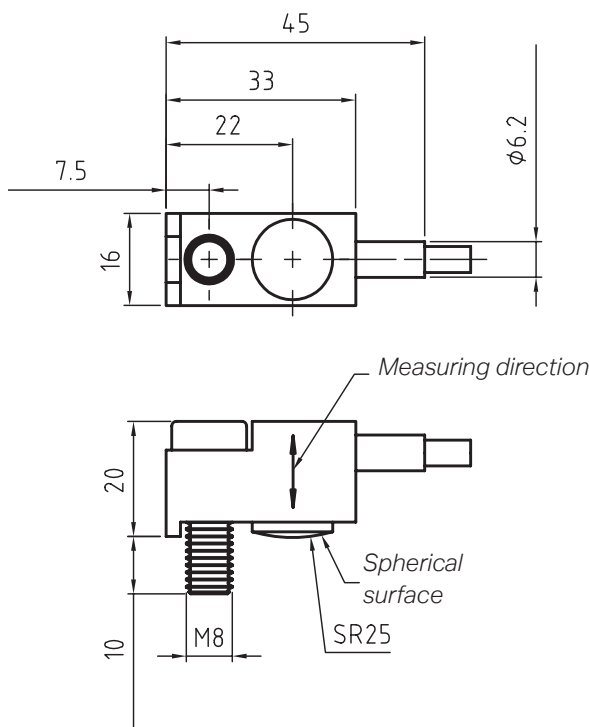


# Acceleration sensors in IEPE technology

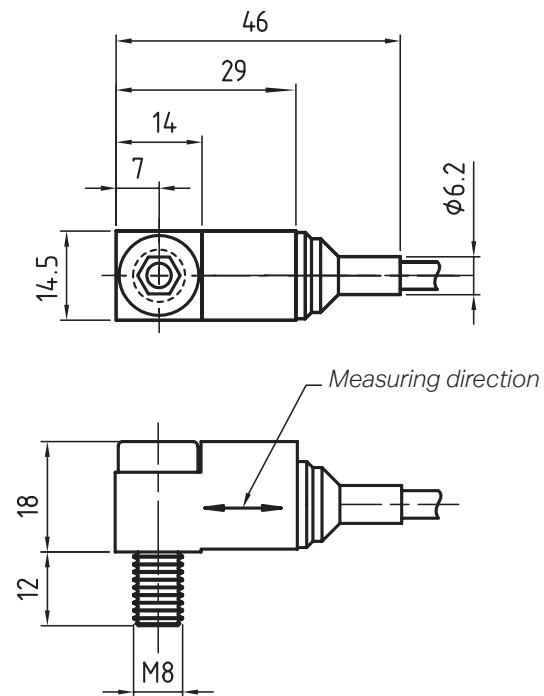
## VBS 100 AR

Measuring direction axial  
and cable radial in aspect to the bolt



## VBS 100 RR

Measuring direction radial  
and cable radial in aspect to the bolt



(All measurements in mm)

## Technical data

### Performance

Sensitivity ( $\pm 20\%$ )*	100 mV/g
Measurement range	$\pm 50$ g
Frequency range	0.1 to 10,000 Hz
Internal filter	Low pass 10 kHz, 2nd order
Resonant frequency	> 20 kHz

### Environmental conditions

Overload limit (shock)	7.000 g Peak
Enclosure rating	IP 67
Temperature range	-50 °C to +70 °C (-60 to 160 °F)

### Electrical characteristics

Excitation voltage	18 to 28 VDC
Constant current excitation	2 to 20 mA
Output bias voltage	8 to 12 VDC
Case insulation	> $10^8 \Omega$

### Physical connectors

Cable	Triaxial, shielded cable
Cable jacket	PUR, 4.5 mm
Bending radius	25 mm
Screw	M8, Fastening torque 12 Nm

\* The sensor is delivered with calibration data sheet.

# Installation note

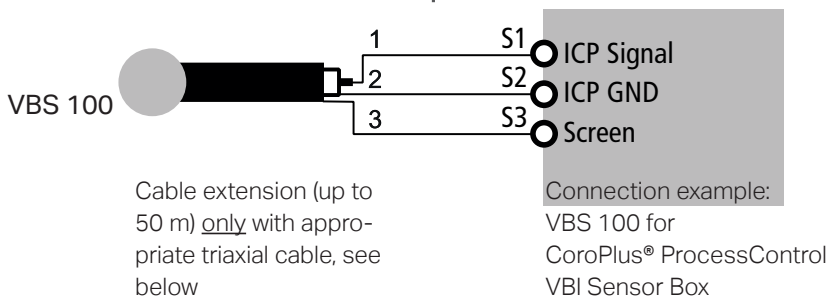
## Important note for installation of sensors in machine tools upon usage of cooling lubricants:

Sensors and especially its cable must be installed in such a way, that cooling lubricant can drain of them. It is also important to fix the cable (especially in the area close to the sensor) with cable claps to the machine, in order to eliminate its vibration.

It must be absolutely avoided that the sensor or its cable is installed in a place from which the cooling lubricant cannot drain completely. Cooling lubricant in such places (grooves, seams, or mounting pockets) is unlikely to be replaced by fresh cooling lubricant; therefore it ages and develops aggressive bacteria which can even dissolve metals aggressively by acid burning. As protection, an appropriate cabling and fixing of the cable outside of such grooves can be used, as well as the insertion of a drainage bore hole into the sensor location.

**Never use acetone-containing agents** to clean the sensor, cable and protection hose, use alcohol-based cleaning fluids instead.

## Connection example



## Optional connection system

### ① 0.CL.CAC.RC4

Assembly of a 4 pole round connector (m) M12 to the triaxial cable of a VBS sensor type

### ② 0.CP.VBS.RP4-RC4-10

Optional extension cord for VBS sensors, 4 pole round plug (f) M12, standard length 10 m (other cord length on request)

### ③ 0.CP.VBS.RP4-SB3-xx

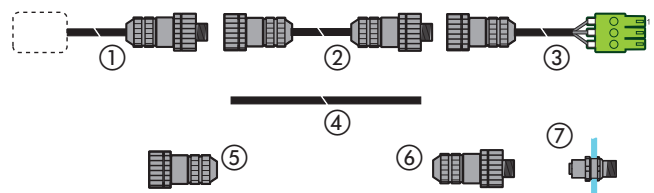
Connection cord, 4 pole round plug (f) M12 to 3 pole screw block, standard length 10 m (other cord length on request)

### ④ 0.CA.SPC.TRIAXPUR

1 m triaxial cord (specify required cord length)

### ⑤ 0.CL.VBS.RP4

4 pole round plug (f) M12



### ⑥ 0.CL.VBS.RC4

4 pole round connector (m) M12

### ⑦ 0.CL.VBS.RC4RP4WFT

Wall feed-through for 4 pole round connectors M12, male to female, shielded, 5-pos. (max. wall thickness 4.5 mm, mounting-Ø 16.1 mm)

## Part numbers

VBS 100 AR (with XX m cable): Part-No.: 0.SH.VBS.100ARXX

VBS 100 RR (with XX m cable): Part-No.: 0.SH.VBS.100RRXX

### Optional accessories:

Flexible Perbunan protection hose with metal braiding for the cable (in required length), diameter: 9 mm

Flexible spiral coiled metal protection hose for the cable (in required length), diameter: 8 mm

Metal protection hose section for the sensor cable, 1.3 m, for reinforcement mechanically stressed cable sections

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