

FUNCTIONAL SAFETY DATA SHEET[®]

Manufacturer	BD I SENSORS GmbH BD-Sensors-Straße 1 D-95199 Thierstein Germany
Product(s)	LMK 331
Intended application	The above listed product(s) are used for level measurements in the process industry
Basis of testing	IEC 61508:1999 IEC 61511:2003
Report	The test report 154.101.103 of 2007-02-15 is an integral part of this data sheet
Functional Safety Data	
Type	A
Hardware Fault Tolerance	0
Safe Failure Fraction	61,0 %
Safe Detected Failure Rate	0 /hour
Safe Undetected Failure Rate	6,13E-8 /hour
Dangerous Detected Failure Rate	3,66E-8 /hour
Dangerous Undetected Failure Rate	6,28E-8 /hour
Dangerous Diagnostic Coverage	37%
MTTFd	1148 years
MTTFs	1863 years
PFD	See report for sample calculations
PFS	See report for sample calculations
Fit for use in Safety Integrity Level	2
Fit for use in Spurious Trip Level [™]	5

2007-02-15

Date

Dr. M.J.M. Houtermans

FUNCTIONAL SAFETY DATA SHEET[®]

Manufacturer	BD I SENSORS GmbH BD-Sensors-Straße 1 D-95199 Thierstein Germany
Product(s)	LMK 331 Ex
Intended application	The above listed product(s) are used for level measurements in the process industry in Ex environments
Basis of testing	IEC 61508:1999 IEC 61511:2003
Report	The test report 154.101.103 of 2007-02-15 is an integral part of this data sheet
Functional Safety Data	
Type	A
Hardware Fault Tolerance	0
Safe Failure Fraction	61,5 %
Safe Detected Failure Rate	0 /hour
Safe Undetected Failure Rate	5,95E-8 /hour
Dangerous Detected Failure Rate	3,79E-8 /hour
Dangerous Undetected Failure Rate	6,10E-8 /hour
Dangerous Diagnostic Coverage	38%
MTTFd	1154 years
MTTFs	1920 years
PFD	See report for sample calculations
PFS	See report for sample calculations
Fit for use in Safety Integrity Level	2
Fit for use in Spurious Trip Level [™]	5

2007-02-15

Date



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