

# MAGNESCALE

digital gauge



## Series DS

Key-Features:

- Available measurement ranges 5 - 100 mm
- Resolution up to 0,1  $\mu\text{m}$
- Accuracy up to 1,0  $\mu\text{m}$
- USB (2.0FS) interface - free evaluation software for download
- Protection class up to IP67
- Spring loaded and pneumatic versions available
- Resistant against water and oil
- Life cycle up to 30 million strokes

Content

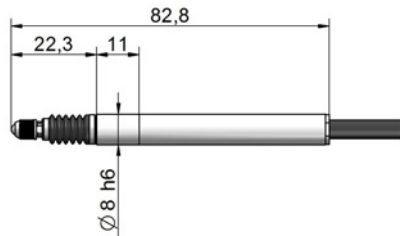
## DIGITAL GAUGE DS805 - MEASUREMENT RANGE 5 mm

Model (Order Code)		DS805SR, DS805SFR, DS805SLR, DS805SFLR	DS805SR5, DS805SFR5, DS805SLR5, DS805SFLR5
Measurement range	[mm]	5	
Resolution	[ $\mu\text{m}$ ]	0,1	0,5
Accuracy (20°C)	[ $\mu\text{m}$ ]	1	1,5
Displacement speed max.	[m/min]	42*	
Rod principle		spring loaded	
Reference point		position at spindle movement of 1 mm	
Vibration	m/s <sup>2</sup>	100 (20Hz to 2kHz)	
Impact resistance	m/s <sup>2</sup>	1000 (11 ms)	
Operating temperature	[°C]	0...50 (no condensation)	
Storage temperature	[°C]	-20 to 60 (90% RH or less)	
Power supply	[VDC]	5 $\pm$ 5%	
Power consumption	[mA]	120 max.	
Measuring force upward	[N]	0,35 $\pm$ 0,25	
Measuring force horizontal	[N]	0,40 $\pm$ 0,25	
Measuring force downward	[N]	0,45 $\pm$ 0,25	
Protection class**		IP67	
Feeler		Carbide ball tip, mounting screw M2.5	
Cable length	[m]	Gauge $\Leftrightarrow$ Interpolator: 2, Interpolator $\Leftrightarrow$ USB: 0,5	
Weight	[g]	approx. 30	
Accessory		Instruction manual, tightening nut, clamp spanner, wave washer, spanner	
Communication interface		USB2.0FS	
Recommended system specification		CPU: Intel Core i3 or higher RAM: 1 GB or more; OS: Windows7, Windows10 (32 bit/64 bit)	

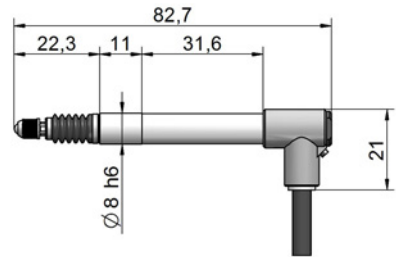
\*Depending on the number of connected devices

