

Ex-Resistance Temperature Detector WR15 model 4F

for gas explosion hazardous areas and areas with combustible dust

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 separate project planning and a production of plant components and sensors. By pre-delivery of the weld-in sleeve, (D-sleeve fig. 1/6) parts of the system can already be manufactured and pressure-tested. The temperature sensor is then installed by simply screwing it into the process connection of the welding sleeve.

Application area:

Autoclave, machine and plant engineering, chemicals industry, power plant technology, industry of building materials, recycling.

Depended on electrical and thermal parameters for operating with the following types of protection:

II 2G Ex ia IIC T1...T6 Gb or

II 2D Ex ia IIIC T135 °C Db.

Ambient temperature at the connection point max. -40 °C up to +100 °C

For installation please see our operating instructions.

Stock-number-code: TR15-L.

Technical datas

- **Connection head** (fig. 1/1) according to DIN EN 50446.
Standard connection heads: Form B-G12, B-KL, B-VA, BA-KL, BA-KLH, B-KUKL, B-KUHKL. Dimension see page 2.
- **Protection shell** (fig. 1/3 up to 7) according or similar to DIN 43772.
Standard material 1.4571.
- **Process connection** occurs by weld-in protective tube (Abb. 1/6 up to 7) (D - sleeve) Standard Length (L und U) 140/65 mm, 200/65 mm and 200/125 mm, 260/125 mm.
Standard thread (N) M14x1,5 or M18x1,5 with welded Blindflange according DIN EN 1092-1 Type 05 or ASME B 16.5.
Standard flange DN25 / DN50 PN40 model B1,
Standard diameter (F2/F3) 24/12,5 mm.
- **Measuring insert** (fig.1/2) replaceable according or similar to DIN 43735.
Sensor depending on use:
thin film or ceramic according to IEC / EN 60751,
standard in 1 x 3-, 1 x 4-, 2 x 3-, oder 2 x 4 wire circuit.
Recommended operating temperature on the measuring tip depended on accuracy class according to IEC / EN 60751
- 40°C up to + 500°C by thin film sensors,
- 40°C up to + 600°C by ceramic sensors.
Notice: Process temperatures above 450 °C are only possible with appropriate process decoupling.
Double sensor with exi-transmitter only on request.
- **Sheath material** according to IEC / EN 61515.
Standard material 1.4404, Standard diameter 1,5; 3 or 6 mm.
Notice: Sensors with \varnothing 3 mm and more than 4 inner conductors, \varnothing < 3 mm, \varnothing > 3 mm and more than 6 inner conductors are considered to be non-insulated or grounded in accordance with IEC / EN 60079-11 (dielectric strength) and must be connected to equipotential bonding of the system throughout the intrinsically safe circuit for safety reasons, taking into account the special conditions according to IEC / EN 60079-14.
Protection shell (fig. 1/3 up to 7) the following demension are acceptable:
outer diameter(D) \geq 6,0 mm, wall thickness(S) \geq 1,0 mm, ground high \geq 1,3 x S [mm].
neck tube length (HLR) max. 2000 mm. Thermowell according or similar to DIN 43772 model 4.
- **Optional materials for gas and dust explosion protection:**
please see ex operation constructions chapter 4 X-Conditions.

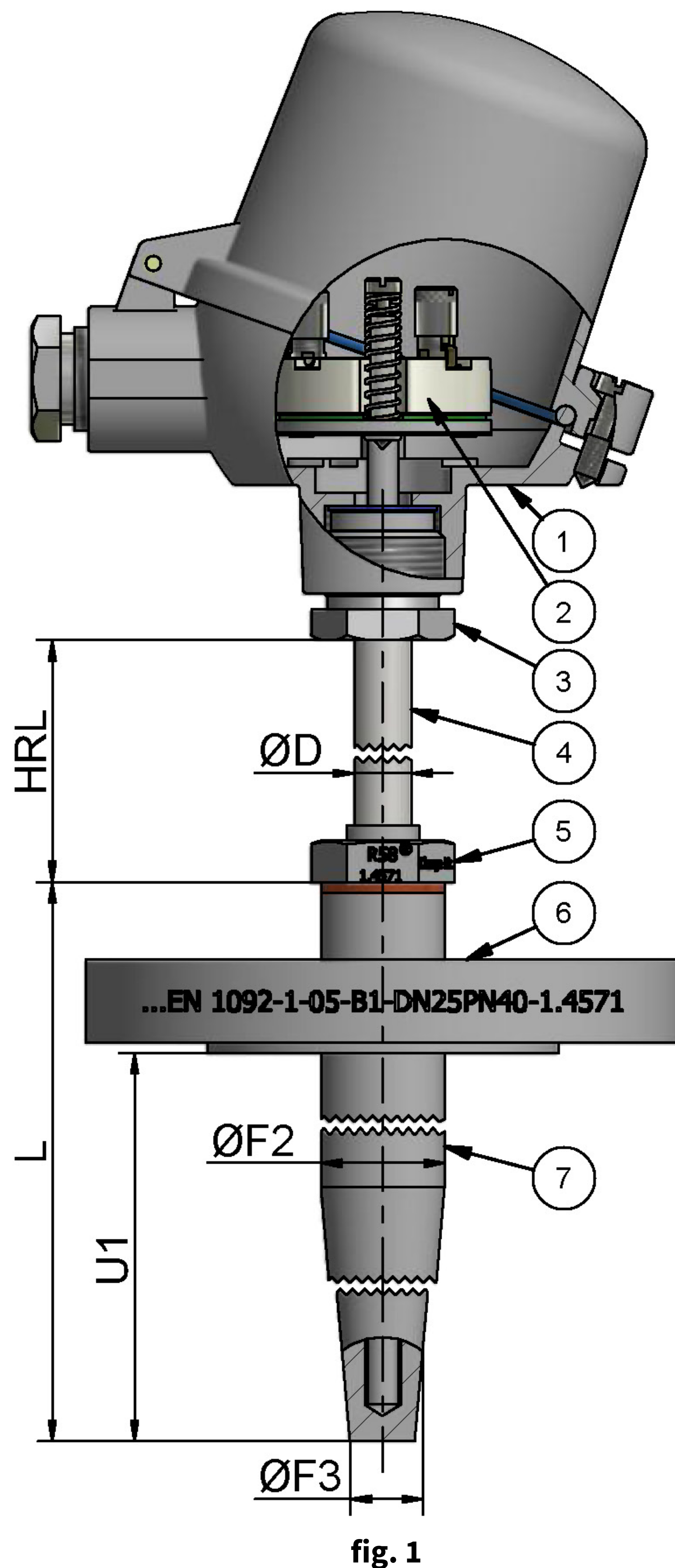
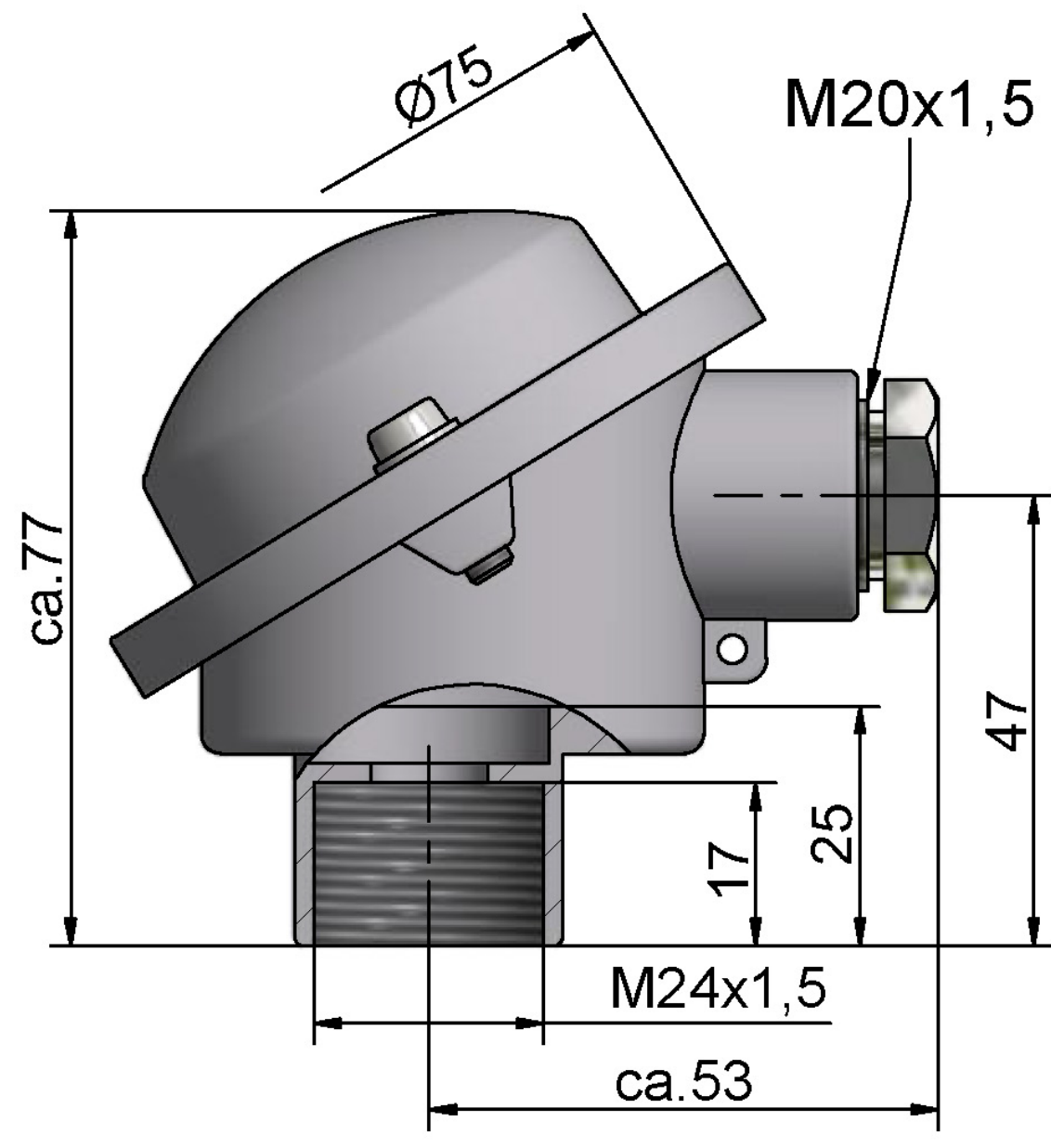


