

Adjustable Wirewound Enamelled Resistors



"B" Ring

FEATURES

- 21 W to 180 W at 25 °C
- NF C 93-214
 - RBA 13 x 70
 - RBA 20 x 117
 - RBA 25 x 168

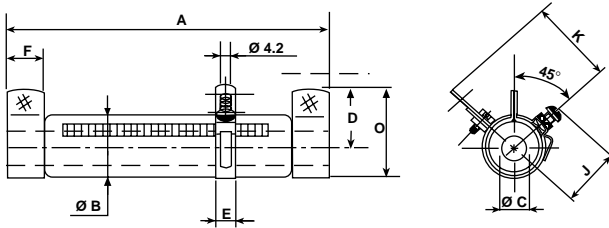


RoHS
COMPLIANT

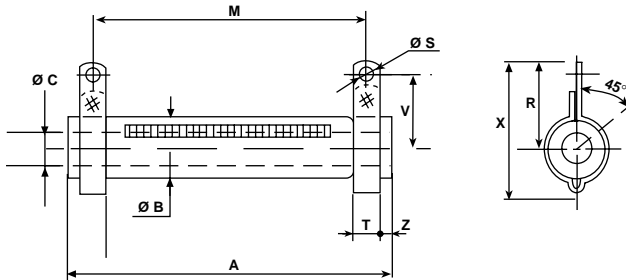
The ceramic tubular core ensures high dissipation capacity and excellent resistance to thermal shock and overload. The resistor winding is evenly coiled on the core and protected by an enamel coating. A longitudinal opening provides for one or more electrical connections by means of sliding collars equipped with a tongued connector.

DIMENSIONS in millimeters

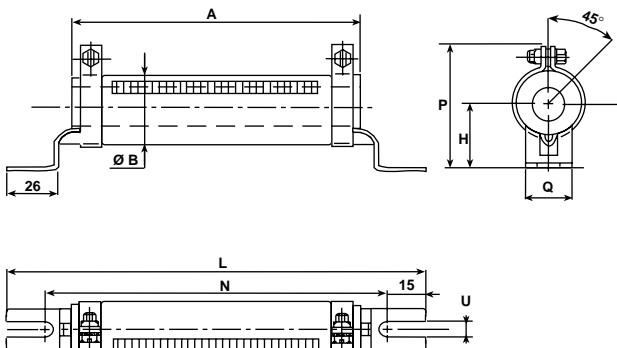
WELDED STAINLESS STEEL 304 L BAND "B"



WELDED STAINLESS STEEL 304 L COLLAR "AN" TYPE 1



SCREWED STAINLESS STEEL 304 L "CS" TYPE 1



DIMENSIONS in millimeters

RA MODEL	13 x 70	16 x 94	20 x 117	25 x 138	25 x 168	30 x 250
Connection	AN-B ⁽¹⁾	AN-B	AN-B	AN-B-CS	AN-B-CS	AN-B-CS
A ± 2	70	94	117	138	168	250
Ø B max.	16	19.5	23	28	28	33
Ø C min.	5	9	9	12	12	17
D	16 ± 0.5	17.5 ± 0.5	21 ± 0.7	23.5 ± 1	23.5 ± 1	26 ± 1
E +0.5 +0	7	8	8	8	8	8
F +0.5 +0	10.5	12	14	15	15	18
H ± 1	-	-	-	27	27	30
J max.	19.5	23	25	27.5	27.5	30
K max.	24	29.5	31.5	34	34	36.5
L -0 -4	-	-	-	199	229	317
M	56 ± 2	78 ± 2	98 ± 2	117 ± 2	147 ± 2	227 ± 2.5
N -0 -4	-	-	-	169	199	287
O max.	24.5	28	33	38.5	38.5	43.5
P ± 1.5	-	-	-	50	50	60
Q ± 0.5	-	-	-	24	24	25
R	24 ± 0.5	26.5 ± 0.5	31 ± 0.7	33.5 ± 1	33.5 ± 1	36 ± 1
S	4.2	4.2	4.2	5.7	5.7	5.7
T	6.35	6.35	6.35	9	9	13
U ± 0.5	-	-	-	6.5	6.5	9
V	20 ± 0.5	21 ± 0.5	24 ± 0.7	28.5 ± 1	28.5 ± 1	33 ± 1
X	34.5 ± 1	38 ± 1	42 ± 1	51 ± 1.5	51 ± 1.5	55 ± 1.5
Z approx	3.5	5	6	6	6	5
Average unit weight in g	40	70	116	200	225	415

Note

⁽¹⁾ Also with CS and CR collars. See RW datasheet

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MECHANICAL SPECIFICATIONS

Mechanical Protection	Vitreous enamel
Resistive Element	Ni-Cr wire
Connections	B band AN or CS collar
Average Unit Weight	40 g to 415 g

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits	- 55 °C + 350 °C
Climatic Category	- 55 °C/+ 200 °C/56 days

ELECTRICAL SPECIFICATIONS

Resistance Range	33 to 22K (E6 series)
Tolerance	
Standard	± 10 %
Power Rating	21 W to 180 W at 25 °C
Temperature Coefficient	+ 75 ppm/°C (typical)

