In compliance with:

CEN ISO 13849-1:2015

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

MTTFd  KSS Series

B10d rating based on the calculated assumptions below is:-

\[ \text{B10d} = 2,500,000 \text{ cycles} \]

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

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

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

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

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

\( \Pi_{op} = (d_{op} \times h_{op} \times 3600) / t_{cycle} \)

1760 mean annual operations

B10d no. cycles until 10% of components fail dangerously 2,500,000 cycles

\( \text{MTTFd} = \text{B10d} / (0.1 \times \Pi_{op}) \)

14,204.55 years

\( \lambda_{d} = (0.1 \times \Pi_{op}) / (\text{B10d} \times 220 \times 8) \)

4.00 E-08 per operating hour

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