OMNITERM C2063 RELIABILITY DATASHEET

1. PRODUCT DESCRIPTION.

Omniterm LPI is a loop-powered isolator. It accepts mA input in the range 4-20mA. The output current is equal to the input current, within limits of product specification. The unit provides internal precision 250 Ohm resistors to convert 4-20mA current signal into 1-5V voltage signal.

The product is designed for SIL1 requirements and low-demand mode of operation. For detailed specifications consult the product datasheet.

2. CONDITIONS OF USE IN SAFETY-RELATED APPLICATIONS.

- The LPI must be used within its electrical and mechanical specifications.
- EMC environment must be standard industrial environment.
- Low output current <3.6mA must be detected as a fault and this condition must result in actuators being placed in a safe state.

3. RELIABILITY INFORMATION.

Hardware reliability analysis yields the results as summarised in the Table below. The LPI has no software.

Subsystem	Type A
Diagnostic Coverage	72%
Safe Failure Fraction	77%
PFD_{avg}, (TI = 1 year)	7.43×10^{-4}
PFD_{avg}, (TI = 2 years)	1.48×10^{-3}
MTBF (in years)	155.4

An MTTR of 8hrs was used in the above PFD calculations. TI denotes Test Proof Interval.

4. EXPLANATION OF RESULTS.

Any hardware failure, which results in incorrect output current, is deemed a dangerous failure. If the fault leads to the current dropping below normal range (3.6mA or less), that failure is considered detected.

For applications requiring compliance with EN61508, the DC=Low (60-90%) must be assumed. Tthe LPI is a Type A subsystem. Recommended applications are limited to SIL1 loops.

5. DISCLAIMER

This datasheet provides reliability figures only. Omniflex does not assume responsibility for the correct and safe application of the LPI or its reliability data. In safety-related applications, it is the user's responsibility to comply with all other requirements of EN61508, which may be applicable to the system in question.

Omniflex reserves the right to change specifications without notice.