PERFORMANCE			
TESTS	CONDITIONS	REQUIREMENTS	TYPICAL VALUES AND DRIFTS
Short Time Overload	10 Pr 5 s Voltage < 6000 V	2 % or 0.05	0.5 %
Climatic Sequence	- 55 °C + 200 °C 5 cycles	3 % or 0.05 Insulation resistance > 100M	1 %
Humidity (Steady State)	56 days 95 % R.H.	2 % or 0.05 Insulation resistance > 100M	0.5 %
Thermal Shock	Load at Pr followed by exposure at - 55 °C/15	2 % or 0.05	0.5 %
Resistor Strength	200 N ± 10 N	2 % or 0.05	0.25 %
Vibration	55/10	1 %* or 0.05	0.5 %
Terminal Strength	AN B Traction 40 Ncm Torque 60 Ncm	1 % or 0.05	0.25 %
Load Life	1000 h at Pr 25 °C 90'/30'	5 %	1.5 %

Note

- 1 % of total resistance and 2 % between sliding collar and fixed connection

SPECIAL FEATURES						
RA STYLE	13 x 70	16 x 94	20 x 117	25 x 138	25 x 168	30 x 250
Designation NF C 93-214	RBA 13 x 70	-	RBA 20 x 117	-	RBA 25 x 168	-
Power Rating NF C 93-214 at 25 °C	13 W	-	25 W	-	50 W	-
Maximum Power Rating at 25 °C	21 W	35 W	50 W	75 W	120 W	180 W
Ohmic Range (E6, E24 series)	33 3.9K	68 3.9K	100 4.7K	150 6.8K	220 10K	330 22K

ADMISSIBLE RATED AMPERAGE

This must in all cases be less than:

$$I_n = \sqrt{\frac{P_n(W)}{R_n(\Omega)}}$$

SLIDING COLLAR

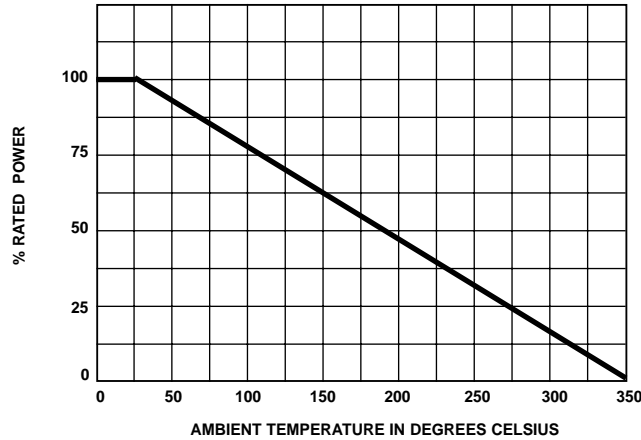
Resistors are normally supplied with 1 sliding collar fitted and locked in a specific position. Additional collars can be supplied and adjusted at the factory to special order (on request).*

* Quote ohmic value and tolerance of each resistance section, and Rn value.

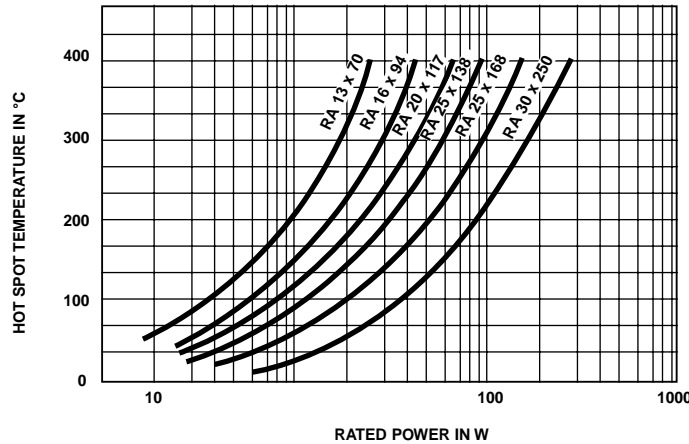
MAXIMUM ADDITIONAL COLLARS						
MODEL AND TYPE	RA 13 x 70	RA 16 x 94	RA 20 x 117	RA 25 x 138	RA 25 x 168	RA 30 x 250
Additional sliding collar	1	1	1	2	3	4

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POWER RATING CHART



TEMPERATURE RISE



MARKING

SFERNICE trademark, model, style, NF style (if applicable) ohmic value (in Ω), tolerance (in %), manufacturing date.

ORDERING INFORMATION

RA	13 x 70	AN	470U	$\pm 10\%$	1 C. SUP.	BO10	e	
MODEL	STYLE	SPECIAL DESIGN	CONNECTIONS	OHMIC VALUE	TOLERANCE	ADDITIONAL SLIDING COLLAR	PACKAGING	LEAD (Pb)-FREE
		In option	Custom items are subject to extra-charge and min. order. Please see price list.					

GLOBAL PART NUMBER INFORMATION

R	A	3	0	2	5	0	A	6	8	0	R	0	K	B	0	3			
GLOBAL MODEL		SIZE			LEADS		OHMIC VALUE				TOLERANCE		PACKAGING			SPECIAL			
RA		13X70 16X94 20117 25138 25168 30250			A = AN B = B C = CS D = CR		The first four digits are significant figures and the last digit specifies the number of zeros to follow. R designates decimal point. 680R0 = 630 Ω 20302 = 20.3 k Ω 88R88 = 88.88 Ω				K = 10 %		Box: BO10 BO10NA BO20 BO30 BO30NA BO40 BO40NA			As applicable. Example: BA7			