



Certificate / Certificat Zertifikat / 合格証

DLY 1205025 C001

exida hereby confirms that the:

CatTracker® Temperature Tracking System

**Daily Thermetrics Corporation
Houston, TX - USA**

The manufacturer
may use the mark:



Has been assessed per the relevant requirements of:

IEC 61508 : 2010 Parts 1-7

and meets requirements providing a level of integrity to:

Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type A, Route 1_H Device

**PFD_{avg} and Architecture Constraints
must be verified for each application**

Revision 3.0 April 3, 2020
Surveillance Audit Due
May 1, 2023

Safety Function:

Each CatTracker probe thermocouple will transmit a measured temperature value within the specified safety accuracy.

Application Restrictions:

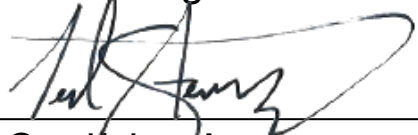
The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements.



ISO/IEC 17065
PRODUCT CERTIFICATION BODY
#1004




Evaluating Assessor


Certifying Assessor

DLY 1205025 C001

Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type A

PFD_{avg} and Architecture Constraints must be verified for each application

Systematic Capability :

The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 3. These are intended to achieve sufficient integrity against systematic errors of design by the manufacturer.

A Safety Instrumented Function (SIF) designed with this product must not be used at a SIL level higher than stated.

Random Capability:

The SIL limit imposed by the Architectural Constraints must be met for each element.

CatTracker® Catalyst
Temperature
Tracking System

IEC 61508 Failure Rates in FIT*

Device	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}
High Trip with no diagnostics	0	0	0	1040
High Trip with out of range diagnostics	0	0	987	53

* FIT = 1 failure / 10⁹ hours

SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFD_{avg} considering redundant architectures, proof test interval, proof test effectiveness, any automatic diagnostics, average repair time and the specific failure rates of all products included in the SIF. Each element must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are a mandatory part of certification:

Assessment Report:

DLY 12-05-025 R002 V3R0

Safety Manual:

SM-1.0 CatTracker Safety Manual



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Sellersville, PA 18960