

# Mineral Insulated Thermocouple model 3F

## MIT with protection shell model 3F according or similar to DIN 43722

### In general

The temperature sensors manufactured by Reckmann GmbH (R58®) are solely intended for the measurement of process temperatures in solid, liquid and gaseous media. This design allows a direct flanging to the weld-neck-flange of a vessel or a pipeline. The tapering reduces the response time.

#### Application area:

Autoclaves, mechanical and plant engineering, food, chemical industry, energy and power plant technology, building materials industry, recycling, pipeline construction.

**For installation-specific data, see installation instructions Type code 1R9-C3.**

### Technical datas

- **Connection head** (fig. 1/1) according to DIN EN 50446, Preferred heads: Form B, B-KL, B-KS, BA-KL, BA-KS, BA-KLH, BA-KSH, B-VA, B-GR, B-KU, B-KUKL, B-KUHKL, IP 54. Dimensions see page 2.  
**On request:** IP 65 or IP 67.
- **Protection shell** (fig. 1/3 to 4) according to or similar to DIN 43772. Standard material 1.4571. Preferred diameter 9 mm.
- **Process connection** (fig. 1/4) via welded blind flange according to DIN EN 1092-1 type 05 or ASME B 16.5. Preferred flanges DN25 PN40 / DN50 PN16 form B1.
- **Measuring insert** (fig. 1/2) exchangeable, according to or similar to DIN 43735. Sensor depending on application: with 1 or 2 thermocouples according to IEC / EN 60584-1. Recommended application temperature depending on thermocouple type and diameter:  
Type K: Ø 3.0 mm up to 1070 °C, 6.0 and 8.0 mm up to 1100 °C.  
Type J: Ø 3.0 mm up to 520 °C, 6.0 and 8.0 mm up to 720 °C.  
Type N: Ø 3.0 mm up to 1070 °C, 6.0 and 8.0 mm up to 1100 °C.  
Type E: Ø 3.0 mm up to 650 °C, 6.0 and 8.0 mm up to 820 °C.  
Type T: Ø 3.0 mm up to 315 °C, 6.0 and 8.0 mm up to 350 °C.
- **Sheath material** Design according to IEC / EN 61515. Preferred material 2.4816. Preferred diameter 3 or 6 mm.
- **Optional:** Class 3 requirements (-200 °C to 40 °C) on request. For requirements of class 1 and class 3 only possible with specially selected sheath material, high expense and not with type T.

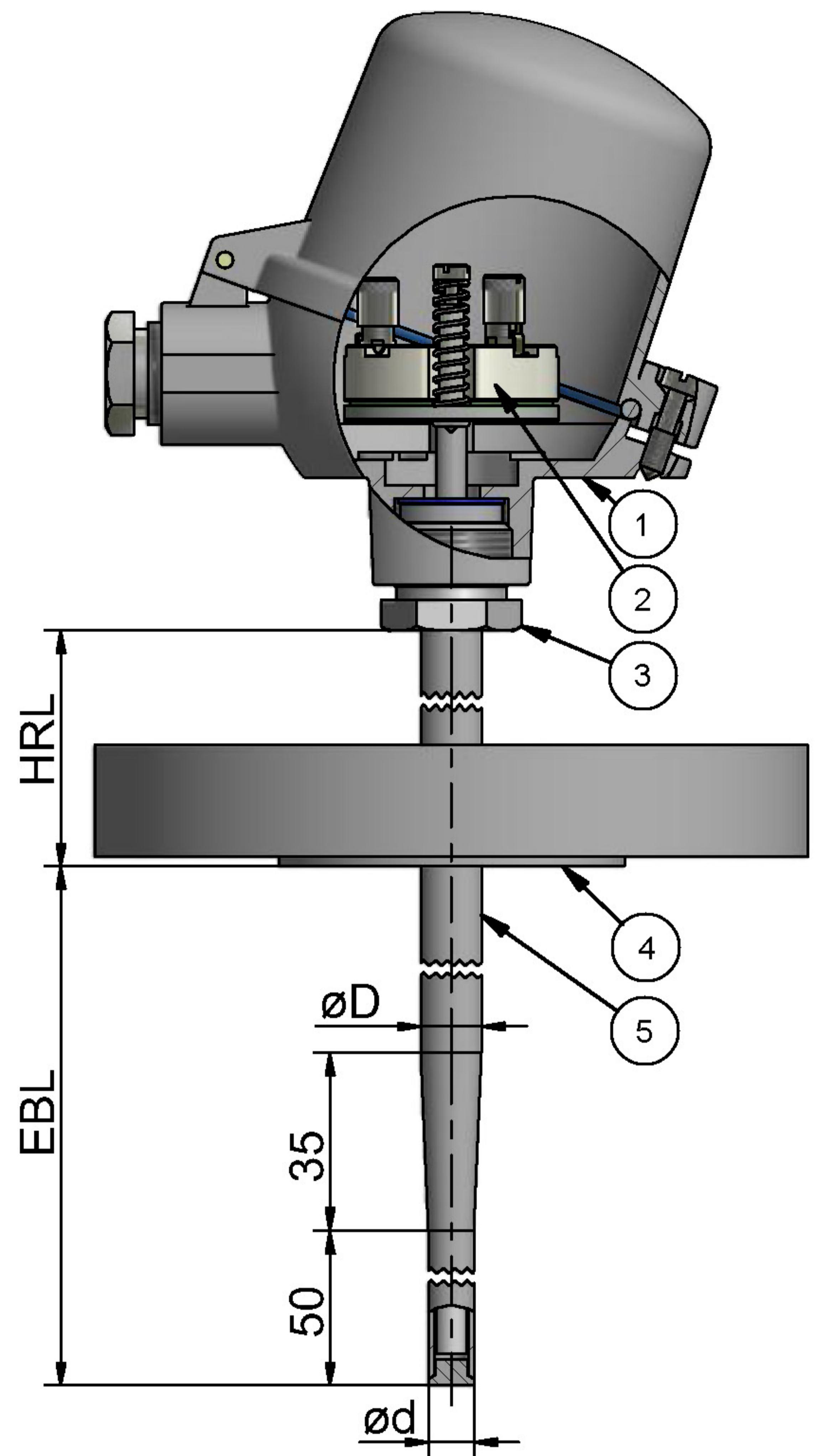
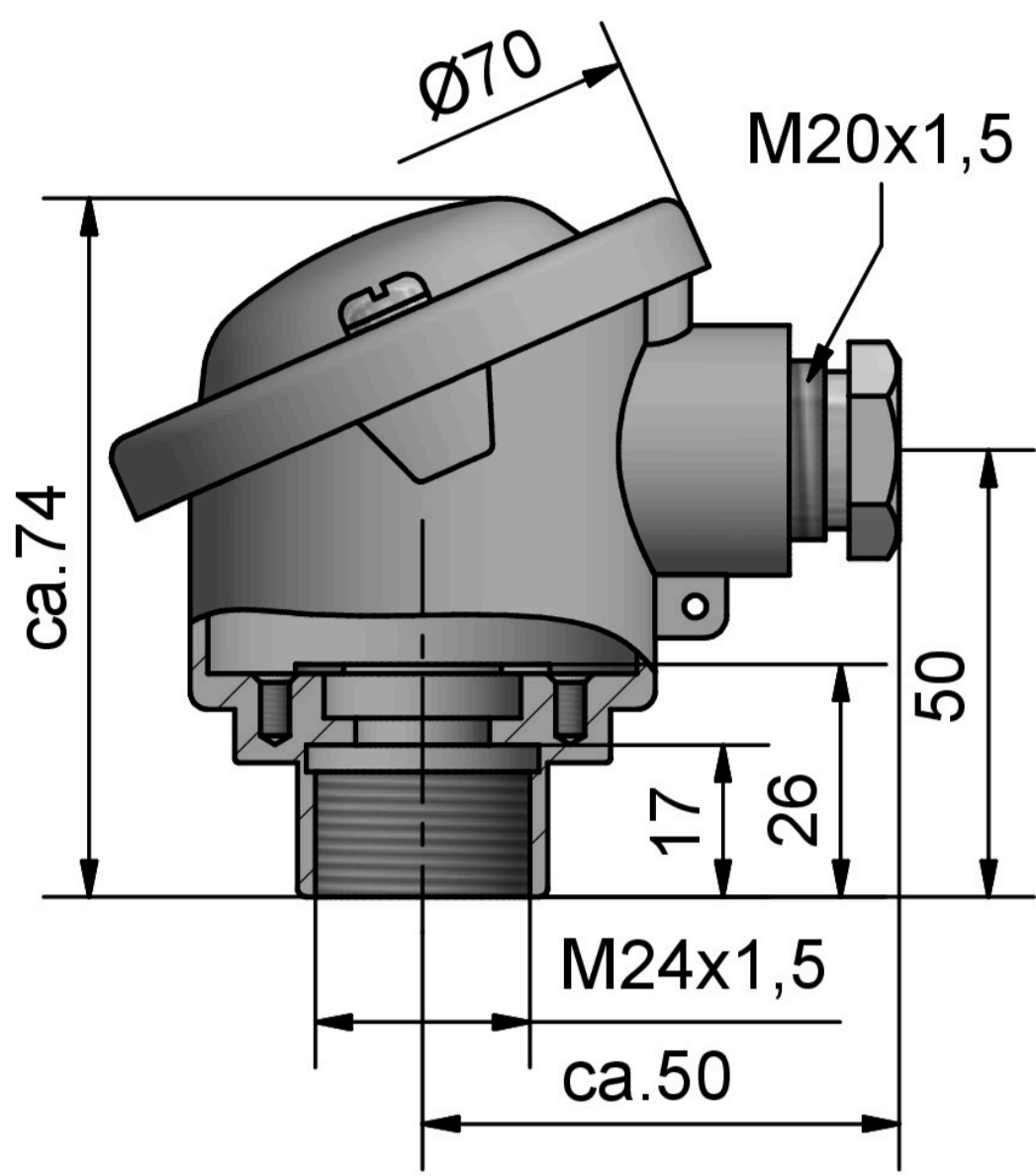