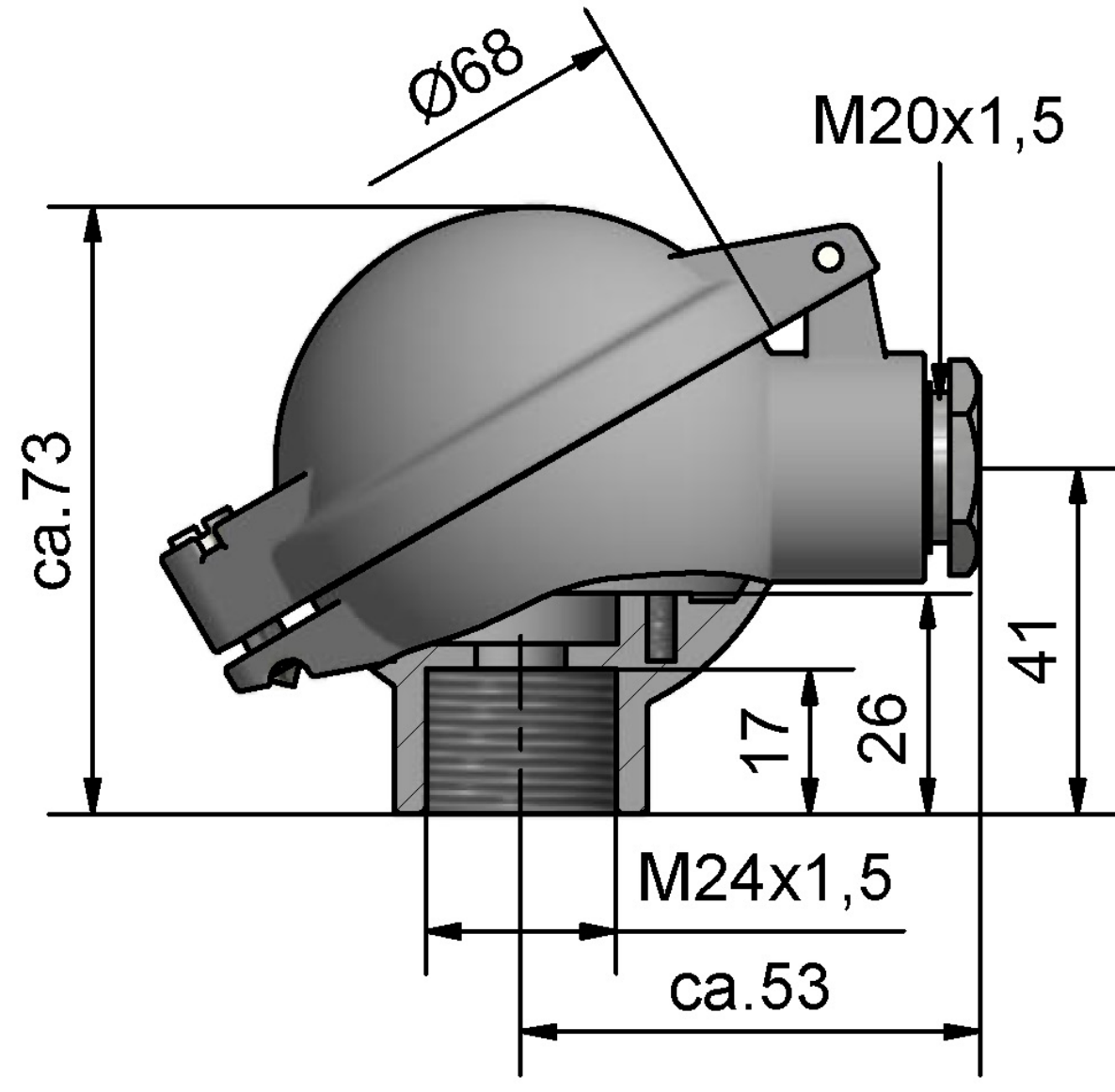
fig. 1

Optional connecting heads / circuit diagram

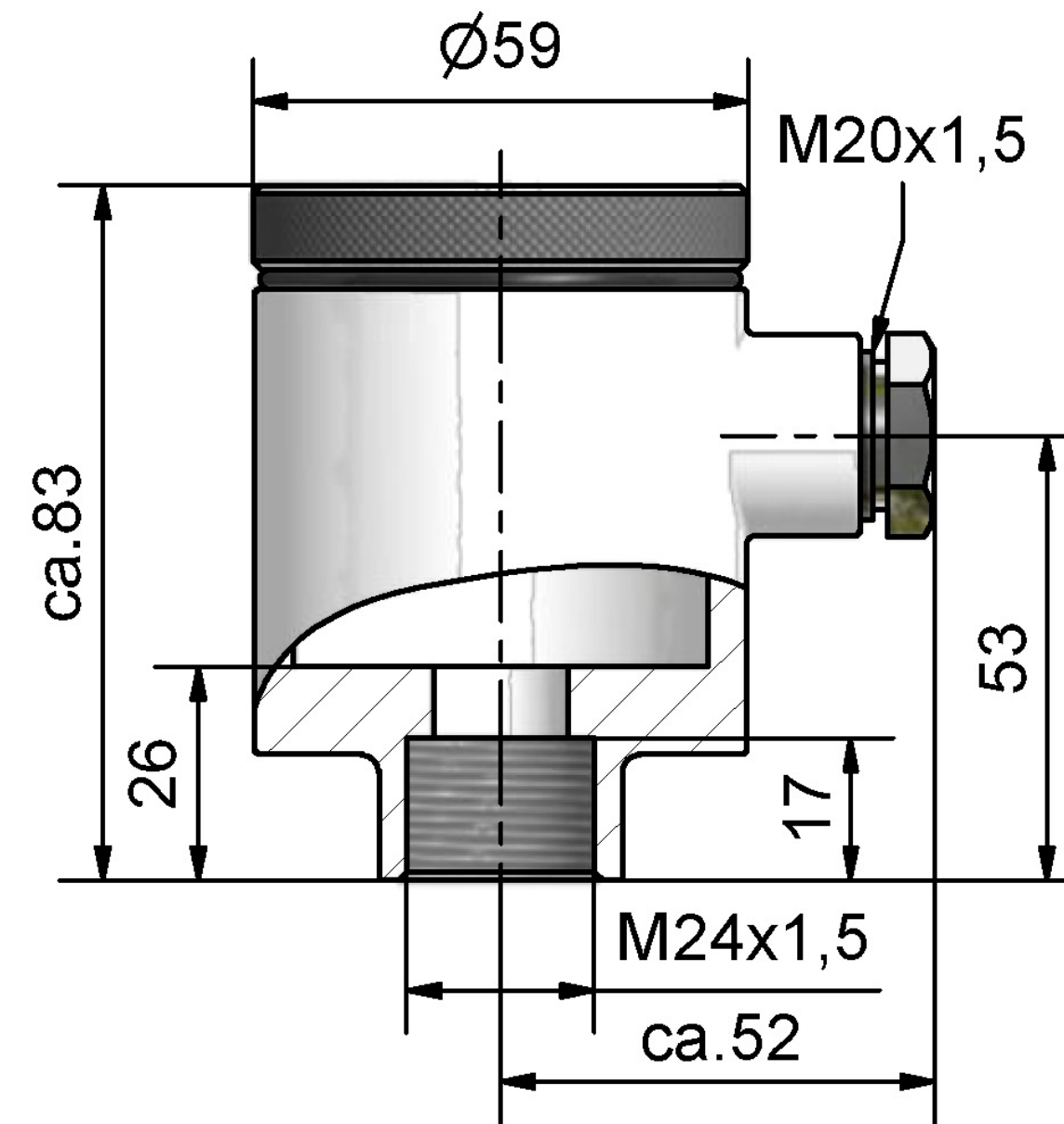
Alternative to the cable gland a M12 insert plug is possible



