## Reliability Prediction

**Typ designation:**  
LFFS Level Switch

**Material number:**  
5550-533

**Status:**  
Serie

**Operating temperature [°C]**  
40

**Operating voltage range [VDC]**  
12.5 - 36

**Calculation base:**  
EN ISO 13849-1:2007

**Calculation method**  
Part Count

**MTTF(d)-Components (Worst Case)**  
Factor 10

**50% hazardous failures**  
Factor 0.5

**Environment temperature [°C]**  
40

**Operating conditions**  
Nominal load

**MTTF-base values (remaining parts)**  
MIL-HDBK 217F, Notice 2 / RDF 2000

**Environmental conditions**  
Ground fixed, 40°C (Industry standard)

**Conditions**  
constant failure rate

<table>
<thead>
<tr>
<th>Total:</th>
<th>Worst Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean time to dangerous failure MTTF(d) [year]</td>
<td>&gt; 100</td>
</tr>
<tr>
<td>Mean time to dangerous failure MTTF(d) [hours, h]</td>
<td>&gt; 876'000</td>
</tr>
<tr>
<td>Probability of a dangerous failure per hours [1/h]</td>
<td>&lt; 1.14E-06</td>
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</tbody>
</table>

Remarks:
- The values of applicable EN-ISO calculation methods refer to worst case conditions, which are improved by factor 2 compared to calculation according to MIL-HDBK-217.
- Typical values by considering of effective applications can be improved up to factor 5.
- The resulting MTTF(d) values judge not the safety of the product. It is a calculation or estimation of the random failures, which causing based on random hardware failures as a result of limited reliability of components.