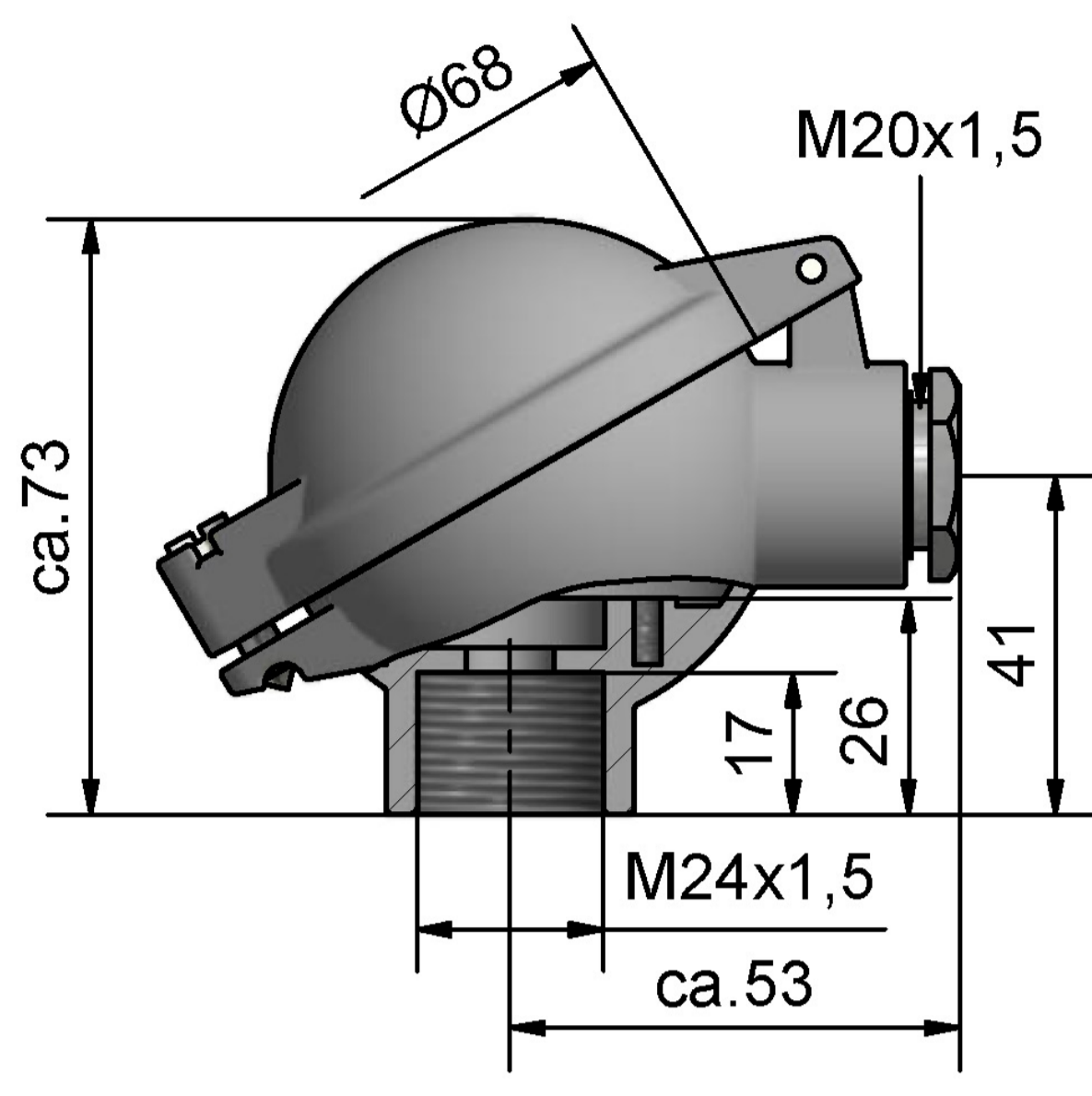
fig. 1

## Optional connection heads / connection diagrams

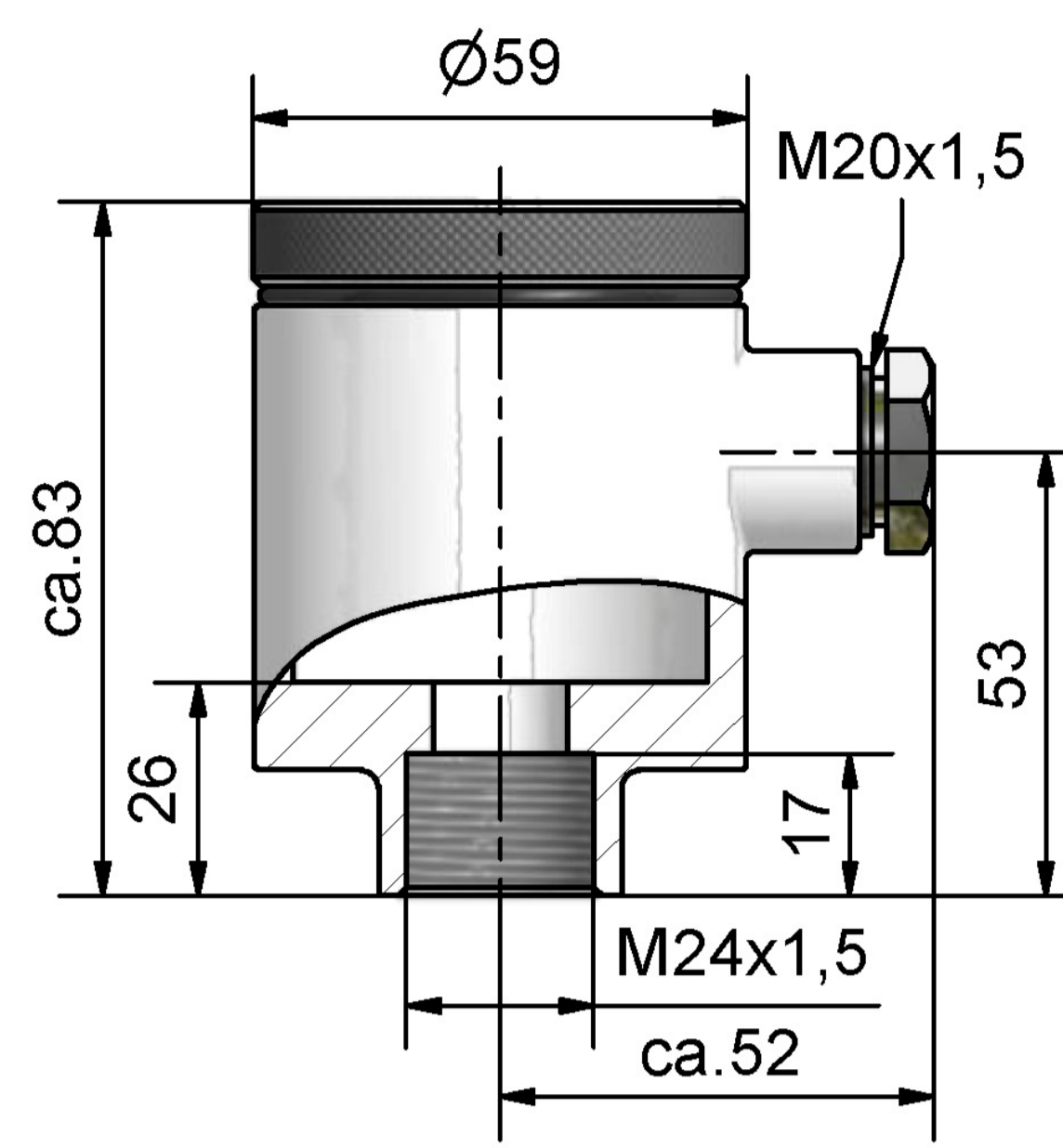
As an alternative to the cable gland, an M12 flush-type connector is possible.