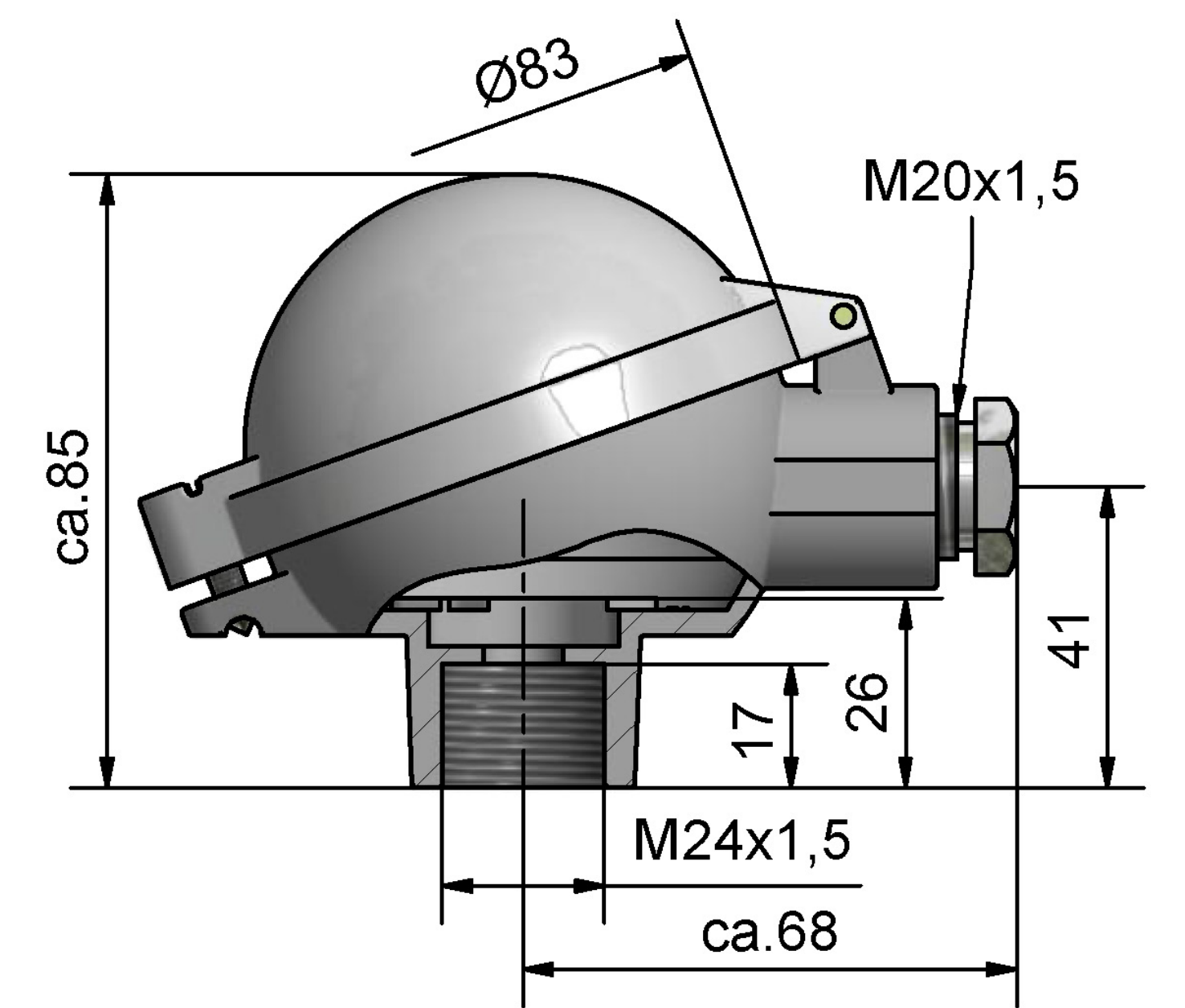
connection head model B-G12
M24 x 1,5



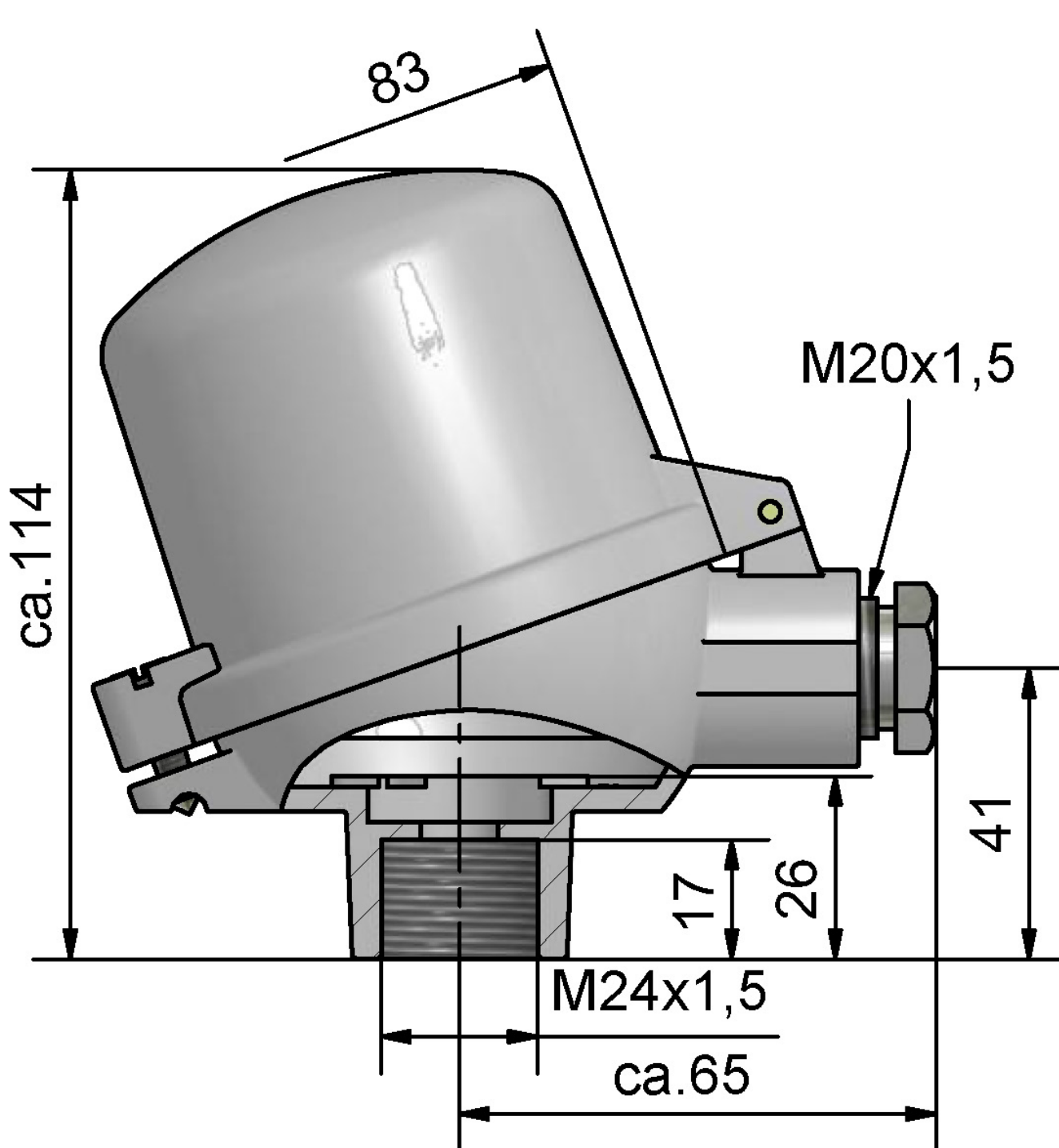
connection head model B-KL
M24 x 1,5



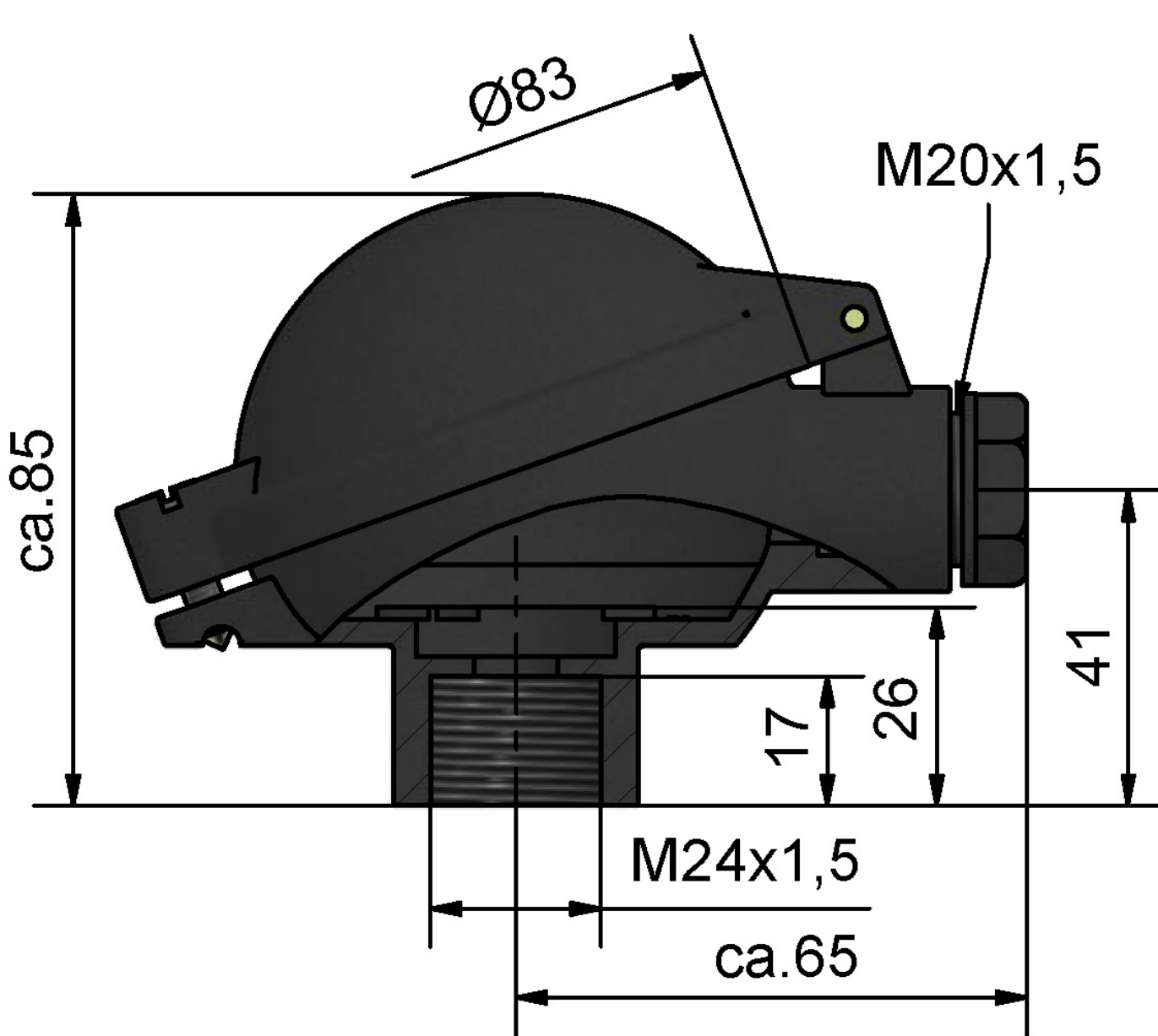
