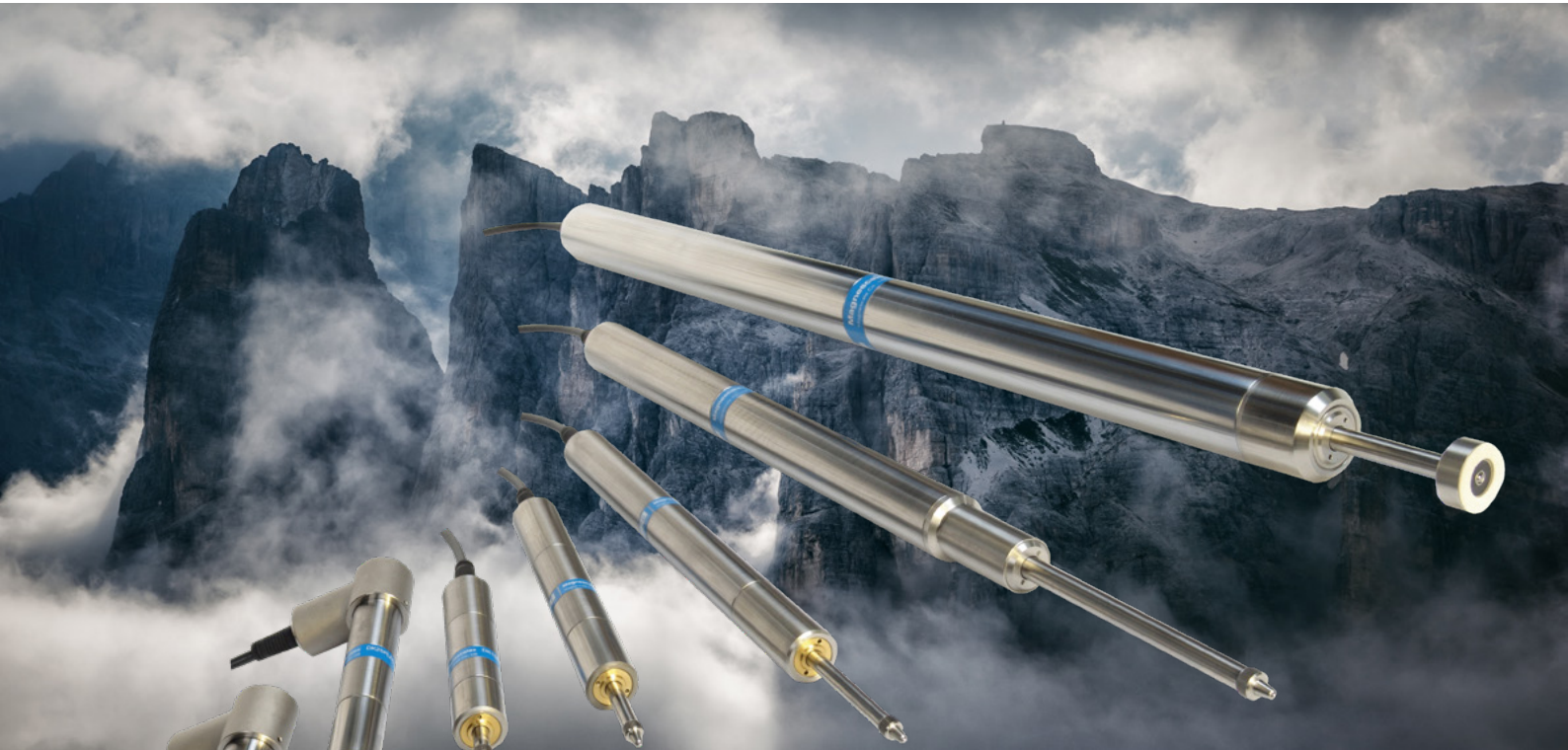


MAGNESCALE

digital gauge



Series DK

Key-Features:

- Available measurement ranges: 10, 25, 50, 100, 155 and 205 mm
- Resolution 0.5 μm
- Linearity up to 2 μm
- Output signal A/ B/ reference point, TTL- Linedriver according to EIA-422
- Integrated reference point
- Displacement speed up to 250 m/min
- Working temperature 0...+50 °C
- Protection class up to IP64
- Spring loaded versions up to 100 mm range
- Easy mounting
- Resistant against water and oil

