

PQ1 Grenzwertkurven



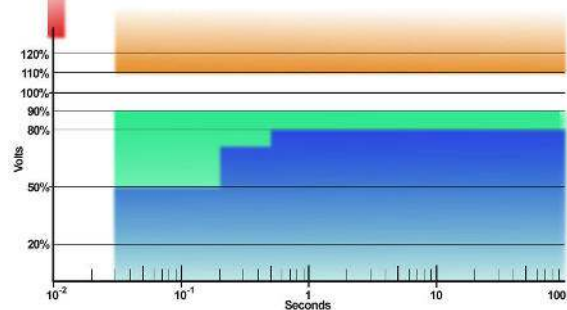
Die Amplituden und Dauer Grenzwertkurven des PQ1 sind von internationalen Normen abgeleitet. Mit dem Drehschalter an der Seite des PQ1 können die Grenzwerte ausgewählt werden.

Sollten bestimmte Vorgaben fehlen wird der Schalter auf "STANDARD" eingestellt.

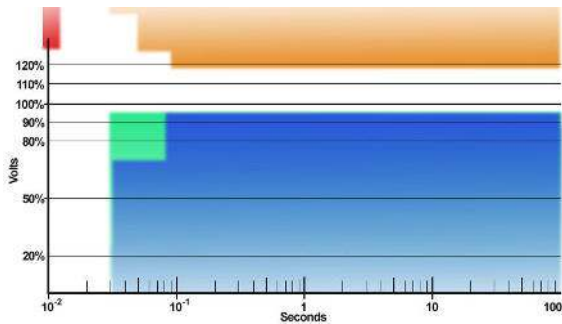
Gibt es in einer Norm einen Grenzwert nicht (z.B. SEMI F47 definiert keinen Grenzwert für Überhöhungen) oder wenn ein Grenzwert außerhalb des Arbeitsbereiches des PQ1 liegt, wurde ein sinnvoller Wert eingesetzt.

Die Amplituden und Dauer Grenzwertkurven basieren auf den angeführten Normen, können aber aus verschiedenen Gründen von diesen geringfügig abweichen. Für weitere Informationen schlagen sie in den jeweiligen Normen nach.

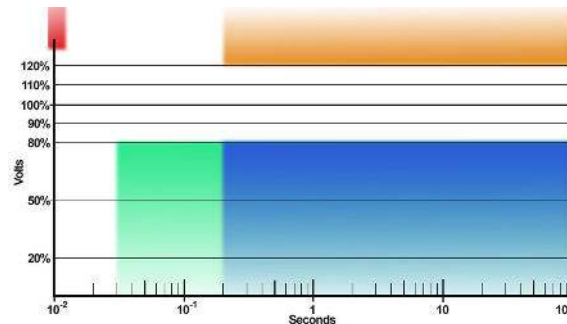
- Impuls (einheitlich 450V Spitze)
- Überhöhung (% von Vnom)
- geringer Einbruch (% von Vnom)
- bedeutender Einbruch (% von Vnom)



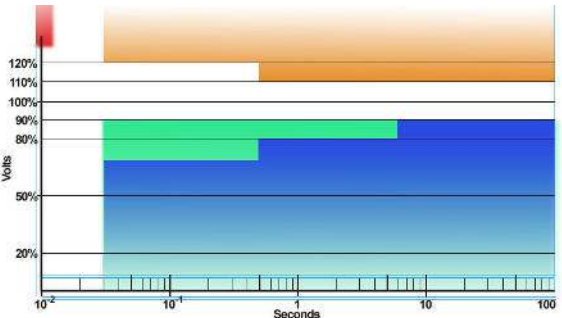
"Standard" Depth-Duration Thresholds
General purpose thresholds selected by PSL. Good compromise between sensitivity and false alarms.



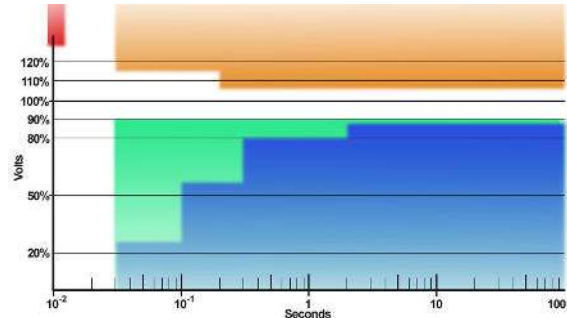
"MIL-STD-704E (Aircraft)" Depth-Duration Thresholds
Derived from MIL-STD-704E, "Interface Standard: Aircraft Electric Power Characteristics," Figure 4 and Figure 6. This standard does not directly specify impulse thresholds.