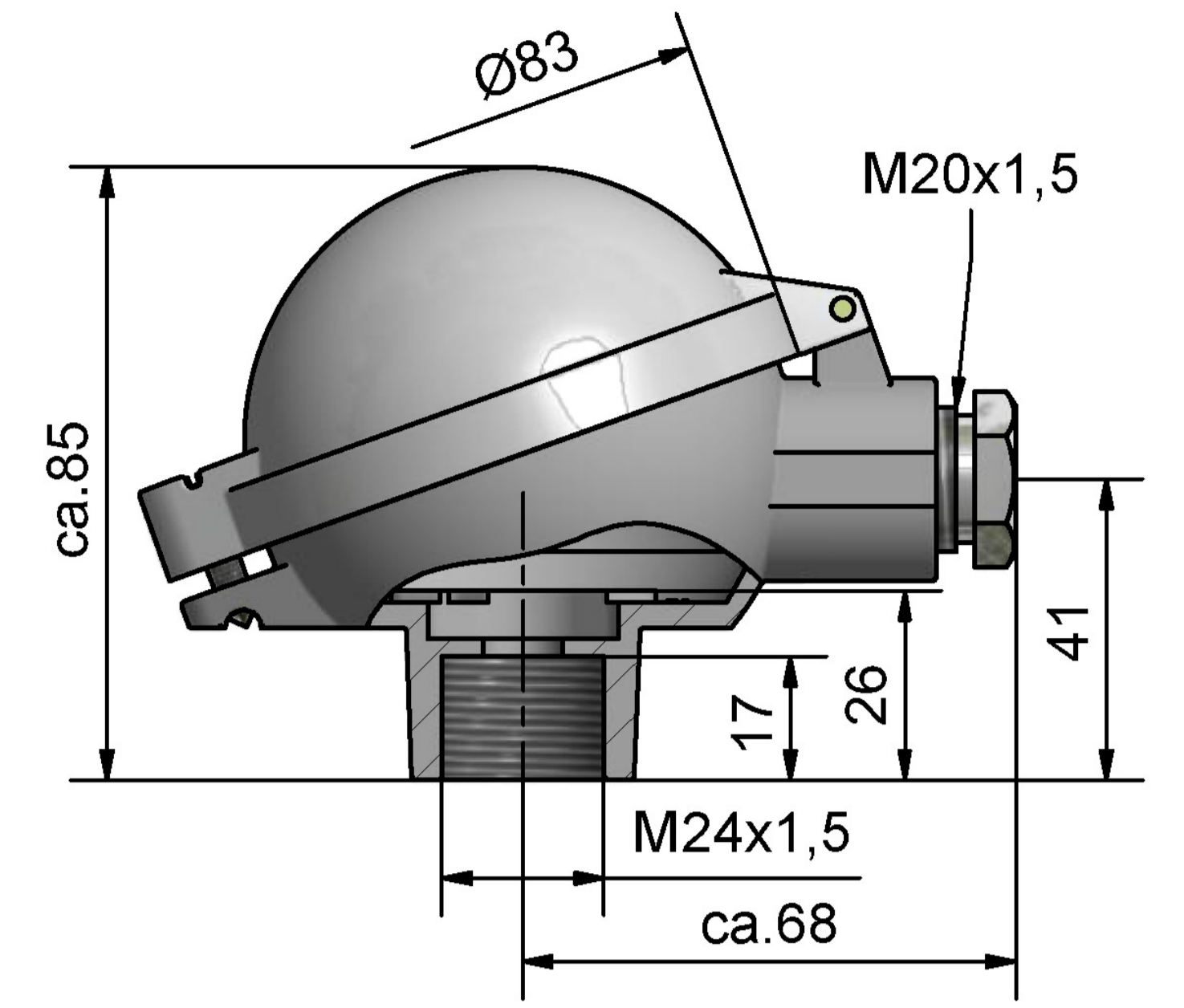
head model B  
M24 x 1,5



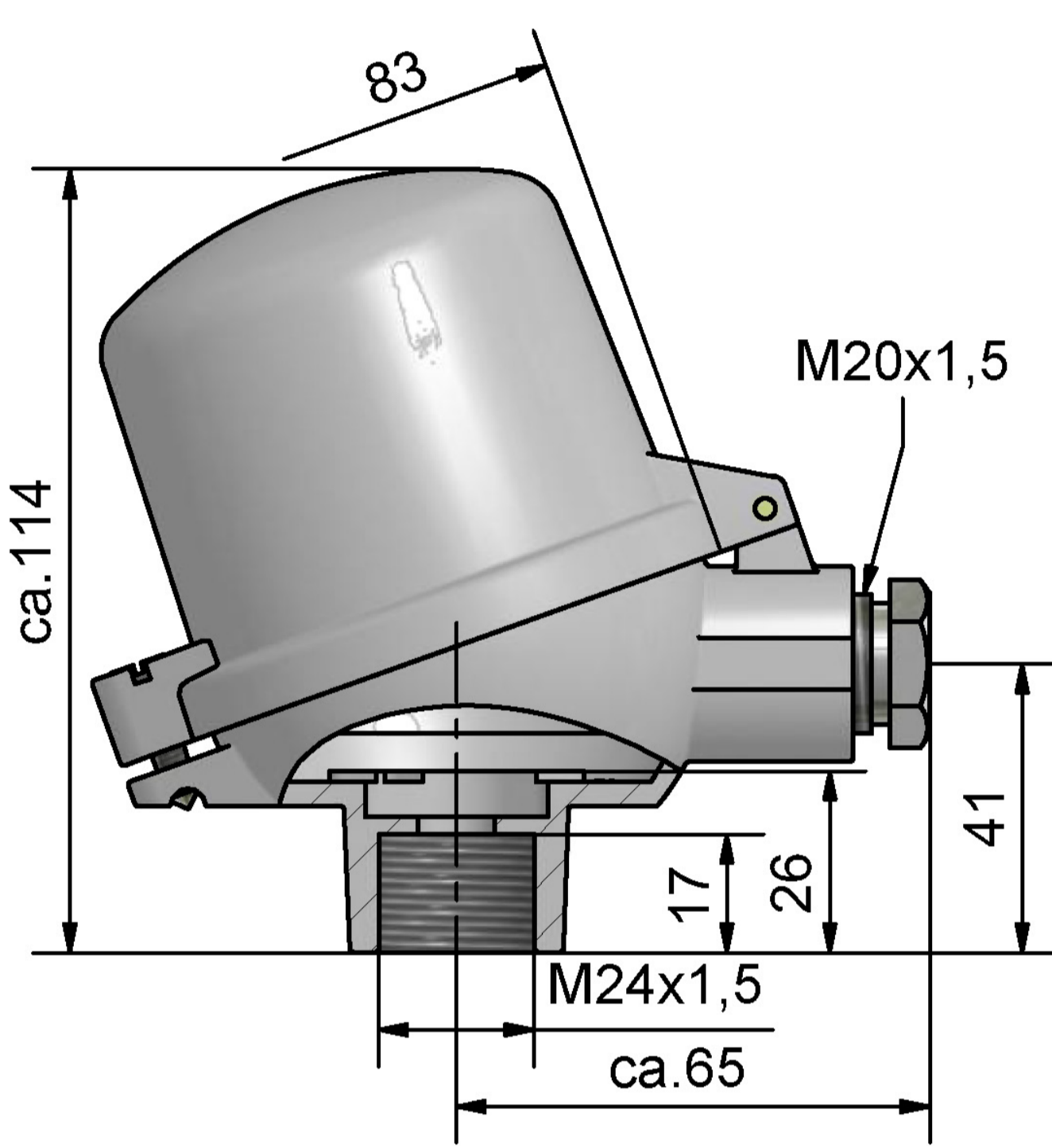
head model B-KL  
M24 x 1,5



