

Strain Probes without Amplifier

DSRH P20

Features

- Simple strain measurements in deep holes
- Completely recessed installation possible
- Characteristic curve deviation < 1%
- For cyclical applications only
- Optional sensor tip of steel for repeated installation and removal



Strain Gage Data

Strain gage type	Foil gages
Nominal resistance at 24 °C	350 Ω
Sensitivity at 24 °C	Gage factor k=2.00 ±0,5% (compensated with resistors)
Temp. compensation	Steel
Transverse sensitivity nominal	+0,7%
bridge circuit	2 x 1/4 bridge (see electrical connections)

Mechanical Data

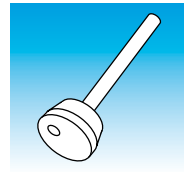
Connection	Open leads
Material	
- Sensor tip (option)	Aluminum anodized (stainless steel)
- Tube	Stainless steel
- Support ring	Aluminum anodized
Hexagon socket	6 mm
Installation torque	(3 Nm)
Cable	5 m, 4 core, shielded PUR

Environmental Conditions

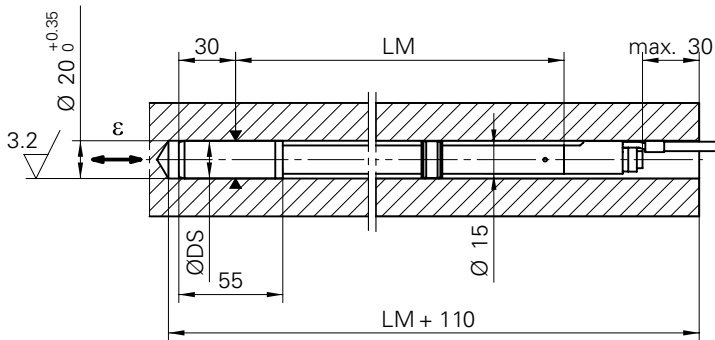
Surface installation spot	Ra 3.2 (N8) or better
Operating temp. range	-10...+60 °C
Storage temperature	-40...+100 °C
Protection class	IP 54

Electrical Data

Measuring Range	±1000 µε (1 µε = 0,001 mm/m resp. 1 µε equals 0,001 mm strain per meter)
Output signal per 1000 µε	1 mV/V (with completed full bridge)
Combined error	< 1% FS
Linearity	< 0,5% FS
Hysteresis	< 0,5% FS
Non-repeatability	< 0,2% FS
Zero, Bridge balance	< ±200% FS (depending on installation) Since the gages are pressed-on, the bridge can have any arbitrary zero offset after the probe is mounted. Baumer amplifiers and display instruments are equipped with a reset function to tare this offset. The bridge should be reset before each measuring cycle.
Max. recommended bridge excitation	9 VDC
Signal polarity	The signal polarity depends on the bridge circuit. In combination with Baumer amplifiers, the polarity is positive under tensile load.
Rise time (10 - 90%)	< 1 ms (on steel)



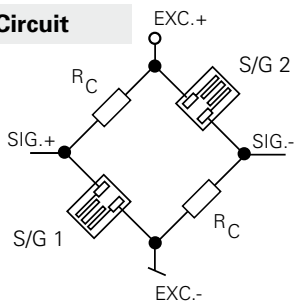
Dimensions (mm)



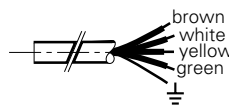
- Ø DS = Tip diameter
- LM = Measurement depth
- ε = Strain
- ▲ = Gage location