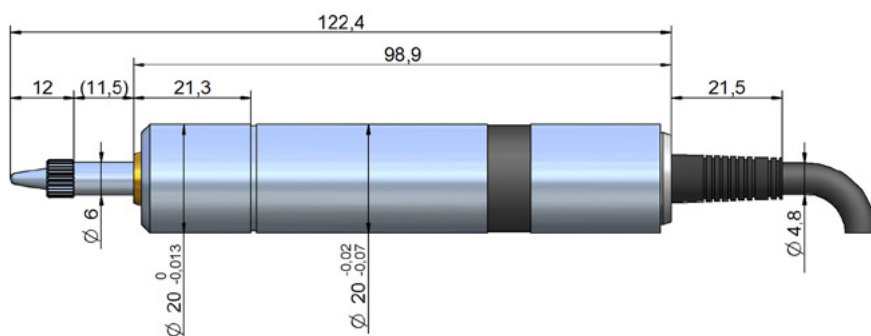
Content:

Technical Data DK10, DK252
Technical Data DK50, DK1004
Technical Data DK155, DK2055
Accessories6
Displays7
Order Code8

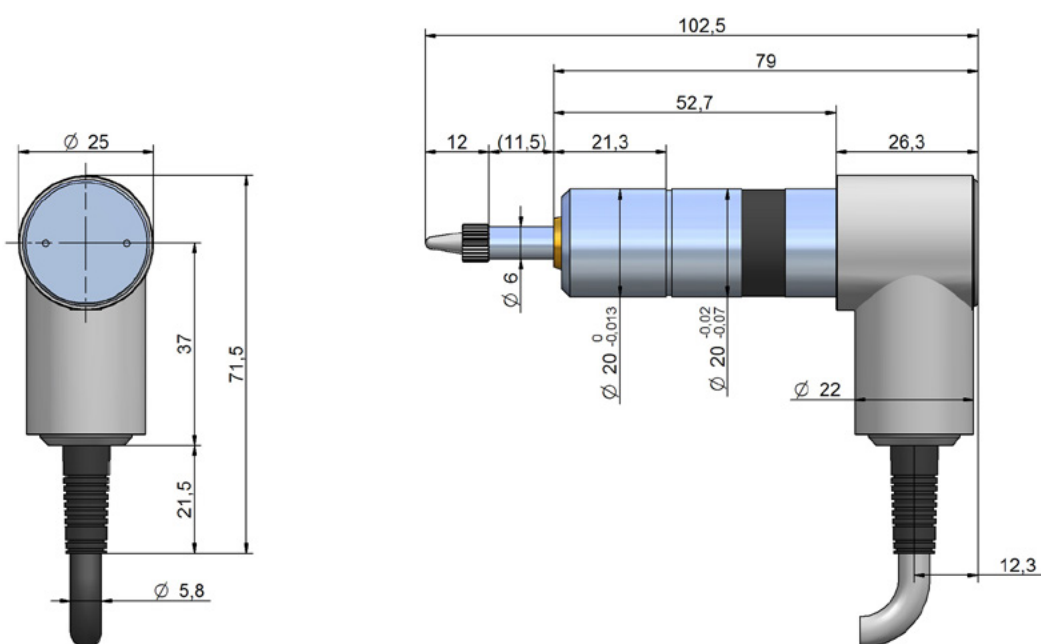
MAGNESCALE DIGITAL GAUGES DK10, DK25

Model	DK10NR5	DK10PR5	DK10PLR5	DK25NR5	DK25PR5	DK25NLR5	DK25PLR5
Measurement range	10 mm			25 mm			
Resolution	0,5 µm						
Accuracy (20°C)	2 µm						
Displacement speed max.	250 m/min						
Output	A/ B/ reference point, TTL-Linedriver according to EIA-422						
Supply	5 VDC ± 5 %						
Consumption	1 W						
Reference point	at 1 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	Federtaster						
Protection class	IP50	IP64		IP50	IP64	IP50	IP64
Vibration	10...2000 Hz, 150 m/s ²						
Shock	1500 m/s ² , 11 ms						
Weight	230 g (without interpolator, cable and connector)			300 g (without interpolator, cable and connector)			
Feeler	Carbide ball tip, mounting screw M2.5 (different types available)						
Cable length	2.4 m						
Displays	LT30 (directly), LY71, LY72 (with connection cable CE29)						

