In compliance with:

**CEN ISO 13849-1:2015**

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

**MTTFd  DAE Series**

B10d rating based on the calculated assumptions below is:-

= **26,400 cycles**


≡ Performance Level b (CEN ISO 13849-1. Table 2)
≡ Safety Integrity Level 1 (CEN ISO 13849-1. Table 3)
≡ MTTFd denotation HIGH (CEN ISO 13849-1. Table 4)

\[
tc \text{cycle, mean time between two successive cycles} = 3600 \text{ seconds (1 cycle per hour)}
\]

\[
hop \text{, mean operation in hours per day} = 1 \text{ shift x 8 hours.}
\]

\[
dop \text{, mean operation in days per year} = 220 \text{ days.}
\]

\[
\etaop = \frac{dop \times hop \times 3600}{tcycle}
\]

\[
B10d \text{ no. cycles until 10\% of components fail dangerously} = 26,400 \text{ cycles}
\]

\[
MTTFd = \frac{B10d}{0.1 \times \etaop}
\]

\[
\lambda_d = \frac{0.1 \times \etaop}{(B10d \times 220 \times 8)}
\]

\[
\lambda_d = 3.79 \times 10^{-6} \text{ per operating hour}
\]

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