The manufacturer may use the mark:

Certificate / Certificat
Zertifikat / 合格証

WES 1102068 C001

exida hereby confirms that the:

Accutrak Position Monitor Series 2200, 2600, 3300, 3400, 3500, 8300, 8400 and 8500

Westlock Controls Ltd. Tunbridge Wells, Kent - UK

Has been assessed per the relevant requirements of:

IEC 61508 : 2010 Parts 1-7

and meets requirements providing a level of integrity to:

Systematic Integrity: SIL 2 Capable

Random Integrity: Type A Element

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

Safety Function:
The Position Monitor switch will change it's output when the attached Valve moves to the configured position.

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

Reports:
WES 11/02-068 R002 V1 R1 Assessment Report
WES 10/02-068 R001 V1 R1 FMEDA Report

Validity:
This assessment is valid for Accutrak Series and Switch types listed on the back.

This assessment is valid until July 1, 2014.

Revision 1.0 June 9, 2011

Evaluating Assessor

Certifying Assessor

Certificate / Certificat / Zertifikat / 合格証

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Systematic Integrity: SIL 2 Capable

Random Integrity: Type A Element

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

Accutrak Position Monitor Series 2200, 2600, 3300, 3400, 3500, 8300, 8400 and 8500

Westlock Controls Ltd. Tunbridge Wells, Kent - UK

SIL 2 Capability:

The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 2. 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 without “prior use” justification by end user or diverse technology redundancy in the design.

Table 1 Version Overview

Series	Switch Quantity and Type (Option Code)
Accutrak 2200	1 to 4 SPDT Microswitches (5) 1 to 4 Magnum Switches (9)
Accutrak 2600	
Accutrak 3300	
Accutrak 3400	
Accutrak 3500	
Accutrak 8300	
Accutrak 8300	
Accutrak 8500	

IEC 61508 Failure Rates in FIT*

Accutrak Series 2200, 2600, 3300, 3400, 3500, 8300, 8400 and 8500 Switch Qty (Option Code)	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}
1 Switch (5 or 9)	0	11	0	94
2 Switches (5 or 9)	0	22	0	119
3 Switches (5 or 9)	0	34	0	149
4 Switches (5 or 9)	0	45	0	174
1 Switch (5 or 9) w/PVST†	11	0	86	8
1 Switches (5 or 9) w/PVST†	22	0	110	9
3 Switches (5 or 9) w/PVST†	34	0	139	10
4 Switches (5 or 9) w/PVST†	45	0	163	11

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 subsystem must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

* FIT = 1 failure / 10^9 hours

†PVST = Partial Valve Stroke Test of a final element Valve

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Form	Version	Date
C61508	2.7-2	Mar 2011