

**Certificate of Conformity No.: 28714183 Rev. 1**

**Manufacturer: DVG Automation S.p.A.**  
Via G. Rossetti, 2  
I-29016 Cortemaggiore (PC)

**Specifications: IEC 61508-1+7:2010**

**Product: Intelligent Total Valve Controller**

**Type: ITVC**

**RESULT: As per the TÜV Rheinland Italia Report No. FS 28714183 Rev. 4, we declare that the product meets the below requirements:**

**IEC 61508: 2010, part 1 to 7 Functional Safety of electrical/electronic/programmable electronic safety related systems**

| Type | HFT | SC | Architectural Constraints |
|------|-----|----|---------------------------|
| B    | 1   | 3  | SIL 3                     |

| Safety Function                                  | $\lambda_s$ [1/h] | $\lambda_{DD}$ [1/h] | $\lambda_{DU}$ [1/h] | PFD <sub>AVG</sub> (TI=1y) |
|--|-------------------|----------------------|----------------------|----------------------------|
| Panic Button (DETT)                              | 7,49E-07          | 1,51E-08             | 6,91E-10             | 3,15E-06                   |
| Panic Button (ETT)                               | 7,18E-07          | 3,55E-08             | 8,97E-10             | 4,22E-06                   |
| ESD (DETT)                                       | 7,23E-07          | 1,51E-08             | 6,91E-10             | 3,15E-06                   |
| ESD (ETT)  | 6,91E-07          | 3,55E-08             | 8,97E-10             | 4,22E-06                   |
| Line Break 1oo2 (DETT)                           | 4,50E-07          | 1,52E-08             | 8,03E-10             | 3,64E-06                   |
| Line Break 2oo3 (DETT)                           | 4,50E-07          | 1,57E-08             | 8,64E-10             | 3,92E-06                   |
| Line Break 1oo3 (DETT)                           | 4,50E-07          | 1,46E-08             | 7,42E-10             | 3,37E-06                   |
| Line Break 1oo2 (ETT)                            | 4,18E-07          | 3,55E-08             | 1,01E-09             | 4,71E-06                   |
| Line Break 2oo3 (ETT)                            | 4,18E-07          | 3,61E-08             | 1,07E-09             | 4,98E-06                   |
| Line Break 1oo3 (ETT)                            | 4,18E-07          | 3,48E-08             | 9,27E-10             | 4,35E-06                   |
| Differential Line Break 1oo2 (DETT) (Open/Close) | 4,50E-07          | 1,52E-08             | 8,03E-10             | 3,64E-06                   |
| Differential Line Break 1oo2 (ETT) (Open/Close)  | 4,18E-07          | 3,55E-08             | 1,01E-09             | 4,71E-06                   |
| Differential Line Break 1oo2 (Stayput)           | 4,18E-07          | 3,55E-08             | 1,01E-09             | 4,71E-06                   |

- REMARKS:**
- ETT: Energise-To-Trip (for ETT applications battery back-up must always be present)
  - DETT: De-Energise-To-Trip
  - The Safety Function "LineBreak" is realised with 1oo2, or 2oo3, or 1oo3 architecture of the Input block, while the Logic block and the Output block are always realised in 1oo2 redundant architecture.
  - The above values of PFD<sub>AVG</sub> are calculated for MRT=8 h, Proof Test Coverage=100% and TI=1 y. For other values of MRT, TI and/or non-perfect Proof Test, the PFD<sub>AVG</sub> values must be recalculated.

Considering the values above summarised, the DVG Automation Intelligent Total Valve Controller ITVC can be used up to SIL 3.

The requirements of the Safety Manual and the User Manual shall be observed.

**Expiry date: 2018-07-31**

--- End document

Location **Milan**  
Date **2016-01-27**

Diego Sirtori  
Business Stream Manager