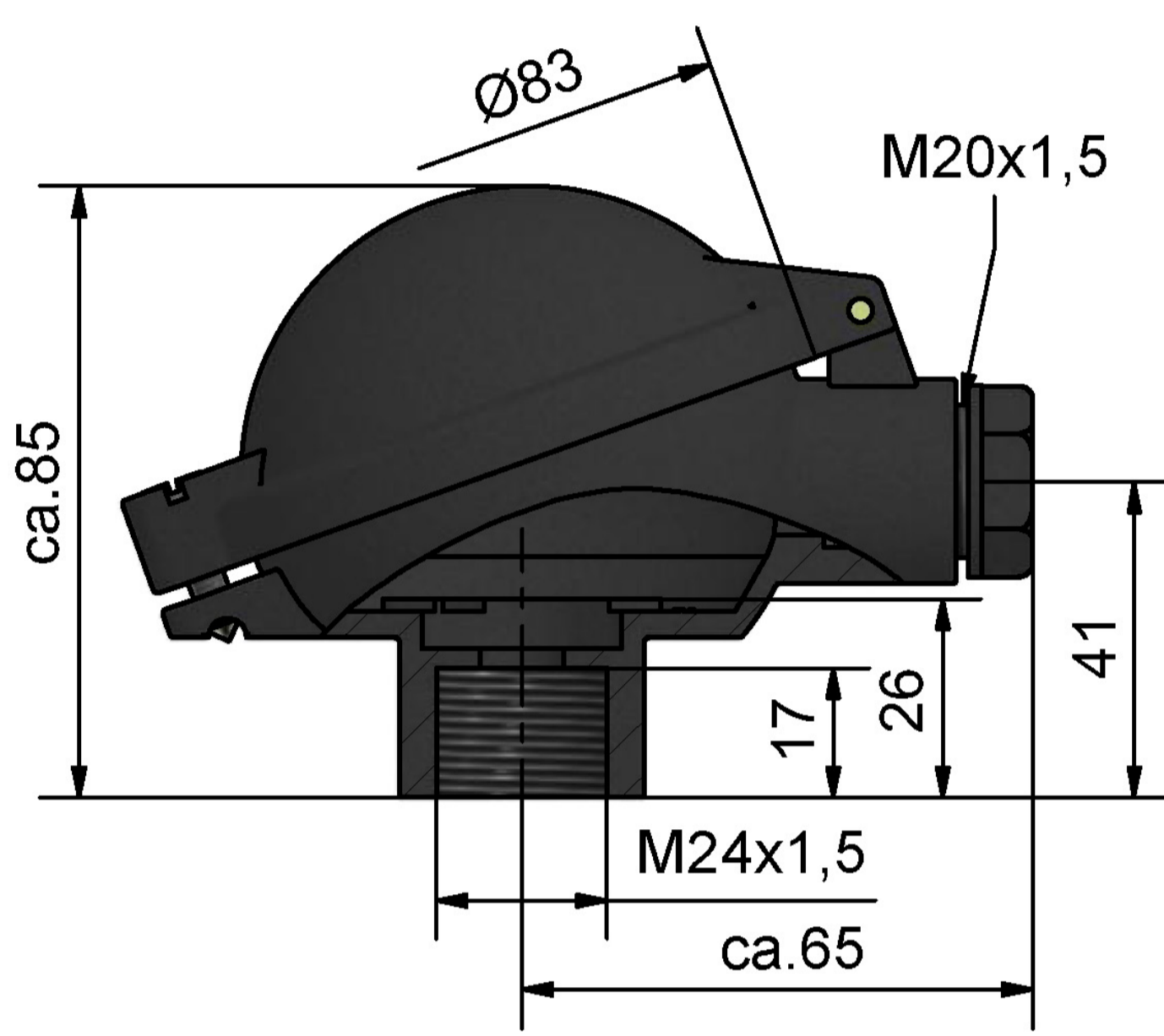
head model B-VA  
M24 x 1,5



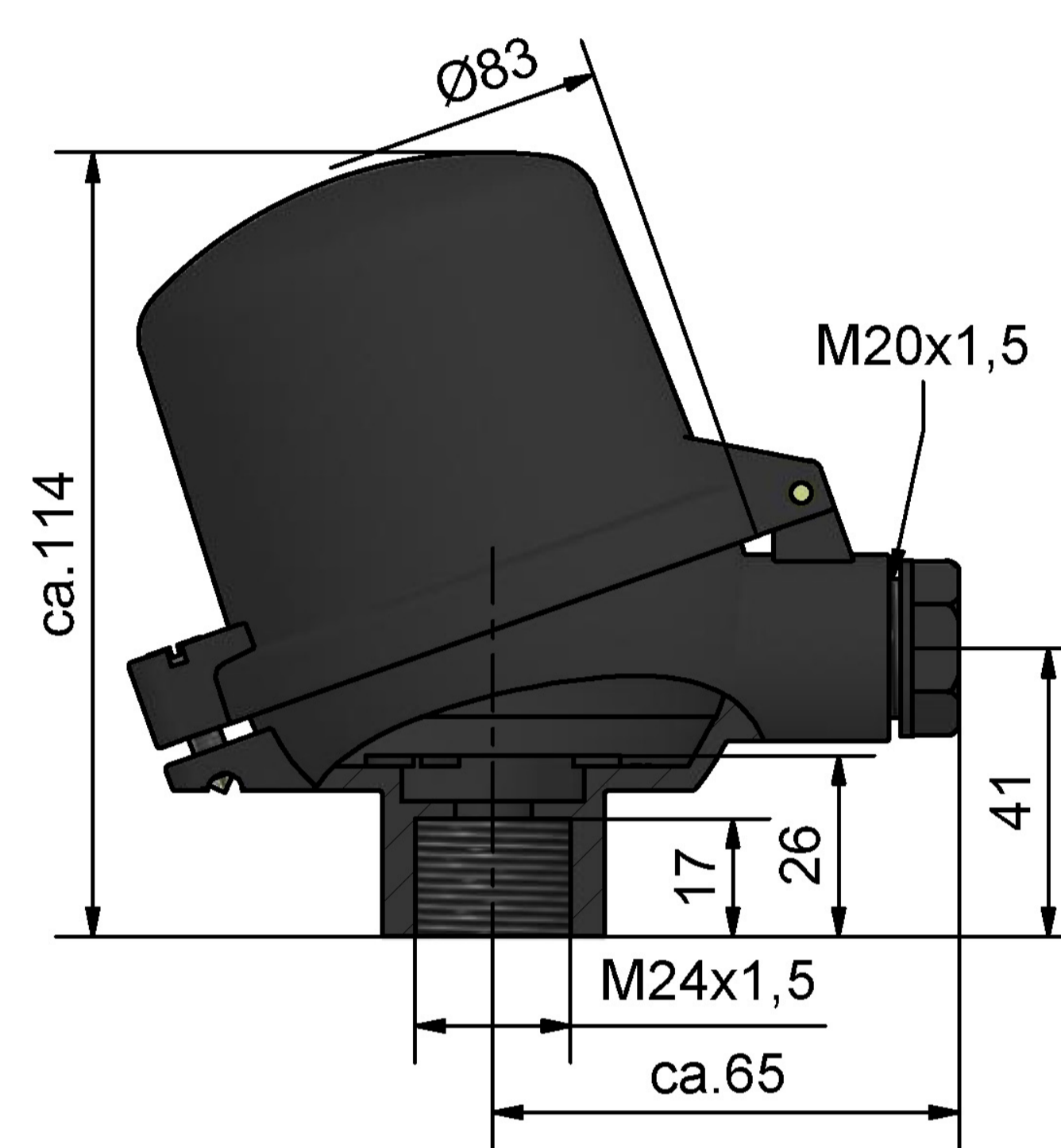
head model BA-KL  
M24 x 1,5



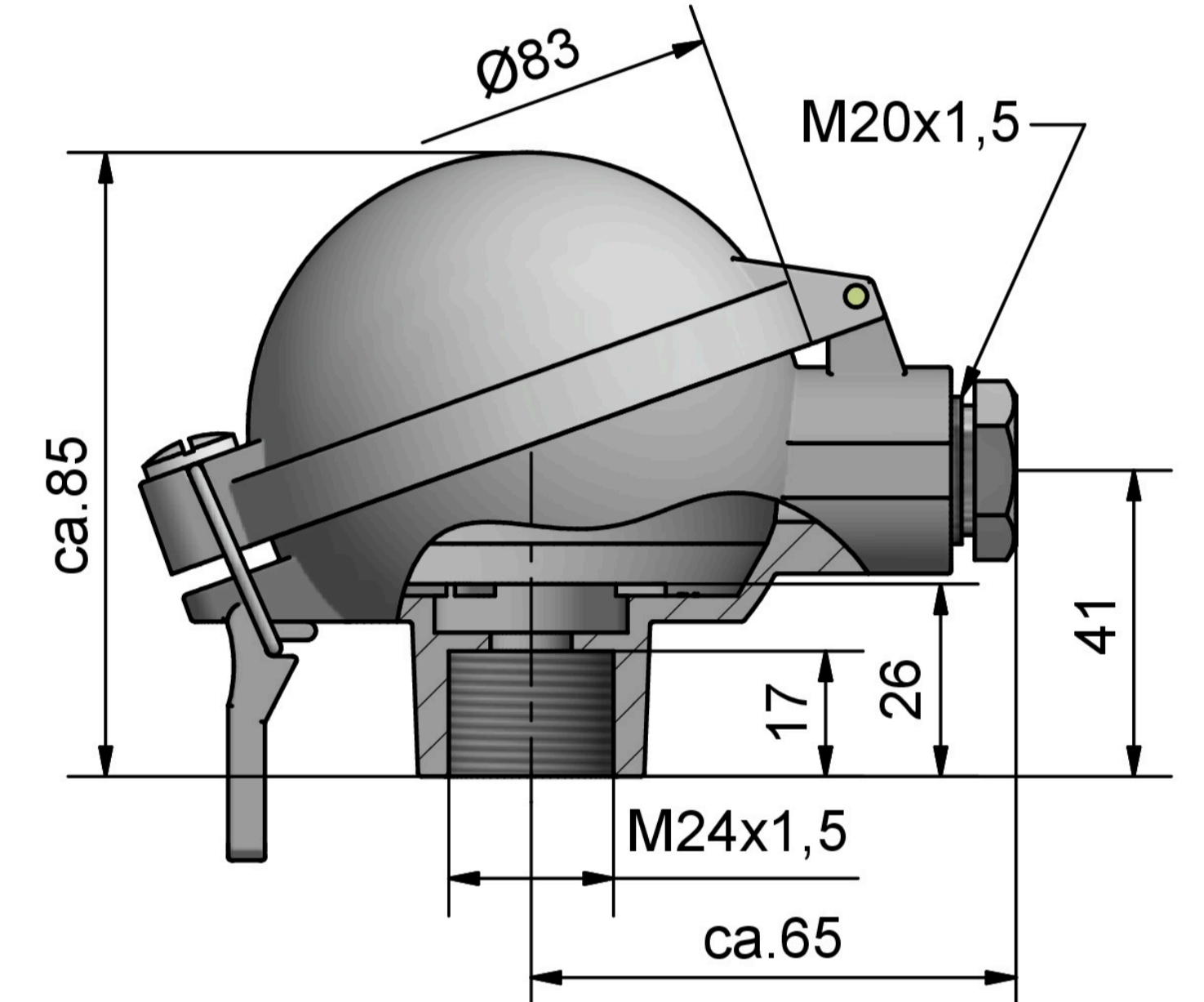
