Vishay Huntington





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VISHA

FEATURES

- · High temperature vitreous coating
- Complete welded construction

Material categorization:

- Excellent stability in operation (< 3 % change resistance)
 - COMPLIANT HALOGEN FREE **GREEN** for definitions of compliance please see (5-2008) www.vishay.com/doc?99912

STANDARD ELECTRICAL SPECIFICATIONS					
GLOBAL MODEL	HISTORICAL MODEL	POWER RATING P _{25 °C} W	RESISTANCE RANGE Ω ±5%	RESISTANCE RANGE Ω ± 10 %	WEIGHT (typical) g
FVE0050	FVE-50	50	1.0 to 3.8	1.0 to 3.8	18
FVE0090	FVE-90	90	0.10 to 5.7	0.10 to 5.7	36
FVE0100	FVE-100	100	1.0 to 6.1	0.15 to 6.1	41
FVE0110	FVE-110	110	1.0 to 7.4	0.20 to 7.4	49
FVE0120	FVE-120	120	1.0 to 8.6	0.1 to 8.6	54
FVE0140	HLZ-140	140	0.08 to 9.0	0.08 to 9.0	109
FVE0155	FVE-155	155	1.0 to 12.5	0.1 to 12.5	129
FVE0165	FVE-165	165	0.35 to 13.0	0.35 to 13.0	91
FVE0180	HLZ-165	165	0.35 to 13.0	0.35 to 13.0	91
FVE0240	FVE-240	240	1.0 to 18	0.1 to 18	186
FVE0300	FVE-300	300	1.0 to 25	0.15 to 25	236
FVE0375	FVE-375	375	1.0 to 32	0.20 to 32	286
FVE0420	FVE-420	420	1.0 to 35.8	0.25 to 35.8	320
FVE0500	FVE-500	500	1.0 to 46.2	0.30 to 46.2	381

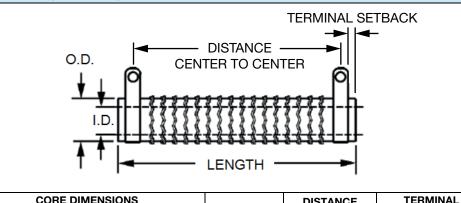
GLOBAL PAR	GLOBAL PART NUMBER INFORMATION						
Global Part Numb	ering example: FV	/E030020E15R	0JE (visit <u>www.vi</u>	<u>shay.net</u> Vishay Da	ale parts numbering manu	al for all options)	
FVE	F V E 0 3 0 0 2 0 E 1 5 R 0 J E						
GLOBAL MODEL (7 digits)	TERMINAL DESIGNATION (2 digits)	TERMINAL FINISH (1 digit)	VALUE (4 digits)	TOLERANCE (1 digit)	PACKAGING CODE (1 digit)	SPECIAL (up to 2 digits)	
(see Standard Electrical	06 15	E = lead (Pb)-free	R = decimal 1R50 = 1.5 Ω	J = ± 5 % K = ± 10 %	E = lead (Pb)-free bulk pack	(dash number) from 1 to 99 as	
Specifications Global Model column for options)	20					applicable 91 = 100 style BKT 92 = 200 style BKT 93 = 300 style BKT	
Historical Part Nu	Historical Part Number example: FVE-300-15-5 %						
FVE-300 15 Ω			5 %	, D			
HISTORICAL	MODEL	RESISTANC	E VALUE	TOLERA	NCE	SPECIAL	

RoHS

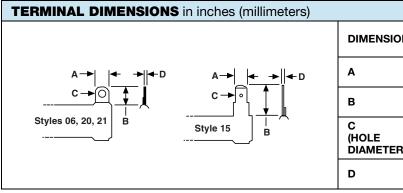


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DIMENSIONS in inches (millimeters)