DK10NR5, DK10PR5

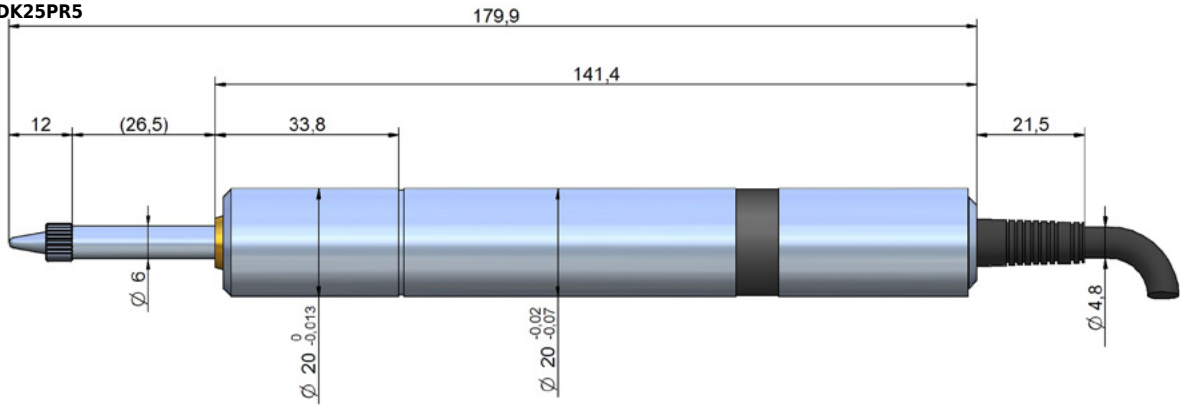


DK10PLR5

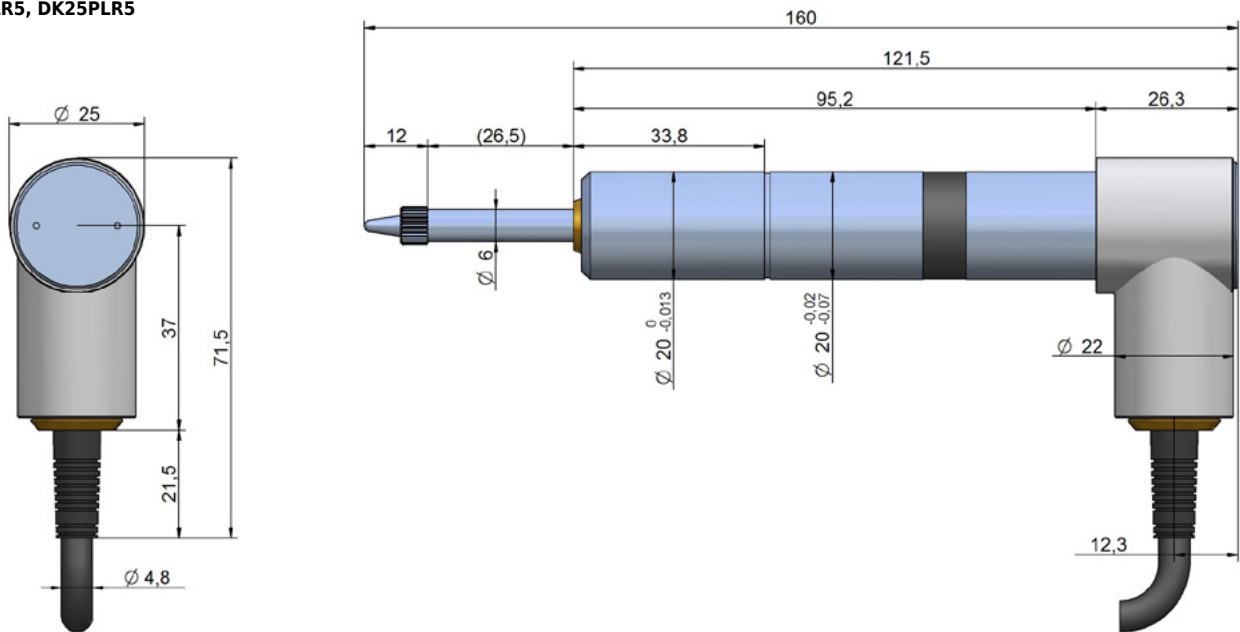


MAGNESCALE DIGITAL GAUGE DK25

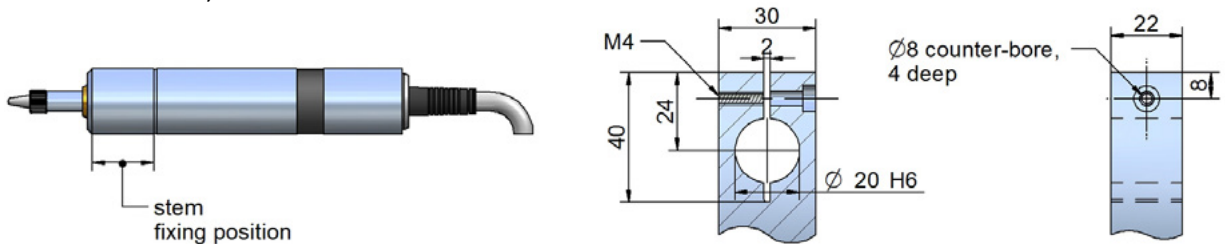
DK25NR5, DK25PR5



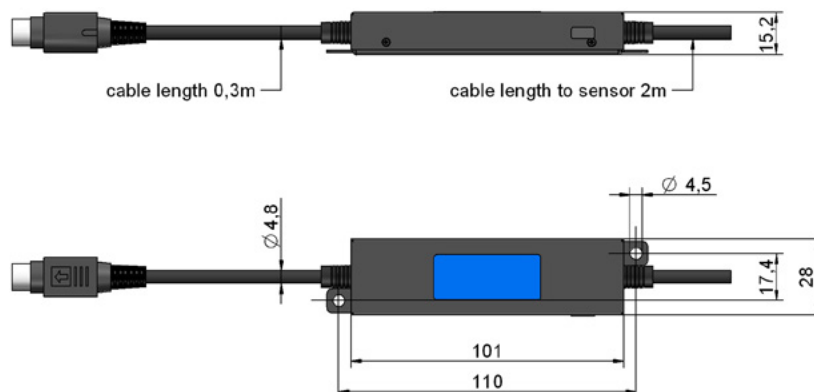
DK25NLR5, DK25PLR5



Instruction for installation DK10, DK25



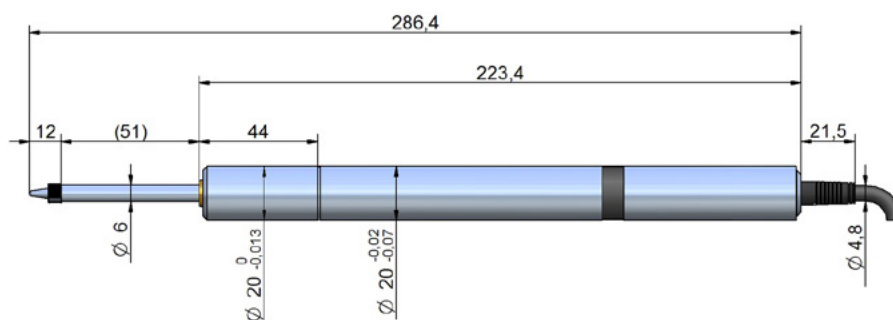
INTERPOLATOR UNIT



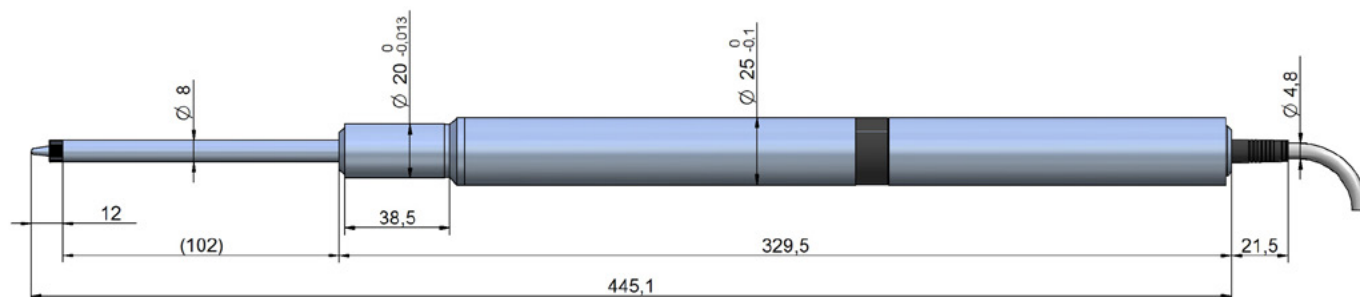
MAGNESCALE DIGITAL GAUGE DK50, DK100

Model	DK50NR5	DK50PR5	DK100NR5	DK100PR5