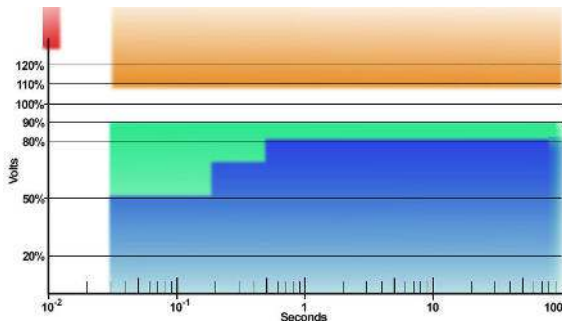
"MIL-STD-1399 (Shipboard)" Depth-Duration Thresholds
Derived from MIL-STD-1399 "Interface Standard for Shipboard Systems - Section 300A - Electric Power, Alternating Current," Table I, Type II power. This standard specifies a 1kV threshold for impulses, which differs from the 0,5kV impulse threshold in the PQ1.



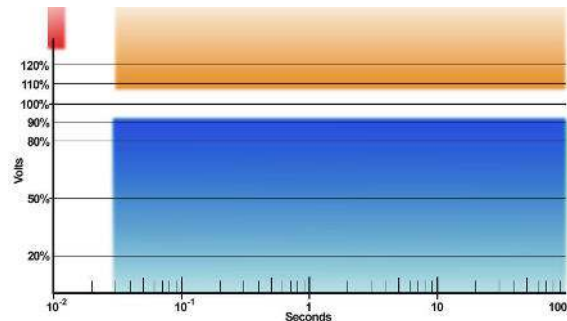
"ITIC" Depth-Duration Thresholds
Derived from the ITI Curve (revised 2000) published by Technical Committee 3 of Information Technology Industry. Original curve for to single-phase 120V 60 Hz computer and business equipment; extended here to other voltages and frequencies.



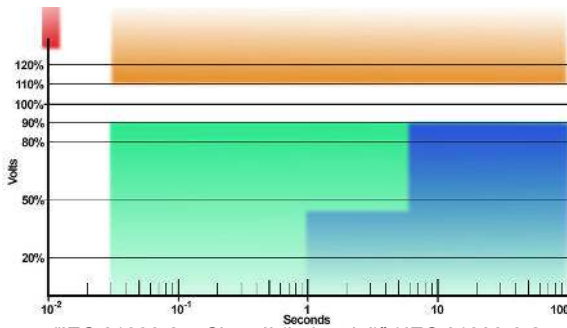
"CBEMA" Depth-Duration Thresholds
Based on version published in IEEE 1100-1992, Fig 3-2. Thresholds in the original curve are expressed in percent of nominal. Curve is intended to apply to single-phase 120V 60 Hz computer and business equipment; extended here to other voltages and frequencies.



"SEMI F47" Depth-Duration Thresholds
Based on SEMI F47-0200 ©SEMI 1999,2000. Standard lacks swell thresholds, impulse threshold. Thresholds in PQ1 include both Recommendations and Requirements in standard to the extent practical.

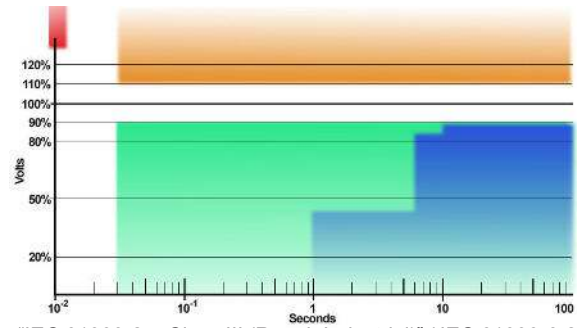


"IEC 61000-2-4 Class I (Laboratory)" Depth-Duration Thresholds
Derived from IEC 61000-2-4, CDV 11-2000, Section 6 Table 1. This standard does not specify voltage swell or impulse thresholds, which are discussed in Annex B.4. Standard does not specify dip compatibility levels; values are given for guidance only.



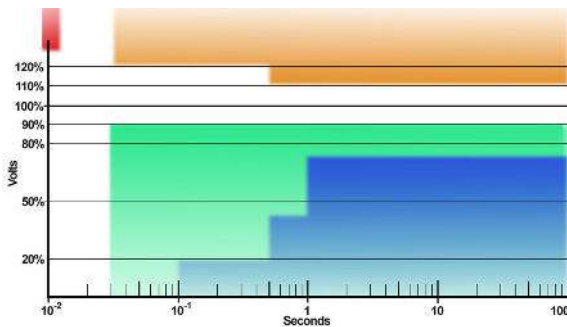
“IEC 61000-2-4 Class II (Industrial)” / IEC 61000-6-2
Depth-Duration Thresholds

Derived from IEC 61000-2-4, CDV 11-2000, Section 6 Table 1. This standard does not specify voltage swell or impulse thresholds, which are discussed in Annex B.4. This standard does not specify dip compatibility levels; the values are given for guidance only.