\*\*not including cable and interpolation box

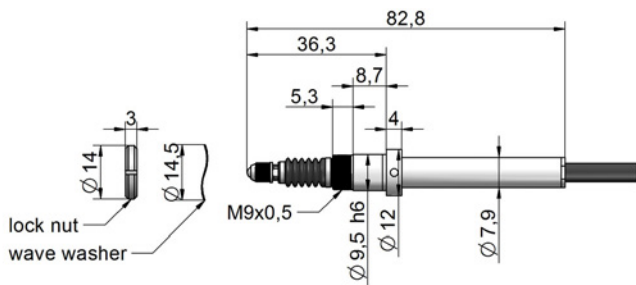
DS805SR / DS805SR5



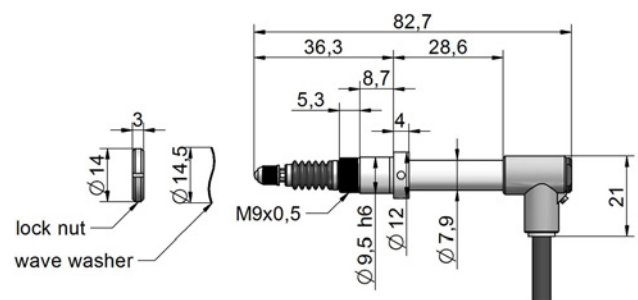
DS805SLR / DS805SLR5



DS805SFR / DS805SFR5



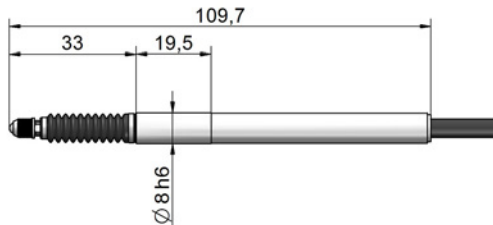
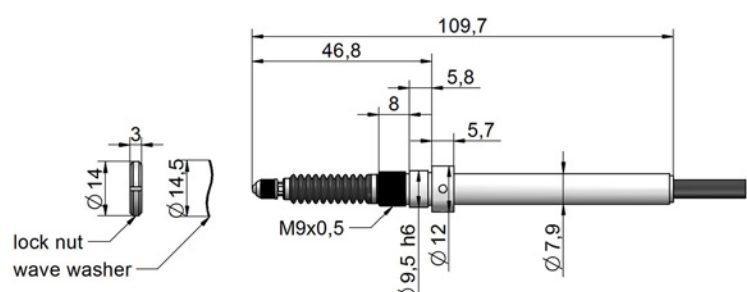
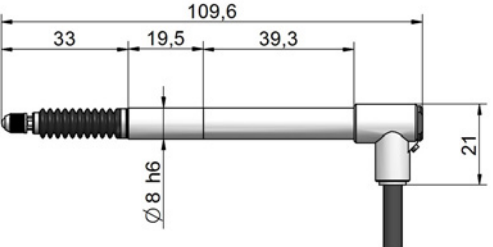
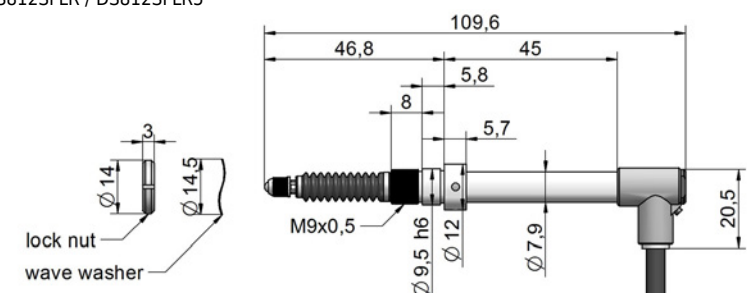
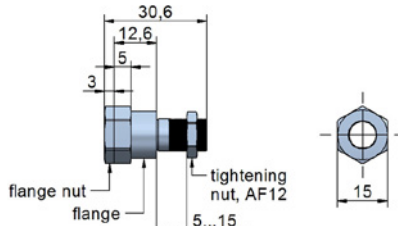
DS805SFLR / DS805SFLR5



## DIGITAL GAUGE DS812S - MEASUREMENT RANGE 12 mm

Model / Order Code		DS812SR, DS812SFR, DS812SLR, DS812SFLR, DS812SVR	DS812SR5, DS812SFR5, DS812SLR5, DS812FLR5, DS812SVR5
Measurement range	[mm]	12	
Resolution	[µm]	0,1	0,5
Accuracy (20°C)	[µm]	1	1,5
Displacement speed max.	[m/]	42*	
Rod principle		spring loaded, pneumatic	
Reference point		position at spindle movement of 1 mm	
Vibration	m/s <sup>2</sup>	100 (20Hz to 2kHz)	
Impact resistance	m/s <sup>2</sup>	1000 (11 ms)	
Operating temperature	[°C]	0...50 (no condensation)	
Storage temperature	[°C]	-20 to 60 (90% RH or less)	
Power supply	[VDC]	5 ± 5%	
Power consumption	[mA]	120 max.	
Measuring force upward	[N]	0,4 ± 0,3** (DS812SVR / DS812SVR5: 0,6 ± 0,5***)	
Measuring force horizontal	[N]	0,5 ± 0,3** (DS812SVR / DS812SVR5: 0,7 ± 0,5***)	
Measuring force downward	[N]	0,6 ± 0,3** (DS812SVR / DS812SVR5: 0,8 ± 0,5***)	
Protection class****		IP67	
Mass	[g]	approx. 30	
Feeler		Carbide ball tip, mounting screw M2.5	
Weight	[m]	Gauge <=> Interpolator: 2, Interpolator <=> USB: 0,5	
Accessories		Instruction manual, tightening nut, clamp spanner, wave washer, hose elbow, spanner	
Communication interface		USB2.0FS	
Recommended system specification		CPU: Intel Core i3 or higher; RAM: 1 GB or more OS: Windows7, Windows10 (32 bit/64 bit)	