Measurement range	50 mm		100 mm	
Resolution	0.5 μ m			
Accuracy (20°C)	2 μ m		4 μ m	
Displacement speed max.	250 m/min			
Output	A/ B/ reference point, TTL-Linedriver according to EIA-422			
Supply	5 VDC \pm 5 %			
Consumption	1 W			
Reference point	at 1 mm			
Working temperature	0...50 °C			
Storage temperature	-20...60 °C			
Measuring force	0.9 \pm 0.4 N	6.2 N or less	1.8 \pm 0.65 N	9.3 N or less
Rod principle	Spring push-out			
Protection class	IP50	IP64	IP50	IP64
Vibration	10...2000 Hz, 150 m/s ²			
Shock	1500 m/s ² , 11 ms			
Weight	360 g (without interpolator, cable and connector)		630 g (without interpolator, cable and connector)	
Feeler	Carbide ball tip, mounting screw M2,5 (different types available)			
Cable length	2.4 m			
Displays	LT30 (directly), LY71, LY72 (with connection cable CE29)			

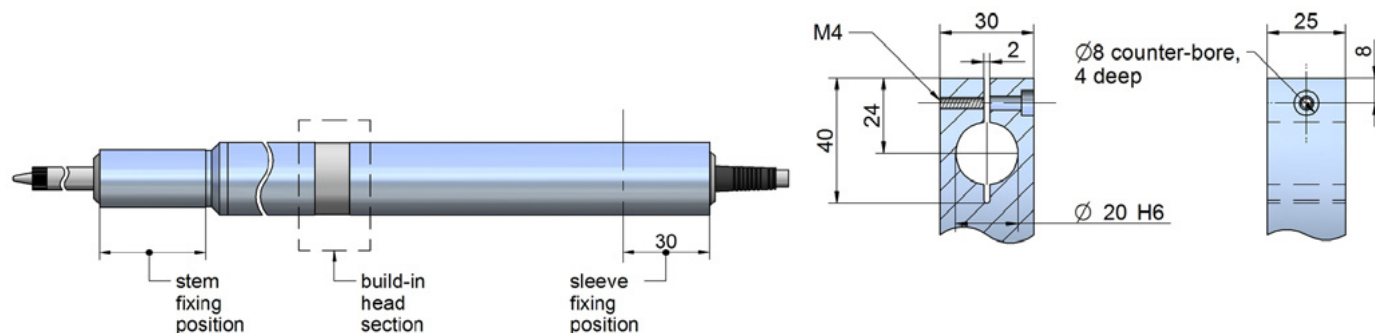
DK50NR5, DK50PR5



DK100NR5, DK100PR5



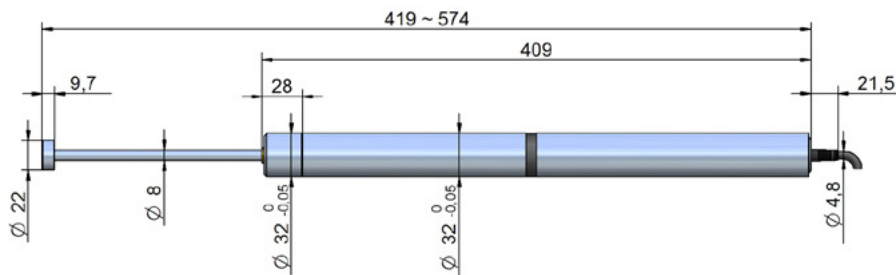
Instruction for installation DK50, DK100



