

In compliance with:

CEN ISO 13849-1:2015

Safety of machinery, safety related parts of control systems

Part 1: general principles of design

MTTFd MLK Series

B10d rating based on the calculated assumptions below is:-

= 26,400 cycles

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

≡ **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)**

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.
$n_{\text{op}} = (d_{\text{op}} \times h_{\text{op}} \times 3600) / t_{\text{cycle}}$	1760 mean annual operations
B10d no. cycles until 10% of components fail dangerously	26,400 cycles
$MTTFd = B10d / (0.1 \times n_{\text{op}})$	150 years
$\lambda_d = (0.1 \times n_{\text{op}}) / (B10d)$	7.61 E-07 per operating hour

Neal Partridge

Head of Compliance

