

# Mineral Insulated Thermocouple model 3G

for operation in the hazardous area with gas or dust

## In general

The ex temperature sensors listed in this document are solely intended for the measurement of process temperatures in solid, liquid and gaseous media. This model allow a directly screw in into the process connection of a autoclave or 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-C2.**

## 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 screw-in spigot with all common  
threads.  
Standard thread G1/2".
- **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.

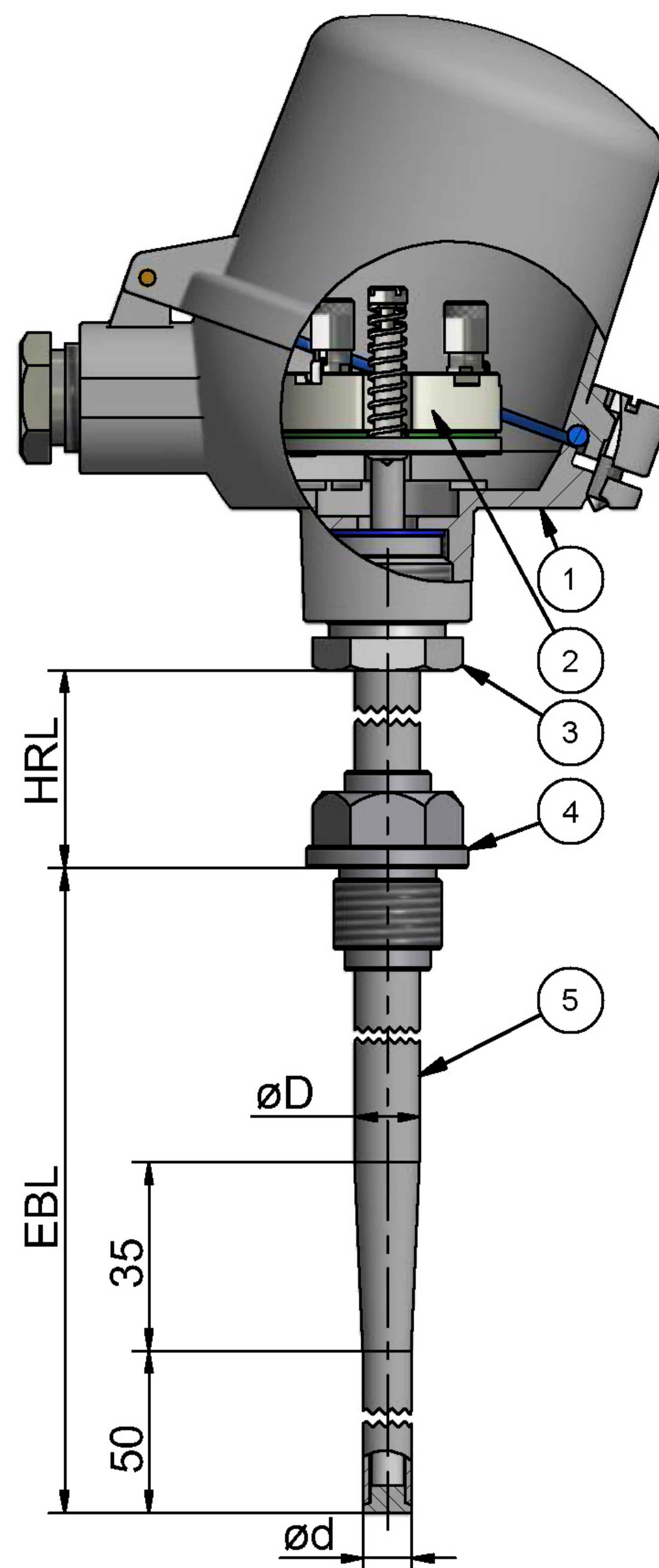
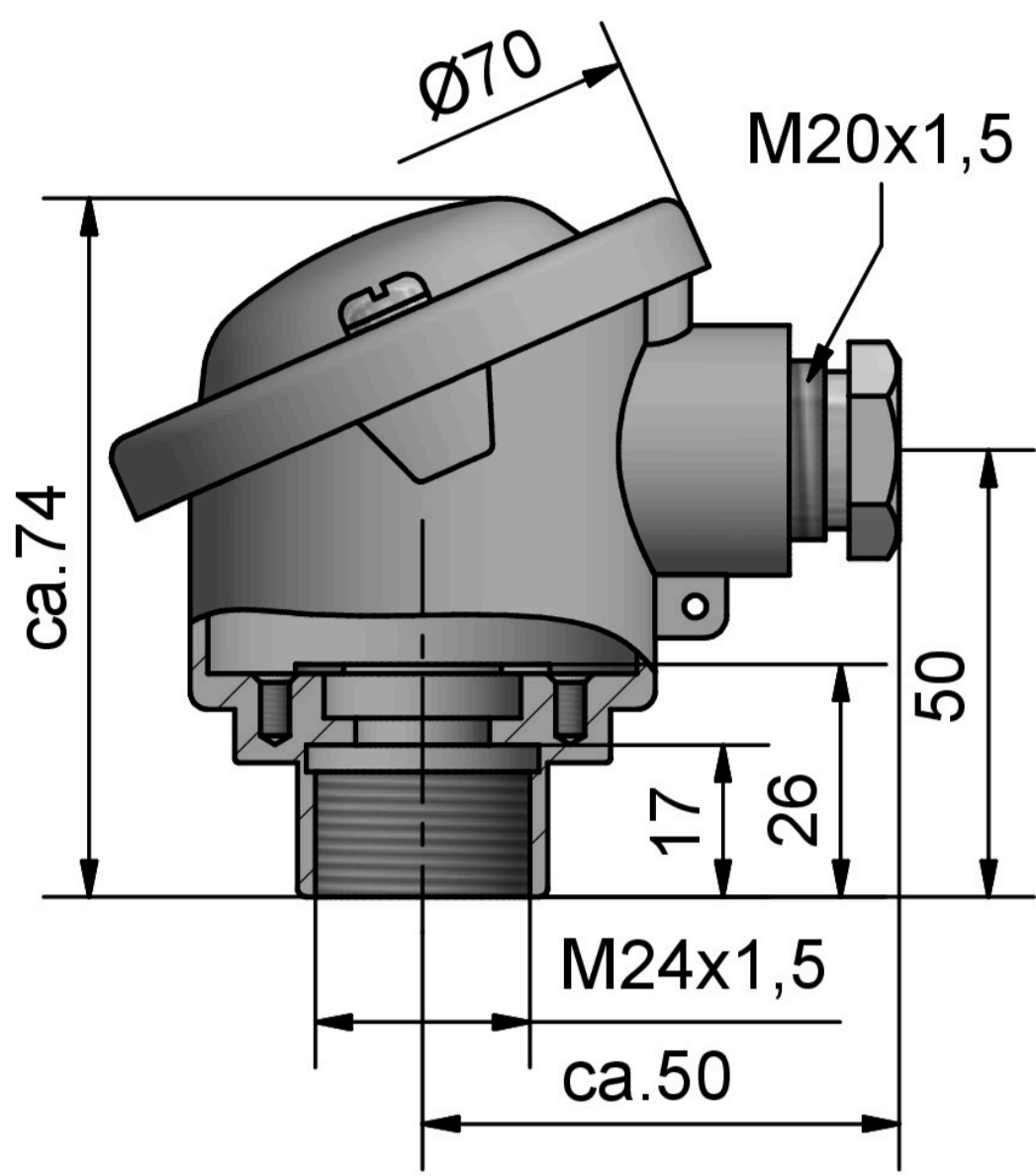


