

# TECHNIS

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## CERTIFICATE of RELIABILITY and FUNCTIONAL SAFETY

### This is to certify that

The D1xCP1-PS Manual Call Point provided by European Safety Systems, Impress House, Mansell Road, London W3 7QH UK. has been assessed and is considered suitable for use in a low demand safety function:

- As an unvoted item (ie hardware fault tolerance of 0) at SIL 2

This claim is in respect of random hardware failures and systematic failures. The assessment was based on the assumptions, proven-in-use data provided, and recommendations given in Technis Report T1009 (Issue 1.0). The product was assessed against the failure modes:

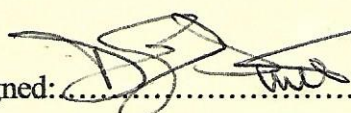
- Failure to close contact when the call point dual action is operated
- Failure to open contact when call point dual action is operated

The assessment was carried out having regard to the guidance in IEC 61508 [2010] and the related body of guidance in respect of Random Hardware Failures and Systematic Failures [route 2<sub>H</sub>]

Integrity in respect of failure to close	SIL 2
Total Failure Rate	0.49 pmh
“hazardous” failure rate (revealed)	0 pmh
“hazardous” failure rate (unrevealed)	0.49 pmh
“safe” failure rate (revealed)	0 pmh
“safe” failure rate (unrevealed)	0
System Type	A
Hardware Fault Tolerance	0
PFD (hazardous failure)	$2.2 \times 10^{-3}$
Proof Test Interval	Up to 1 year

The above supports a SIL2 claim. However, Technis does not consider SIL2 to be a realistic target for these functions.

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 T1009-189) – 12 March 2021)

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*