



Are you challenged with..

**..complying local laws
and standards?**

**..reducing of
engineering times?**

**..fulfilling machine
safety requirements?**

Our solution for you:

STO Manifolds

STO Manifolds

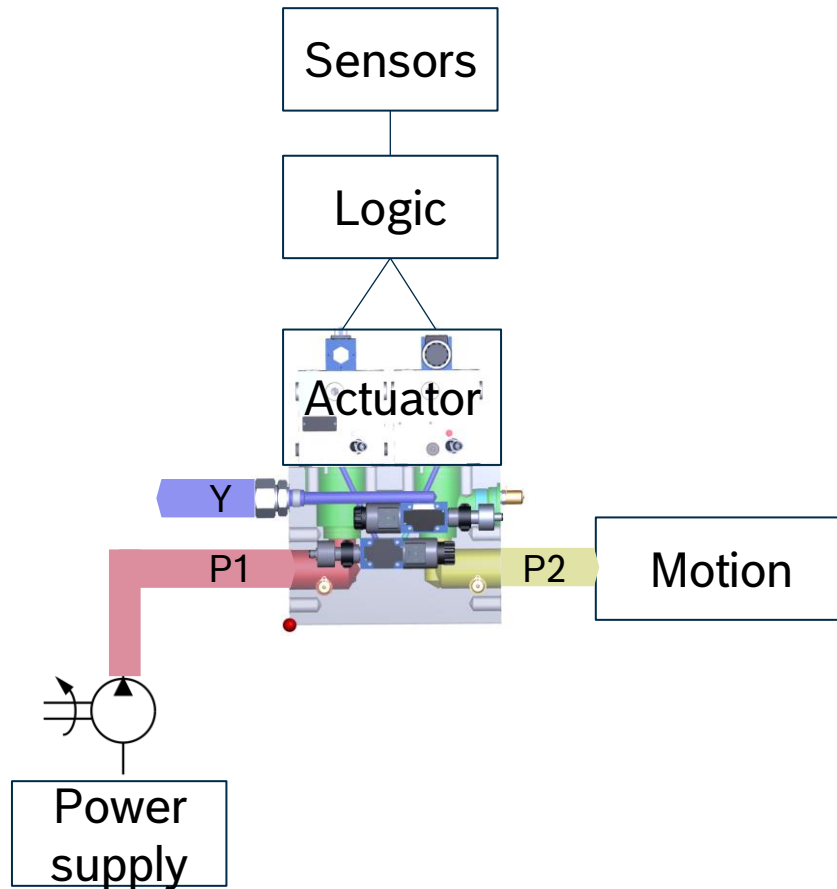
Your benefits:

- Certified functional concept acc. to ISO13849:
 - Ready for Safe torque off function (Cat4 Ple)
 - Ready for Safe de-energizing (Cat4 Ple)
- Save design efforts and engineering times with access to finished manifold designs
- Suitable to all common fluids (HLP, HFC, HFDU)
- Detailed documentation available in RExxxxx



STO-Manifold

Valve actuator with more than just one function



Safety related functions according to DIN EN ISO 13849

Safe torque off (STO)

- Is a safety-related stop function (e.g. initiated by a safeguard) that as soon as necessary after actuation, put the machine in a safe state
- prevents unintended motion

Safe de-energizing (SDE)

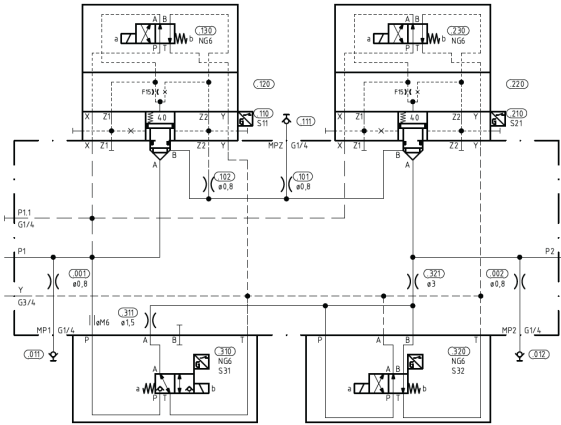
- Is an isolation and energy dissipation function that is active after STO was triggered (subfunction of STO)