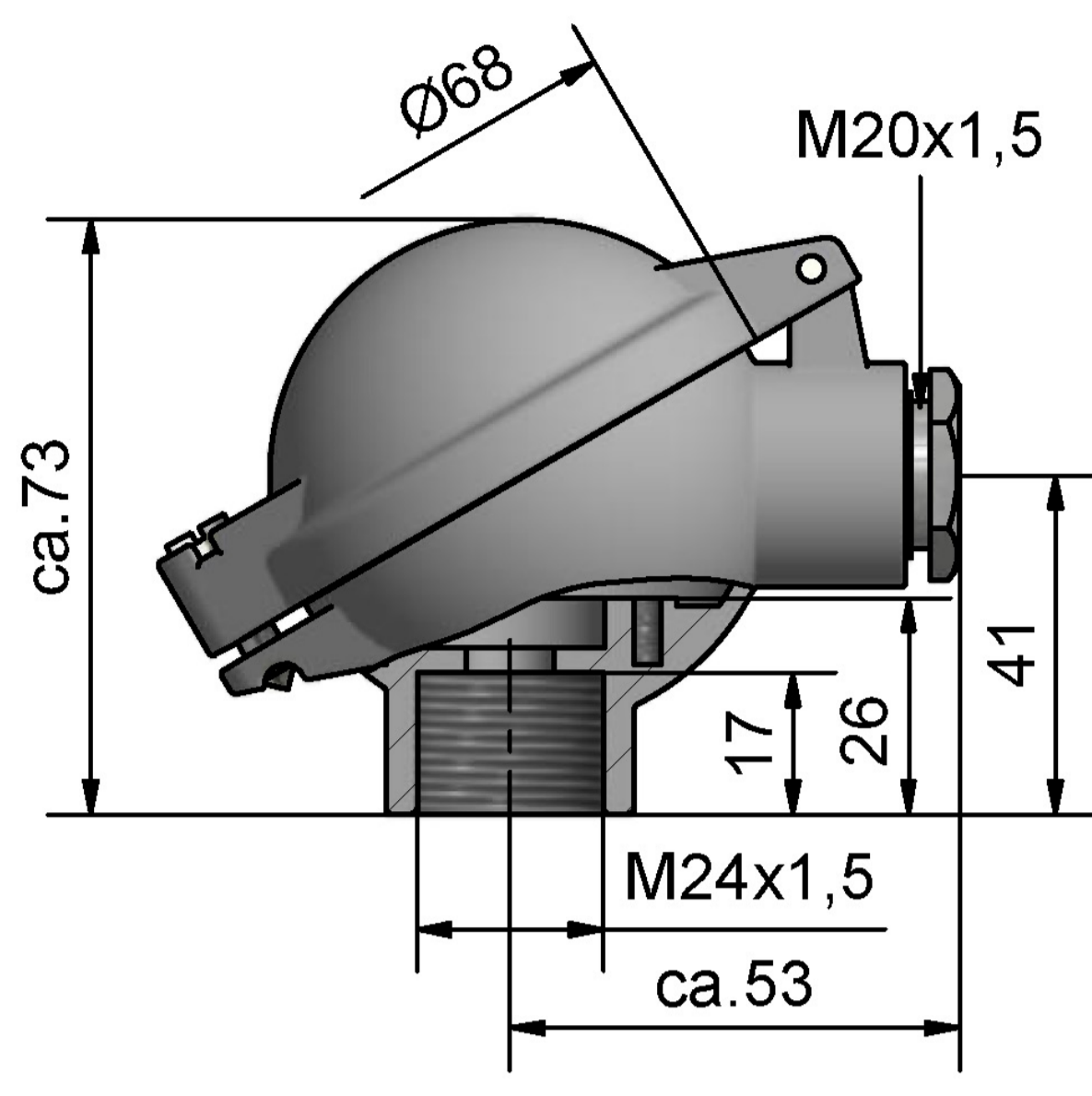
fig. 1

# Optional connection heads / connection diagrams

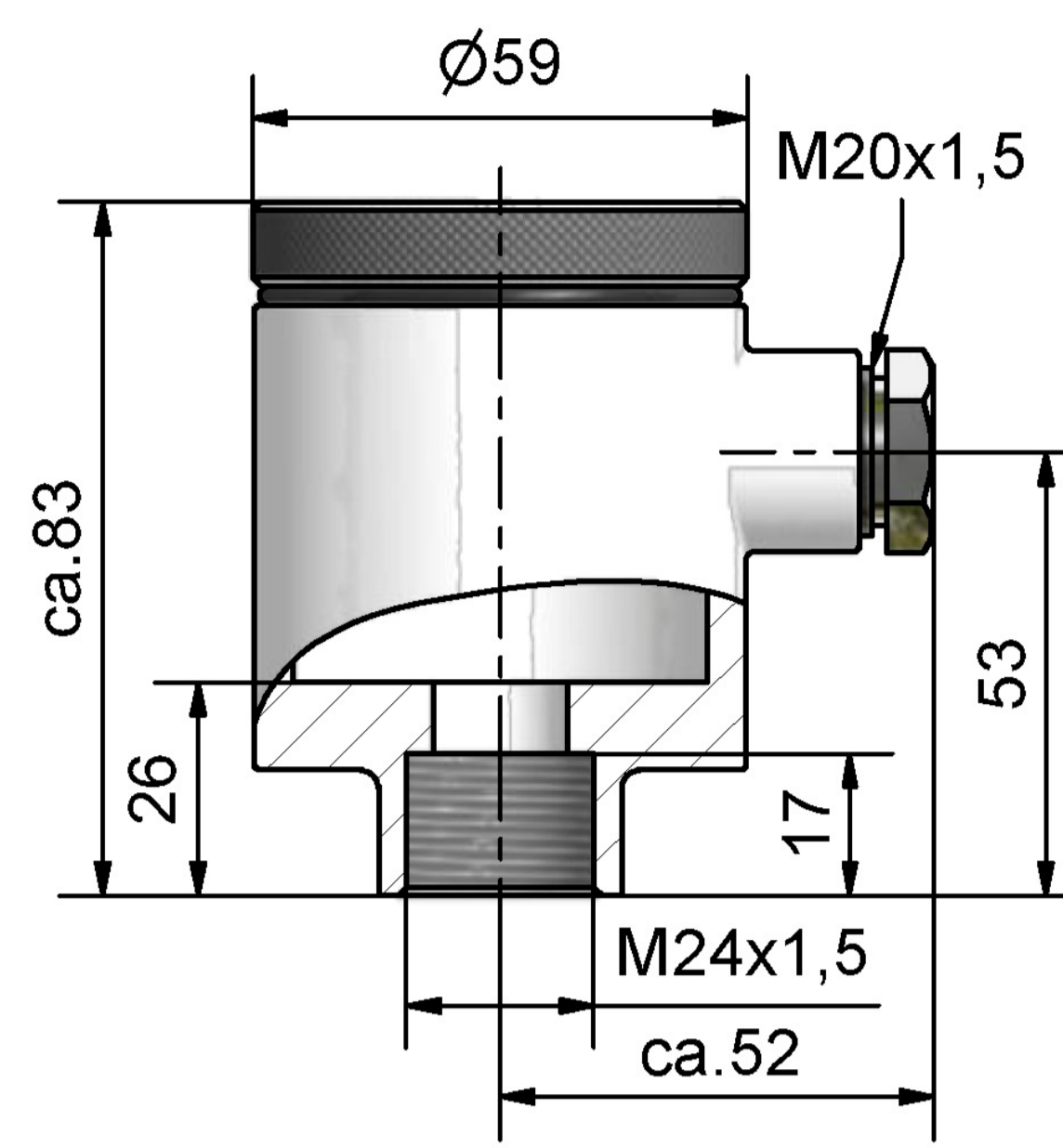
As an alternative to the cable gland, an M12 flush-type connector is possible.