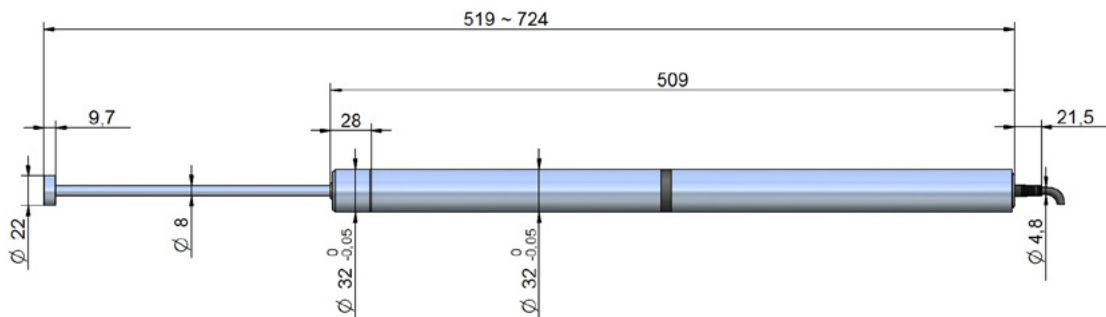
MAGNESCALE DIGITAL GAUGES DK155, DK205

Model	DK155PR5	DK205PR5
Measurement range	155 mm	205 mm
Resolution	0.5 μ m	
Accuracy (20°C)	5 μ m	6 μ m
Displacement speed max.	250 m/min	
Output	A/ B/ reference point, TTL-Linedriver according to EIA-422	
Supply	5 VDC \pm 5 %	
Consumption	1 W	
Reference point	at 5 mm	
Working temperature	0...50 °C	
Storage temperature	-20...60 °C	
Measuring force	0.9 \pm 0.4 N	6.2 N or less
Rod	8 mm, radial swing: 0.04 mm max., weigh 400 g	
Protection class	IP64	
Vibration	10...2000 Hz, 150 m/s ²	
Shock	1500 m/s ² , 11 ms	
Weight	1100 g (without interpolator, cable and connector)	1300 g (without interpolator, cable and connector)
Feeler	Magnetic attraction: 10 N, resistance against horizontal slip: 2.7 N, Provided with a \varnothing 4 mm carbide ball tip	
Cable length	2.4 m	
Displays	LT30 (directly), LY71, LY72 (with connection cable CE29)	

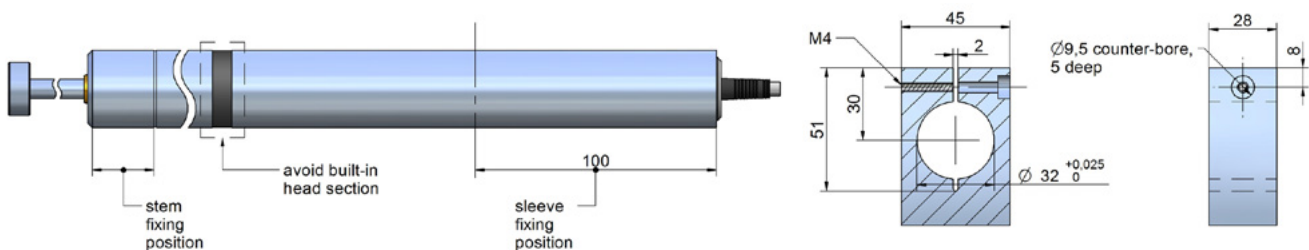
DK155PR5



DK205PR5



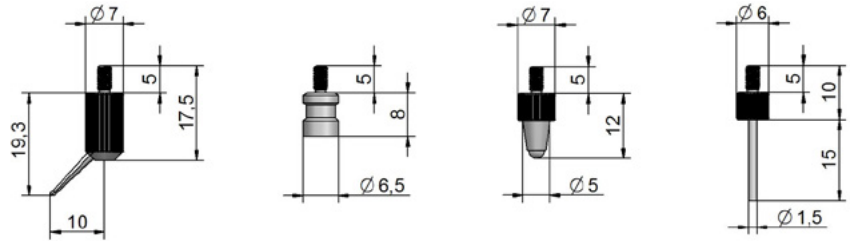
Instruction for installation DK155, DK205



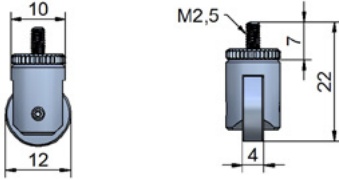
ACCESSORIES

Feeler Set DZ5100:

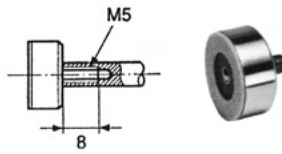
1. Off-center contact point: $\varnothing 1,0$ mm steel ball
2. Flat carbide contact point $\varnothing 6,5$ mm
3. Plastic ball contact point $\varnothing 3,0$ mm, nylon ball
4. Pin contact point $\varnothing 1,5$ mm



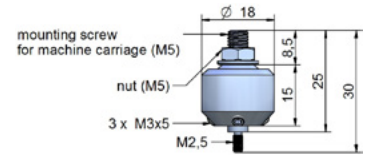
Roller DZ100: Tolerance <math>< 3 \mu\text{m}/\text{turn}</math>



Magnetic Feeler DZ181 (for DK155, DK205)

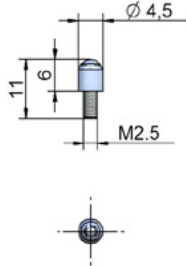


Coupling DZ191 (for DK10...DK100)



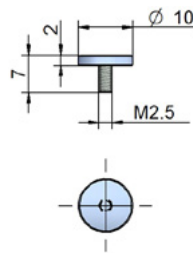
Tastkopf-01 *

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



Tastkopf-02

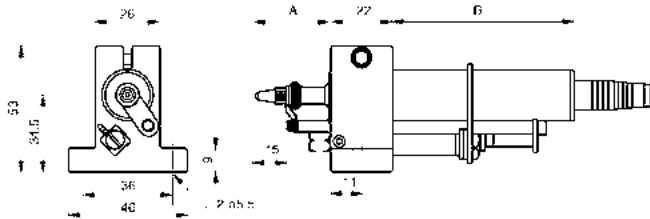
- Tastkopf-02: steel
- Tastkopf-02-HM: cemented carbide



* Material of the feeler balls:

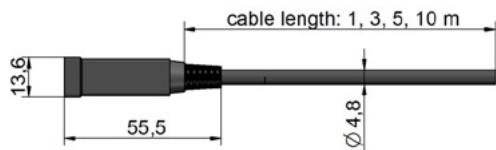
- steel: for standard applications
- ruby: much harder and wear resistant than steel, non-conductive, for all applications except for measuring on aluminium and cast iron
- ceramics: comparable to ruby, best choice for measuring on aluminium and cast iron

Air lifter DZ174 for DK10, DK25, DK50



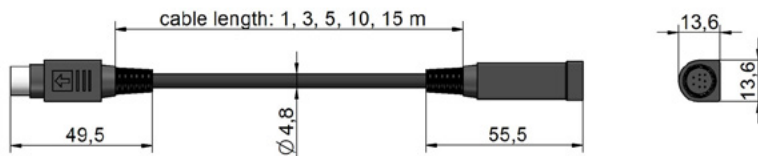
Typ	A	B
DK10NR5, DK10PR5	32,5	75,5
DK10PLR5	32,5	56
DK25NR5, DK25PR5	47,5	118
DK25NLR5, DK25PLR5	47,5	98,5
DK50NR5, DK50PR5	72	200

Extension cable, open end: CE22-01 (1 m), CE22-03 (3 m), CE22-05 (5 m), CE22-10 (10 m)

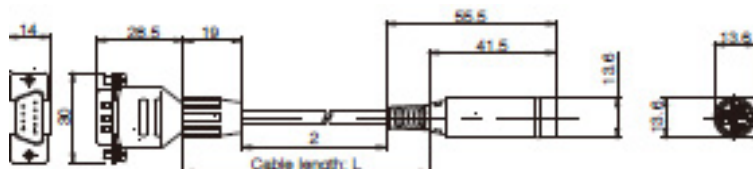


Kabelbelegung offenes Kabelende								
Funktion	+Vcc	0 V	A	A*	B	B*	Z	Z*
Kabelfarbe	rot	weiß	blau	gelb	orange	grau	grün	violett

Extension cable, high flex (for connection to display LT30): CK-T12 (1 m), CK-T13 (3 m), CK-T14 (5 m), CK-T15 (10 m), CK-T16 (15 m)



Adapter cable (for connection to displays LY70, LY71): CE29-01 (1 m), CE29-03 (3 m), CE29-05 (5 m), CE29-10 (10 m)



OUTPUT OPTIONS

Connection to PLC, counter, etc.