CORE DIMENSIONS			DISTANCE	TERMINAL D	ESIGNATION		
MODEL	LENGTH	O.D. ± 0.031 (± 0.79)	I.D. ± 0.031 (± 0.79)	TERMINAL SETBACK	CENTER TO CENTER (REF.)	STANDARD	OPTIONAL (QUICK CONNECT)
FVE0050	2.000 (50.8)	0.750 (19.05)	0.500 (12.70)	0.094 (2.18)	1.562 (39.67)	06	15
FVE0090	4.000 (101.6)	0.563 (14.30)	0.313 (7.95)	0.094 (2.39)	3.562 (90.47)	06	15
FVE0100	3.500 (88.90)	0.750 (19.05)	0.500 (12.70)	0.079 (2.01)	3.092 (78.54)	06	15
FVE0110	4.000 (101.6)	0.750 (19.05)	0.500 (12.70)	0.125 (3.18)	3.500 (88.90)	06	15
FVE0120	4.500 (114.3)	0.750 (19.05)	0.547 (13.89)	0.125 (3.18)	3.400 (101.60)	06	15
FVE0140	4.000 (101.6)	1.125 (28.58)	0.750 (19.05)	0.219 (5.56)	2.812 (71.42)	20	15
FVE0155	4.250 (107.95)	1.125 (28.58)	0.750 (19.05)	0.282 (7.16)	3.311 (84.10)	20	15
FVE0165	6.500 (165.1)	0.750 (19.05)	0.750 (19.05)	0.125 (3.18)	5.75 (146.05)	20	15
FVE0180	6.500 (165.1)	0.750 (19.05)	0.750 (19.05)	0.125 (3.18)	5.75 (146.05)	20	15
FVE0240	6.500 (165.1)	1.125 (28.58)	0.750 (19.05)	0.250 (6.35)	5.625 (142.88)	20	15
FVE0300	8.500 (215.9)	1.125 (28.58)	0.750 (19.05)	0.267 (6.78)	7.591 (192.81)	20	15
FVE0375	10.500 (266.7)	1.125 (28.58)	0.750 (19.05)	0.266 (6.76)	9.593 (243.66)	20	15
FVE0420	11.750 (298.45)	1.125 (28.58)	0.750 (19.05)	0.266 (6.76)	10.843 (275.41)	20	15
FVE0500	10.500 (266.7)	1.625 (41.28)	1.125 (28.58)	0.267 (6.78)	9.466 (240.44)	21	-



DIMENSIONS	TERMINAL STYLE					
DIVIENSIONS	06	15	20	21		
Α	0.250 (6.35)	0.250 (6.35)	0.375 (9.53)	0.500 (12.70)		
В	0.500 (12.70)	0.594 (15.08)	0.5625 (14.28)	0.625 (15.87)		
C (HOLE DIAMETER)	0.173 (4.39)	0.065 (1.65)	0.204 (5.18)	0.264 (6.70)		
D	0.020 (0.51)	0.031 (0.79)	0.032 (0.812)	0.025 (0.64)		

Revision: 03-Jun-16

2 For technical questions, contact: <u>ww2dresistors@vishay.com</u> Document Number: 31842

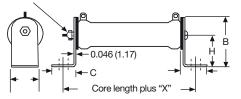
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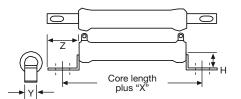
MOUNTING HARDWARE FOR FVE PRODUCTS - Dimensions in inches (millimeters)

91 = 100 Style Horizontal 1 High Bracket



BRACKET TYPE	x	Y	z	Н	MOUNTING SLOT	С	В
102					0.219 x 0.438 (5.56 x 11.11)		
103	1.063 (26.99)				0.281 x 0.563 (7.14 x 14.29)		