Safe limited speed (SLS)

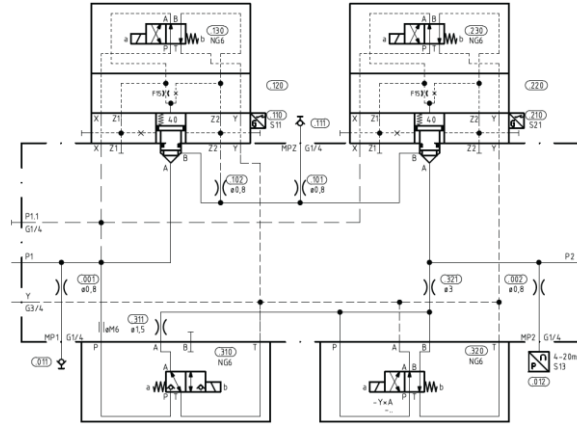
- Exceeding of the speed limit/ volume flow value is prevented (e.g. when operating in setting mode)
- Only suited for single actuator functions

STO-Manifold

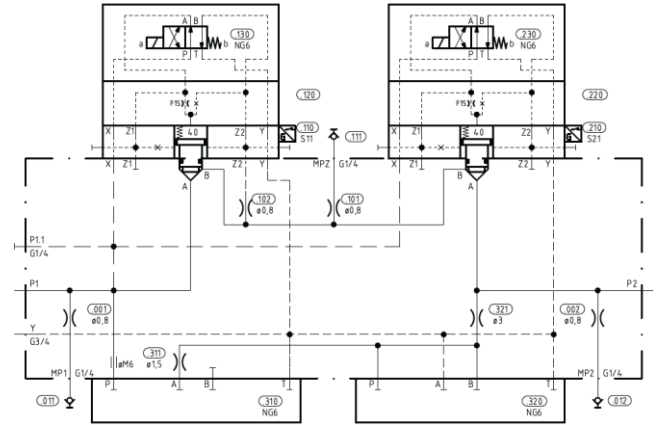
Variance of safety levels and functions in a modular design



1. STO: Cat4 PI e
 2. SDE: Cat4 PI e
 3. SLS: Cat4 PI e
 4. Compression of P2
- Performance Level: $x, x \cdot 10^{-7}$**
DC: 99%