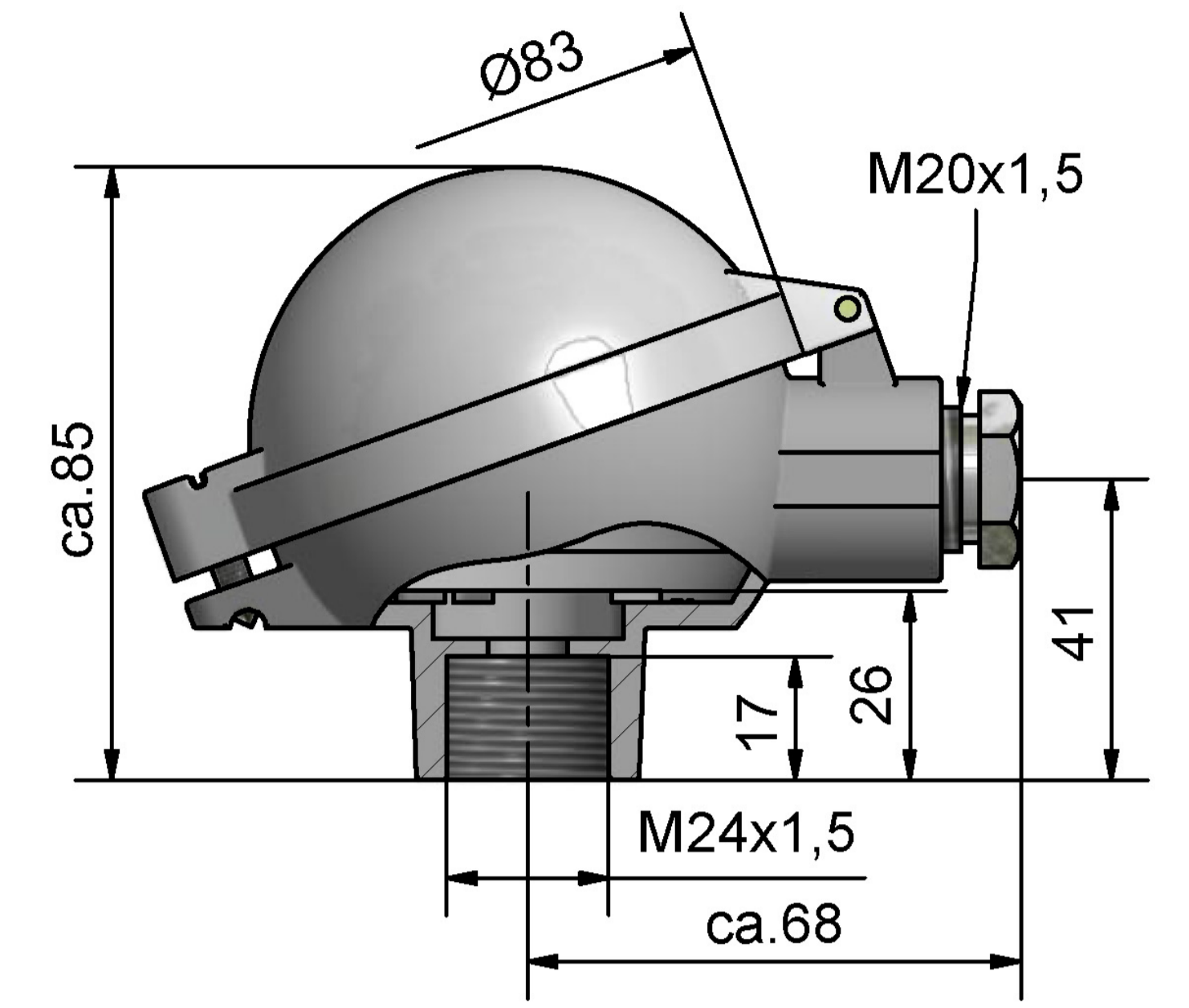
head model B  
M24 x 1,5



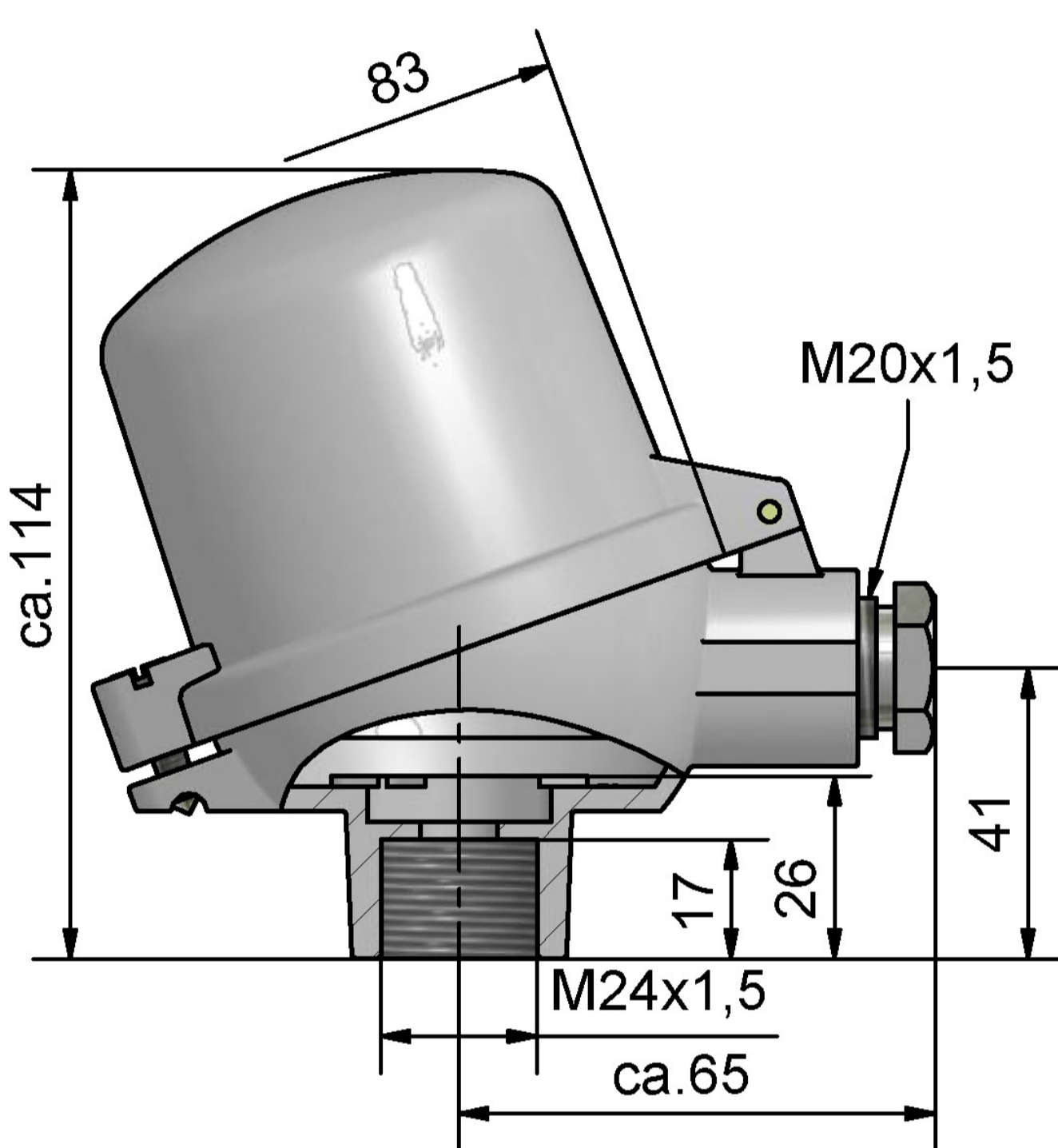
head model B-KS  