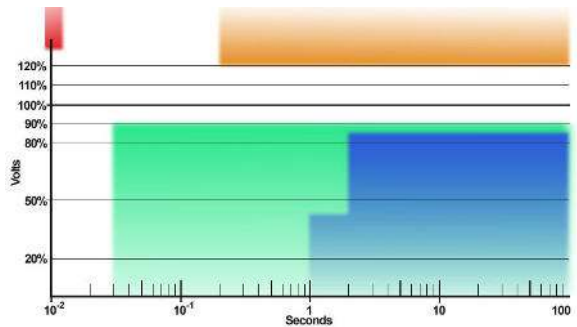
“IEC 61000-2-4 Class III (Rough Industrial)” / IEC 61000-6-2
Depth-Duration Thresholds

Derived from IEC 61000-2-4, CDV 11-2000, Section 6 Table 1. This standard does not specify voltage swell or impulse thresholds, which are discussed in Annex B.4. This standard does not specify dip compatibility levels; the values are given for guidance only.



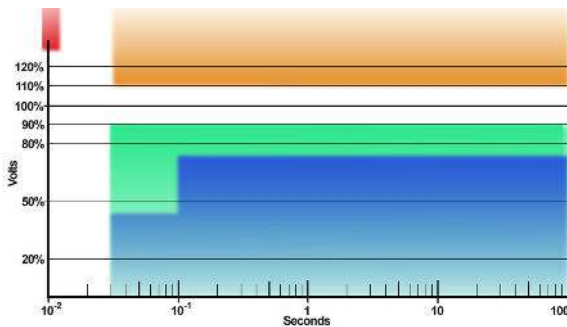
“IEC 61000-4-11” Depth-Duration Thresholds

Derived from IEC 61000-4-11, Edition 1.1, 2001-03. This standard does not specify voltage swell or impulse thresholds. Also, this standard does not specify dip thresholds; however, some dip depth and durations may be inferred from Table 1 and Annex B.



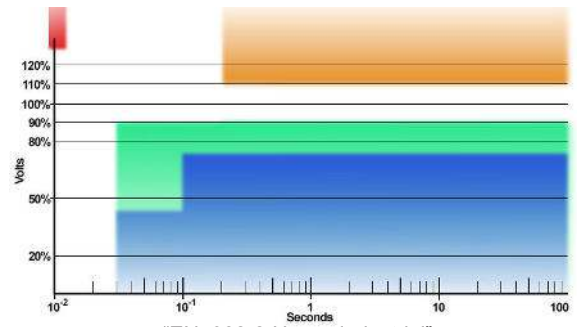
“EN50160” Depth-Duration Thresholds

Derived from EN50160:1994. This standard does not specify voltage swell, voltage dip, or impulse thresholds. Voltage dip thresholds are inferred here from indicative values given in Section 3.5, and voltage swell thresholds from implications in Section 3.8.



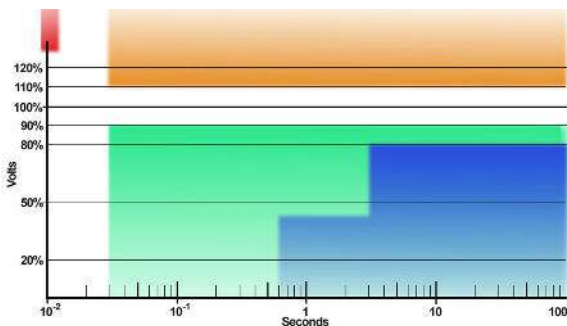
“EN5082-1 Residential/commercial”
Depth-Duration Thresholds

Derived from EN5082-1 (Residential, Commercial, Light Industry). Voltage dip thresholds are inferred from values given in Table 4 Line 4.4, and impulse threshold from value in Table 3 Line 3.3.



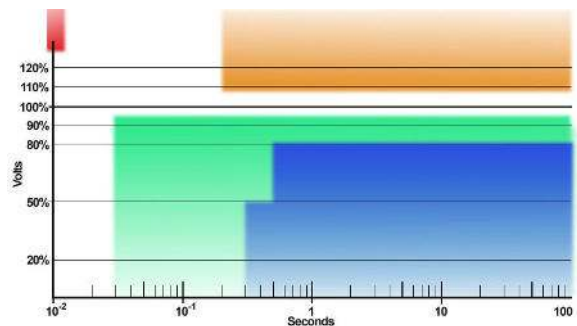
“EN5082-2 Heavy industrial”
Depth-Duration Thresholds

Derived from EN5082-2 (Industrial). Voltage dip thresholds are inferred from values given in Table 4 Line 4.4. Note that impulse threshold in Table A.4.5 is 4kV, not 0,5kV as implemented in PQ1.



“ZA” (South Africa) Depth-Duration Thresholds

Derived from South Africa NRS048:1996, Dip Window Categories Y, X, and S; swells based on 4.6.1. NRS048:1996 may evolve into SABS 00480. No impulse threshold in standard. Standard is primarily a utility connection standard.



“JN” (Japan) Depth-Duration Thresholds

Derived from “Denki-Setsubi no Gizyutu-Kizyun”, extended by PSL to lower depths and durations. Standard does not directly specify voltage swell, sag, or impulse thresholds.