head model BA-KLH  
M24 x 1,5



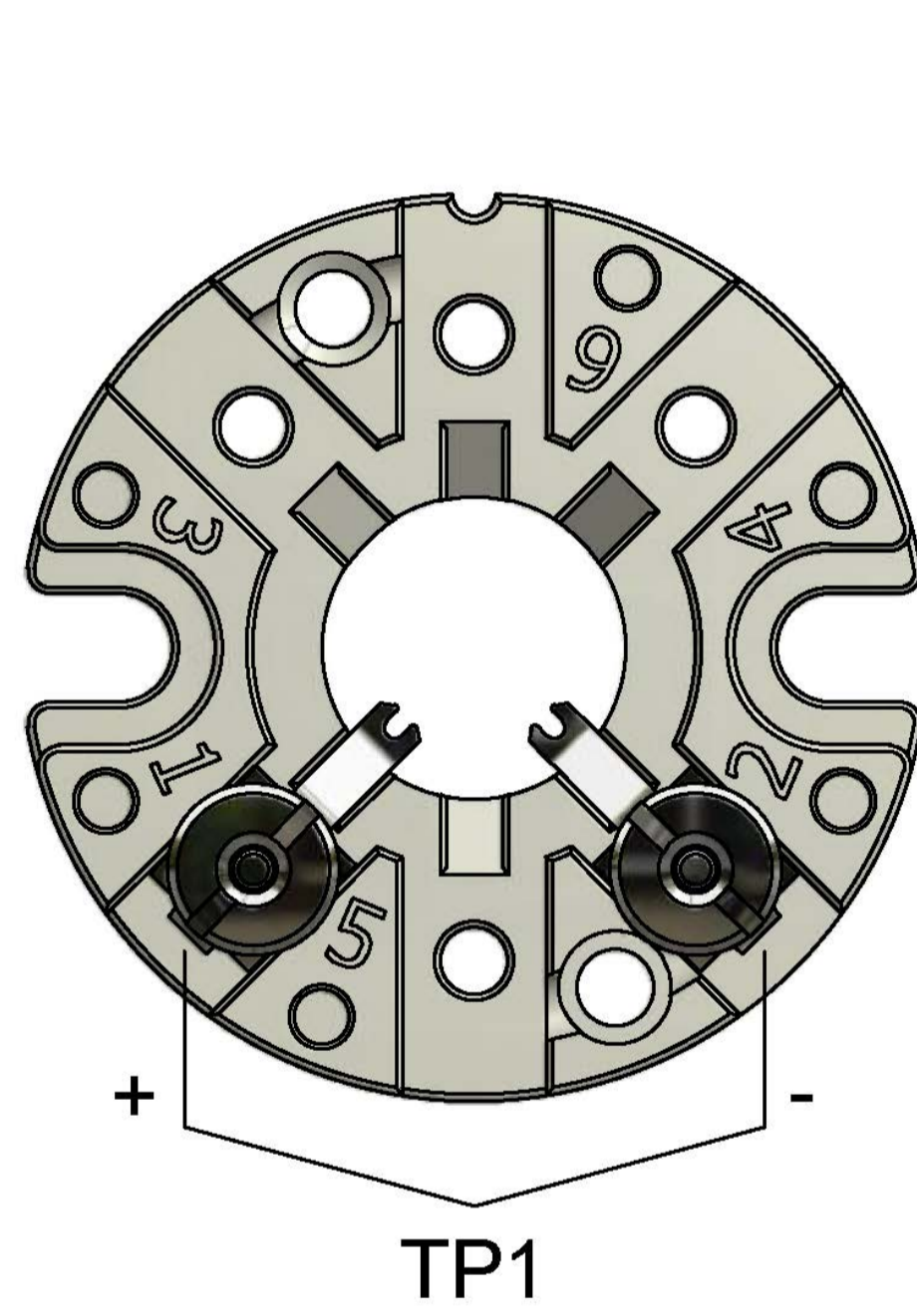
head model B-KUKL  
M24 x 1,5



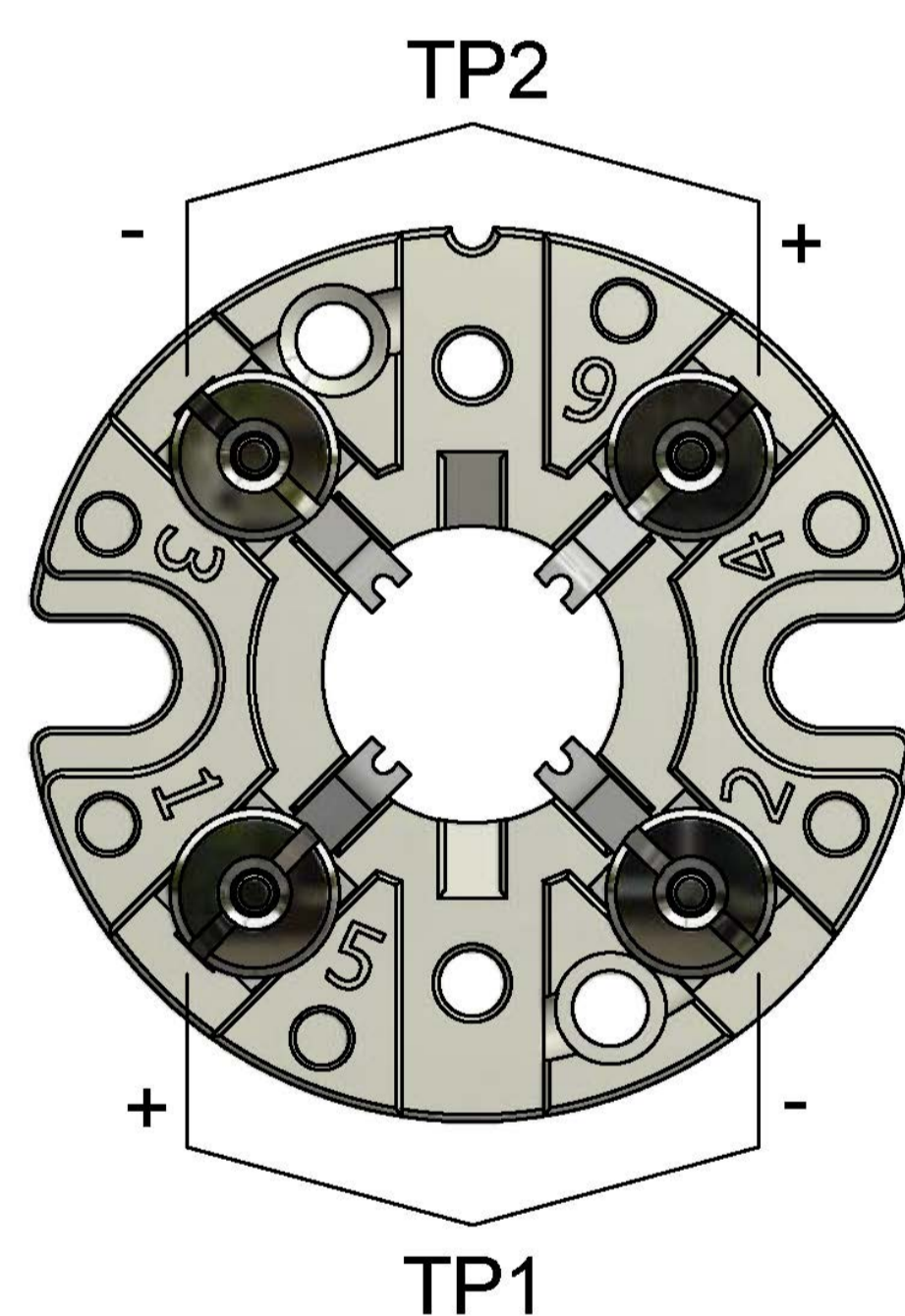