M24 x 1,5



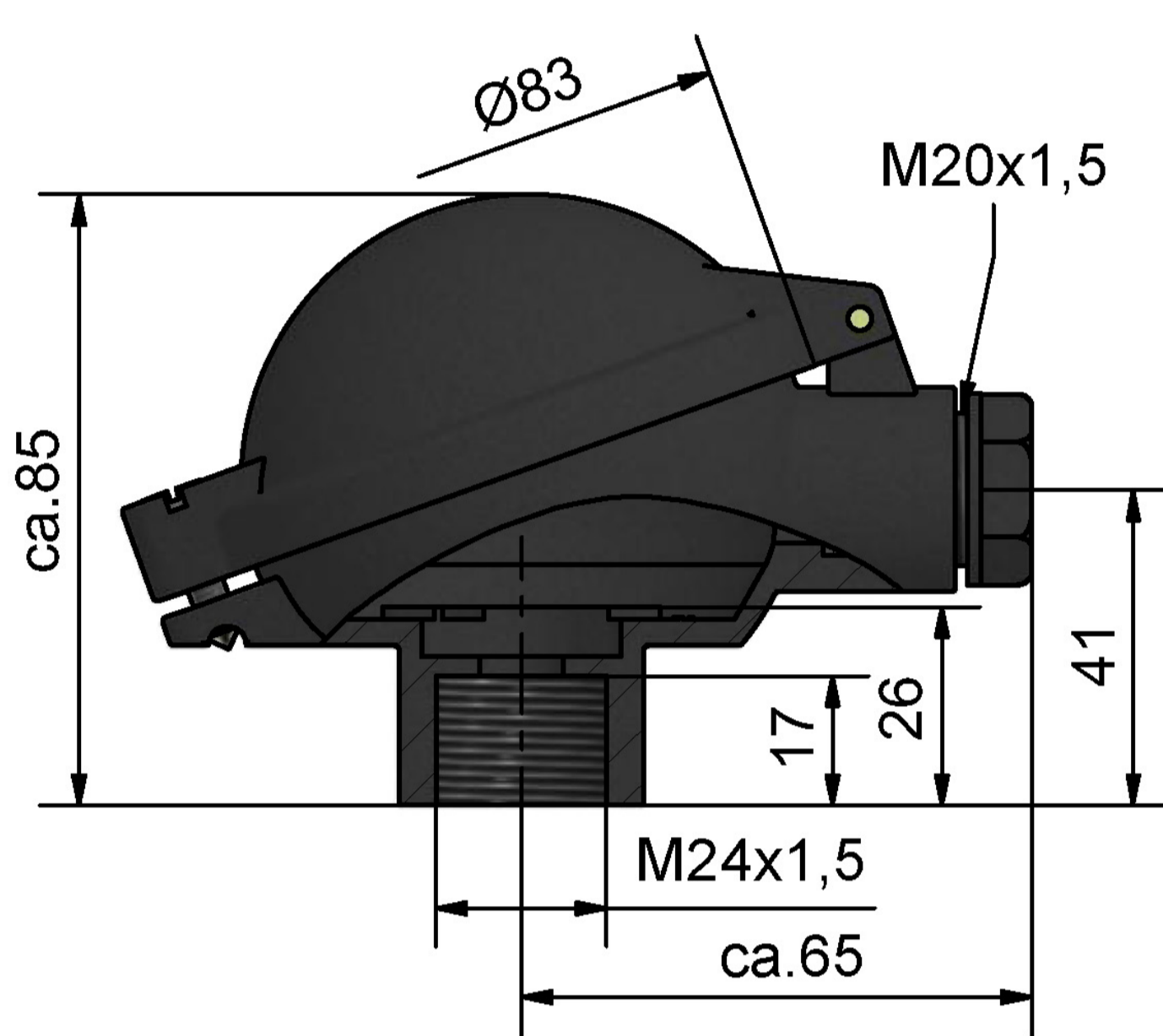
head model B-VA  
M24 x 1,5



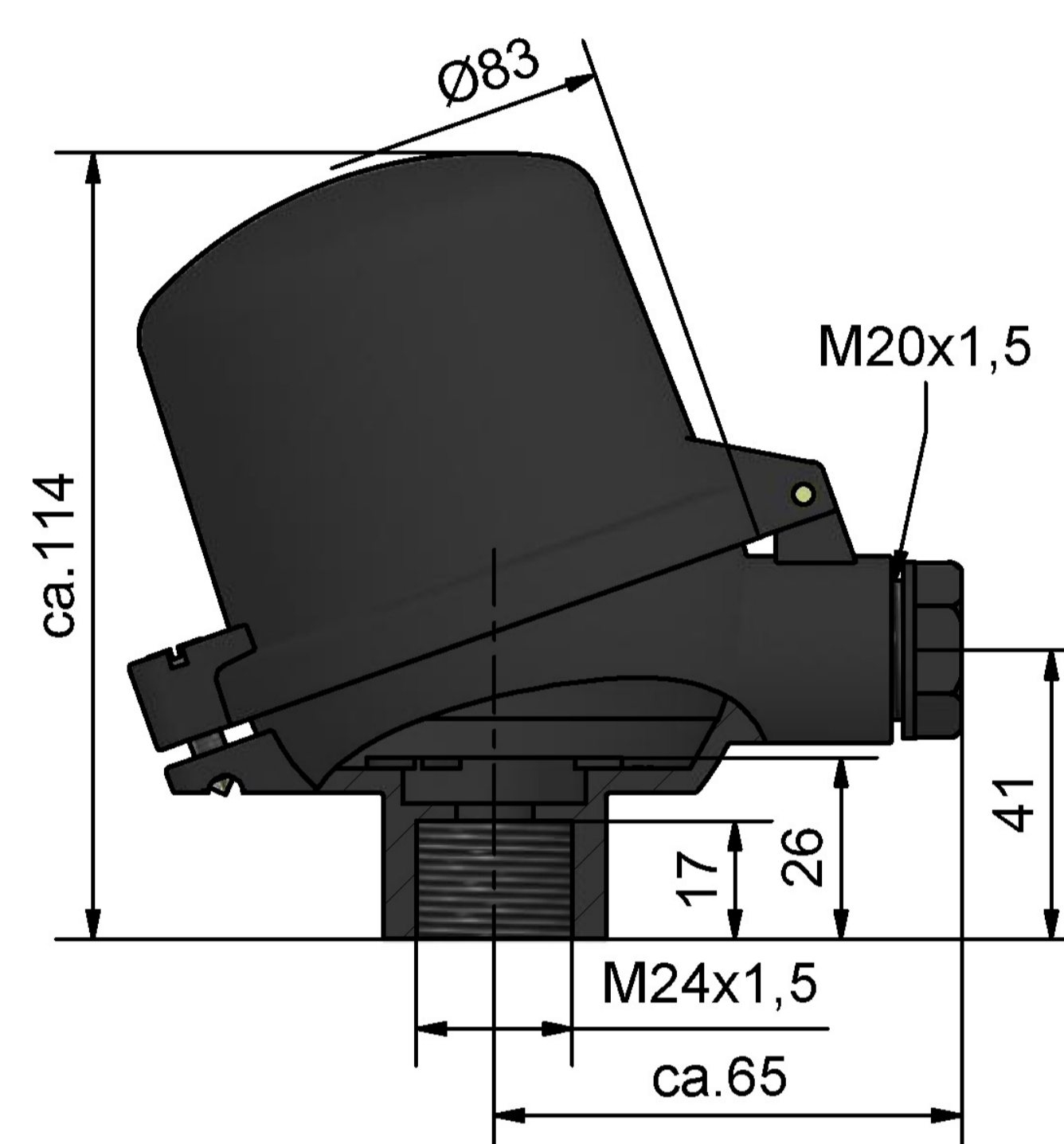
