26 ORCHARD DRIVE,
TONBRIDGE, KENT, TN10 4LG.
Tel: 01732 352532
david.smith@technis.org.uk
www.technis.org.uk

CERTIFICATE of RELIABILITY and FUNCTIONAL SAFETY

This is to certify that

The **PNEUCON 2PC & 3PC BALL VALVE [up to ½"-6" #150 #300 WITH SINGLE ACTING ACTUATOR [SA models]** provided by **PNEUCON AUTOMATION PVT LTD, Plot No.1/235 B, Off Blossom High School, Kolshet Balkum Road, Thane (W) –400 607 India,** has been assessed and is considered suitable for use in a low demand safety function:

- **Ball valve with Single Acting Actuator (with hardware fault tolerance of 0) at SIL 2**
- **Ball valve with Single Acting Actuator (with hardware fault tolerance of 1) at SIL 3**

This claim is in respect of random hardware failures (routes 1H and 2H). The assessment was based on the assumptions, limitations and recommendations given in Technis Report T1112 (Issue 1.0) for Kalsafe Certification Services LLP. The product was assessed against the failure mode:

- **Failure to close on demand**

The assessment was carried out having regard to the guidance in IEC 61508 [2010] and IEC 61511 [2016] and related guidance.

	SINGLE ACTING ACTUATOR
Integrity claim	**SIL 2 (HFT[0[& SIL 3 (HFT[1]**
System Type	A
Hardware Fault Tolerance	0
SFF	>64%
PFD (hazardous failure)	$<2.5 \times 10^{-3}$
Proof Test Interval	Up to 1 year

The validity of this certificate requires that the product is used in accordance with any assumptions, limitations or intervals stipulated in the underpinning reliability/integrity report. The product build state continues to conform to the drawings and issues quoted in the underpinning reliability/integrity report. The product is used having regard to the instructions, limitations of use, intervals etc as outlined in the manufacturer's Safety Manual. The manufacturer maintains a credible level of Functional Safety Management in respect of (for example) design configuration control, procurement, manufacturing and defect analysis. The certificate will not apply to any product variation/modification or to the use of functions not addressed in the original study. It is recommended that the design, defect records and the company FSM procedure are reviewed, at least every 2 years, and should any changes have occurred since the original certification then the manufacture should contact Technis to request re-certification.

Signed:.....(Certificate No T1112-233.1) – 27 April 2024)

Dr David J. Smith BSc,PhD,CEng,FIEE,FIQA,HonFSaRS,MIGasE

This certificate does not warrant fitness for any specific applications related purpose and is based on probabilistic and statistical assessment