connection head model B-VA
M24 x 1,5



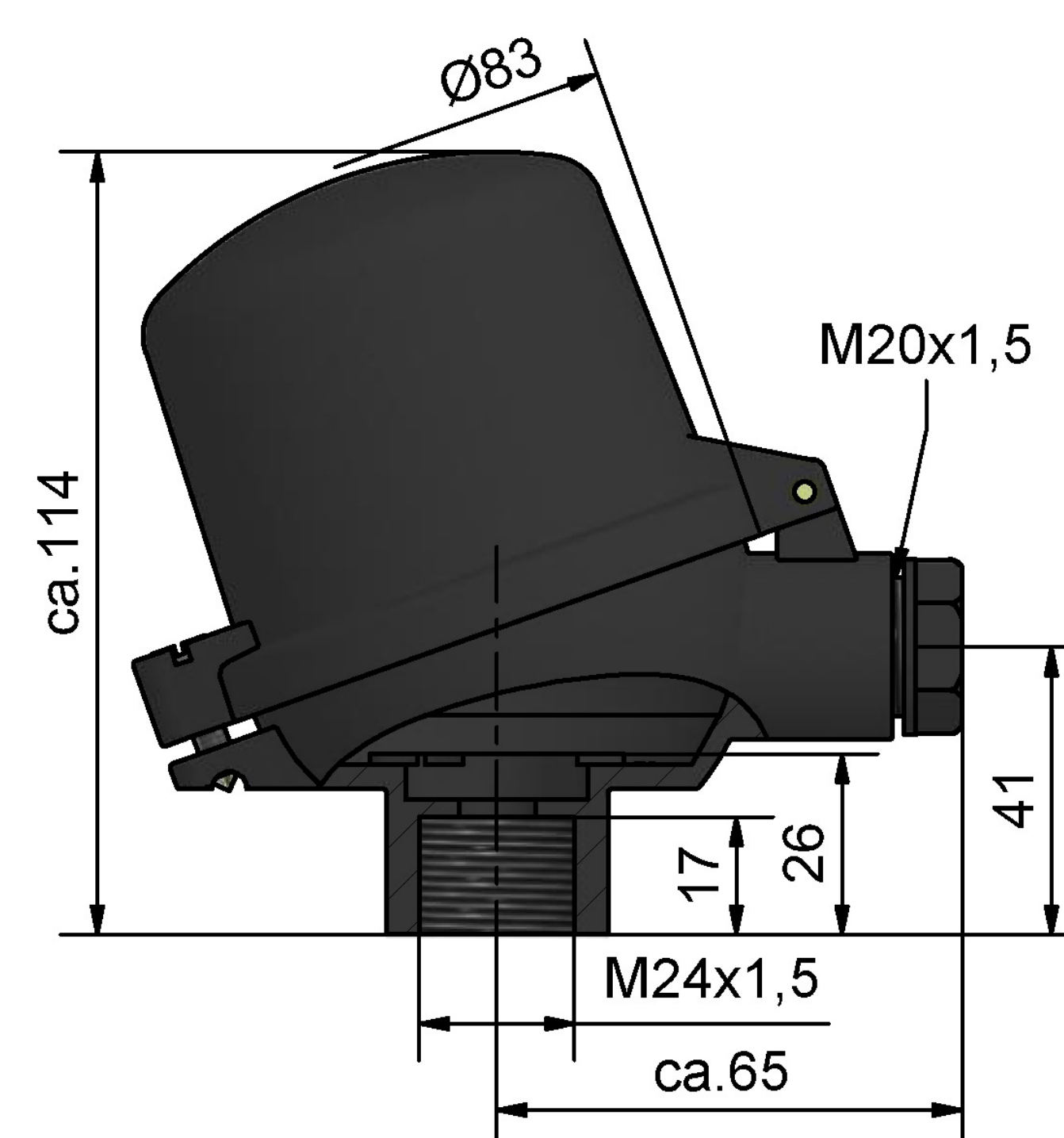
connection head model BA-KL
M24 x 1,5



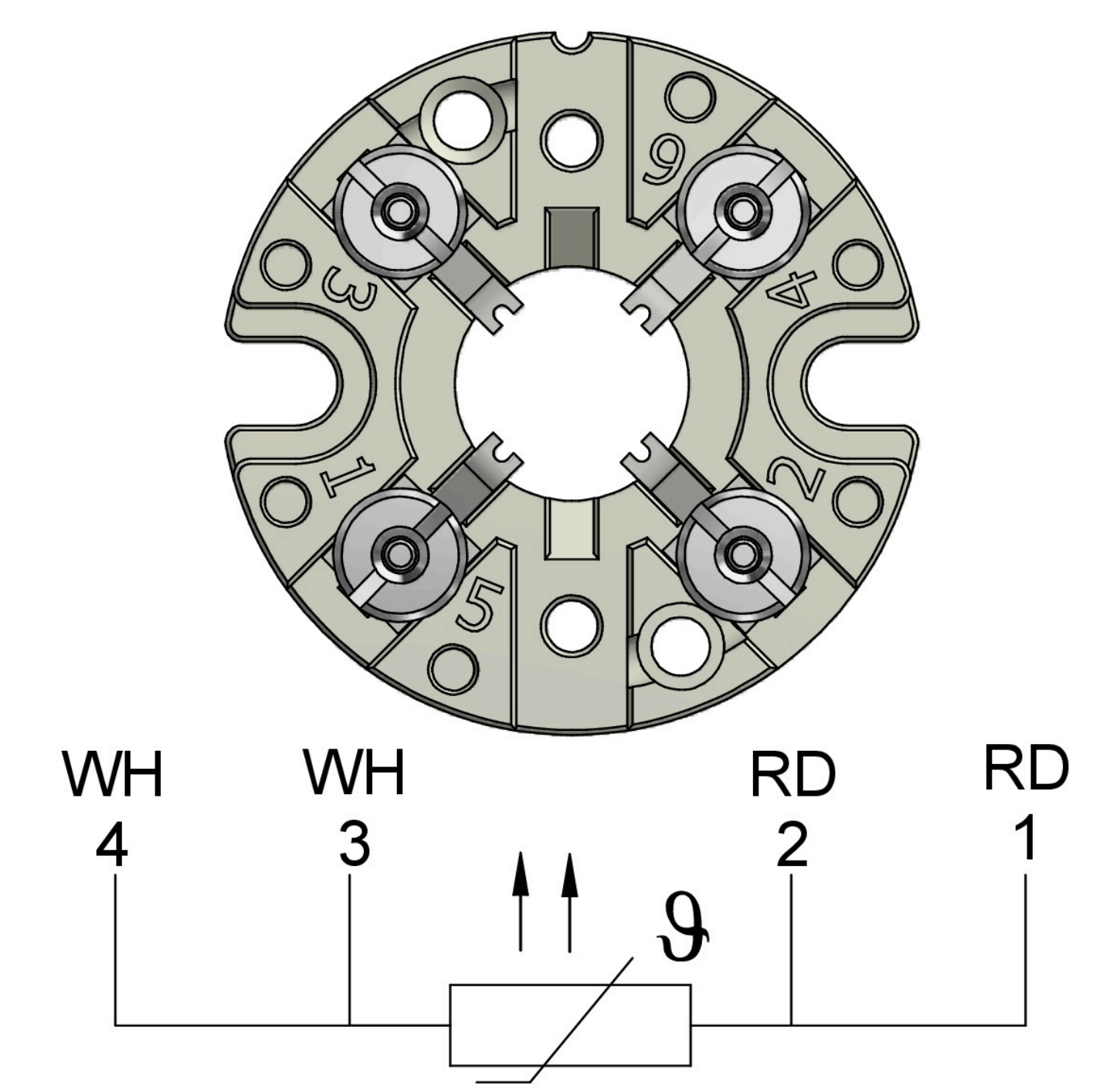
