

## Manufacturer's declaration - SIL Capability

### Functional safety according to IEC 61508/IEC 61511

Emerson Process Management, Rosemount , declares as manufacturer that the:

#### ***Vortex flowmeter, model 8800D and 8800D with MTA option***

fulfills the criteria for reducing the hardware fault tolerance with 1 (HFT) as stated in second; third and fourth bullets of clause 11.4.4 of IEC 61511-1; version 2003. This flowmeter can therefore be used as a single instrument up till SIL 2, under the condition that the "prior use" criteria (first bullet of clause 11.4.4.) are met.

The criteria of "prior use" can only be assessed by the user, as clearly stated in the scope of IEC 61511-1, version 2003 (clause 1.b).

Additional information:	<b>8800D</b>	<b>8800D with MTA option</b>
SFF (Safe Failure Fraction)	85.8%	89.2 %
PFD <sub>avg</sub> (Average Probability of Failure on Demand)	5.56 * 10 <sup>-4</sup> (within the range of SIL 2)	7.09 x 10 <sup>-4</sup>
MBTF <sub>tot</sub> (Mean Time Between total Failures)	129 years	78 years
λ <sup>DU</sup> (Dangerous Undetected failure rate)	126 FIT	160 FIT (Failure In Time ; 1*10 <sup>-9</sup> per hour)
Type of equipment	type B (microprocessor based)	

The stated PFD<sub>avg</sub> is based on a proof test interval of 1 year and a diagnostic coverage of 100%.

The data in this declaration is based on the IEC 61508 hardware assessment via a Failure Modes, Effects and Diagnostics Analysis (FMEDA), performed by exida.com (report ROS 06/03-34 R001 – May 2006).

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