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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:-

= 1,000,000 cycles

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

= Performance Level e (CEN ISO 13849-1. Table 2)

■ Safety Integrity Level 3 (CEN ISO 13849-1. Table 3)

■ MTTFd denotation HIGH (CEN ISO 13849-1. Table 4)

tcycle, mean time between two successive cycles 3600 seconds (1 cycle per hour)

hop, mean operation in hours per day 1 shift x 8 hours.

dop, mean operation in days per year 220 days.

nop = (dop x hop x 3600) / tcycle1760 mean annual operations B10d no. cycles until 10% of components fail dangerously

5,682 years $MTTFd = B10d / (0.1 \times nop)$

2.01 E-08 per operating hour $\lambda d = (0.1 \text{ x } \text{ nop}) / (B10d)$

Neal Partridge

1,000,000 cycles

Head of Compliance

a Cirtilar

A HALMA COMPANY QF- 083