

**Series CR**  
**Precision Power Wirewound resistors**  
**axial, ceramic carrier, coated**



**Specification**

Type		251-0	253-0	254-0	255-0	256-0	257-0	258-0	259-0
Power rating	$P_{40}$	1,1	2,2	3,0	3,3	4,0	5,0	5,5	7,2
$\vartheta_0 = 235^\circ\text{C}$	$P_{70}$	1,0	2,0	2,5	3,0	3,5	4,3	5,0	6,5
Resistance range		see Page 2							
Tolerance	%	Rmin. ... Rmax.: $\pm 5, \pm 2, \pm 1$ ; $R \geq 1R0: \pm 0,5$							
Temperature coefficient	$10^{-6} * K^{-1}$	see Table							
working voltage	$V_{RMS}$	$\sqrt{P_{70} \cdot R}$							
Insulation voltage (1min.)	$V_{RMS}$	max. 75V							
Insulation resistance	$\Omega$	not insulated							
Derating linear	$^\circ\text{C}$	70 ... 350 (0W)							
Climatic category		55/200/56							
Temperature range	$^\circ\text{C}$	- 55 ... 350							
Thermal resistance	$KW^{-1}$	280	140	112	94	80	65	56	43
Failure rate (Total, $\vartheta_0$ max., 60% conf. lev.)	$10^{-9} * h^{-1}$	appr. 10, depends on value							
Endurance ( $P_{70}$ , $70^\circ\text{C}$ , 1000h, intm.)	$\left[ \frac{\Delta R}{R} \right] \%$	$\pm 3,0$ average							
Damp heat, steady state ( $40^\circ\text{C}$ , 93% r. h., 56d)	$\left[ \frac{\Delta R}{R} \right] \%$	$\pm 1,0$							
Climatic sequence (IEC 115-1/23)	$\left[ \frac{\Delta R}{R} \right] \%$	$\pm 1,0$							
Resistance to soldering heat ( $260^\circ\text{C}$ , 10s, 3mm)	$\left[ \frac{\Delta R}{R} \right] \%$	$\pm 0,2$ typ.							
Solderability	s	2,5 Flowtime, solderglobule test, IEC 60068-2-20							
Terminal strength	$\left[ \frac{\Delta R}{R} \right] \%$	$\pm 0,2$							
Terminal tensile strength	N	50							
Marking		printed in clear							

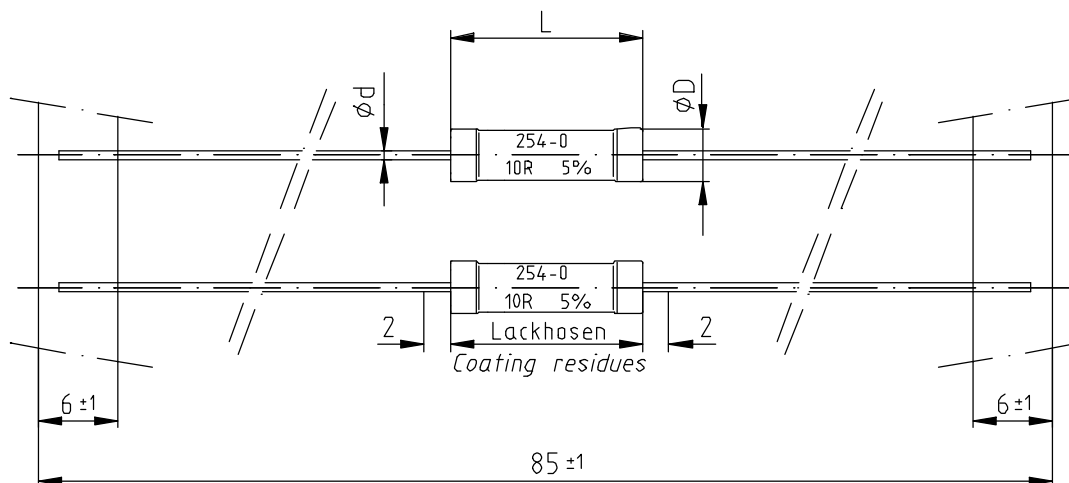
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Type	Resistance range		Thermal EMF to Cu			
	min.	max.	$-40 \frac{\mu V}{K}$ Constantan		$+1 \frac{\mu V}{K}$ Nichrome	
251-0	R10	82R	$\geq R50$	$< 62R$	$\geq 62R$	$\leq 82R$
253-0	R10	360R	$\geq R10$	$< 160R$	$\geq 160R$	$\leq 360R$
254-0	R10	360R	$\geq R10$	$< 160R$	$\geq 160R$	$\leq 360R$
255-0	R10	470R	$\geq R10$	$< 220R$	$\geq 200R$	$\leq 470R$
256-0	R10	750R	$\geq R15$	$< 330R$	$\geq 330R$	$\leq 750R$
257-0	R20	1K1	$\geq R20$	$< 430R$	$\geq 430R$	$\leq 1K1$
258-0	R20	1K3	$\geq R20$	$< 430R$	$\geq 430R$	$\leq 1K3$
259-0	R30	2K0	$\geq R30$	$< 800R$	$\geq 800R$	$\leq 2K0$

Dimensions in mm:



Type	L max.	øD * max.	ød
251-0	9,0	3,0	0,65
253-0	14,5	4,0	0,65
254-0	12,6	5,5	0,80
255-0	15,0	8,5	0,80
256-0	17,0	5,5	0,80
257-0	18,0	8,5	0,80
258-0	22,0	8,5	0,80
259-0	27,0	8,5	0,80

\*  $R \leq 1R0$  Dmax. +1

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Packaging:

Type	Packaging	Pieces	Pack.-Code
251-0	taped	1000	1B
253-0	taped	1000	1J
254-0	taped	1000	1J
255-0	taped	500	1J
256-0	taped	1000	1J
257-0	taped	500	1J
258-0	taped	500	1Q
259-0	taped	500	1Q

Ordering example:

259-0                      1K0                      1%                      1Q  
Type                      Value                      Tolerance                      Pack.-Code

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