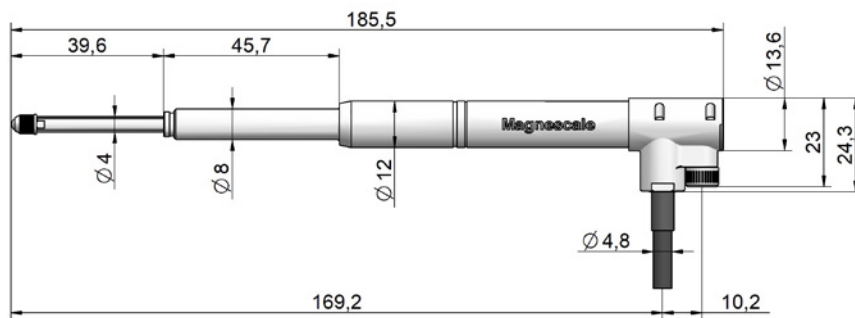
\*Depending on the number of connected devices \*\*Except SVR/SVR5 \*\*\* When air pressure is 0,555 Mpa \*\*\*\*not including cable and interpolation box

<p>DS812SR / DS812SR5</p> 	<p>DS812SFR / DS812SFR5</p> 
<p>DS812SLR / DS812SLR5 / DS812SVR / DS812SVR5</p> 	<p>DS812SFLR / DS812SFLR5</p> 
<p>Flange adaptor DZ812F</p> 	

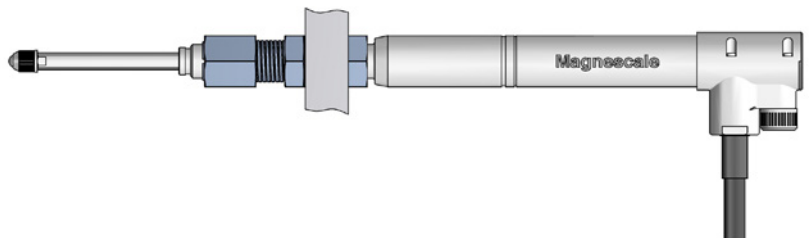
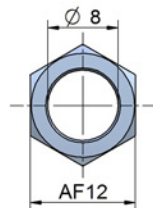
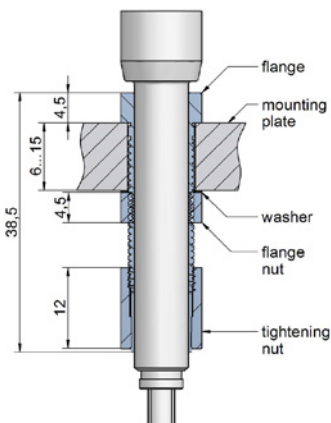
## DIGITAL GAUGE DS830S – MEASUREMENT RANGE 30 mm

Model / Order Code	DS830SLR
Measurement range	30 mm
Resolution	0.1 µm
Linearity (20°C)	1,5 µm
Max. displacement speed	80 m/min
Interface	USB2.0FS
Power supply	5 VDC ±5 %
Power consumption	1 W
Reference point	at 1 mm ±0,5 mm
Working temperature	0...50 °C
Storage temperature	-20...60 °C
Feeler	Carbide ball tip, mounting screw M2.5
Measuring force horizontal (20°C)	0.60 ±0.35 N
Protection class	IP53
Vibration	20...2000 Hz, 100 m/s <sup>2</sup>
Shock	1000 m/s <sup>2</sup> , 11 ms
Weight	70...80 g (without interpolator, cable and connector)
Cable length	Gauge <=> Interpolator: 2, Interpolator <=> USB: 0,5

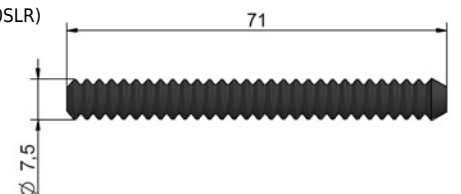
### DS830SLR



### Flange adaptor DZ830F



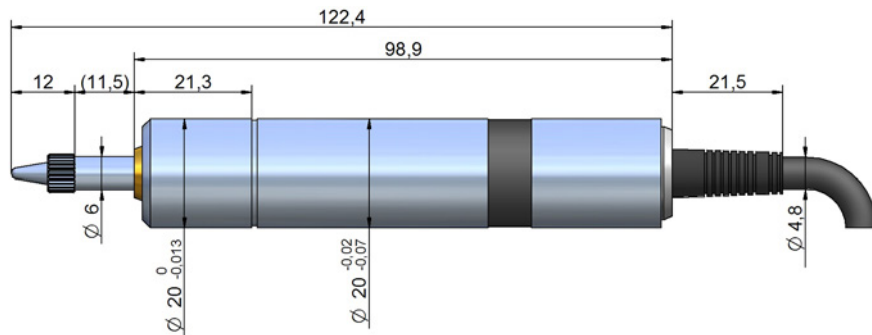
### Bellows set DZ830BL (for DS830SLR)



