



High Energy Varistors E Series

High Energy Varistors - E25, E32, E40 Series

Description

The E types are heavy-duty metal oxide varistors designed mainly for industrial applications. They offer excellent surge protection for various electronic equipment such as: traffic and railway signal systems, communication equipment, waterworks, automatic control devices for power distribution, oil drilling and mining equipment (dredgers, cranes, etc.). The E housings offer excellent protection also when they are exposed to different kinds of vibrations, dust, moisture, etc. The advantages of the E Series are: rigid terminals for good wire contact, solid plastic housing for secure mounting, higher insulation resistance (polyurethane filling and plastic housing).



Main Features

Wide Operating Voltage Range V_{RMS}	130 V to 750 V
Three Model Sizes Available	25 mm, 32 mm, square 33 mm
High Energy Absorption Capability W_{max} (2 ms)	150 J to 1230 J
High Peak Current Capability I_{max} (8/20 μ s)	15000 A to 40000 A
Rigid Terminals for Secure Wire Contact	
Case Design Provides Complete Electrical Isolation of Disc Assembly	
UL Specification #1449 File No.: E103662;	Models E40, E32, prefixed by: V130, V140, V150, 175, V230, V250, V275, V300, V320, V350, V385, V420, V440, V460, V510, V550, V625, V680, V750

General Technical Data

Climatic Category	40/85/56	in accordance with IEC 68-1
LCT	- 40°C	
UCT	+ 85°C	
Damp Heat, Steady State (93% r.h., 40°C)	56 days	in accordance with IEC 68-2-3
Operating Temperature	- 40 ... + 85°C	in accordance with CECC 42 000
Storage Temperature	- 40 ... + 110°C	
Electric Strength	≥ 2.5 kV	in accordance with CECC 42 000
Insulation Resistance	≥ 1.0 G Ω	in accordance with CECC 42 000
Response Time	< 25 ns	
Max. Torque	1.0 Nm	

Type Designation

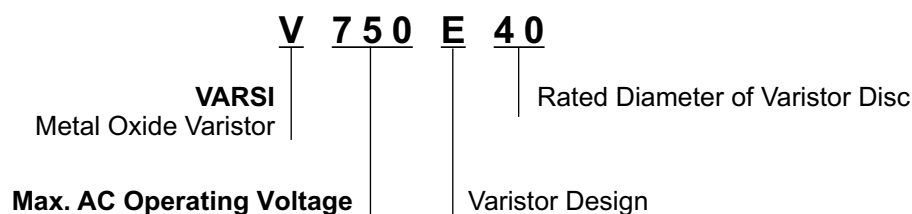
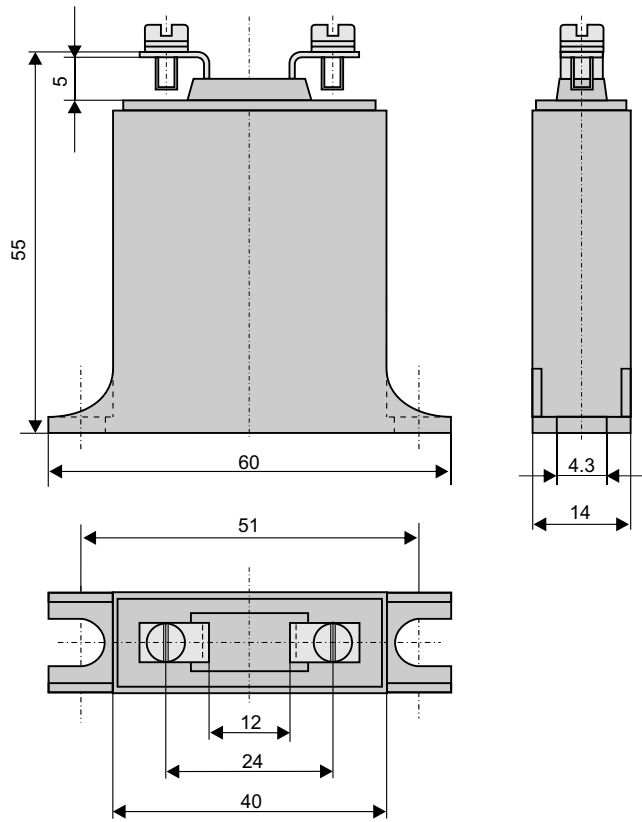


