In compliance with:

**CEN ISO 13849-1:2015**

Safety of machinery, safety related parts of control systems Part 1: general principles of design

**MTTFd MLD Series**

\(B_{10d}\) rating based on the calculated assumptions below is:-

\[= 1,500,000 \text{ cycles}\]

Calculation data assumptions (CEN ISO 13849-1:2015, Annex C):

\(\equiv\) Performance Level \(d\) (CEN ISO 13849-1, Table 2)

\(\equiv\) Safety Integrity Level 2 (CEN ISO 13849-1, Table 3)

\(\equiv\) MTTFd denotation HIGH (CEN ISO 13849-1, Table 4)

\(t_{cycle}\), mean time between two successive cycles \(3600\) seconds (1 cycle per hour)

\(hop\), mean operation in hours per day \(1\) shift \(x\) 8 hours.

\(dop\), mean operation in days per year \(220\) days.

\(nop = (dop \times hop \times 3600) / t_{cycle}\) \(1760\) mean annual operations

\(B_{10d}\) no. cycles until 10\% of components fail dangerously \(1,500,000\) cycles

\(MTTFd = B_{10d} / (0.1 \times nop)\) \(8,522.72\) years

\(\lambda_d = (0.1 \times nop) / (B_{10d} \times 220 \times 8)\) \(6.67 \times 10^{-08}\) per operating hour

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