Aluminum Housed Compact Wirewound Resistor



FEATURES

- Power rating up to 500 W
- High overload capacity
- Protection IP20 or IP65
- Enhanced humidity protection
- Complete housed construction
- Multiple construction for higher power rating
- Heatsink mounting
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

RoHS COMPLIANT

HALOGEN FREE

GREEN (5-2008)

APPLICATIONS

- Drive controllers
- Railway
- Frequency inverter
- Renewable energy

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	POWER RATING W $P_{40\,°C}$	RESISTANCE RANGE (1) Ω	TEMPERATURE COEFFICIENT ppm/K	TOLERANCE ± %	PROTECTION	MAX. PERMISSIBLE OPERATING VOLTAGE
VACR0500	50	3.0 to 560	50 to 150	10	IP65	UL 600 V/UL 1000 V
VACR1000	100	3.0 to 560	50 to 150	10	IP65	EN 1000 V DC
VACR1001		2.7 to 910	50 to 150	10	IP65	UL 600 V/UL 1000 V
VACR1003		6.2 to 1.2K	50 to 150	10	IP65	UL 600 V/UL 1000 V
VACR1202	120	4.7 to 1.0K	50 to 150	10	IP65	UL 600 V/UL 1000 V
VACR1301	130	2.7 to 910	50 to 150	10	IP65	EN 1000 V DC
VACR1501	150	2.7 to 910	50 to 150	10	IP20	UL 600 V/UL 1000 V
VACR1502		4.7 to 1.0K	50 to 150	10	IP65	EN 1000 V DC
VACR1503		6.2 to 1.2K	50 to 150	10	IP65	EN 1000 V DC
VACR1504		6.2 to 1.2K	50 to 150	10	IP65	UL 600 V/UL 1000 V
VACR1505		9.1 to 1.5K	50 to 150	10	IP65	UL 600 V/UL 1000 V
VACR1804	180	6.2 to 1.2K	50 to 150	10	IP65	EN 1000 V DC
VACR1806		8.2 to 1.8K	50 to 150	10	IP65	UL 600 V/UL 1000 V
VACR2001	200	3.3 to 910	50 to 150	10	IP20	EN 1000 V DC
VACR2005		9.1 to 1.5K	50 to 150	10	IP65	EN 1000 V DC
VACR2502	250	4.7 to 1.0K	50 to 150	10	IP20	UL 600 V/UL 1000 V
VACR2506		8.2 to 1.8K	50 to 150	10	IP65	EN 1000 V DC
VACR3002	300	4.7 to 1.0K	50 to 150	10	IP20	EN 1000 V DC
VACR3004		6.2 to 1.2K	50 to 150	10	IP20	UL 600 V/UL 1000 V
VACR4004	400	6.2 to 1.2K	50 to 150	10	IP20	EN 1000 V DC
VACR4006		8.2 to 1.8K	50 to 150	10	IP20	UL 600 V/UL 1000 V
VACR5006	500	8.2 to 1.8K	50 to 150	10	IP20	EN 1000 V DC

Notes

- VACR100 and VACR200 as special flat version on request.

(1) Resistance value to be selected from E24 series, other values on request.

For technical questions, contact: ww1resistors@vishay.com

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PULSE POWER [1] in W at T_a = 40 °C

MODEL	MAX. PERMISSIBLE OPERATING VOLTAGE	SIZE: 40 mm x 20 mm				SIZE: 60 mm x 30 mm			
		PULSE TIME [2]							
		6 %	15 %	25 %	40 %	6 %	15 %	25 %	40 %
VACR050	UL 600 V/UL 1000 V	550	200	150	100	-	-	-	-
VACR100 [3]	UL 600 V/UL 1000 V	950	400	250	150	900	500	300	200
	EN 1000 V DC	1600	650	400	250	-	-	-	-
VACR120	UL 600 V/UL 1000 V	-	-	-	-	1080	600	360	240
VACR130	EN 1000 V DC	-	-	-	-	1170	650	390	260
VACR150	UL 600 V/UL 1000 V	1600	650	400	250	1350	750	450	300
	EN 1000 V DC	2200	900	550	350	1350	750	450	300
VACR180	UL 600 V/UL 1000 V	-	-	-	-	1620	900	540	360
	EN 1000 V DC	-	-	-	-	1620	900	540	360
VACR200 [3]	EN 1000 V DC	3200	1300	750	500	1800	1000	600	400
VACR250	UL 600 V/UL 1000 V	-	-	-	-	2250	1250	750	500
	EN 1000 V DC	-	-	-	-	2250	1250	750	500
VACR300	UL 600 V/UL 1000 V	-	-	-	-	2700	1500	900	600
	EN 1000 V DC	-	-	-	-	2700	1500	900	600
VACR400	UL 600 V/UL 1000 V	-	-	-	-	3600	2000	1200	800
	EN 1000 V DC	-	-	-	-	3600	2000	1200	800
VACR500	EN 1000 V DC	-	-	-	-	4500	2500	1500	1000

Notes

(1) Approximate value (depending on resistance)

(2) Cycle duration of 120 s

PART NUMBER AND PRODUCT DESCRIPTION

Part Number: VACR1003VUB1000K00

V	A	C	R	1	0	0	3	V	U	B	1	0	0	0	K	0	0

MODEL		MOUNTING	MAX. PERMISSIBLE VOLTAGE	PROTECTION	VALUE	TOLERANCE	SPECIAL
VACR050 **VACR100** [3] **VACR120** **VACR130** **VACR150** **VACR180** **VACR200** [3] **VACR250** **VACR300** **VACR400** **VACR500**	**0** = 160 x 40 x 20 160 x 20 x 40 **1** = 167 x 60 x 30 167 x 30 x 60 **2** = 217 x 60 x 30 217 x 30 x 60 **3** = 240 x 40 x 20 240 x 20 x 40 **4** = 267 x 60 x 30 267 x 30 x 60 **5** = 300 x 40 x 20 300 x 20 x 40 **6** = 337 x 60 x 30 337 x 30 x 60	**V** = Vertical **H** = Horizontal	**E** = EN1000 (EN 1000 V DC) **U** = UL 1000 V **V** = UL 600 V	**A** = IP20 **B** = IP65 **C** = IP54 (on request)	**3 digit value** **1 digit multiplier** MULTIPLIER **8** = $*10^{-2}$ **9** = $*10^{-1}$ **0** = $*10^{0}$ **1** = $*10^{1}$ **2** = $*10^{2}$ **3** = $*10^{3}$	**K** = ± 10.0 %	**00** = Standard Two digits code for special parts, edited by marketing.

