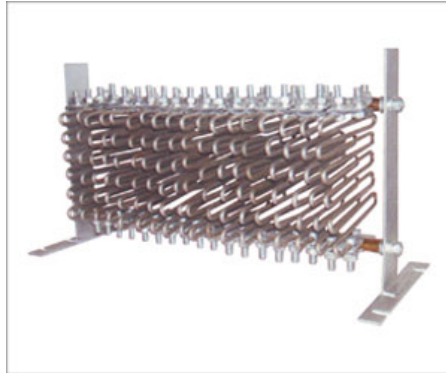


## Dynamic Braking Resistors

D.B.R. Current in AMP	Resistance Per Grid in OHM
700	0.033
600	0.050
500	0.067
450	0.081
350	0.121
275	0.200
150	0.275
95	0.465
60	0.870

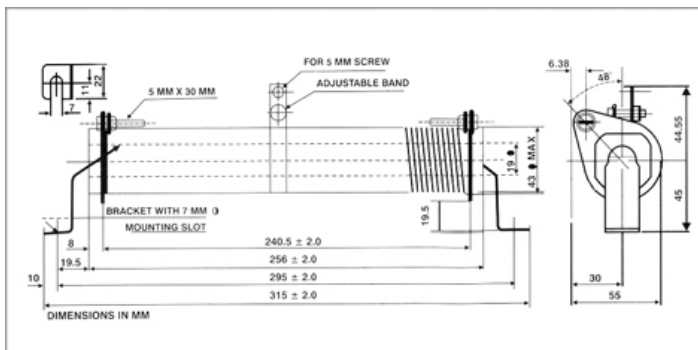
Grid Capacity for Dynamic Braking Period Upto 10 Seconds



Resistance +/- 10%	Continuous Current Rating
0.018	106
0.025	106
0.035	92
0.050	80
0.080	62
0.100	55
0.150	45
0.250	37
0.370	27
0.560	20
0.750	14
1.000	14
2.000	11

Typical Resistance Values Tolerance +/- 10%  
Continuous Current Ratings at 280°C Temperature Rise

Ohms	0.5	0.6	0.75	1.0	1.3	1.7	2.2	2.8	3.5	4	5	6.5	9	13	16
Amps	28	24	20	16	16	14	11	11	9	9	8	6.5	5	3.8	3.2



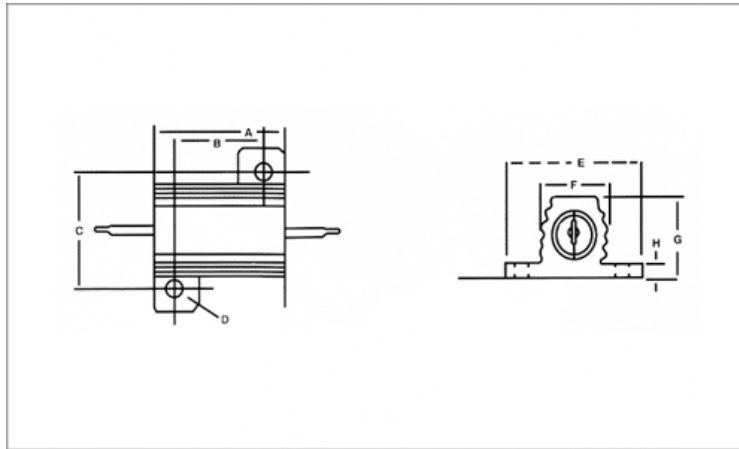
Motor Starting Resistor  
Maximum Current Max. Resistance through DBR - 1P  
(Amps) per tube - Ohms

72	1.4
56	1.8
43	3.0
35	4.4
28	5.5
21	5.5
21	10.0
15	14.0
11	17.0

## Professional Grade Heat Sink Power Resistors Type = YAH = Aluminium Housed

### Special Features:

- Completely Welded Construction
- Screw Mounts on Chasis to Utilize Heat Sink Effect
- High Stability at Conventional Power Ratings
- Complete Environmental Protection
- Low Surface Temperature
- Low Temperature Co-Efficient
- Flat Marking Surface for Easy Identification



Physical Dimension in M.M.

Type	Power Rating at 25°C Mounted	A +- 0.3	B +- 0.3	C +- 0.3	D +- 0.3	E +- 0.3	F +- 0.3	G +- 0.3	H +- 0.3
YAH	25W	27	18.3	21.4	3.18	30	15.8	15.8	2.18
YAH	50W	50	39.8	21.4	3.18	30	15.8	15.8	2.18

### Electrical Specifications:

- Tolerance= +-1% +-2% +-5% (STD)
- Wattage Range 25W and 50W
- Temperature Co-Efficient=0.1Ω to 10Ω +- 100PPM Above 10Ω +- 50ΩPPM
- Dielectric Voltage=2000 VAC for 25W and 50W Unit
- Derating=Power to Zero at 275°C

Ambient derating is required for reduced chasis mounting area and for high ambient Temperatures the following curves apply to operation of unmounted resistors.

Proper Aluminium Heat Sinks Dimension in M.M.			
Watt Units	Length	Width	Thickness
25W	150	150	1.5
50W	150	150	3

## Punch Grid Resistors

### Resistance Box:

Resistors are designed to meet requirements of both A.C. & D.C. applications. The basic types of resistors are stainless steel (Grade - 304) and punched steel resistors. These are manufactured for current rating from 10 to 800 Amps. Continuous resistors of higher ratings are manufactured using 2 or more parallel paths. Resistors with short time rating up to 3000 Amps or even more for neutral earthing are possible which suitable for system voltage up to 11 KV and above.