connection head model BA-KLH
M24 x 1,5



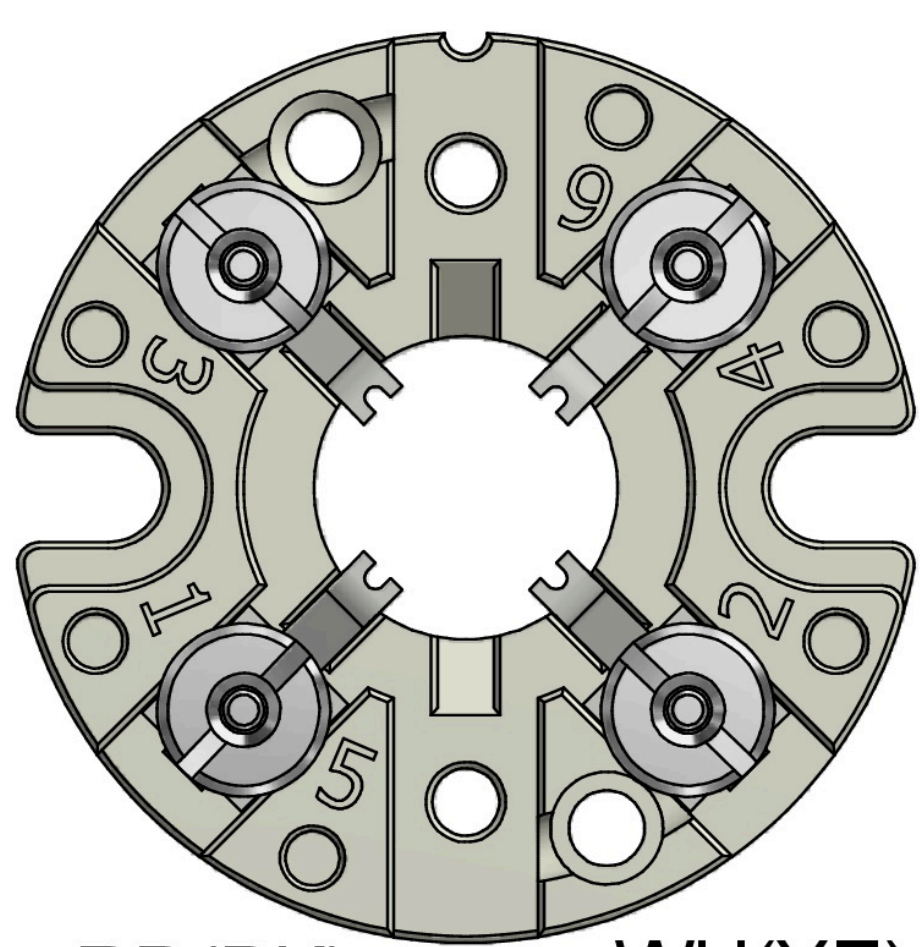
connection head model B-KUKL
M24 x 1,5



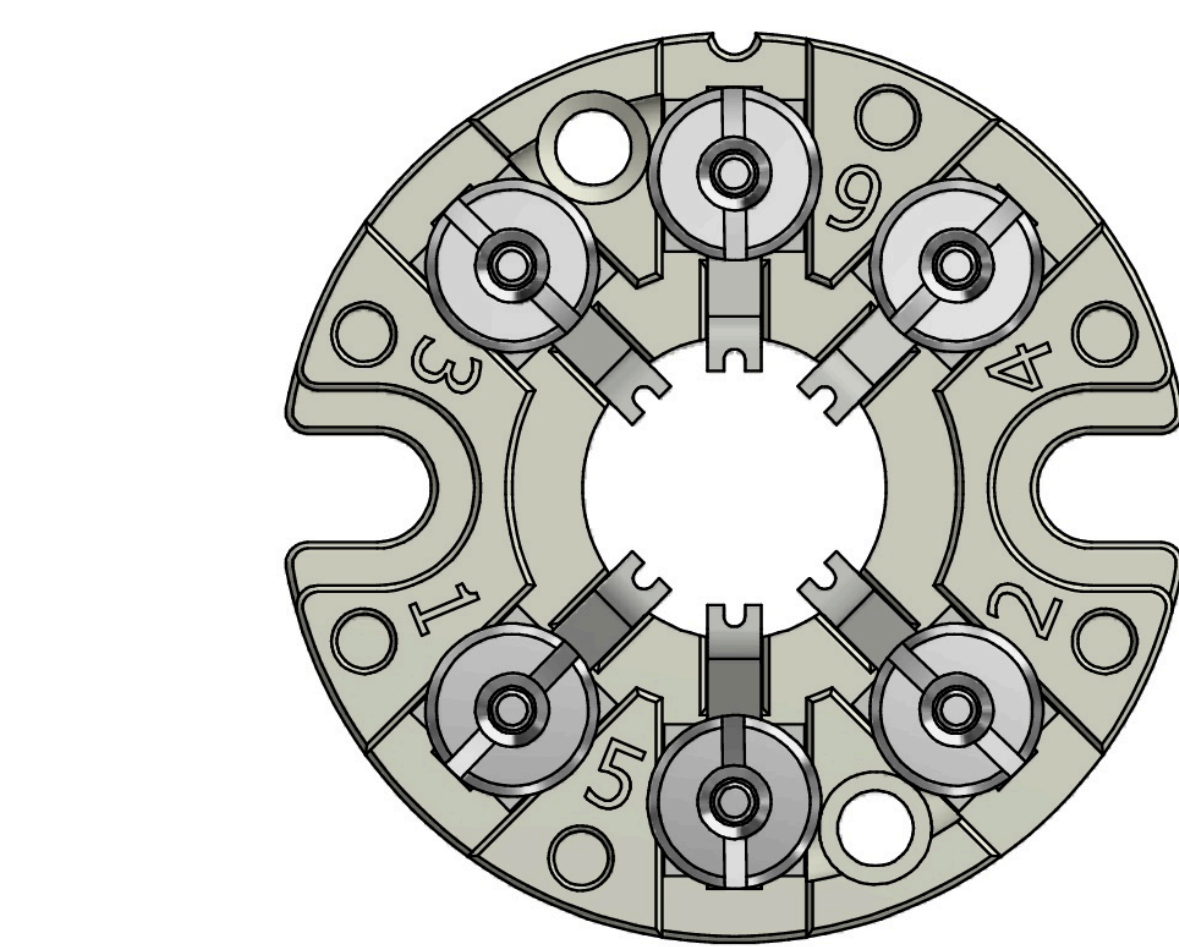
connection head model B-KUHKL