head model B-KUHKL  
M24 x 1,5



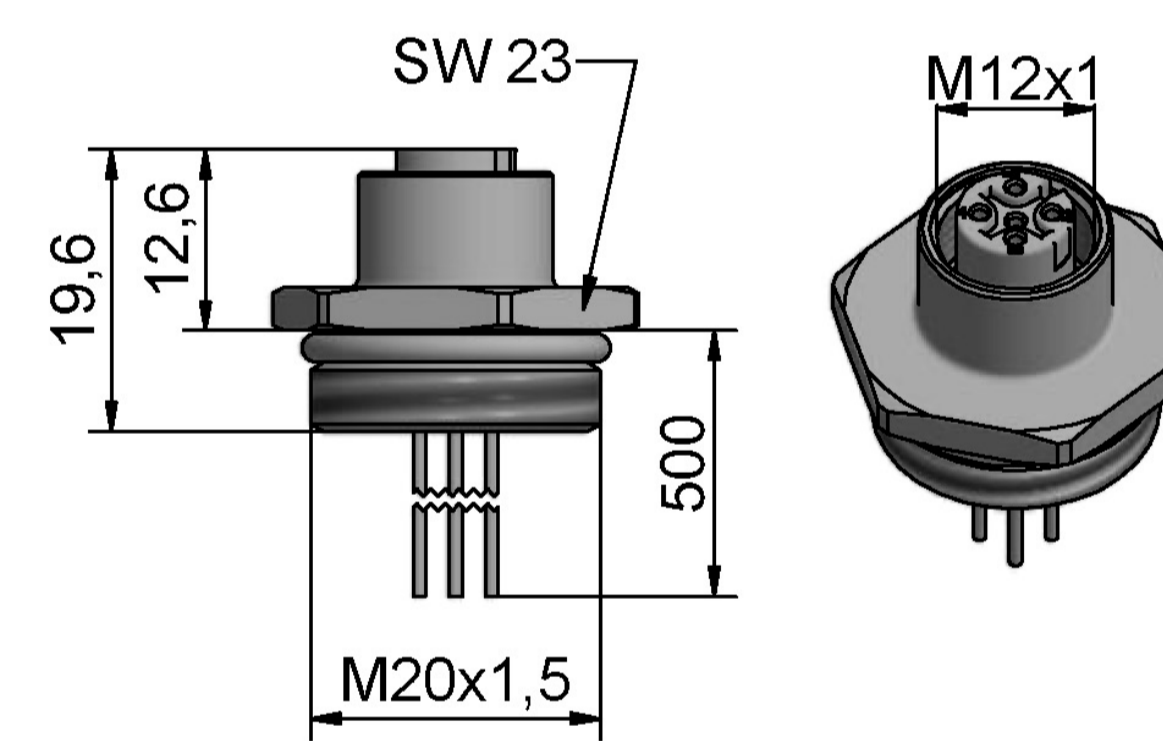
head model BA-KS  
M24 x 1,5



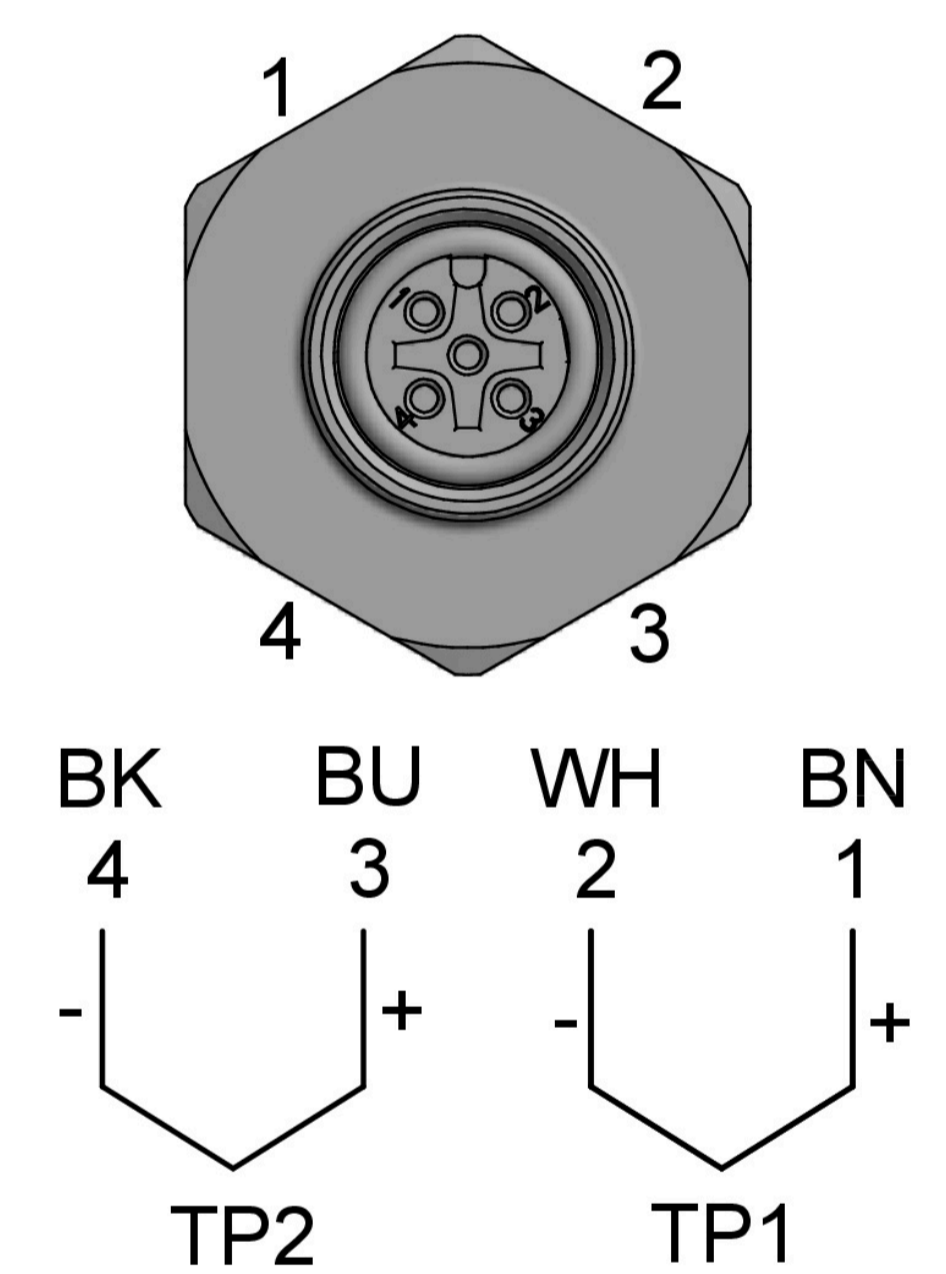
Terminal base model B  
1 thermocouple



Terminal base model B  
2 thermocouples



M12 Insert socket  
4 terminals



M12 Insert socket  
2 thermocouples