

SIL Approved Actuators from Zoedale

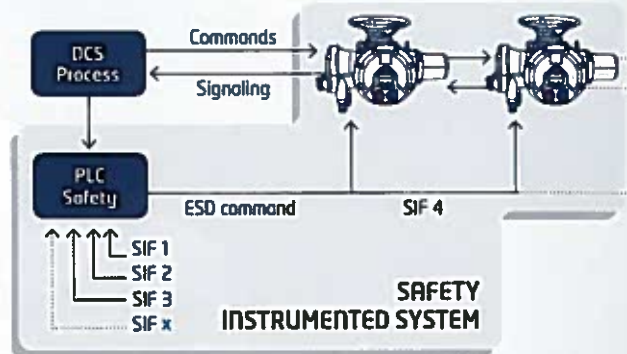
Zoedale is the UK value added reseller (VAR) of Bernard high quality electric actuators and can now announce that these actuators can be compliant in a SIL safety system.

SIL started out in 1998 as a series of standards known as IEC 61508 ("Functional safety for safety-related Electrical/ Electronic /Programmable Electronics") and in 2003 after a few alterations they have become the SIL regulations of today. SIL (Safety Integrity Level) is a measure of safety level in an industrial environment, which is based on the level of security provided by a measure of risk. Regulatory, societal and economic pressures all contributed to the development of the SIL safety standards. In a SIS (Safety Instrumented System) there is one or more safety instrumented functions (SIF) the typical structure of a command chain includes sensors, actuator and the item being actuated (valve for example).

The most common SIS (Safety Integrated System) application within Bernard's speciality is an ESD (Emergency Shut Down) command chain (pictured right). In a SIS there are several safety instrumental functions (SIF) which can be categorised as one of the following: sensors that measure, PLC's that treat and command, and a safety device that operates components. Each SIF has its own SIL level; the combination of all these levels determines the SIL capability of the system as a whole.



SIL (Safety Integrity Level) is a measure of safety level in an industrial environment



SIS system diagram

An actuator with SIL offers a high level of confidence and diagnostic capabilities and these can be measured in different ways:

The level of confidence can be measured in: PFD – the Probability of Failure on Demand or PFH – the Probability of dangerous Failure per Hour.

The level of diagnostic capabilities is defined as SSF – Safe Failure Fraction Zoedale supply several SIL compliant actuators these include:

Weatherproof:

Quarter-turn:

SQ Range
SQ20 to SQ80 (200 to 800 Nm)

Multi-turn:

ST Range
ST6 – ST220 (60 to 2200 Nm)
ASM Range
ASM 0 to ASM 3

ATEX Explosion proof:

Quarter-turn:

SQX Range
SQX18 to SQX80 (200 to 800 Nm)

Multi-turn:

STX Range
STX6 to STX 1400 (60 to 1400 Nm)
ST175 & ST220 (1750 to 2200Nm)

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