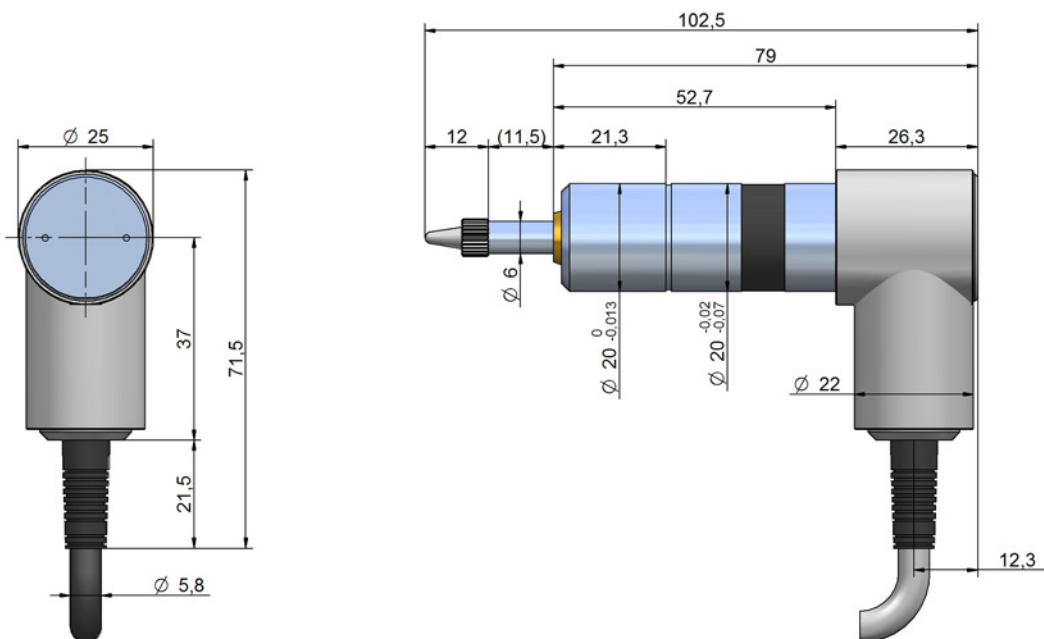
## DIGITAL GAUGES DS10, DS25 - MEASUREMENT RANGE 10/25 mm

Model / Order Code	DS10NR5	DS10PR5	DS10PLR5	DS25NR5	DS25PR5	DS25NLR5	DS25PLR5
Measurement range	10 mm			25 mm			
Resolution	0,5 µm						
Accuracy (20°C)	3 µm						
Displacement speed max.	250 m/min						
Interface	USB2.0FS						
Supply	5 VDC ± 5 %						
Consumption	1,2 W						
Reference point	at 1 mm ± 0,5 mm						
Working temperature	0...50 °C						
Storage temperature	-20...60 °C						
Measuring force	0.6 ± 0.3 N	4.9 N or less		0.7 ± 0.35 N	4.9 N or less	0.7 ± 0.35 N	4.9 N or less
Rod principle	spring loaded						
Protection class	IP50	IP64		IP50	IP64	IP50	IP64
Vibration	10...2000 Hz, 150 m/s <sup>2</sup>						
Shock	1500 m/s <sup>2</sup>						
Weight	230 g (without interpolator, cable and connector)			300 g (without interpolator, cable and connector)			
Feeler	Carbide ball tip, mounting screw M2.5						
Cable length	Gauge <=> Interpolator: 2		Interpolator <=> USB: 0,5				

