	0.1	100k	2500	3500	165	170
RB100	150	75	0.1	100k	1900	4500	500	150
RB250	250	100	0.1	120k	2300	4500	900	180

*Temperature depends on heatsink dimensions, airflow and ambient temperature.

Table 1

Thermal Drift	30 ppm	R > 20 Ω
	50 ppm	1 < R < 20 Ω
	100 ppm	0.1 < R < 1 Ω
Insulation Resistance	> 10 GΩ	
Tolerance	±5%, up to 1% on request	
E24 Series	10 11 12 13 15 16 18 20 22 24 27 30	
E24 Series	33 36 39 43 47 51 56 62 68 75 82 91	
Overload	5xPn @ 5 s	

Table 2

Special Resistors	
RB25/6	Like RB25 and insulation voltage 3000 VAC @ 1 minute
RB50/6	Like RB50 and insulation voltage 3000 VAC @ 1 minute
RB25/7	Like RB25 and welded faston connection
RB50/7	Like RB50 and welded faston connection
RB50/8	Like RB50 and screw terminals M4
RB106	Like RB100 and insulation voltage 5000 VAC @ 1 min.
RB256	Like RB100 and insulation voltage 5000 VAC @ 1 min.

Table 3

RB resistors are wirewound resistors on a ceramic steatite core. The resistive wire is made of a copper-nickel alloy or a nickel-chrome alloy. The type of wire is selected based on the required ohmic value.

Standard resistor values are according to the E24 range. It is possible to offer non-standard resistance values, please, contact our sales department.

Most resistors can also be offered as inductive low types by using Ayrton-Perry winding method.

RB10 till RB150 have copperweld terminals. RB100 and RB250 have stainless steel terminals.

For maximum power rating, the resistor must be mounted on a heatsink. The maximum power is given in table 1 at nominal heatsink temperature.

For higher heatsink temperatures the resistor must be de-rated using following formular:

$$P_{max} = P_{nom} \cdot \left\{ 1 - \frac{T_{Heat\ sink} - T_{nom. Heat\ sink}}{250 - T_{nom. Heat\ sink}} \right\}$$

Type	A	B	C	D	E	F	G	H	J	K	L	M	N	Ø
RB10	20.4	35	10	11	19	14.3	15.9	5	2.4	2	2.4	-	2	2.2
RB25	27.2	49	14	14	27	18.3	19.8	6.5	4.4	2	3.2	-	2	2.2
RB50	29.2	71	16	16	50	39.7	21.5	7	5.2	2	3.2	-	2	2.2
RB75	47	73	24	27	48	29	37	11.5	9.5	3.5	4.4	-	3	3.2
RB101	47	89	24	27	64	35	37	11.5	14.5	3.5	4.4	-	3	3.2
RB150	47	122	24	27	97	58	37	11.5	19.5	3.5	4.4	-	3	3.2
RB100	71.5	139	44.5	46	89	-	57.1	20	9.6	5	4.8	69.8	M5	-
RB250	76	178	55.6	54	114	76.2	63.5	25.5	7.8	6.3	4.8	98.4	M6	-
Tolerance	±0.2	±1	±0.2	±0.2	±0.5	±0.2	±0.2	±0.2	±0.2	±0.5	±0.2	±0.2	±0.2	±0.2

Table 4

Mechanical Dimensions