Table of Standard Values

Part Number	Maximum Ratings TA = +85°C (+185°F)					Characteristics TA = +25°C (+77°F)					V - I Characteristic Page	Derating curve Page
	Operating Voltage		Average Power Dissipation P _{max} (W)	Permissible Peak Current (8/20 μs) I _{max} (A)	Energy Absorption (2 ms) W _{max} (J)	Varistor Voltage (1 mA) V _N (V)	Standard Tolerance of V _N ΔV _N (±%)	Maximum Clamping Voltage at Test Current (8/20 μs) V _C (V) I (A)		Typical Capacitance f=1kHz C (pF)		
	RMS Voltage V _{RMS} (V)	DC Voltage V _{DC} (V)						I	V _C			
V130E25	130	170	1.0	15000	150	205	10	340	150	2600	8	11
V130E32	130	170	1.2	25000	220	205	10	340	200	4400	8	11
V130E40	130	170	1.4	40000	320	205	10	340	300	5800	9	12
V140E25	140	180	1.0	15000	155	220	10	360	150	2400	8	11
V140E32	140	180	1.2	25000	235	220	10	360	200	4100	8	11
V140E40	140	180	1.4	40000	340	220	10	360	300	5400	9	12
V150E25	150	200	1.0	15000	160	240	10	395	150	2200	8	11
V150E32	150	200	1.2	25000	250	240	10	395	200	3700	8	11
V150E40	150	200	1.4	40000	370	240	10	395	300	5000	9	12
V175E25	175	225	1.0	15000	170	270	10	455	150	2000	8	11
V175E32	175	225	1.2	25000	270	270	10	455	200	3000	8	11
V175E40	175	225	1.4	40000	410	270	10	455	300	4200	9	12
V230E25	230	300	1.0	15000	190	360	10	595	150	1600	8	11
V230E32	230	300	1.2	25000	310	360	10	595	200	2500	8	11
V230E40	230	300	1.4	40000	470	360	10	595	300	3400	9	12
V250E25	250	320	1.0	15000	210	390	10	650	150	1400	8	11
V250E32	250	320	1.2	25000	340	390	10	650	200	2200	8	11
V250E40	250	320	1.4	40000	505	390	10	650	300	3100	9	12
V275E25	275	350	1.0	15000	230	430	10	710	150	1300	8	11
V275E32	275	350	1.2	25000	370	430	10	710	200	2000	8	11
V275E40	275	350	1.4	40000	565	430	10	710	300	2900	9	12
V300E25	300	385	1.0	15000	240	470	10	775	150	1200	8	11
V300E32	300	385	1.2	25000	400	470	10	775	200	1900	8	11
V300E40	300	385	1.4	40000	600	470	10	775	300	2700	9	12
V320E25	320	420	1.0	15000	275	510	10	840	150	1100	8	11
V320E32	320	420	1.2	25000	440	510	10	840	200	1700	8	11
V320E40	320	420	1.4	40000	655	510	10	840	300	2400	9	12
V385E25	385	505	1.0	15000	320	620	10	1025	150	900	8	11
V385E32	385	505	1.2	25000	560	620	10	1025	200	1400	8	11
V385E40	385	505	1.4	40000	815	620	10	1025	300	2000	9	12
V420E25	420	560	1.0	15000	360	680	10	1120	150	800	8	11
V420E32	420	560	1.2	25000	615	680	10	1120	200	1300	8	11
V420E40	420	560	1.4	40000	930	680	10	1120	300	1900	9	12
V440E25	440	585	1.0	15000	380	715	10	1180	150	750	8	11
V440E32	440	585	1.2	25000	630	715	10	1180	200	1250	8	11
V440E40	440	585	1.4	40000	950	715	10	1180	300	1800	9	12
V460E25	460	615	1.0	15000	390	750	10	1240	150	700	8	11
V460E32	460	615	1.2	25000	670	750	10	1240	200	1200	8	11
V460E40	460	615	1.4	40000	1010	750	10	1240	300	1700	9	12
V510E25	510	670	1.0	15000	410	820	10	1355	150	650	8	11
V510E32	510	670	1.2	25000	690	820	10	1355	200	1100	8	11
V510E40	510	670	1.4	40000	1040	820	10	1355	300	1600	9	12
V550E25	550	745	1.0	15000	425	910	10	1500	150	600	8	11
V550E32	550	745	1.2	25000	710	910	10	1500	200	1000	8	11
V550E40	550	745	1.4	40000	1080	910	10	1500	300	1500	9	12
V625E25	625	825	1.2	25000	435	1000	10	1650	200	550	8	11
V625E32	625	825	1.2	25000	730	1000	10	1650	200	950	8	11
V625E40	625	825	1.4	40000	1100	1000	10	1650	300	1400	9	12
V680E25	680	895	1.2	25000	465	1100	10	1815	200	530	8	11
V680E32	680	895	1.2	25000	780	1100	10	1815	200	850	8	11
V680E40	680	895	1.4	40000	1130	1100	10	1815	300	1200	9	12
V750E25	750	1060	1.0	15000	485	1200	10	2000	150	500	8	11
V750E32	750	1060	1.2	25000	820	1200	10	2000	200	800	8	11
V750E40	750	1060	1.4	40000	1230	1200	10	2000	300	1100	9	12

Dimensions



Part Number	Approx. Weight (g)
V130E25	52
V130E32	55
V130E40	58
V140E25	53
V140E32	56
V140E40	59
V150E25	54
V150E32	57
V150E40	60
V175E25	56
V175E32	57
V175E40	60
V230E25	55
V230E32	58
V230E40	61
V250E25	55
V250E32	58
V250E40	61
V275E25	56
V275E32	59
V275E40	62
V300E25	57
V300E32	60
V300E40	63
V320E25	58
V320E32	61
V320E40	64
V385E25	59
V385E32	62
V385E40	65
V420E25	60
V420E32	63
V420E40	66
V440E25	61
V440E32	64
V440E40	67
V460E25	62
V460E32	65
V460E40	68
V510E25	62
V510E32	67
V510E40	70
V550E25	64
V550E32	68
V550E40	72
V625E25	65
V625E32	70
V625E40	73
V680E25	65
V680E32	70
V680E40	74
V750E25	66
V750E32	71
V750E40	76

All dimensions are maximum except where noted.
Dimensions are in millimeters.