head model BA-KL  
M24 x 1,5



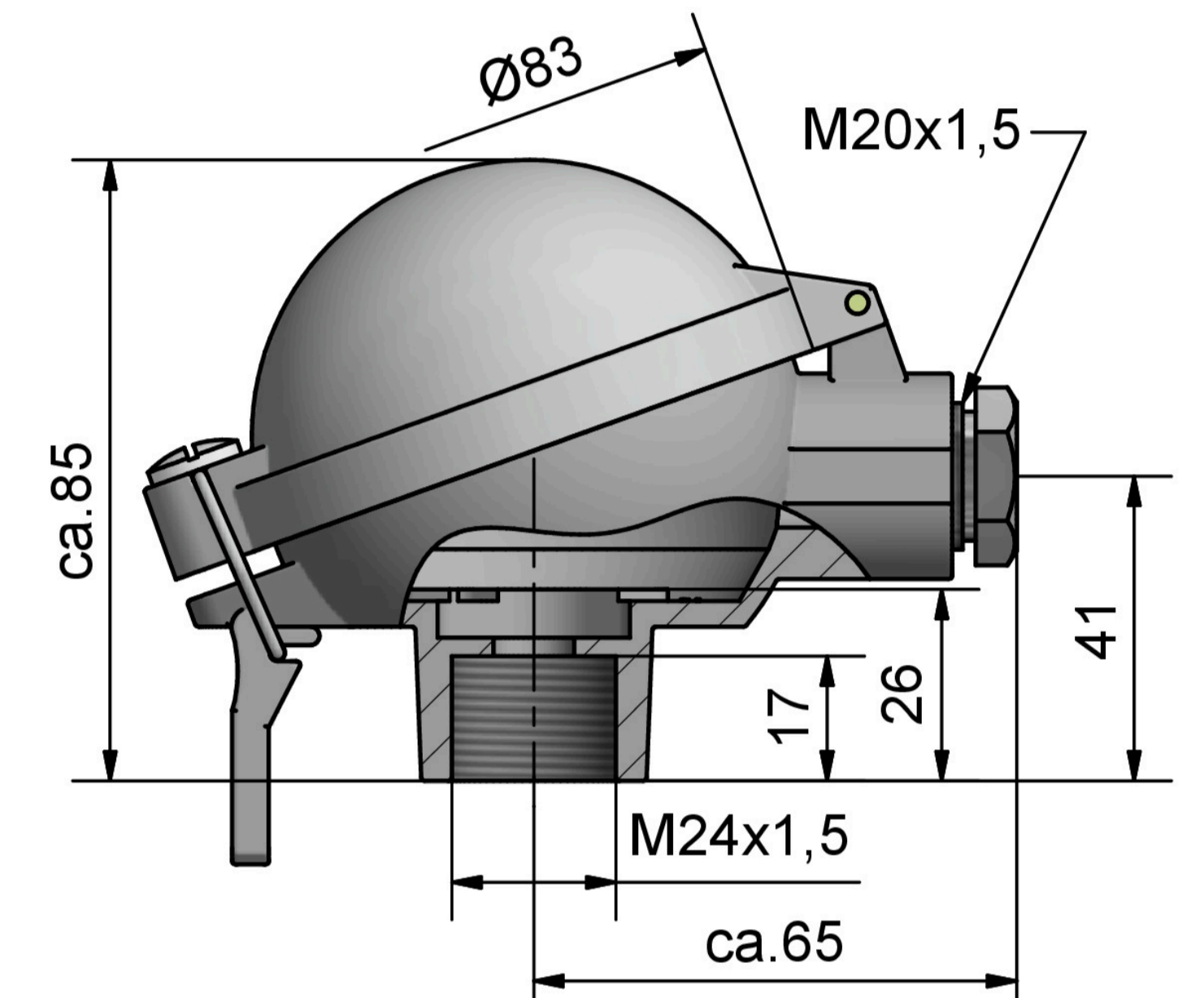
head model BA-KLH  
M24 x 1,5



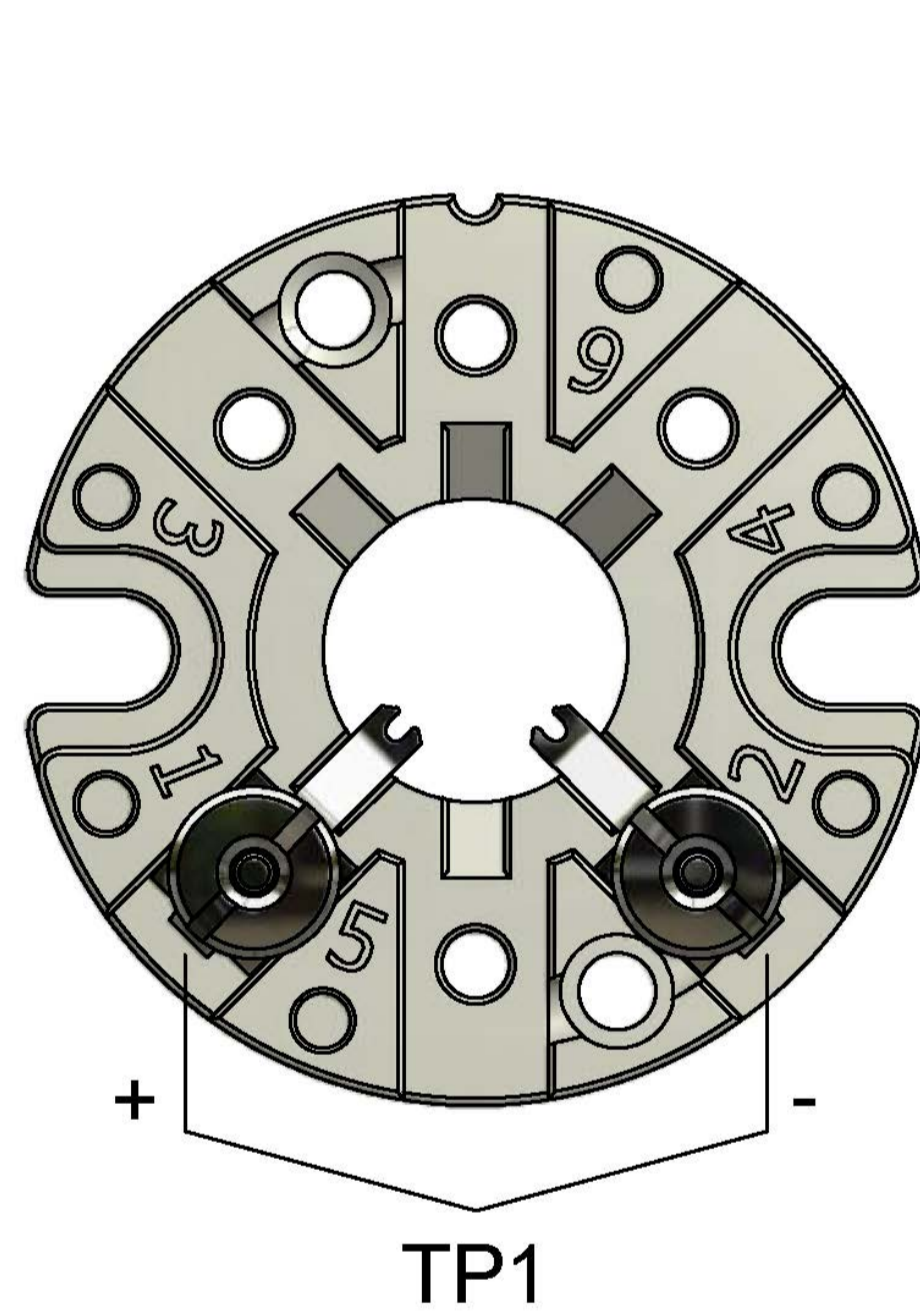
