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)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free Available

e3

RoHS* Available

HALOGEN FREE Available

GREEN (5-2008) Available

Note

* This datasheet provides information about parts that are RoHS-compliant and / or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information / tables in this datasheet for details.

STANDARD ELECTRICAL SPECIFICATIONS

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

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	HLZ RESISTOR CHARACTERISTICS
Temperature Coefficient	ppm/°C	± 30 for 10 Ω and above; ± 50 for 1 Ω to 9.9 Ω; ± 90 for 0.1 Ω to 0.99 Ω
Short Time Overload	-	10 x rated power for 5 s
Terminal Strength	lb	10 minimum
Dielectric Withstanding Voltage	V_{AC}	1000, from terminal to mounting hardware
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

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: HLZ16506Z10R00KJ

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** [1] = skin pack (J01)	(dash number) (up to 2 digits) from **1 to 99** as applicable

Note

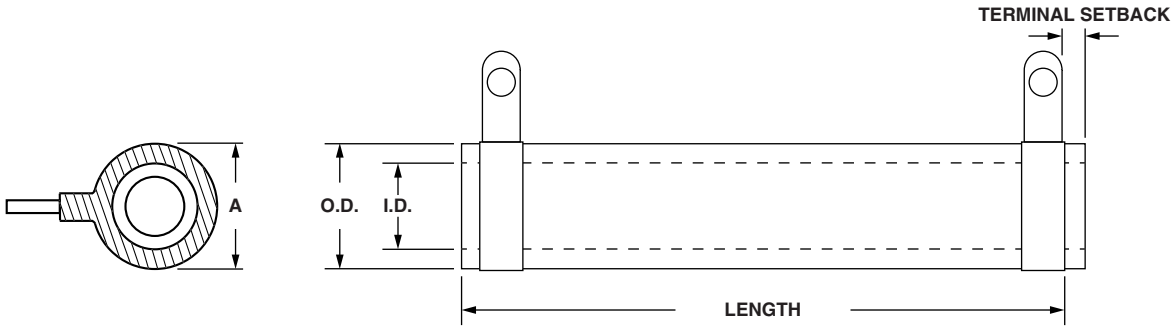
[1] Tin / lead for type "Z", lead (Pb)-free for type "N"

Historical Part Numbering example: HLZ-165-06Z 10 Ω 10 % J01

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

For technical questions, contact: ww2dresistors@vishay.com

DIMENSIONS in inches [millimeters]

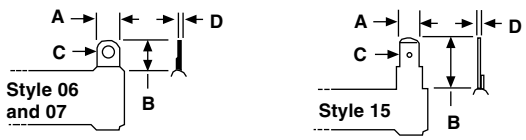


MODEL	CORE DIMENSIONS			TERMINAL SETBACK ± 0.031 [± 0.79]	DISTANCE BETWEEN TERMINALS (REF.)	TERMINAL DESIGNATION		BRACKET TYPE (1)
	LENGTH ± 0.062 [± 1.59]	O.D.	I.D. ± 0.031 [± 0.79]			STANDARD	OPTIONAL	
HLZ033	2.000 [50.8]	0.563 [14.29]	0.313 [7.94]	0.094 [2.38]	1.437	06Z	15N	101, 203, 301
HLZ090	4.000 [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]	2.75	06Z	15N	102, 206, 303
HLZ105	4.000 [101.6]	0.750 [19.05]	0.500 [12.70]	0.125 [3.18]	3.25	06Z	15N	102, 206, 303
HLZ110	4.500 [114.3]	0.750 [19.05]	0.500 [12.70]	0.125 [3.18]	3.75	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]	5.75	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

Note

(1) Brackets are available for mounting HLZ series resistors - see “Mounting Hardware” section.

TERMINAL DIMENSIONS



DIMENSION	TERMINAL STYLE		
	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]

MATERIAL SPECIFICATIONS

Element: copper-nickel alloy of nickel-chrome alloy, depending on resistance range

Core: ceramic, steatite

Coating: special high temperature silicone

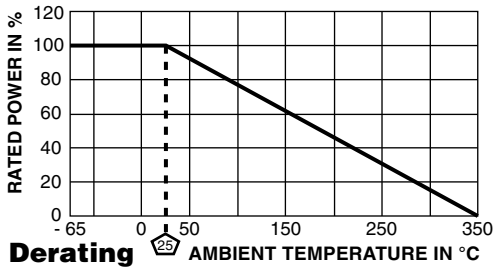
Standard Terminals: model “E” terminals are tinned steel

Terminal Bands: steel

Part Marking: Vishay Dale, model, wattage, value, tolerance, date code

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

Mounting Hardware is available for HLZ resistors, see HL Brackets and Sliders datasheet for more information: www.vishay.com/doc?30279

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