**DS10NR5, DS10PR5**

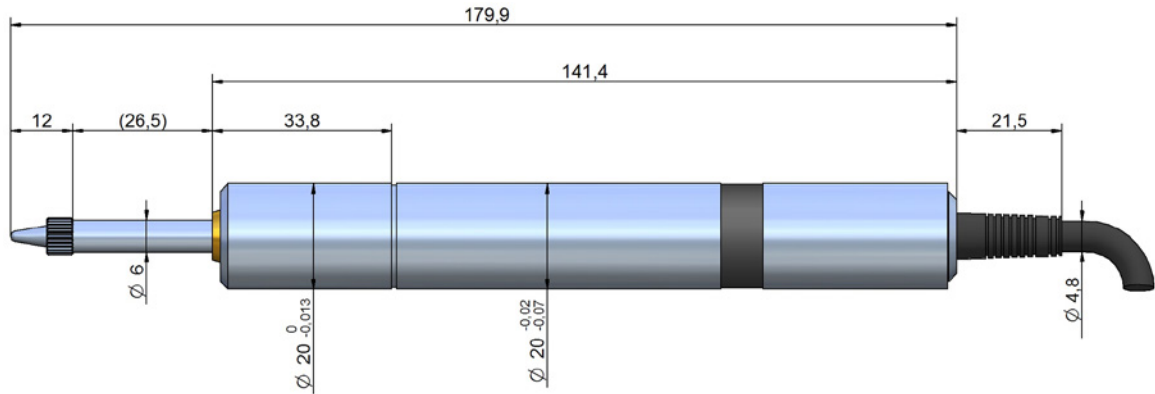


**DS10PLR5**

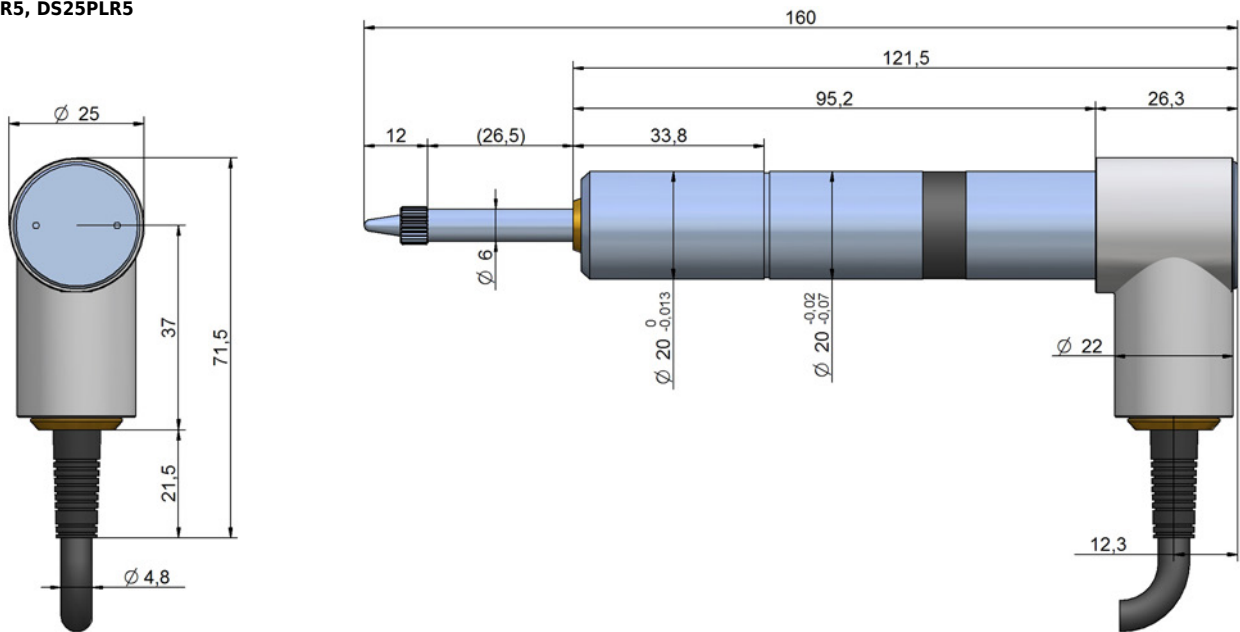


# DIGITAL GAUGE DS25 - MEASUREMENT RANGE 25 mm

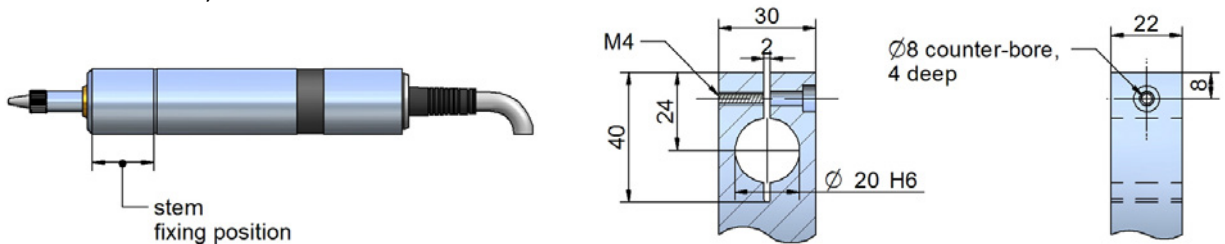
## DS25NR5, DS25PR5



## DS25NLR5, DS25PLR5



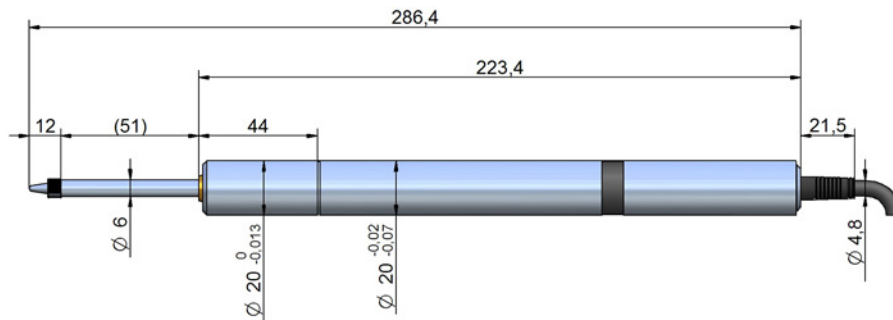
## Instruction for installation DS10, DS25