Product Description: VACR1003 V UL 1000 V IP65 100R 10 %

VACR1003	V	UL 1000 V	IP65	100R	10 %
MODEL	MOUNTING	MAX. PERMISSIBLE VOLTAGE	PROTECTION	VALUE	TOLERANCE

Note

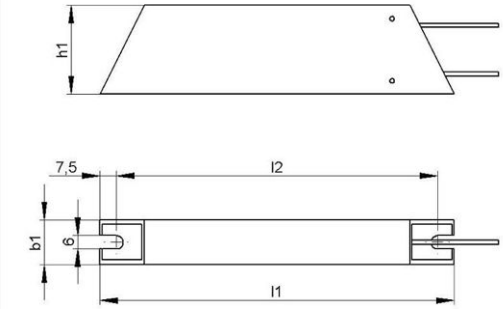
(3) Special flat version on request.

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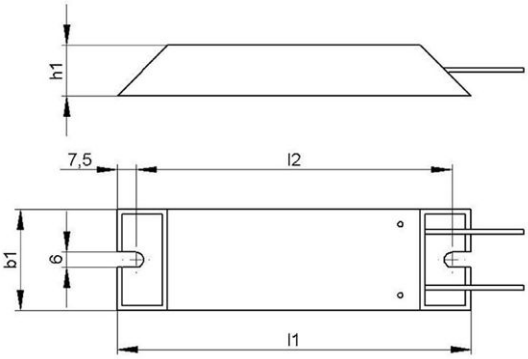
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DIMENSIONS in millimeters

Mounting V



Mounting H



MODEL	MOUNTING	b1	h1	l1 (1)	l2	MASS (kg)
VACR0500	H	40	20	160	145	0.26
	V	20	40	160	145	
VACR1003	H	40	20	240	225	
	V	20	40	240	225	
VACR1000	H	40	20	160	145	0.26
	V	20	40	160	145	
VACR1001	H	60	30	167	150	
	V	30	60	167	150	
VACR1202	H	60	30	217	200	0.7
	V	30	60	217	200	
VACR1301	H	60	30	167	150	0.5
	V	30	60	167	150	
VACR1505	H	40	20	300	285	
	V	20	40	300	285	
VACR1503	H	40	20	240	225	
	V	20	40	240	225	
VACR1501	H	60	30	167	150	0.43
	V	30	60	167	150	
VACR1502	H	60	30	217	200	
	V	30	60	217	200	
VACR1504	H	60	30	267	250	
	V	30	60	267	250	
VACR1804	H	60	30	267	250	
	V	30	60	267	250	0.9
VACR1806	H	60	30	337	320	
	V	30	60	337	320	
VACR2005	H	40	20	300	285	
	V	20	40	300	285	0.55
VACR2001	H	60	30	167	150	
	V	30	60	167	150	
VACR2502	H	60	30	217	200	
	V	30	60	217	200	0.7
VACR2506	H	60	30	337	320	
	V	30	60	337	320	
VACR3002	H	60	30	217	200	
	V	30	60	217	200	0.7
VACR3004	H	60	30	287	250	
	V	30	60	267	250	
VACR4004	H	60	30	267	250	
	V	30	60	267	250	0.9
VACR4006	H	60	30	337	320	
	V	30	60	337	320	
VACR5006	H	60	30	337	320	1.1
	V	30	60	337	320	

Notes

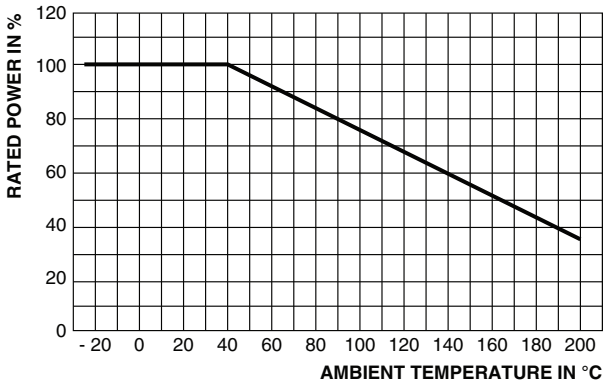
- VACR100 and VACR200 as special flat version on request.

(1) Mounting note: The length l1 increases at 0.85 mm/100 mm while heating (mounting with fixed and movable bearing).

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DERATING



TEMPERATURE			
POWER RATING W	SURFACE TEMPERATURE at $T_{40\ °C}$	MAX. PERMISSIBLE OPERATING VOLTAGE V	SIZE mm
50 to 100	180	UL 600 V/UL 1000 V	40 x 20
100 to 200	250	EN 1000 V DC	40 x 20
200 to 500	360	EN 1000 V DC	60 x 30
150 to 400	340	UL 600 V/UL 1000 V	60 x 30
130 to 250	230	EN 1000 V DC	60 x 30
100 to 180	210	UL 600 V/UL 1000 V	60 x 30

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