In compliance with:

CEN ISO 13849-1:2015

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

MTTFd  MLH Series

**B10d** rating based on the calculated assumptions below is:-

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


\[ \equiv \text{Performance Level d (CEN ISO 13849-1. Table 2)} \]
\[ \equiv \text{Safety Integrity Level 2 (CEN ISO 13849-1. Table 3)} \]
\[ \equiv \text{MTTFd denotation HIGH (CEN ISO 13849-1. Table 4)} \]

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

\( h_{op}, \text{mean operation in hours per day} \) 1 shift x 8 hours.

\( d_{op}, \text{mean operation in days per year} \) 220 days.

\( N_{op} = (d_{op} \times h_{op} \times 3600) / t_{cycle} \) 1760 mean annual operations

B10d no. cycles until 10% of components fail dangerously 1,500,000 cycles

\( MTTFd = B10d / (0.1 \times N_{op}) \) 8522.72 years

\( \lambda_d = (0.1 \times N_{op}) / (B10d \times 220 \times 8) \) 6.67 E-08 per operating hour

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