

Strain Probe with Integrated Amplifier DSRK x16/x20

Features

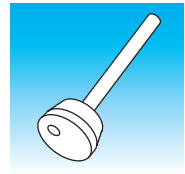
- Strain measurement in deep holes
- Bending compensated by measurement in neutral axis
- Very robust design, maintenance free
- Long lifetime with glued strain gauges
- For permanent installations



Electrical Data	DSRK U	DSRK I
Measuring range	0 ... 1000 $\mu\epsilon$	
Output signal	0 ... 10 VDC	4 ... 20 mA
Output impedance	> 10 k Ω	< 500 Ω
Signal polarity tensile load	positive	
Combined error	< 1% FS	
Frequency range (-3 dB)	120 Hz	
Supply voltage range	18 - 33 VDC	
Current draw	< 50 mA	
Reset input	15 - 45 VDC	
Reset active	> ± 15 V	
Reset inactive	< ± 5 V	
min. Reset pulse	> 1ms	

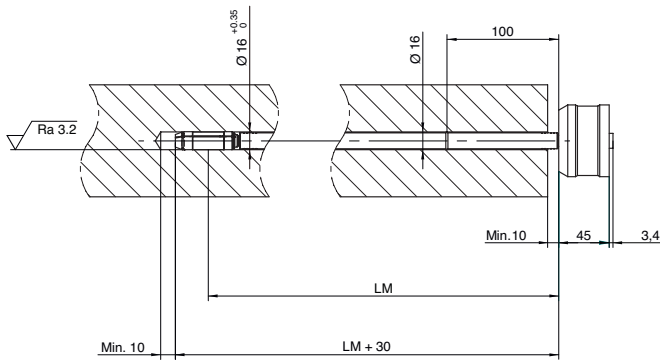
Mechanical Data	
Connection	7 pin male (Series 680/SGR 70)
Material	
- Amplifier enclosure	Aluminum anodized
- Tube	Stainless steel
- Support ring (Type 20)	Aluminum anodized
- Measuring tip	Heat treated steel
Mounting	Hexagon socket 6 mm Installation torque 16 Nm

Environmental Conditions	
Operating temp. range	-5...+85 °C non condensing
Storage temperature	-40...+85 °C
Protection class	IP 54
CE regulations	
- EMC Dir. 2004/108/EC	EN 61000-2-3:2006
- RoHS Dir. 11/65/EC	
UL listed	20120223-E217824

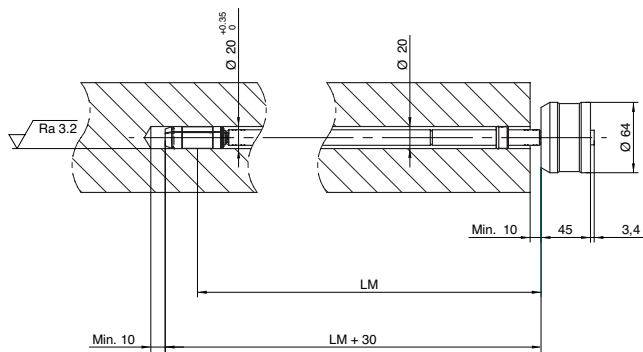


Dimensions (mm)

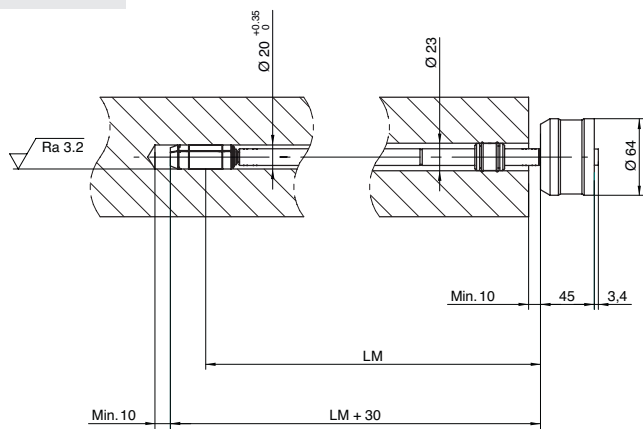
Type 16



Type 20



Type 20 with option ST23

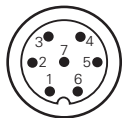


Ø DS = Tip diameter
 LM = Measurement depth
 ϵ = Strain

Strain Probe with Integrated Amplifier DSRK x16/x20

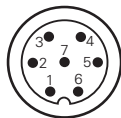
Electrical Connections

Current Output



Pin	Signal
1	+Vs (18 - 33 VDC)
2	do not connect*
3	Reset (bipolar)
4	Reset (bipolar)
5	+I _{OUT} (4 - 20 mA)
6	-I _{OUT}
7	GND

