

## EXECUTIVE SUMMARY

The Keyitec Surge Protective Devices (SPD) were subjected to the 8/20  $\mu$ s current waveform as defined in the ANSI/IEEE C62.41-1991. Three units were first subjected to a 6 kV/3 kA (1.2/50  $\mu$ s/ 8/20  $\mu$ s - combination waveform) pre-strike. Next, the units were subjected to a 100 kA test strike. Lastly, these units received another 6 kV/3 kA post-strike. Following the application of the test surge, the units were examined to determine if they suffered any damage. The surge current and clamping voltage graphs have been recorded. The SPD is considered as compliant if the device exhibits less than 10% deviation from its initial clamping voltage between the pre- and post-strike 6 kV/3 kA combination wave transient (NEMA LS1).

The Keyitec Everprotect 40-120 Surge Suppressor is capable of surviving the ANSI/IEEE C62.41-1991, 100 kA, 8/20  $\mu$ s surge based upon pre- and post-test surge performance. Of the three units tested below, the maximum change of peak clamping voltage following the high-current test strike was 0.00 %.

The table below contains the test results obtained at IITRI, R&B Laboratory's Lightning Test Facility. All figures are in Section 4. Further details are found in this report.

**Everprotect 40-120 Test Results Summary Table**

Serial Number	Injection Mode	Pre-Strike (6kV/3kA)	Test Strike (8/20 $\mu$ s)		Post-Strike (6kV/3kA)	Absolute % Deviation in Clamping Voltage (%)	NEMA LS1 1992 Compliance
		Clamping Voltage (V)	Surge Current Level (kA)	Actual (kA)	Clamping Voltage (V)		
D190	L-G	428	100	98.8	428	0.00	Pass
D191	L-G	428	100	98.8	428	0.00	Pass
D192	L-G	428	100	98.8	428	0.00	Pass

Surge current and clamping voltage waveforms are given in Figures 4-9 to 4-17.

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## EXECUTIVE SUMMARY

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The Keyitec Everprotect 40-240 Surge Suppressor is capable of surviving the ANSI/IEEE C62.41-1991, 100 kA, 8/20  $\mu$ s surge based upon pre- and post-test surge performance. Of the three units tested below, the maximum change of peak clamping voltage following the high-current test strike was 0.91 %.

The table below contains the test results obtained at IITRI, R&B Laboratory's Lightning Test Facility. All figures are in Section 4. Further details are found in this report.

**Everprotect 40-240 Test Results Summary Table**

Serial Number	Injection Mode	Pre-Strike (6kV/3kA)	Test Strike (8/20 $\mu$ s)		Post-Strike (6kV/3kA)	Absolute % Deviation in Clamping Voltage (%)	NEMA LS1 1992 Compliance
		Clamping Voltage (V)	Surge Current Level (kA)	Actual (kA)	Clamping Voltage (V)		
C169	L-G	789	100	95.4	782	0.89	Pass
C245	L-G	772	100	95.4	765	0.91	Pass
C251	L-G	772	100	95.4	765	0.91	Pass

Surge current and clamping voltage waveforms are given in Figures 4-9 to 4-17.

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## EXECUTIVE SUMMARY

The Keyitec Surge Protective Devices (SPD) were subjected to the 8/20  $\mu$ s current waveform as defined in the ANSI/IEEE C62.41-1991. Three units were first subjected to a 6 kV/3 kA (1.2/50  $\mu$ s/ 8/20  $\mu$ s - combination waveform) pre-strike. Next, the units were subjected to a 100 kA test strike. Lastly, these units received another 6 kV/3 kA post-strike. Following the application of the test surge, the units were examined to determine if they suffered any damage. The surge current and clamping voltage graphs have been recorded. The SPD is considered as compliant if the device exhibits less than 10% deviation from its initial clamping voltage between the pre- and post-strike 6 kV/3 kA combination wave transient (NEMA LS1).

The Keyitec Everprotect 40-277 Surge Suppressor is capable of surviving the ANSI/IEEE C62.41-1991, 100 kA, 8/20  $\mu$ s surge based upon pre- and post-test surge performance. Of the three units tested below, the maximum change of peak clamping voltage following the high-current test strike was 0.97 %.

The table below contains the test results obtained at IITRI, R&B Laboratory's Lightning Test Facility. All figures are in Section 4. Further details are found in this report.

**Everprotect 40-277 Test Results Summary Table**

Serial Number	Injection Mode	Pre-Strike (6kV/3kA)	Test Strike (8/20 $\mu$ s)		Post-Strike (6kV/3kA)	Absolute % Deviation in Clamping Voltage (%)	NEMA LS1 1992 Compliance
		Clamping Voltage (V)	Surge Current Level (kA)	Actual (kA)	Clamping Voltage (V)		
G026	L-G	924	100	94.8	933	0.97	Pass
G032	L-G	937	100	94.8	940	0.32	Pass
G038	L-G	924	100	94.8	926	0.22	Pass

Surge current and clamping voltage waveforms are given in Figures 4-9 to 4-17.

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## EXECUTIVE SUMMARY

The Keyitec Surge Protective Devices (SPD) were subjected to the 8/20  $\mu$ s current waveform as defined in the ANSI/IEEE C62.41-1991. Three units were first subjected to a 6 kV/3 kA (1.2/50  $\mu$ s/ 8/20  $\mu$ s - combination waveform) pre-strike. Next, the units were subjected to a 100 kA test strike. Lastly, these units received another 6 kV/3 kA post-strike. Following the application of the test surge, the units were examined to determine if they suffered any damage. The surge current and clamping voltage graphs have been recorded. The SPD is considered as compliant if the device exhibits less than 10% deviation from its initial clamping voltage between the pre- and post-strike 6 kV/3 kA combination wave transient (NEMA LS1).

The Keyitec Everprotect 40-380 Surge Suppressor is capable of surviving the ANSI/IEEE C62.41-1991, 100 kA, 8/20  $\mu$ s surge based upon pre- and post-test surge performance. Of the three units tested below, the maximum change of peak clamping voltage following the high-current test strike was 2.39 %.

The table below contains the test results obtained at IITRI, R&B Laboratory's Lightning Test Facility. All figures are in Section 4. Further details are found in this report.

**Everprotect 40-380 Test Results Summary Table**

Serial Number	Injection Mode	Pre-Strike (6kV/3kA)	Test Strike (8/20 $\mu$ s)		Post-Strike (6kV/3kA)	Absolute % Deviation in Clamping Voltage (%)	NEMA LS1 1992 Compliance
		Clamping Voltage (V)	Surge Current Level (kA)	Actual (kA)	Clamping Voltage (V)		
H027	L-G	1254	100	95.9	1254	0.00	Pass
H030	L-G	1254	100	95.9	1254	0.00	Pass
H034	L-G	1254	100	95.9	1284	2.39	Pass

Surge current and clamping voltage waveforms are given in Figures 4-9 to 4-17.

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