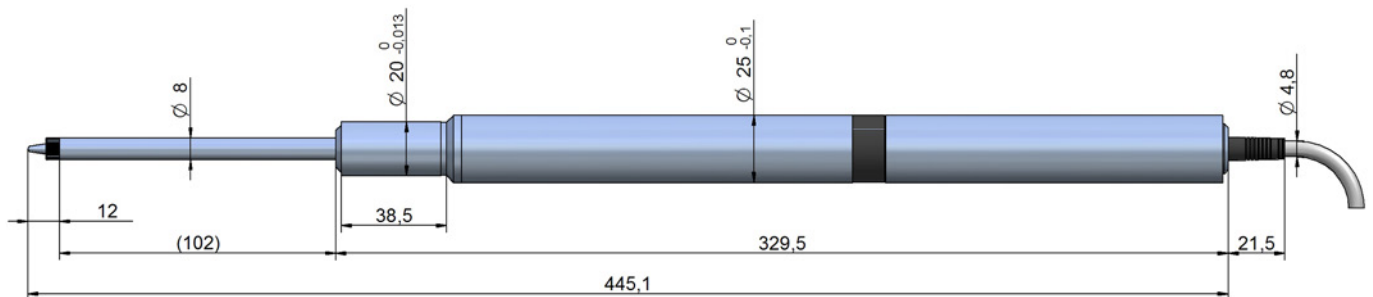
## DIGITAL GAUGE DS50, DS100 - MEASUREMENT RANGE 50/100 mm

Model / Order Code	DS50NR5	DS50PR5	DS100NR5	DS100PR5
Measurement range	50 mm		100 mm	
Resolution	0.5 µm			
Accuracy (20°C)	4 µm		5 µm	
Displacement speed max.	250 m/min			
Interface	USB2.0FS			
Supply	5 VDC ±5 %			
Consumption	1,2 W			
Reference point	at 1 mm ±0,5 mm			
Working temperature	0...50 °C			
Storage temperature	-20...60 °C			
Measuring force	0.9 ±0.4 N	6.2 N or less	1.8 ±0.65 N	9.3 N or less
Rod principle	spring loaded			
Protection class	IP50	IP64	IP50	IP64
Vibration	10...2000 Hz, 150 m/s <sup>2</sup>			
Shock	1500 m/s <sup>2</sup>			
Weight	230 g (without interpolator, cable and connector)		230 g (without interpolator, cable and connector)	
Feeler	Carbide ball tip, mounting screw M2,5			
Cable length	Gauge <=> Interpolator: 2		Interpolator <=> USB: 0,5	