M24 x 1,5



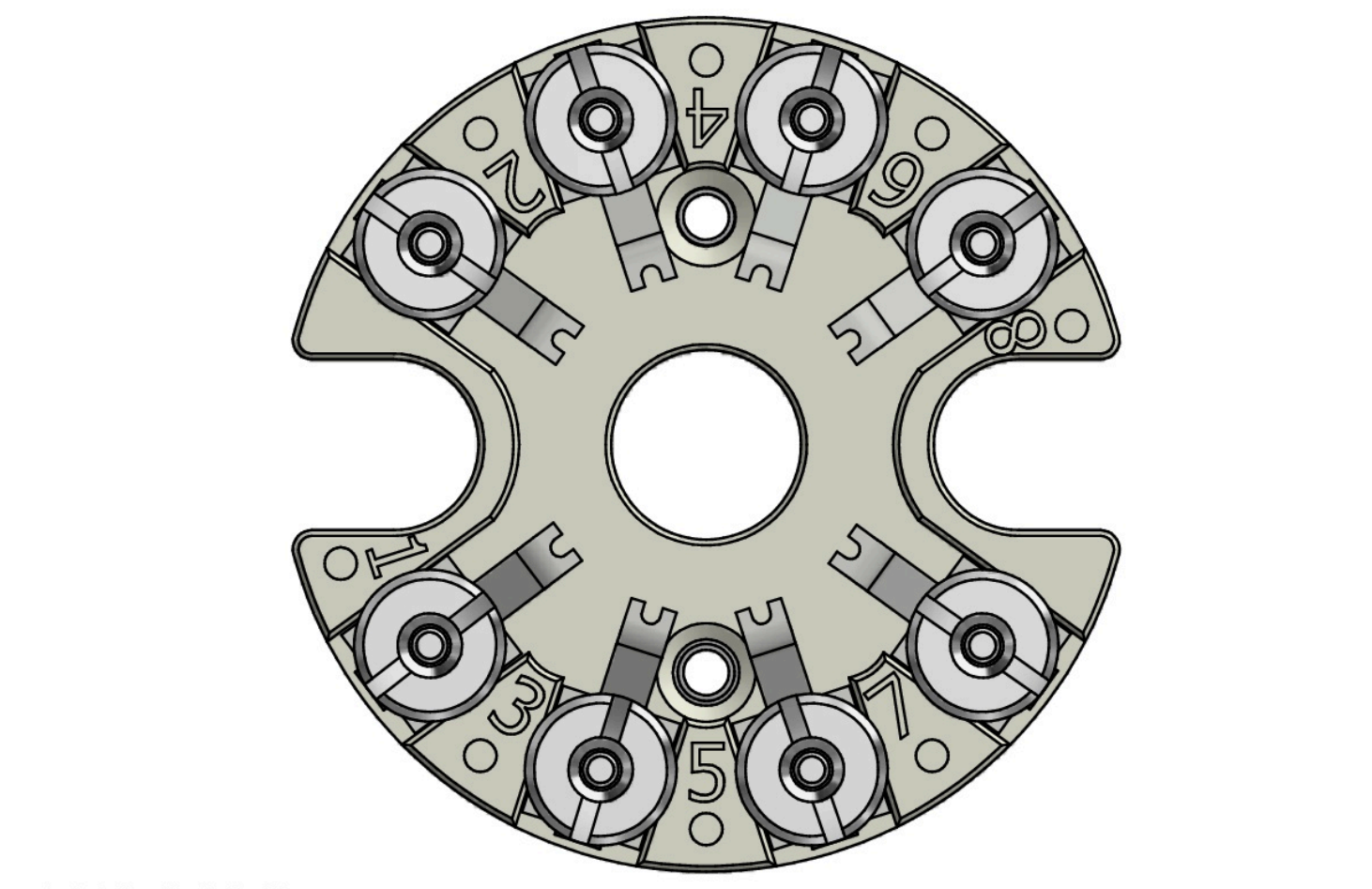
terminal base
1 x PT100 4 wire



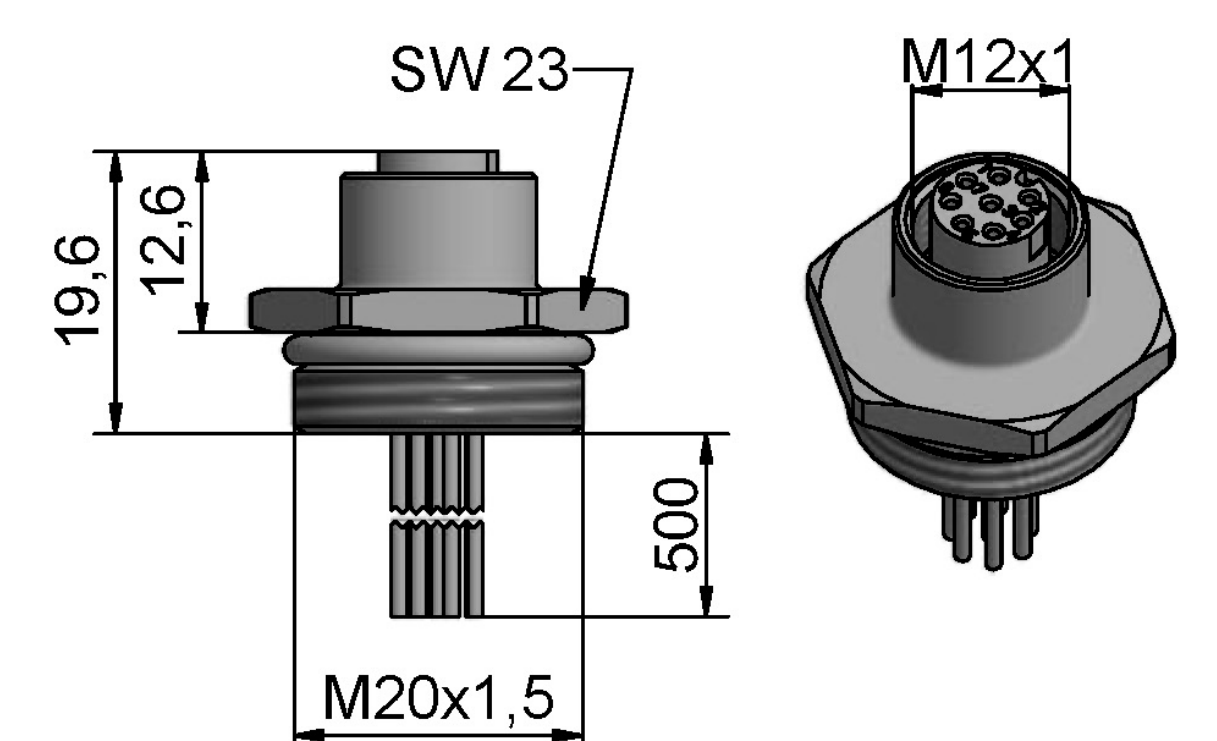
terminal base
2 x PT100 2 wire



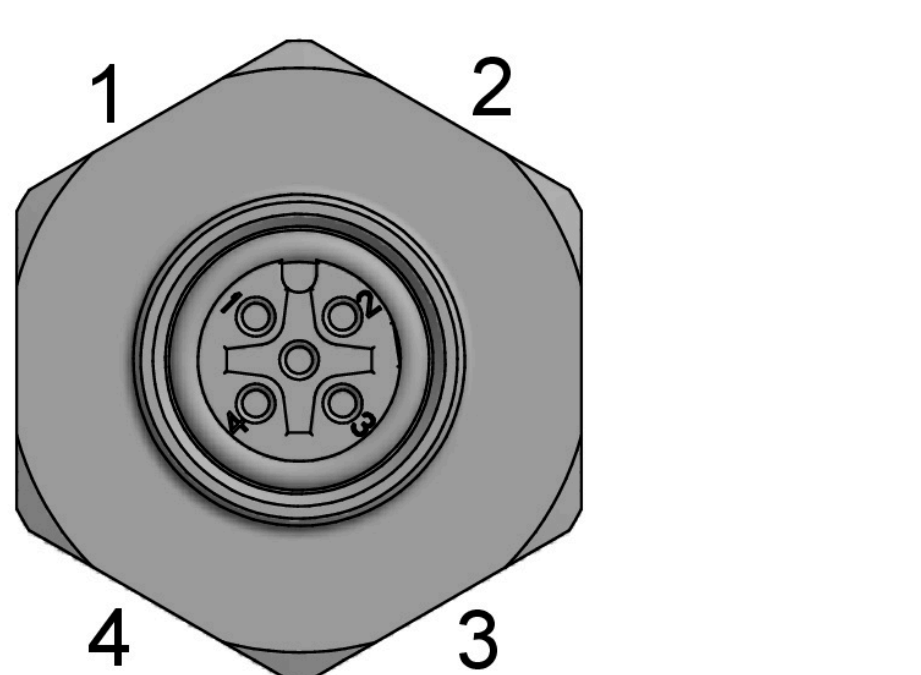