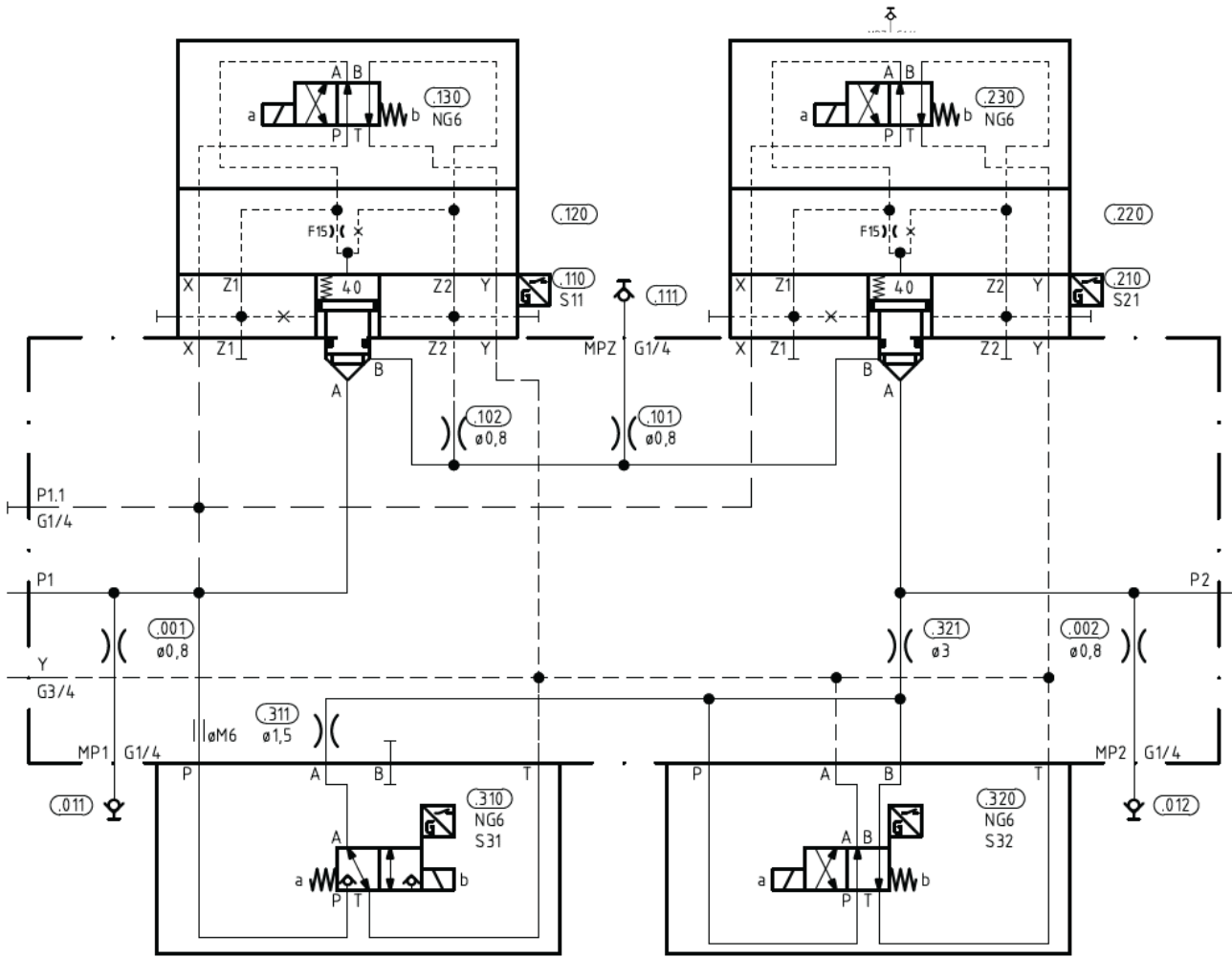


1. STO: Cat3 PI d
 2. SDE: Cat3 PI d
 3. SLS: Cat3 PI d
 4. Compression of P2
- Performance Level: $x, x \cdot 10^{-7}$**
DC: 9x, x%



1. STO: Cat4 PI e
- Performance Level: $x, x \cdot 10^{-7}$**
DC: 9x, x%

STO-Manifold – easy integration in your system



- Prefill your system and prevent pressure peaks during pressure buildup
- Inlet (P1) and outlet (P2) in a single axis for easy integration into your piping
- Similar design and same electrical control mechanism for all sizes
- Size 20 and 30 work with energy efficient unlockable check valves (SL)
- Size 32 and 40 work with the latest generation of high performance active logic valves (LC2A)



STO-Manifold

Technical data at a glance



Size	Main valve	Volume flow @ $\Delta p=10\text{bar}$ (l/min)
20	SL20	~300
30	SL30	~550
32	LC2A032	~900
40	LC2A040	~1.500

Safety functions:

Safe torque off (STO) according to DIN EN ISO 13849 (up to Cat.4 PI e)

Safe de-energizing (SDE) (up to Cat.4 PI e)

Safe limited speed (SLS) (up to Cat.4 PI e)

Maximum operating pressure:

315 bar

Fluid temperature range:

-10°C to +60°C

Supply voltage of valves:

24V

Coating:

Galvanic coating DIN EN ISO 19598

Hydraulic fluid:

Mineral oils: HL, HLP, HVLP

Non flammable oils: HFDU (HFC on request)

Leakage:

In the direction to actuator port „P2“ leakage free