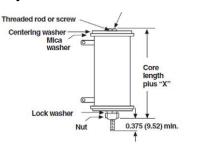
92 = 200 Style Push-In Bracket



BRACKET TYPE	x	н	Y	Z	HOLE (DIA.)
204	0.700	0.578	0.250	0.500	0.156
	(17.78)	(14.68)	(6.35)	(12.70)	(3.96)
206	0.846	0.800	0.375	0.600	0.343 x 0.213
	(21.49)	(20.62)	(9.53)	(15.24)	(8.71 x 5.46)
207	0.700	1.125	0.500	0.687	0.250 x 0.188
	(17.78)	(28.58)	(12.70)	(17.45)	(6.35 x 4.78)

MOUNTING HARDWARE						
	AVAILABLE BRACKET TYPES BY MODEL					
GLOBAL MODEL	91 = 100 STYLE HORIZONTAL 1 HIGH BRACKET	92 = 200 STYLE PUSH-IN BRACKET	93 = 300 STYLE THRU-BOLT BRACKET			
FVE0050	102	206	302			
FVE0090	102	204	302			
FVE0100	102	206	302			
FVE0110	102	206	302			
FVE0120	102	206	302			
FVE0140	103	205	303			
FVE0155	103	207	302			
FVE0165	102	206	303			
FVE0180	102	206	303			
FVE0240	103	207	302			
FVE0300	103	207	303			
FVE0375	103	207	303			
FVE0420	103	207	303			
FVE0500	103	-	302			

93 = 300 Style Thru-Bolt Bracket



BRACKET TYPE	X (APPROXIMATE)	THREAD
302	0.271 (6.88)	10-32
303	0.463 (11.76)	1/4-20

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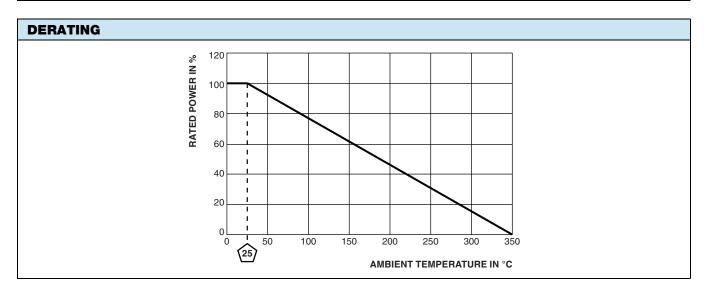
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TECHNICAL SPECIFICATIONS				
PARAMETER	UNIT	RESISTOR CHARACTERISTICS		
Power Rating	W	50 to 500		
Resistance Range	Ω	0.10 to 46.2		
Resistance Tolerance	%	10		
Temperature Coefficient	ppm/°C	\pm 260 for 20 Ω and above, \pm 400 for 1 Ω to 19.99 Ω		
Operating Temperature	°C	-55 °C to 350 °C		
Temperature Rise	°C	325 °C above an ambient of 25 °C		
Maximum Altitude	f.a.s.l.	10 000		
Short-Term Overload	-	10x rated power for 5 s		
Surge Windings	-	Available		
Maximum Working Voltage	-	(P x R) ^{0.5}		
Insultation Resistance	Ω	1M		
Dielectric Voltage	V _{RMS}	1000 V _{AC}		
Creepage	-	Varies by wattage, see "Terminal Setback" in Dimensions table		
Terminal Sleeves	-	n/a		
Inductance	μH	Varies by wattage and resistance		
Non-Inductive Winding	-	n/a		
Terminal Strength	lb	10 lbs		
Electrical or Mechanical Customization	-	Contact factory: ww2dresistors@vishay.com		

MATERIAL SPECIFICATIONS				
Element	Copper-nickel alloy or nickel-chrome alloy, depending on resistance value			
Core	Cordierite, steatite			
Coating	Special high temperature vitreous enamel			
Standard Terminals	Tinned alloy 42			
Optional Terminals	Alloy 42			
Terminal Bands	Alloy 42			
Part Marking	HEI, model, wattage, value, tolerance, date code			



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Document Number: 31842



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