head model B-KUKL  
M24 x 1,5



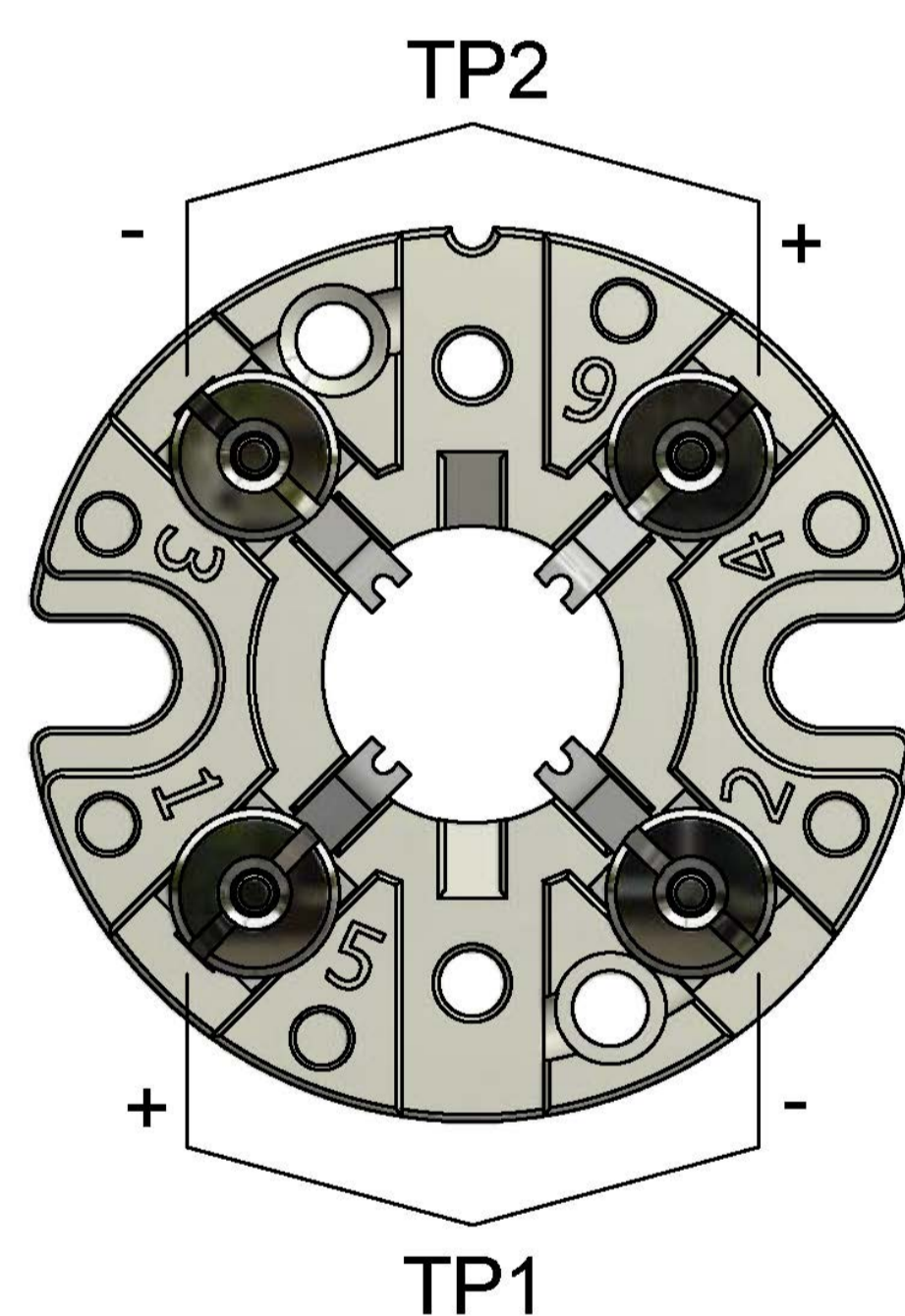
head model B-KUHKL  
M24 x 1,5



