Wirewound Resistors, Industrial Power, Edgewound

FEATURES

- High temperature silicon coating
- Complete welded construction
- Excellent for intermittent power and pulsing applications
- Designed to meet heavy-duty requirement where space is at a premium
- Excellent stability in operation (< 3 % change in resistance)

Pb-free Available

e3

RoHS* COMPLIANT

STANDARD ELECTRICAL SPECIFICATIONS

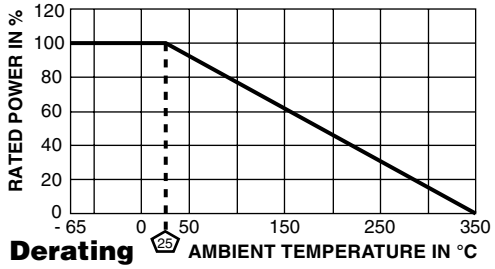
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING $P_{25\ °C}$ W	RESISTANCE RANGE Ω ± 10 % standard, ± 5 % available	WEIGHT (typical) g
HLZ033	HLZ-33	35	0.05 - 1.9	18
HLZ090	HLZ-90	90	0.10 - 5.7	36
HLZ099	HLZ-99	100	0.15 - 6.1	41
HLZ105	HLZ-105	105	0.20 - 7.4	49
HLZ110	HLZ-110	110	0.20 - 8.6	54
HLZ140	HLZ-140	140	0.08 - 9.0	109
HLZ165	HLZ-165	165	0.35 - 13.0	91
HLZ220	HLZ-220	220	0.10 - 16.0	163
HLZ240	HLZ-240	240	0.10 - 18.0	186
HLZ275	HLZ-275	275	0.15 - 23.0	224
HLZ300	HLZ-300	300	0.15 - 25.0	236
HLZ375	HLZ-375	375	0.20 - 32.0	286

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	HLZ RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 90 for 0.1 Ω to 0.99 Ω; ± 50 for 1 Ω to 9.9 Ω; ± 30 for 10 Ω and above
Dielectric Withstanding Voltage	V_{AC}	1000, from terminal to mounting hardware
Short Time Overload	-	10 x rated power for 5 s
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Insulation Resistance	Ω	1000 MΩ minimum dry, 100 MΩ minimum after moisture test
Operating Temperature Range	°C	- 55 to + 350

MATERIAL SPECIFICATIONS

Element: Copper-nickel alloy of nickel-chrome alloy, depending on resistance range
Core: Ceramic, steatite
Coating: Special high temperature silicone
Standard Terminals: Model "Z" terminals are tinned steel
Terminal Bands: Steel
Part Marking: DALE, model, wattage, value, tolerance, date code



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: HLZ16506Z10R00KJ (preferred part number format)

H	L	Z	1	6	5	0	6	Z	1	0	R	0	0	K	J		

GLOBAL MODEL	TERMINAL DESIGNATION	TERMINAL FINISH	RESISTANCE VALUE	TOLERANCE	PACKAGING CODE	SPECIAL
HLZ165 (See "Standard Electrical Specifications" table above for additional P/N's)	06 07 15	**E** = Lead (Pb)-free **Z** = Tin/lead **N** = Nickel	**R** = Decimal **K** = Thousand **10R00** = 10.0 Ω **1K000** = 1 kΩ	**J** = ± 5.0 % **K** = ± 10.0 %	**E** = Lead (Pb)-free skin pack **J*** = Skin pack (J01)	(Dash Number) (up to 2 digits) From **1 - 99** as applicable

* Tin/lead for type "Z", lead (Pb)-free for type "N"

Historical Part Number Example: HLZ-165-06Z 10 Ω 10 % J01 (will continue to be accepted)

HLZ-165	06Z	10 Ω	10 %	J01
HISTORICAL MODEL	TERMINAL/FINISH	RESISTANCE VALUE	TOLERANCE	PACKAGING

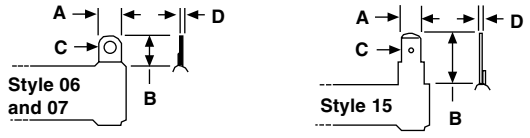
* Pb containing terminations are not RoHS compliant, exemptions may apply

For technical questions, contact: ww2bresistors@vishay.com

DIMENSIONS in inches [millimeters]

