

JOYNER pneumatic GmbH
Im Netzbrunnen 6
70825 Korntal-Münchingen
Germany

This declaration is valid for the following JOYNER products:

DSVN-5 (Pressure applied safety valve)
DRN 3 601, DRN 3 611, DRN 3 128, DRN 5 601, DRN 5 611 (Block form flow regulator)
UB 701 (Air-recirculation block)
SENR-20, SENR-207 (Quick Exhaust Valve)
SRB 700 (SIL Redundant Block)
PN 411 701, P 411 121 (Pneumatic short-cut valve)
BHN 601, BHN 601 01, BHN 611 01, BHN 420 701 (Block & bleed, block & block & short-cut valves)
CBN 700 (Control block for process valves with inflatable valve-seat)
HVRZN 731 701, HVRZN 731 702 (Pneumo-manual override for process valves controlled by positioner)
ZVP 701, ZVP 101, ZVP 121, ZVP 121-701 (Plates to combine a Namur-valve with a double acting cylinder / the actuation-element of a knife-gate-valve)

Intended use: Pneumatically operated products for compressed air

Detailed technical specifications and functionalities about the individual products see in the JOYNER catalogue.

Considering the technical rule VDMA 24578:2009 Fluid power systems - Implementation of DIN EN ISO 13489 - Requirements at manufacturers and users of pneumatic components, the manufacturer hereby declares the lifetime value of the above mentioned products:

$B_{10d} = 10.000.000$ switching cycles.

The above mentioned products fulfil the requirements of the "Good engineering practice method" specified in the standards ISO 13849-1:2015 Safety of machinery -- Safety-related parts of control systems -- Part 1: General principles for design, and in ISO 13849-2:2012 Safety of machinery -- Safety-related parts of control systems -- Part 2: Validation.

The above-mentioned products are suitable for use in safety-related systems up to SIL 2, given that the subsystem meets the requirements of a Category 2 subsystem

ISO 13849-1:2015 Category 2 PL d

The above mentioned products are manufactured according to basic and well-tried safety principles in accordance with ISO 13849-2, and to the relevant standards for the design of the products: ISO 4414:2010 Pneumatic fluid power -- General rules and safety requirements for systems and their components, and ISO 12100:2010 Safety of machinery -- General principles for design -- Risk assessment and risk reduction.

The manufacturer of the above mentioned products specifies the appropriate application and operating conditions for the user.

The design of the SRP/CS fulfils the basic and well-tried safety principles according to ISO 13849-2 for the implementation and operation of the products.

This declaration is valid only if the following conditions are fulfilled:

- The suitability for certain fields of application can only be assessed by additional evaluation of further components of the subsystem.
- The specifications for assembly and operating conditions represented in the user manual or in the datasheet are fulfilled.
- In case of use in a higher category (2 to 4), the further requirements of ISO 13849 (for example CCF, DC, PLr, software) have to be considered by the user.
- The maximum number of switching cycles (B_{10d}) can't be exceeded within the mission time T_M (typical assumption by ISO 13849-1: 20 years). If the number of expectable switching cycles of a component exceeds the B_{10d} value within the mission time, the user shall ensure that the component is replaced in time.
- The valve has to be switched at least once in a week, respectively once in a work shift, to ensure the intended function.
- The basic safety principles for the implementation and operation of the component in accordance with ISO 13849-2 have to be fulfilled. For the categories 1, 2, 3 or 4 the proved safety principles for the implementation and operation of the component in accordance with ISO 13849-2 have to be fulfilled.
- The allowed pulse lengths that can be overcome with absence of reaction must be adhered.
- The allowed rest current that ensures a reliable shut off shall not exceeded.

Korntal-Münchingen, 31. October 2016

Managing Director
JOYNER pneumatic GmbH



Andreas Krämer