Connection to CE22 and CE26 with open end for PLCs, counters A/A*, B/B*, Z

Type	Description	For connection to	Available lengths
CE22	Connection cable, open end	PLC, counter A/A*, B/B*, Z	1, 3, 5, 10 m

Connection to display



Connection cable for displays LY71/72 (cable CE29)
(for display LT30 no additional cable is necessary)
Extension cable CKT12...16

e. g. LT30



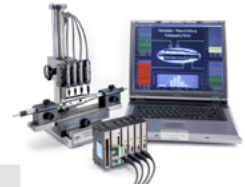
Type	Description	For connection to	Available lengths
CE29	Connection cable, Sub-D connector	Displays, LY71/72	1, 3, 5, 10 m
CK-T12 to 16	Extension cable	MG10/20/30, CE22, CE29	1, 3, 5, 10, 15 m

Connection to MG Module, BCD Module



Digital gauge with MG module, RS232 output, Ethernet or go/no-go by BCD Module

Extension cable CK-T12...16



Type	Description	For connection to	Available lengths
CE22	Extension cable	SPS, Counter und Zähler A/A*, B/B*, Z	1, 3, 5, 10 m

COMPACT COUNTER LT30

Compatible with digital gauges of the DK and DK-S series (without additional cable)

Features:

- Zero point detection
- Data storage
- BCD and RS-232C I/O models available
- Comparator
- Reset/Preset
- Alarm for exceeded max. displacement speed
- 2 axis ADD/SUB (2 axis model only)



MULTIFUNCTIONAL COUNTER LY71, LY72

Digital gauges of the DK-Series can be connected to the multifunctional counters LY71, LY72 using the adapter cable CE29.



Features LY71:

- Various outputs are enabled by mounting extension boards.
 - BCD output (option)
 - Comparator function: Relay/open collector (option)
- Peak hold function convenient for statistical data collection
- Various external input functions convenient
 - for automatic measurement
 - Display resolution switching
 - Data storage
 - Reset/preset/restart
 - Reference-point detection of measuring unit
 - Scaling
 - Flicker control
 - The power supply requires an optional AC adapter.
 - Input axis 1 to 2 axes

Features LY72:

- Equipped with RS-232C function as standard
- Peak hold function convenient for statistical data collection
- Various external input functions convenient for automatic measurement
- Display resolution switching
- Data storage
- Reset/preset/restart
- Reference-point detection of measuring unit
- Scaling
- Flicker control
- The power supply requires an optional AC adapter.
- Input axis 1 to 3 axes

ORDER CODES

DK10NR5		DK50NR5	
DK10PR5		DK50PR5	
DK10PLR5		DK100NR5	
DK25NR5		DK100PR5	
DK25PR5		DK155PR5	
DK25NLR5		DK205PR5	
DK25PLR5			
Displays		Air lifter	
LT30-1G	1 channel display	DZ174-010	for DK10
LT30-1GC	1 channel display with RS232C	DZ174-025	for DK25
LT30-1GB	1 channel display with BCD output	DZ174-050	for DK50
LT30-2G	2 channel display		
LT30-2GC	2 channel display with RS232C	nm	
LT30-2GB	2 channel display with BCD output		
LY71	2-channel-Multifunctional-Display		
LY72	2-channel-Multifunctional-Display, RS232C		
Accessories		Extension and connection cables	
DZ100	Roller	CE22-01	1m, open end
DZ5100	Feeler Set	CE22-03	3m, open end
DZ181	Magnetic feeler	CE22-05	5m, open end
DZ191	Coupling	CE22-10	10m, open end
Tastkopf-01	Standard (included in delivery)	CKT12	1m, high flex extension cable
Tastkopf-01-HM	Cemented carbide ball	CKT13	3m, high flex extension cable
Tastkopf-01-R	Ruby ball	CKT14	5m, high flex extension cable
Tastkopf-01-K	Ceramics ball	CKT15	10m, high flex extension cable
Tastkopf-02	Steel plate	CKT16	15m, high flex extension cable
Tastkopf-02-HM	Cemented carbide plate	CE29-01	1m, adapter cable for LY Display
		CE29-03	3m, adapter cable for LY Display
		CE29-05	5m, adapter cable for LY Display
		CE29-10	10m, adapter cable for LY Display