

# Wirewound Resistors, Industrial Power, Tubular, Metal Case, MCRL



#### **FEATURES**

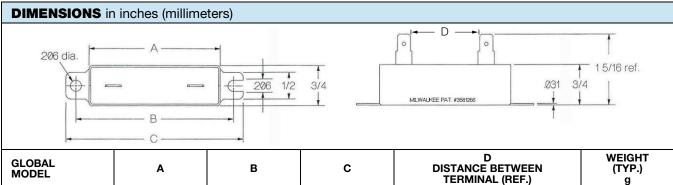
- High power to size ratio
- Flameproof inorganic compound
- All welded construction



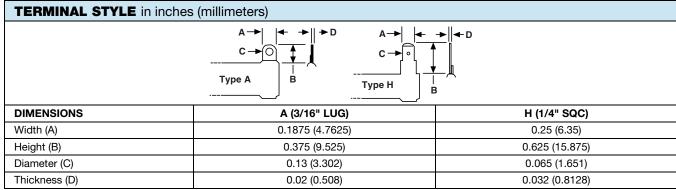
RoHS

- Heat sink mountable to steel panel at least 10" x 10" x 0.04" (254 mm x 254 mm x 1.02 mm)
- Heat transfer increased by use of thermally conductive grease or epoxy
- Wirewound
- Material categorization: For definitions of compliance please see <a href="https://www.vishay.com/doc?99912"><u>www.vishay.com/doc?99912</u></a>

STANDARD ELECTRICAL SPECIFICATIONS								
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING WITH HEAT SINK W	POWER RATING WITHOUT HEAT SINK W	RESISTANCE RANGE $\Omega$	TOLERANCE ± %	TERMINAL STYLE		
MCRL0045	12M16	45	20	1.1 to 2750	5, 10	Α		
MCRL0070	12M40	70	40	0.2 to 22K	5, 10	Н		
MCRL0100	12M59	100	50	0.2 to 66K	5, 10	Н		
MCRL0125	12M89	125	65	0.25 to 76K	5, 10	Н		



MODEL	A	В	C	DISTANCE TERMINA	(TYP.) g	
MCRL0045	1 (25.4)	1.438 (36.513)	1.875 (47.625)	5/16	0.312	33
MCRL0070	2.5 (63.5)	3 (76.2)	3.375 (85.725)	1 1/4	1.25	77
MCRL0100	3.688 (93.675)	4.125 (104.775)	4.563 (115.90)	2 7/16	2.44	108
MCRL0125	5.562 (141.275)	6 (152.4)	6.438 (163.525)	4 1/8	4.12	185
	•	•	•	•	•	•
TERMINAL STYLE in inches (millimeters)						

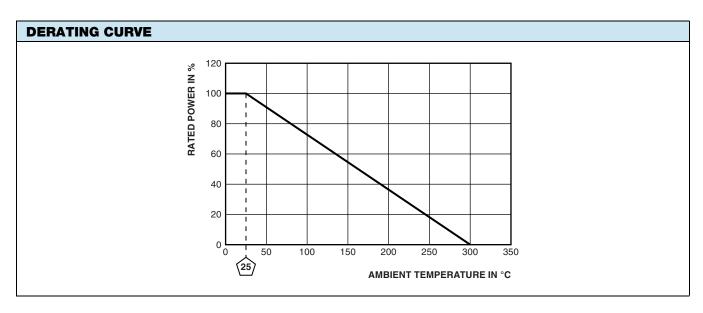


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TECHNICAL SPECIFICATIONS				
PARAMETER	UNIT	RESISTOR CHARACTERISTICS		
Power rating	W	20 to 125		
Resistance range	Ω	0.2 to 76K		
Resistance tolerance	%	5 for above 1 $\Omega$ , 10 for below 1 $\Omega$		
TCR	ppm/°C	± 400, ± 180, ± 130, ± 20 (varies by wattage and resistance)		
Operating temperature	°C	-40 to +300		
Temperature rise	°C	275 above an ambient of 25 °C		
Maximum altitude	f.a.s.l. (m.a.s.l.)	derate above 4921 f.a.s.l. (1500 m.a.s.l.)		
Short-term overload (surge)		10 x rated power for 5 s		
Surge windings		available		
Maximum working voltage		$(P \times R)^{1/2}$		
Insulation resistance	Ω	1M		
Dielectric voltage	V <sub>RMS</sub>	up to 1500 (upon request)		
Creepage	inch (mm)	0.50 (12.7) typical		
Terminal sleeves		available for all sizes, increases creepage distance for 600 V applications		
Inductance	μΗ	0.2 to 800 (varies by wattage and resistance)		
Non-inductive winding		available		
Terminal strength	lb	n/a		
Electrical or mechanical customization		available: www.vishay.com/doc?31859		



MATERIAL SPECIFICATIONS				
Element	copper-nickel, nickel-chrome, iron-chrome-aluminum			
Core	electrical porcelain			
Potting compound	electrical cement or special high temperature silicone			
Standard terminals	stainless steel			
Part marking	value, date code, MRC			





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GLOB	GLOBAL PART NUMBER INFORMATION							
Global F	Global Part Numbering example: MCRL007022K00JHB00 (MCRL0070 22K 5 % 1/4SQC B)							
М	CR	L	0 7	0 2	2 K	0 0 J H	B 0 0	
		<del></del>						
MODEL (3 digits)	TYPE (1 digit)	SIZE (4 digits)	VALUE (5 digits)	TOLERANCE (1 digit)	TERMINAL (1 digit)	PACKAGING (1 digit)	SPECIAL (2 digits)	
MCR	L = Cement	0045 = 45 W 0100 = 100 W Available sizes: 0045 0070 0100 0125	$\begin{array}{l} \textbf{R} = \text{Decimal} \\ \textbf{K} = \text{Thousand} \\ \textbf{R1500} = 0.15 \ \Omega \\ \textbf{1K500} = 1.5 \ \text{k}\Omega \\ \end{array}$ Check datasheet for available value range	<b>J</b> = ± 5.0 % <b>K</b> = ± 10 %	A = 3/16" lug (3/16L) B = A extended length (3/16XL) H = 1/4" single quick-connect (1/4SQC)	<b>B</b> = Bulk	00 = Standard NI = Non-inductive SW = Surge winding	

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