### Applications:

E.O.T. cranes, rubber mills, steel mines, cement mills, power plants, conveyors, coke oven, blowers etc. for speed control and developing starting torques.

Dynamic breaking resistors for V.V.V.F.A.C Drives

Resistors are manufactured:

1. Air cooled type
2. Oil cooled type

Stainless steel grid resistors:

These resistors consists of stainless steel wires or strip in form of grids. The current rating generally ranges from 7 Amps to 400 Amps continuous with multiple or single paths.

Punched steel grids resistors:

The Resistors consists of grids punched from correction resisting nickel chromium alloy sheet steels. The punched steel grids are completely immune to shock vibration. They function reliably under the worst operating conditions and are particularly suited for steel mill duty. These resistors are available in wide range of current rating from 8 Amps to 800 Amps continuous with single & multiple parallel paths.

## Professional Grade Wire Wound Resistors Type = YAH = Aluminium Housed (D.B.R.)

### Special Features:

- Small Size Low Price
- High Power and Excellent Load Life Stability
- Strongly Resistant to Moisture, Solvent and Insulation
- Excellent Short Time Overload
- Both Standard Winding and Non-Inductive Type Winding are Available
- High-Surge Resistance Items are also Available

Electrical Specifications				
Operation Range of Temperature	Insulation Resistance	Dielectric Strength	Temperature Co-efficient	Ohmic Value Range
-50 <sup>0</sup> c to + 250 <sup>0</sup> c	20MΩ MIN	AC 2000V	200 PPM/ <sup>0</sup> c	1Ω to 15KΩ





  

Technical drawing of a wire-wound resistor showing dimensions A, B, C, D, E, F, and G. A trapezoidal marking area is also shown.

Four photographs of different sized aluminium housed wire-wound resistors, labeled with their power ratings: 1000W 100Ω, 750W 50Ω, 500W 50Ω, and 300W 100Ω.

Physical Dimension in M.M.					
Type	Watts	Size L	IN W	MM H	Value
YAH	60 W	95	38	25	1Ω to 5KΩ
YAH	80 W	130	38	25	1Ω to 5KΩ
YAH	100 W	165	38	25	1Ω to 5KΩ
YAH	120 W	190	38	25	1Ω to 5KΩ
YAH	150 W	215	38	25	1Ω to 5KΩ
YAH	200 W	165	65	38	1Ω to 5KΩ
YAH	300 W	215	65	38	1Ω to 5KΩ
YAH	400 W	265	65	38	1Ω to 5KΩ
YAH	500 W	210	80	40	1Ω to 5KΩ
YAH	750 W	265	80	40	1Ω to 5KΩ
YAH	1000 W	330	80	40	1Ω to 5KΩ
YAH	1200 W	400	80	40	1Ω to 5KΩ
YAH	1500 W	495	80	40	1Ω to 5KΩ
YAH	2000 W	400	60	90	1Ω to 5KΩ
YAH	2500 W	495	60	90	1Ω to 5KΩ
YAH	3000 W	540	60	90	1Ω to 5KΩ
YAH	4000 W	600	60	90	1Ω to 5KΩ

## Precision Wire Wound Resistors Industrial Grade, Professional Grade and General Purpose

Type and Application		Wattage Rating	Ohmic Range	Temperature Ambient Maximum	Tolerance	Temperature Co-efficient	Dielectric Strength
	YSR Silicone coated radial terminations. General purpose wire wound resistors with a broad power range available variable. Multipap fixed, non - inductive resistor and mounting hardware.	5, 10, 15, 20, 25, 30, 40, 50, 60, 75, 100, 120, 150, 200, 250, 300, 400, 500, 600, 800, 1000	0.1Ω to 50KΩ	70 <sup>0</sup> c/350 <sup>0</sup> c (Professional) 40 <sup>0</sup> c/275 <sup>0</sup> c (Industrial)	+ - 1% + - 2% + - 5%(STD) + - 10%	+ - 50PPM/ <sup>0</sup> c + - 100PPM/ <sup>0</sup> c + - 200PPM/ <sup>0</sup> c	100VAC
	YSE Silicone coated edge wound radial terminations available variable, multi-tap, fixed resistor, and mounting hardware.	30, 50, 100, 150, 200, 250, 300, 500	0.1Ω to 50Ω	70 <sup>0</sup> c/350 <sup>0</sup> c	+ - 10%(STD)	+ - 200PPM/ <sup>0</sup> c	1000VAC
	YSA Silicone coated axial lead for applications requiring highperformance at low cost ideal for PCB mounting available non - inductive resistor	1, 2, 3, 4, 5, 6, 7, 10, 12	0.1Ω to 100KΩ	40 <sup>0</sup> c/275 <sup>0</sup> c	+ - 1% + - 2% + - 5%(STD) + - 10%	+ - 50PPM/ <sup>0</sup> c + - 100PPM/ <sup>0</sup> c + - 200PPM/ <sup>0</sup> c	1000VAC
	YCA Ceramic case axial lead fibreproof inorganic construction high insulation ideal for PCB mounting	2, 3, 4, 5, 7, 10, 12, 15, 20	0.1Ω to 25KΩ	70 <sup>0</sup> c/350 <sup>0</sup> c	+ - 1% + - 2% + - 5%(STD) + - 10%	+ - 100PPM/ <sup>0</sup> c + - 200PPM/ <sup>0</sup> c	1500VAC

## Wire Grid Resistors

### Construction:

In these type of resistors ferrel wires are used. Wire is formed into grid by bending wire in zig-zag form. Multiple grids are assembled as a bank and then fitted in an enclosure. These resistors are most suitable where high wattage and high current is required.



### Applications:

Loading Resistors  
Dynamic Braking Resistors  
Starting Resistors  
Neutral Grounding Resistors