

Annex to Report No. 968/FSP 2048.00/21

Summary of the characteristic data for use of the product in safety-related applications

 Product: Vertex Pressure Transmitter
 Company: Dynisco Instruments LLC
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1 Characteristic data acc. to IEC 61508-1 till -7 and to EN ISO 13849-1 for use of the product as a subsystem *) in safety functions

| Safety Function | HFT | PFH [h ⁻¹] | PFD _{avg} T ₁ =20 a | MTTF _d | DC _{avg} | Demand Mode | IEC 61508 / EN 62061 | ISO 13849 |
|--|----------|------------------------|---|-------------------|-------------------|-------------|---------------------------|--------------|
| 4-20mA pressure signal output | 0 (1001) | 2,61E-07 | 2,28E-02 | high | low | low | 22.8 % of SIL 1 budget *) | -/- |
| | | | | | | high | 26.1 % of SIL 2 budget | PL d, Cat. 2 |
| | 1 (1002) | 1,03E-10 | 8,94E-06 | high | high | low | 0.9 % of SIL 3 budget | -/- |
| | | | | | | high | 0.1 % of SIL 3 budget | PL e, Cat. 3 |
| Guardian monitoring channel relay signal | 0 (1001) | 2,83E-07 | 2,48E-02 | high | low | low | 24.8 % of SIL 1 budget *) | -/- |
| | | | | | | high | 28.8 % of SIL 2 budget | PL d, Cat. 2 |
| | 1 (1002) | 1,05E-10 | 9,10E-06 | high | high | low | 0.9 % of SIL 3 budget | -/- |
| | | | | | | high | 0.1 % of SIL 3 budget | PL e, Cat. 3 |

*) Note: For shorter proof test intervals (PTI), it is also possible to achieve SIL 2. In the case of the 4-20mA pressure signal output, this would be a PTI of 3 years to reach 35% of the SIL 2 Budget. In case of the Guardian monitoring channel relay signal it would be 2 years to reach 25% of the SIL 2 Budget.

2 Additional data for use of the product as a subsystem element in safety functions

| Safety Function | SFF | λ [1/h] | λ_s [1/h] | λ_d [1/h] | λ_{du} [1/h] | λ_{dd} [1/h] |
|--|--------|-----------------|-------------------|-------------------|----------------------|----------------------|
| 4-20mA pressure signal output | 74,7 % | 1,03E-06 | 5,10E-07 | 4,97E-07 | 2,61E-07 | 2,36E-07 |
| Guardian monitoring channel relay signal | 72,6 % | 1,03E-06 | 4,96E-07 | 5,05E-07 | 2,83E-07 | 2,23E-07 |