



Annex I

No. 6L250430.AMADT74

Test Report / Technical Construction File no. AMA-20240115-2-SIL3-TCF

- SC 3 (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.
- The product version of hardware components used for validation and type tests are the following:

Product:	Pressure Transmitter
Model(s):	LD3351 series, LD3351D series, LR3351 series, LR3351D series, LD3851 series, LD3851D series, LR3851 series, LR3851D series, LD series, LDY series, LDU series, LY series, LYFB series, LYYL series, LYGZL series, LYGT series, LY4285H series, LYYW series, LYGZL series, MF series, MF3351 series, MF3851 series, MFYS series, MFUST series, MF3051 series, MF2088 series, 3351 series, 3851 series, 3051 series, 2088 series, Y-100 series, Y-150 series, YTN series, YTN-B series, Y-60BF series, Y-100BF series, Y-150BF series, YE-100 series, YE-150 series, YPF series, YML series, YMF series, YB-150A series, YB-150B series, YJTX-150B series, YZS-102 series

- 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 for each element.
- IEC 61508 Failure Rates:

Failure Rate Data	Per 10 ⁹ Hours				Open On Trip	
	Close On Trip					
	Full Stroke		Tight Shutoff		Normal	Pvst
Clean Service	Normal	Pvst	Normal	Pvst		
Fail Dangerous Detected		278		381		169
Fail Dangerous Undetected	53	51	33	40	75	23

PVST: Partial Valve Stroke Test

- 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.