Voltage Output



Pin	Signal
1	+Vs (18 - 33 VDC)
2	do not connect*
3	Reset (bipolar)
4	Reset (bipolar)
5	+V _{OUT} (±10 V)
6	-V _{OUT}
7	GND

* Factory use

Order Code

DSRK - M /

Option

0500 Measuring range 0 ... 500 µε
ST23 Supporting ring 23 mm

Length* (LM)

0240	1050
0285	1150
0320	1300
0400	1350
0500	1400
0600	1500
0760	1700
0800	1810
0830	1900
0900	2270

Tip diameter (Ø DS)

16	16 mm
20	20 mm

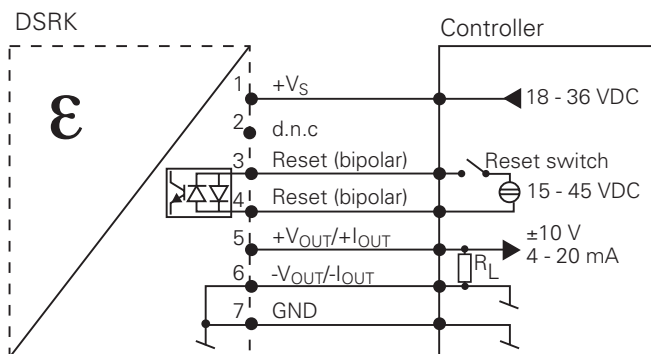
Output signal

U Voltage output 0 ... 10 V
I Current output 4 ... 20 mA

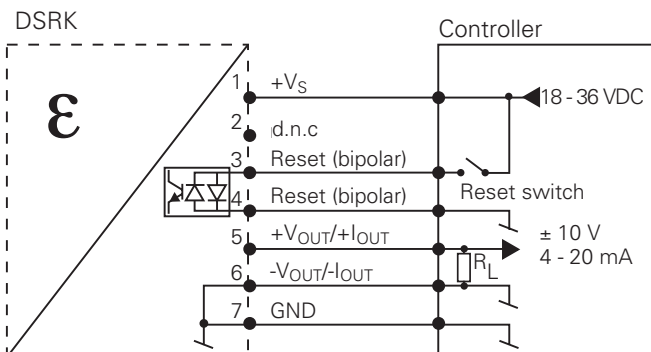
* Other lengths available upon request

Control

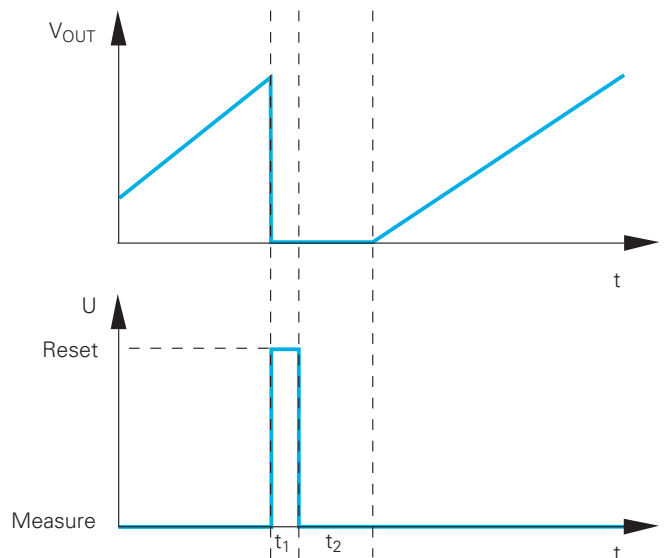
Reset galvanically isolated



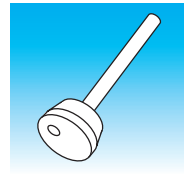
Reset not galvanically isolated



Reset Function

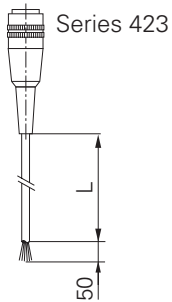


V/I _{OUT}	Output signal
Reset	Reset input (active high)
t ₁	Reset pulse (> 1 ms)
t ₂	Reset settle time after reset pulse (> 15 ms)

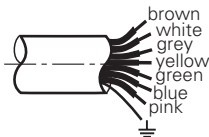


Accessories

Connecting Cable with Flying Leads



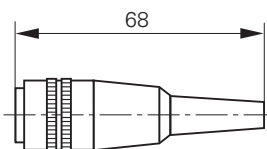
Length	Order Code
5 m	DZCS 05/404155
10 m	DZCS 10/404155



Color	Signal
white	+Vs (18 - 35 VDC)
brown	do not connect
green	Reset (bipolar)
yellow	Reset (bipolar)
grey	+Iout / +Vout
blue	-Iout / -Vout
pink	GND

Straight Connector

Series 423



Part No. 10146423