MODEL	CORE DIMENSIONS			TERMINAL SETBACK ± 0.031 [± 0.79]	DISTANCE BETWEEN TERMINALS (REF.)	TERMINAL DESIGNATION		MOUNTING HARDWARE OPTIONS
	LENGTH ± 0.062 [± 1.59]	O.D.	I.D. ± 0.031 [± 0.79]			STANDARD	OPTIONAL	
HLZ033	2.000 [50.8]	0.563 [14.29]	0.313 [7.94]	0.094 [2.38]	1.437	06Z	15N	101, 203, 301
HLZ090	4.000 [101.6]	0.563 [14.29]	0.313 [7.94]	0.094 [2.38]	3.312	06Z	15N	101, 203, 301
HLZ099	3.500 [88.9]	0.750 [19.05]	0.500 [12.70]	0.125 [3.18]	2.750	06Z	15N	102, 206, 303
HLZ105	4.000 [101.6]	0.750 [19.05]	0.500 [12.70]	0.125 [3.18]	3.250	06Z	15N	102, 206, 303
HLZ110	4.500 [114.3]	0.750 [19.05]	0.500 [12.70]	0.125 [3.18]	3.750	06Z	15N	102, 206, 303
HLZ140	4.000 [101.6]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	2.812	07Z	15N	103, 205, 303
HLZ165	6.500 [165.1]	0.750 [19.05]	0.750 [19.05]	0.125 [3.18]	5.750	06Z	15N	102, 206, 303
HLZ220	6.000 [152.4]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	4.812	07Z	15N	103, 205, 303
HLZ240	6.500 [165.1]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	5.312	07Z	15N	103, 205, 303
HLZ275	8.000 [203.2]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	6.812	07Z	15N	103, 205, 303
HLZ300	8.500 [215.9]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	7.312	07Z	15N	103, 205, 303
HLZ375	10.500 [266.7]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	9.312	07Z	15N	103, 205, 303

TERMINAL DIMENSIONS



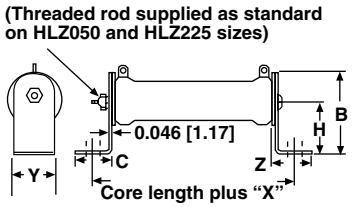
DIMENSION	TERMINAL TYPE		
	06	07	15
A	0.250 [6.35]	0.375 [9.53]	0.250 [6.35]
B	0.563 [14.29]	0.625 [15.88]	0.594 [15.08]
C	0.166 [4.22]	0.173 [4.39]	0.065 [1.65]
D	0.020 [0.51]	0.020 [0.51]	0.031 [0.79]

TERMINAL FINISH

"E" finish - 100 % Sn coated steel. "Z" finish - 60/40 Sn/Pb coated steel. "N" finish - nickel coated steel. Finish for terminal style 14 and 15 are limited to nickel plated steel (N).

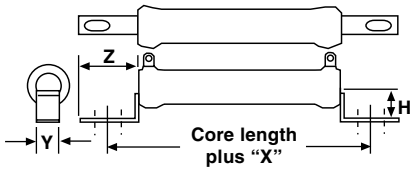
MOUNTING HARDWARE DIMENSIONS in inches [millimeters]

HORIZONTAL THRU-BOLT



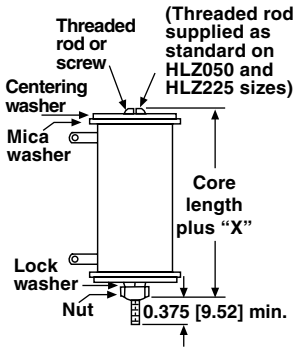
DIMENSION	BRACKET TYPE		
	101	102	103
X	1.063 [26.99]	1.063 [26.99]	1.063 [26.99]
Y	0.500 [12.70]	0.750 [19.05]	1.250 [31.75]
Z	0.859 [21.83]	0.859 [21.83]	1.000 [25.40]
H	1.000 [25.40]	1.250 [31.75]	1.500 [38.10]
MOUNTING SLOT	0.219 x 0.438 [5.56 x 11.11]	0.219 x 0.438 [5.56 x 11.11]	0.281 x 0.563 [7.14 x 14.29]
C	0.750 [19.05]	0.750 [19.05]	0.875 [22.23]
B	1.375 [34.93]	1.750 [44.45]	2.125 [53.98]

PUSH-IN



DIMENSION	BRACKET TYPE		
	203	205	206
X	0.625 [15.88]	0.813 [20.64]	0.719 [18.26]
H	0.672 [17.07]	1.391 [35.32]	0.969 [24.61]
Y	0.250 [6.35]	0.500 [12.70]	0.375 [9.53]
Z	0.469 [11.91]	0.688 [17.46]	0.625 [15.88]
HOLE (Dia.)	0.161 [4.09]	0.196 x 0.260 [4.98 x 6.60]	0.196 x 0.260 [4.98 x 6.60]

VERTICAL THRU-BOLT



DIMENSION	BRACKET TYPE	
	301	303
X (Approximate)	0.438 [11.11]	0.500 [12.70]
THREAD	8-32	10-32

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