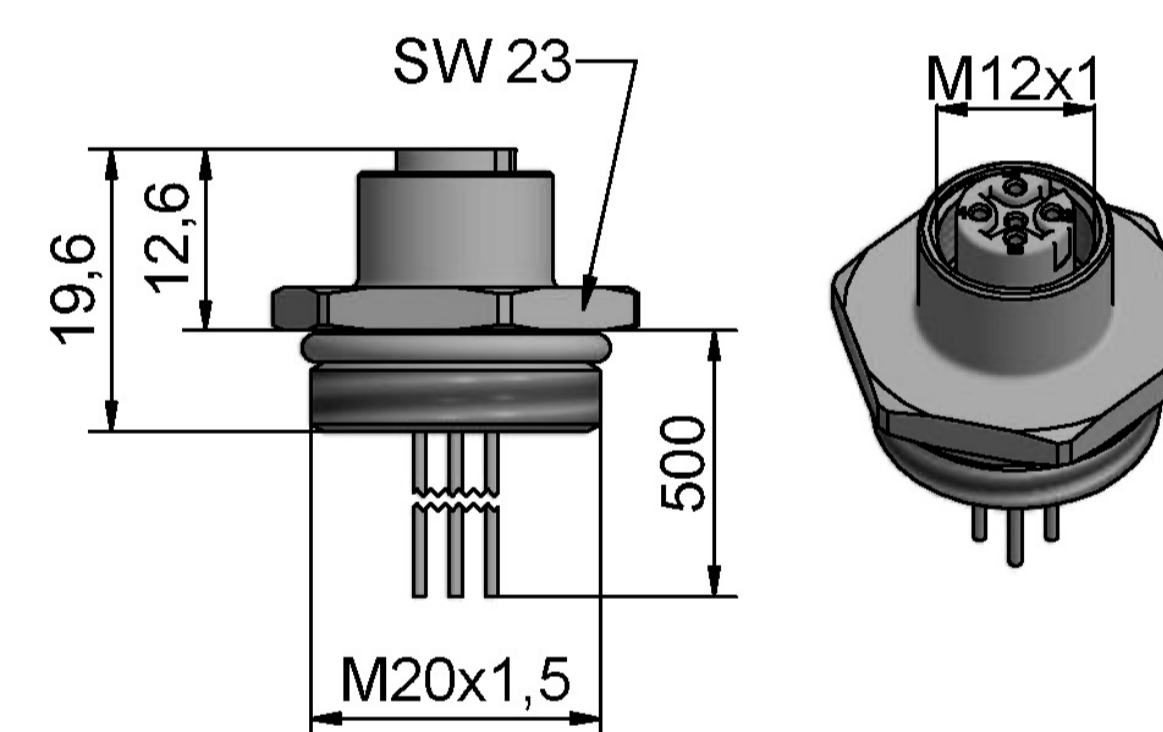
head model BA-KS  
M24 x 1,5



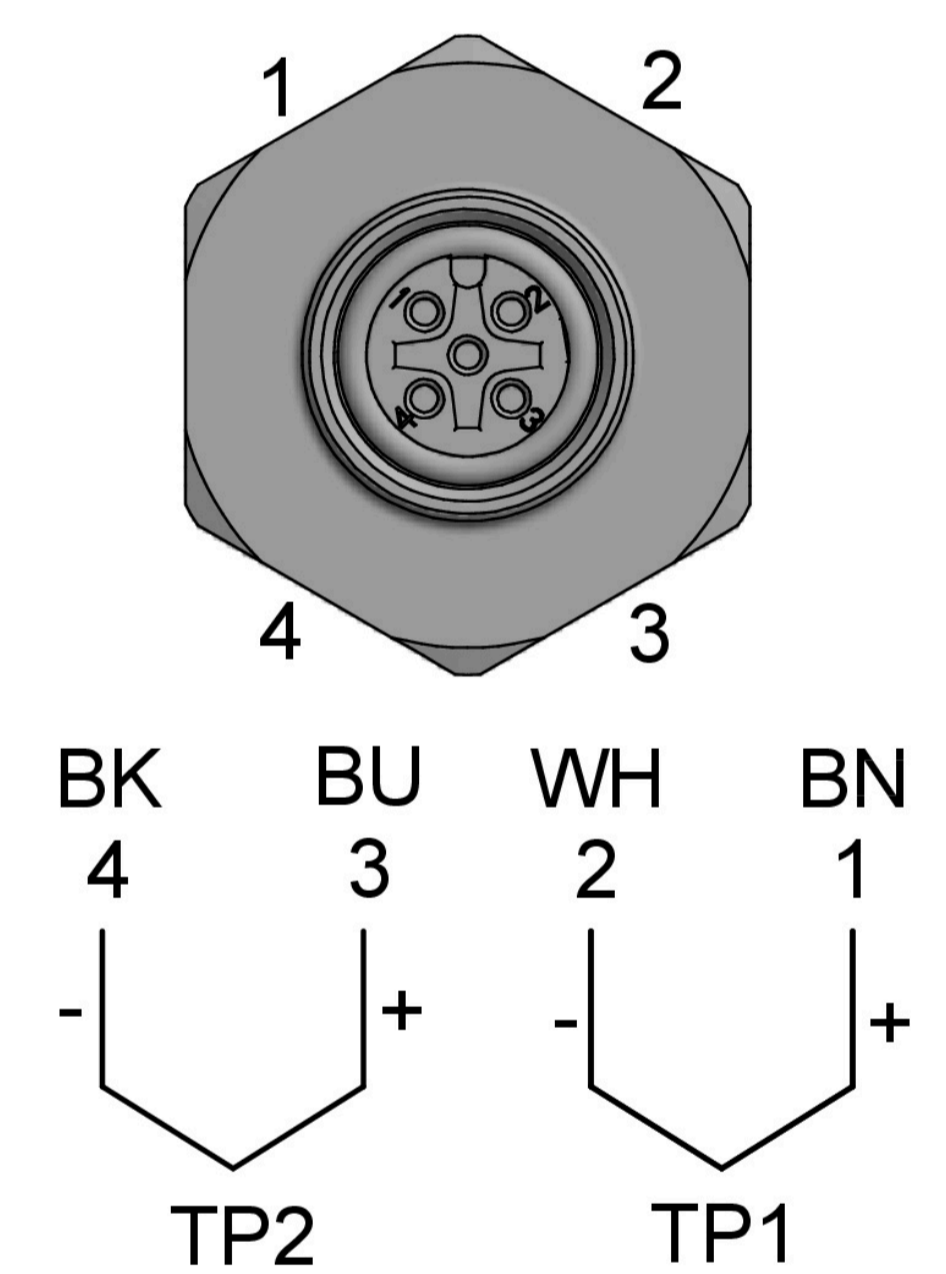
Terminal base model B  
1 thermocouple



Terminal base model B  
2 thermocouples



M12 Insert socket  
4 terminals



M12 Insert socket  
2 thermocouples