Wirewound Resistors, Industrial Power, Adjustable Tapped Tubular

FEATURES

- Adjustable resistor or voltage divider
- High temperature silicon coating
- Can be used to quickly obtain odd resistance values
- One or more adjustable lugs can be provided for voltage divider applications
- Can be used as multi-tap resistor
- 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
HLA012	HLA-12	12	1.0 to 10K	5	6.69
HLA020	HLA-20	20	1.0 to 18K	5	12.57
HLA025	HLA-25	25	1.0 to 23K	5	20.72
HLA026	HLA-26	26	1.0 to 31K	5	15.34
HLA050	HLA-50	50	1.0 to 57K	5	42.08
HLA051	HLA-51	51	1.0 to 95K	5	51.96
HLA060	HLA-60	60	1.0 to 74K	5	65.64
HLA065	HLA-65	65	1.0 to 130K	5	64.82
HLA080	HLA-80	80	1.0 to 111K	5	121.58
HLA100	HLA-100	100	1.0 to 132K	5	91.37
HLA120	HLA-120	120	1.0 to 180K	5	183.82
HLA130	HLA-130	130	1.0 to 192K	5	192.36
HLA160	HLA-160	160	1.0 to 249K	5	245.86
HLA175	HLA-175	175	1.0 to 398K	5	250.80
HLA225	HLA-225	225	1.0 to 337K	5	309.97

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	HLA 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 [1]	-	10 x rated power for 5 s
Maximum Working Voltage	V	$(P \times R)^{1/2}$
Operating Temperature Range	°C	-55 to +350

Note

[1] Short time overload is rated without adjustable lug attached.

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: HLA22507Z200R0JJ

H	L	A	2	2	5	0	7	Z	2	0	0	R	0	J	J		

GLOBAL MODEL	TERMINAL DESIGNATION	TERMINAL FINISH	VALUE	TOLERANCE	PACKAGING	SPECIAL
HLA225 (see "Standard Electrical Specifications" table above for additional P/N's)	**02** **05** **06** **07** **14** **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** [2] = skin pack (J01)	(dash number) (up to 2 digits) from **1 to 99** as applicable

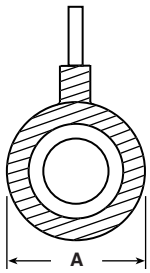
Note

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

Historical Part Numbering example: HLA-225-07Z 200 Ω 5 % J01

HLA-225	07Z	200 Ω	5 %	J01
HISTORICAL MODEL	TERMINAL/FINISH	RESISTANCE VALUE	TOLERANCE	PACKAGING

DIMENSIONS



(Includes Coating and Terminal Band)