terminal base
2 x PT100 3 wire



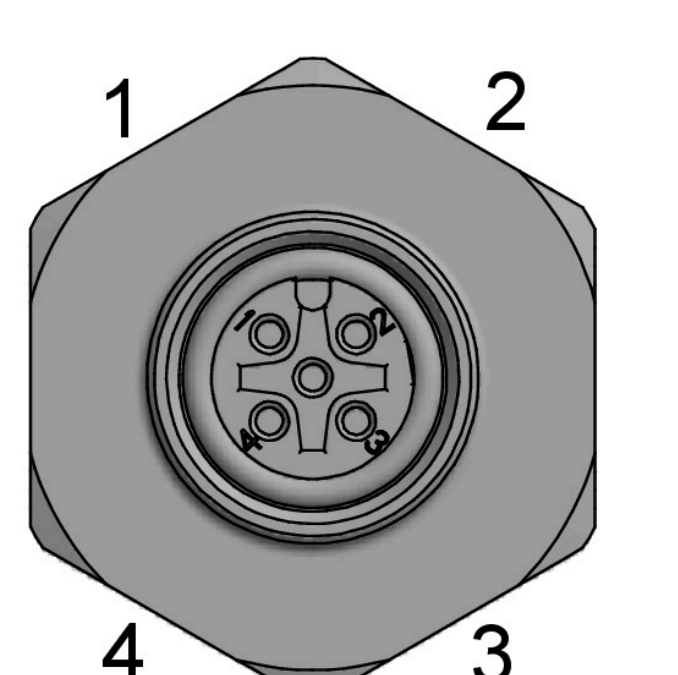
terminal base
2 x PT100 4 wire



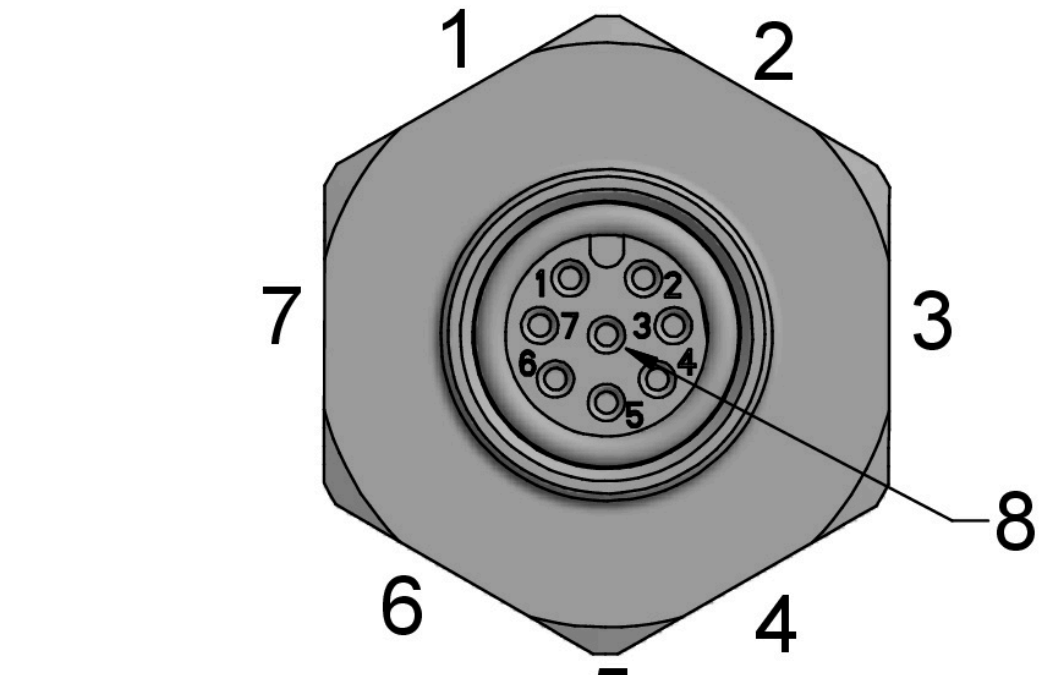
M12 insert socket
8 - terminal



