



OMNITERM TTP Trip Transmitter

Model C2468B - 24Vdc powered, Universal Transmitter with trips.

RELIABILITY DATA

1. PRODUCT DESCRIPTION.

Omniterm TTP is a 24Vdc-powered universal-input Transmitter, which accepts mA, Volts, thermocouple and RTD inputs and provides two separate configurable trip relay outputs.

The product is designed for SIL1 safety loops and achieves reliability parameters specified by IEC61508 for this level.

2. CONDITIONS OF USE IN SAFETY-RELATED APPLICATIONS.

- The TTP must be used within its electrical and mechanical specifications.
- EMC environment must be typical industrial environment (IEC61000-4-4 Level 3 or IEC61000-4-3 Class 3).
- To maximise Diagnostic Coverage and Safe Failure Fraction, relays must be set as “de-energized to trip”.

3. RELIABILITY INFORMATION.

Hardware reliability analysis yields the results as summarised in the Table below.

Subsystem	Type B
DC	66%
SFF	75%
PFD _{avg} , (TI = 1 year)	2.71×10^{-3}
PFD _{avg} , (TI = 2 years)	5.42×10^{-3}
MTBF (in years)	47.0

An MTTR of 8hrs was used in the above PFD calculations.

Note: DC – Diagnostic Coverage; SFF – Safe Failure Fraction; PFD – Probability of Failure on Demand; TI – Test Proof Interval; MTBF – Mean Time Between Failures; MTTR – Mean Time To Repair.

4. EXPLANATION OF RESULTS.

Any hardware failure, which affects accuracy, is deemed a dangerous failure. If a fault results in the loss of output signal, that failure is considered detected.

As the TTP has no hardware fault tolerance, the 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 TTP 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.