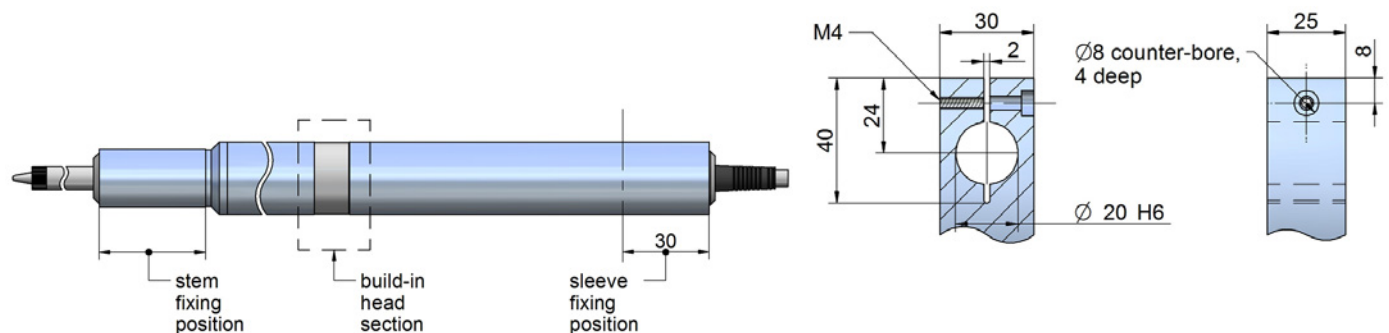
### DS50NR5, DS50PR5



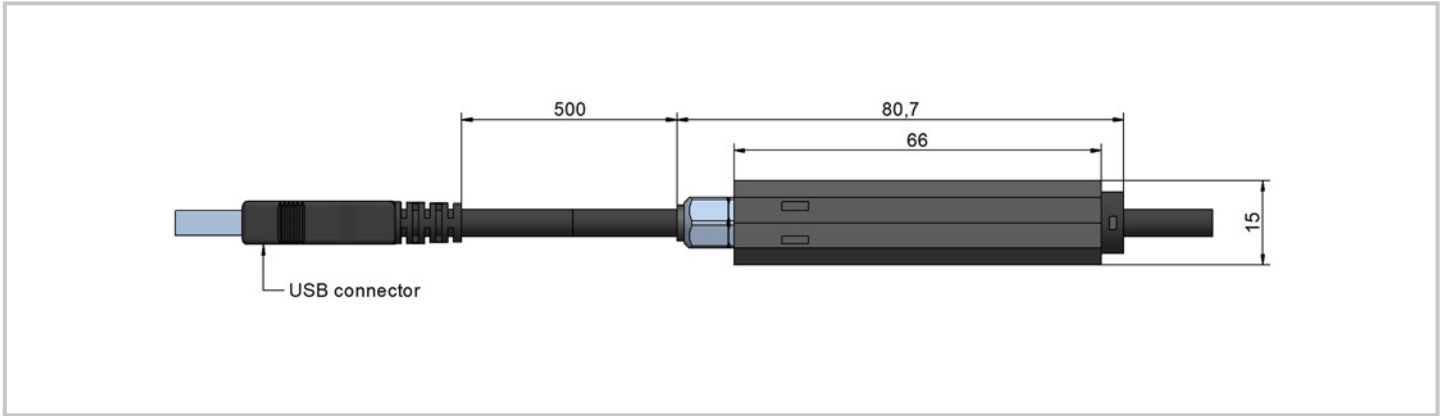
### DS100NR5, DS100PR5



### Instruction for installation DS50, DS100



## INTERPOLATOR UNIT



## USB SOFTWARE

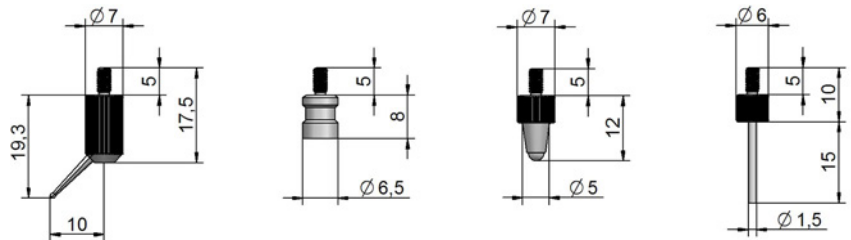
With a free basic software tool measuring values can be read out and saved in an excel or csv file.

- Up to 8 gauges can be connected
- Easy to operate and setup
- Comparator function
- Calibration (Reset) function
- Scaling function
- Various languages available
- free download from Magnescale Homepage
- Compatible with Windows 7/8/10 (XP possible)

## ACCESSORIES

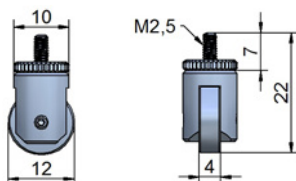
### Feeler Set DZ5100:

1. Off-center contact point:  $\varnothing 1,0$  mm steel ball
2. Flat carbide contact point  $\varnothing 6,5$  mm
3. Plastic ball contact point  $\varnothing 3,0$  mm, nylon ball
4. Pin contact point  $\varnothing 1,5$  mm



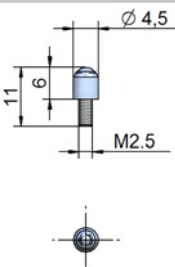
### Roller DZ100:

Tolerance  $< 3 \mu\text{m}/\text{turn}$



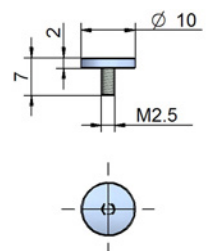
### Tastkopf-01\*

Tastkopf-01: steel (standard)  
Tastkopf-01-HM: cemented carbide  
Tastkopf-01-R: ruby  
Tastkopf-01-K: ceramics



### Tastkopf-02

Tastkopf-02: steel  
Tastkopf-02-HM: cemented carbide



### \* Material of the feeler balls:

steel: for standard applications  
ruby: much harder and wear resistant than steel, non-conductive, for all applications except for measuring on aluminium and cast iron  
ceramics: comparable to ruby, best choice for measuring on aluminium and cast iron