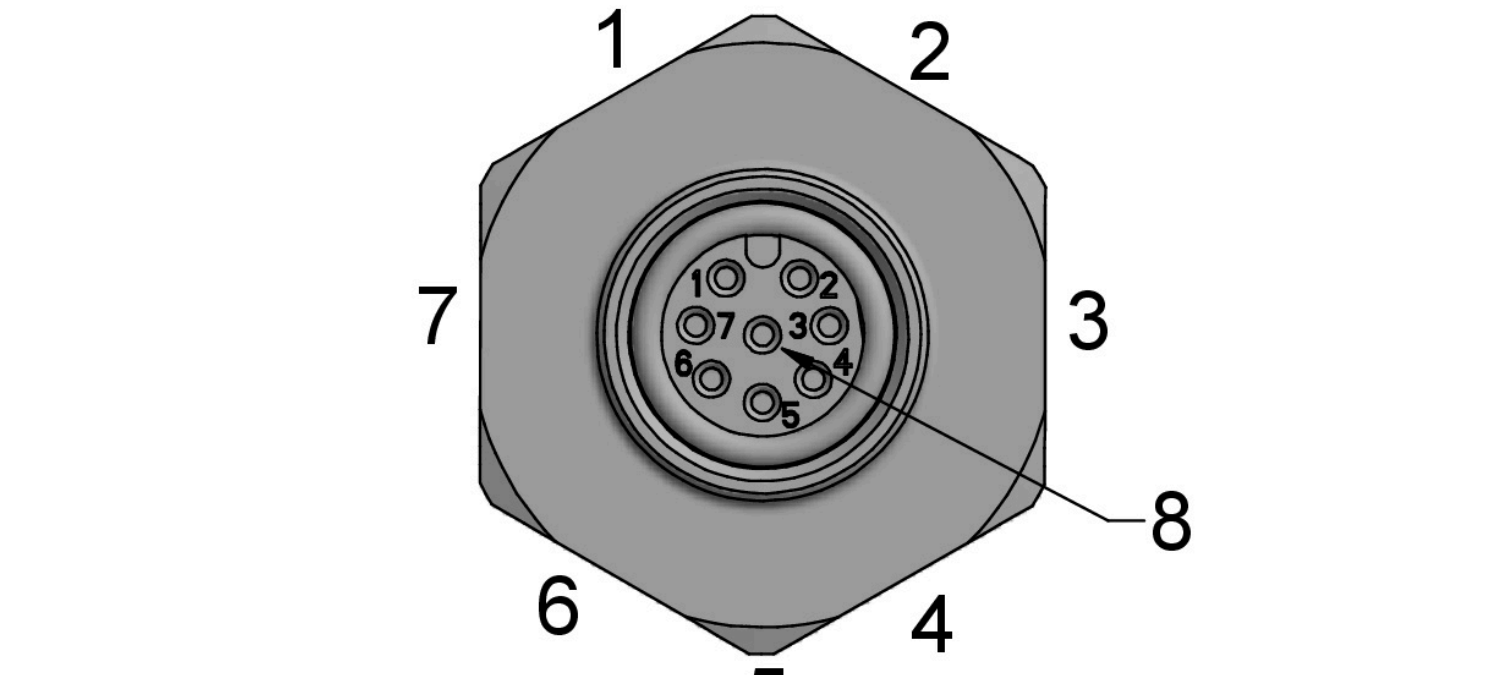
M12 insert socket
1 x PT100 4 wire



M12 insert socket
2 x PT100 2 wire



M12 insert socket
2 x PT100 3 wire



M12 insert socket
2xPT100 4-wire