Electrical Connections

Bridge Circuit

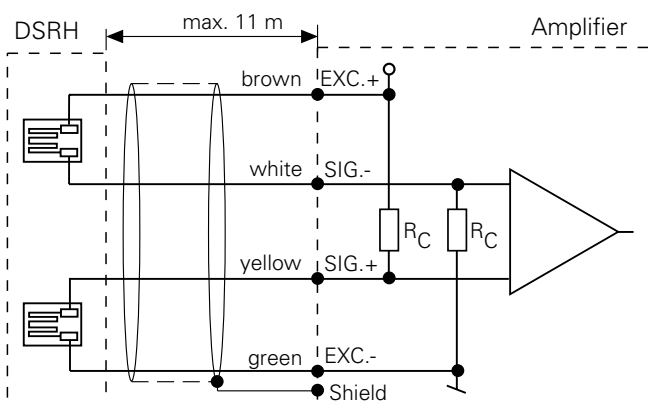


Wire Color

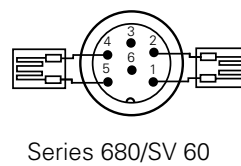


Color	Signal
brown	S/G 1
white	S/G 1
yellow	S/G 2
green	S/G 2

Wiring Diagram



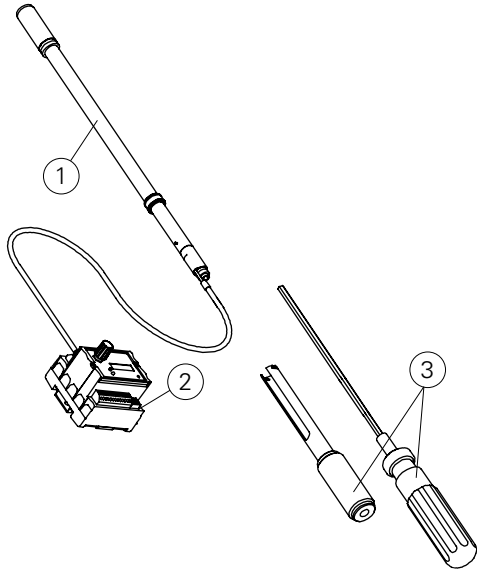
Option /CN



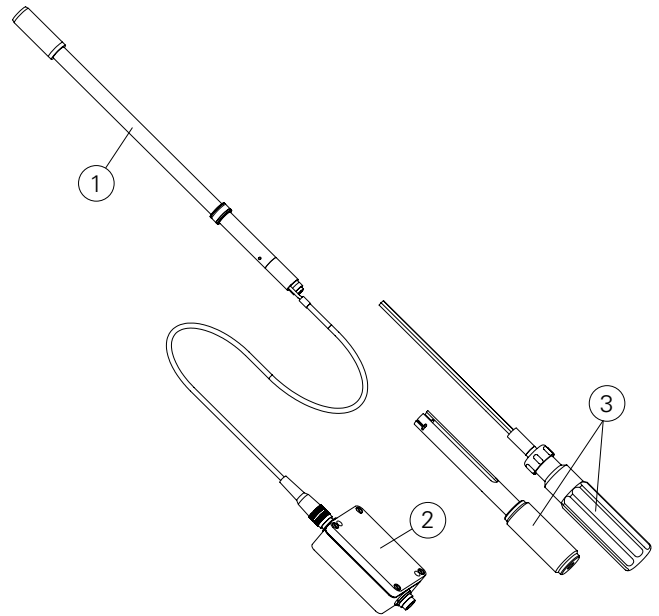
Pin	Signal
1	S/G 1
2	S/G 1
3	Shield
4	S/G 2
5	S/G 2
6	Shield

Strain Probe without Amplifier DSRH P20

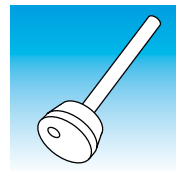
Typical Measuring Chains



Pos.	Qty	Type	Description
1	1	DSRH P20	Strain probe w/o amplifier
2	1	DABU MP4M	Bridge amplifier
3	1	DZMT/404486	Mounting tool set



Pos.	Qty	Type	Description
1	1	DSRH P20-xxxxM/CN	Strain probe with optional connector
2	1	DABU AL1R	Bridge amplifier in aluminum enclosure
3	1	DZMT/404486	Mounting tool set



Order Code

DSRH P20 - M /

Options

- /ST Sensor tip of steel
- /CN Conn. 6 pin/m installed
- /CL10 Cable length 10 m

Length (LM)

0200	0760
0220	0800
0240	0900
0400	1050
0500	1300
0600	1400

Accessories

Mounting tool set



Order code: DZMT/404486