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The Future of Safety is Here

In compliance with:

CEN ISO 13849-1:2015

Safety of machinery, safety related parts of control systems

Part 1: general principles of design

MTTFd KP & KLP Series

B10d rating based on the calculated assumptions below is:-

= 2,000,000 cycles

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

≡ Performance Level d (CEN ISO 13849-1:2015 Table 2)

≡ Safety Integrity Level 3 (CEN ISO 13849-1:2015 Table 3)

≡ MTTFd denotation HIGH (CEN ISO 13849-1:2015 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.
$n_{op} = (d_{op} \times h_{op} \times 3600) / t_{cycle}$	1760 mean annual operations
B10d no. cycles until 10% of components fail dangerously	2,000,000 cycles
$MTTFd = B10d / (0.1 \times n_{op})$	11,363.64 years
$\lambda d = (0.1 \times n_{op}) / (B10d \times 220 \times 8)$	5.00 E-08 per operating hour

Neal Partridge

Head of Compliance