GLOBAL MODEL	DIMENSIONS in inches [millimeters]									
	A (MAX.)	CORE DIMENSIONS			TERMINAL SETBACK ± 0.031 [0.79]	DISTANCE BETWEEN TERMINALS (REF.)	TERMINAL DESIGNATION		SLIDER MODEL NUMBER (1)	BRACKET TYPE (1)
		LENGTH ± 0.063 [1.59]	O.D.	I.D. ± 0.031 [0.79]			STANDARD	OPTIONAL		
HLA012	0.406 [10.32]	1.750 [44.45]	0.313 [7.94]	0.188 [4.76]	0.094 [2.38]	1.187	05Z	14 N	70	101, 204, 301
HLA020	0.563 [14.29]	2.000 [50.80]	0.438 [11.11]	0.313 [7.94]	0.094 [2.38]	1.437	02Z	14 N	71	101, 203, 301
HLA025	0.688 [17.46]	2.000 [50.80]	0.563 [14.29]	0.313 [7.94]	0.094 [2.38]	1.312	06Z	15 N	72	101, 203, 301
HLA026	0.563 [14.29]	3.000 [76.20]	0.438 [11.11]	0.313 [7.94]	0.094 [2.38]	2.437	02Z	14 N	71	101, 203, 301
HLA050	0.688 [17.46]	4.000 [101.60]	0.563 [14.29]	0.313 [7.94]	0.094 [2.38]	3.312	06Z	15 N	72	101, 203, 301
HLA051	0.906 [23.02]	3.500 [88.90]	0.750 [19.05]	0.500 [12.70]	0.125 [2.38]	2.75	06Z	15 N	73	102, 206, 303
HLA060	0.906 [23.02]	4.000 [101.60]	0.750 [19.05]	0.500 [12.70]	0.125 [2.38]	3.250	06Z	15 N	73	102, 206, 303
HLA065	0.906 [23.02]	4.500 [114.30]	0.750 [19.05]	0.500 [12.70]	0.125 [2.38]	3.750	06Z	15 N	73	102, 206, 303
HLA080	1.313 [33.34]	4.000 [101.60]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	2.812	07Z	15 N	74	103, 205, 303
HLA100	0.906 [23.02]	6.500 [165.10]	0.750 [19.05]	0.500 [12.70]	0.125 [2.38]	5.750	06Z	15 N	73	102, 206, 303
HLA120	1.313 [33.34]	6.000 [152.40]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	4.812	07Z	15 N	74	103, 205, 303
HLA130	1.313 [33.34]	6.500 [165.10]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	5.312	07Z	15 N	74	103, 205, 303
HLA160	1.313 [33.34]	8.000 [203.20]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	6.812	07Z	15 N	74	103, 205, 303
HLA175	1.313 [33.34]	215.90 [8.500]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	7.312	07Z	15 N	74	103, 205, 303
HLA225	1.313 [33.34]	10.500 [266.70]	1.125 [28.58]	0.750 [19.05]	0.219 [5.56]	9.312	07Z	15 N	74	103, 205, 303

Note

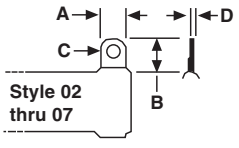
(1) Brackets and sliders are available for mounting HLA series resistors - see Mounting Hardware.

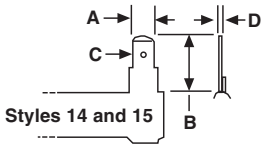
ADJUSTABLE LUGS

The coating protects the resistance wire from shifting and shorting to other turns during adjustment. However, the following three steps should always be taken whenever adjustments are made:

1. Turn off power to avoid possible operator injury and damage to the unit.
2. Loosen adjustable lug until it will slide completely free, without touching the exposed wire.
3. When adjustment point has been selected, retighten lug only enough to assure a firm contact, do not tighten beyond this point. Failure to follow these three steps in order can result in damage to the resistor.

TERMINAL DIMENSIONS





DIMENSION	TERMINAL STYLE					
	02	05	06	07	14	15
A	0.188 [4.76]	0.188 [4.76]	0.250 [6.35]	0.375 [9.53]	0.188 [4.76]	0.250 [6.35]
B	0.406 [10.32]	0.438 [11.118]	0.563 [14.29]	0.625 [15.88]	0.563 [14.29]	0.594 [15.08]
C	0.093 [2.36]	0.104 [2.64]	0.166 [4.22]	0.173 [4.39]	0.050 [1.27]	0.065 [1.65]
D	0.020 [0.51]	0.020 [0.51]	0.020 [0.51]	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 is limited to nickel plated steel (N).

MOUNTING HARDWARE

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

MATERIAL SPECIFICATIONS

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

Core: ceramic, steatite

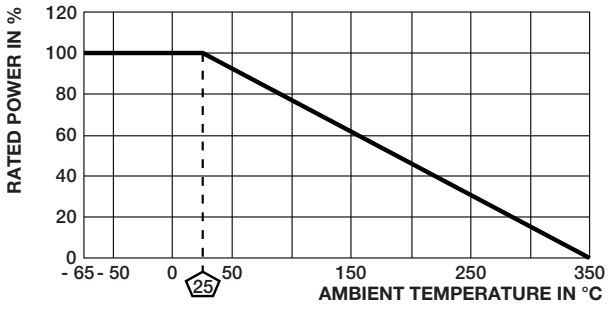
Coating: special high temperature silicone

Standard Terminals: model "E" terminals are tinned steel

Terminal Bands: steel

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

DERATING



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