
	SIL classification MTBF: Mean Time Between Failure SIL: Safety Integrity Level
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Product	SR Pneumatic Actuator	
Type	Single Acting Pneumatic Actuator	
Range	SR1 – SR8	

Objective

The objective is to determine the rate of critical failures of the Single Acting Pneumatic Actuator to allow MTBF (Mean Time Between Failure) calculation and SIL classification.



System description


Type	A
HFT	0
Safety functions	1. Delivery of a full stroke (90° +/- tolerance) driven by the spring, with power fluid exhausted from from the cylinder through the control system
Mode of operation	Low Demand Mode

Summary Table

Random Failure rates				
Configuration	Safety Function	λ_{DU}	λ_{DD}	λ_S
No PST	1	$2,23.10^{-8}$	$0,00.10^{-0}$	$0,00.10^{-0}$
With PST	1	$2,01.10^{-9}$	$2,03.10^{-8}$	$0,00.10^{-0}$

Systematic capability	3 (Route 1s applied)		
Architectural Constraints	Route 1H:	Applied	Route 2H: Applied
	The product can be used in: <ul style="list-style-type: none"> - Single channel configuration: Up to SIL 2 without external diagnostic tests Up to SIL 3 considering external diagnostic tests - Double channel configuration: Up to SIL 3 		

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DATE	MODIFICATION	NOM / Name	NOM / Name
	Wordings	EMISSION	VERIFICATION / APPROBATION

	SIL Classification	H/AQL/D24/D
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