## ACCESSORIES

### Accessories

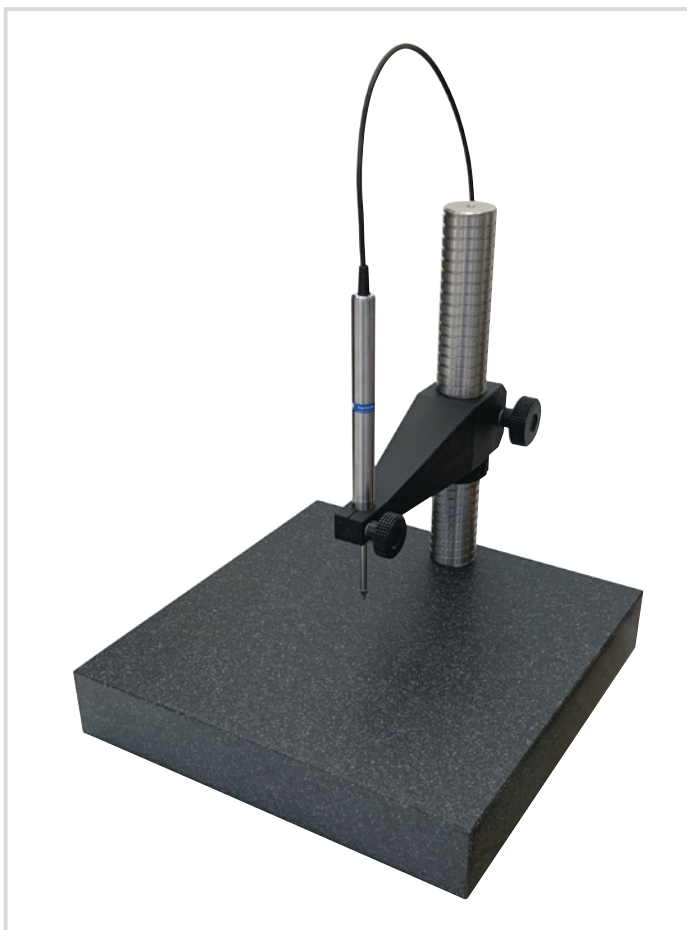
DZ100	Roller
DZ5100	Feeler set
DZ812F	Flange adapter (for DS812S)

### USB-extension cable

CE38-01	1 m, USB
CE38-02	2 m, USB
CE38-04	4 m, USB

### Measuring station

for gauges with clamping diameter 20 mm (DS10...DS100)

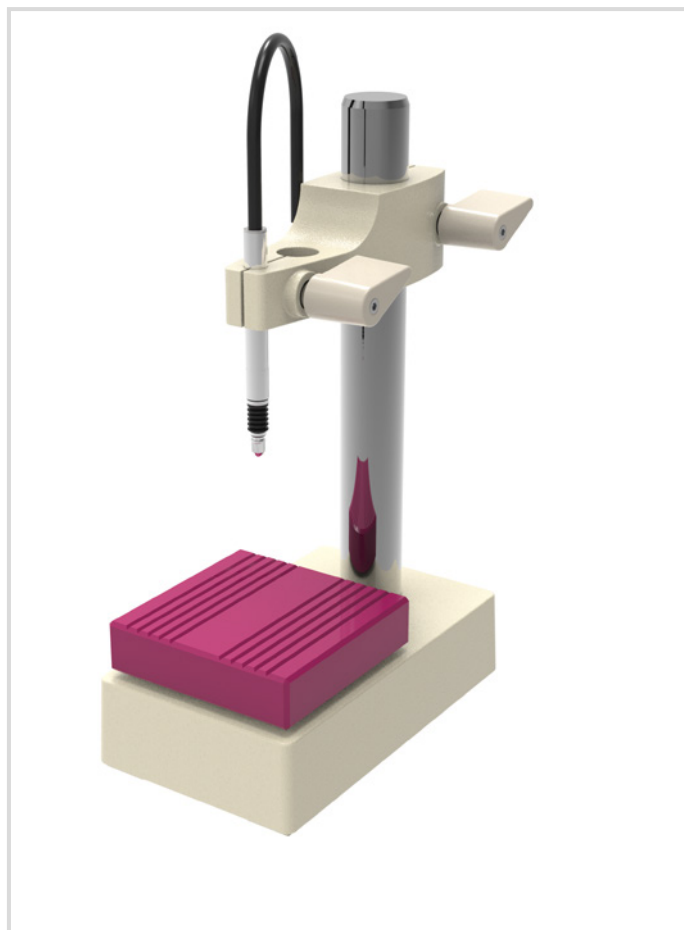


### Tastkopf

Tastkopf-01	Standard (included in delivery)
Tastkopf-01-HM	Cemented carbide ball
Tastkopf-01-R	Ruby ball
Tastkopf-01-K	Ceramics ball
Tastkopf-02	Steel plate
Tastkopf-02-HM	Cemented carbide plate

### Measuring station

for gauges with clamping diameter 8 mm (DS805/812/830)





Subject to change without prior notice.

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