

TECHNICAL NOTE

TN591



Rev. B, Juli 2018

Use of Moog Valves in Safety-Related Parts of
Control Systems in Accordance with DIN EN
ISO 13849-1:2016-06

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We reserve the right to make changes to this document at any time and without specified reasons.

Completeness

This document is complete only when used in conjunction with the product-related hardware and software documentation required for the relevant application, as for example operating instructions of the valve and other manuals.

Selection and qualification of personnel

As specified in the product-related hardware and software documentation required for the relevant application, only users properly qualified and authorized for these tasks may work with and on our products.

Note

This document has been prepared with great care in compliance with the relevant regulations, state-of-the-art technology and our many years of knowledge and experience, and the contents have been generated to the best of the authors' knowledge. However, the possibility of error remains and improvements are possible.

Please feel free to submit any comments about possible errors and incomplete information to us.

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1. Affected Valve Series

This document affects the following Moog valve series:

D633, D634, D635, D636, D637, D638, D639, D661, D662, D663, D664, D665, D671, D672, D673, D674, D675, D681, D682, D683, D684, D685, D941, D942, D943, D944, D945, D816, D920, D930,

Please refer to the following requirements for all valve series.

2. Requirements

Valves of the above-named series are suitable for installation in safety-related parts of control systems in accordance with DIN EN ISO 13849-1:2016-06, subject to the following requirements:

- The valves must be fitted with springs for setting the main spool to a defined position.
- The safety-related function of the valves is to set the main spool to a defined position by spring power to prevent unsafe motion after the power that controls the main spool has been shut off.
- If a motion of the consumer in the safe position has to be prevented, a sufficient overlap must be selected. Note that in the case of spool valves internal leakage may occur even with large overlaps, and this may result in a drifting motion of the consumer.
- Depending on the required safety functions it may be necessary to fit pilot-controlled valves with integrated 2/2-way or 4/2-way switching valves.
- The user has to comply with the basic and well-tried safety principles for implementation and operation of valves in accordance with DIN EN ISO 13849-2:2013-02, Tables C.1 and C.2.
- The user implements the valves in accordance with the environmental and application conditions described in the catalog, the operating instructions and the mounting and installation notes.

The valves have been designed to conform to the basic and well-tried safety principles in accordance with DIN EN ISO 13849-2:2013-02, Tables C.1 and C.2.

3. MTTFd

If the requirements listed above are met, an MTTFd of 150 years or a time according to table C.1 of DIN EN ISO 13849-1:2016-06 can be set for the safety-related function of the valves

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Technical Note TN591
Rev. B, Juli 2018 CDS55742-en