

The manufacturer  
may use the mark:



**Reports:**

YEC 07/08-38 R001 FMEDA  
Report V1 R1

YEC 07/08-38 R003  
Assessment Report V1 R3

**Validity:**

This assessment is valid for  
the EJX Pressure  
Transmitter.

This assessment is valid  
until January 31, 2011.

Revision 1.4 September 4, 2009



Certificate / Certificat

Zertifikat / 合格証

YEC 070838 C001

*exida* hereby confirms that the:

**EJX Pressure Transmitter**

**Yokogawa Electric Corporation,  
Tokyo, 180-8750, Japan**

Has been assessed per the relevant requirements of:

**IEC 61508 Parts 1, 2, 3**

and meets requirements providing a level of integrity to:

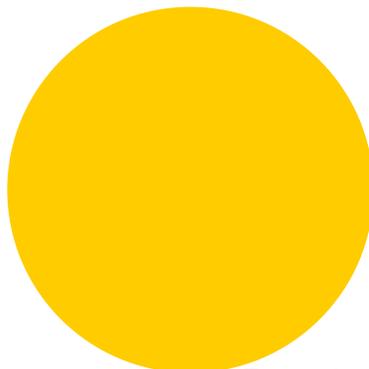
**Systematic Integrity: SIL 3 Capable  
Random Integrity for Type B Device:  
SIL 3 @ HFT=1 / SIL 2 @ HFT=0**

Safety Function:

The EJX Pressure Transmitter will measure pressure within the  
stated safety accuracy.

Application Restrictions:

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



*Michael Medoff*  
Product Assessor

*William M. Hoff*  
Auditor

YEC 070838 C001

**Systematic Integrity: SIL 3 Capable**  
**Random Integrity for Type B Device:**  
**SIL 3 @ HFT=1 / SIL 2 @ HFT=0**

**EJX Pressure  
Transmitter**

**Yokogawa Electric  
Corporation,  
Tokyo, Japan**

**SIL 3 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 without "prior use" justification by end user or diverse technology redundancy in the design.

**IEC 61508 Failure Rates**

**Failure rates for EJX Transmitter in FIT\***

Device	$\lambda_{sd}$	$\lambda_{su}$	$\lambda_{dd}$	$\lambda_{du}$	SFF
EJX Pressure Transmitter	0	195	277	27	94.6%
EJX Pressure Transmitter with integral Digital Output	0	215	260	31	93.9%

**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

  
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 Certification S.A.

Form	Version	Date
C61508	2.01	July 2008