

MAGNESCALE

digital gauge



Series DK800S

Key-Features:

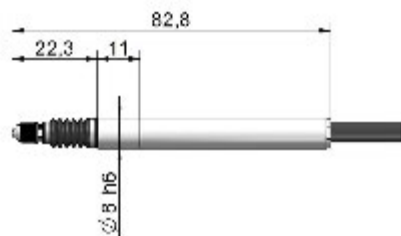
- Available measurement ranges: 5, 12 and 30 mm
- Resolution up to 0.1 μm
- Linearity up to $\pm 0.5 \mu\text{m}$
- Output signal A/ B/ reference point, TTL- Linedriver according to EIA-422
- Integrated reference point
- Displacement speed up to 250 m/min
- Working temperature 0...+50 °C
- Protection class up to IP67
- Pneumatic versions available
- Easy installation
- Resistant against water and oil
- Life cycle up to 130 million strokes

Content:

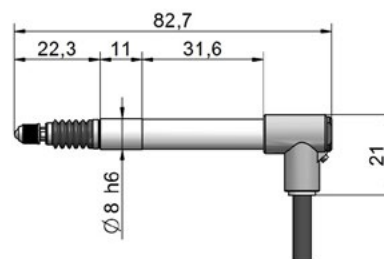
MAGNESCALE DK805S - MEASUREMENT RANGE 5 mm

Model	DK805SAR, DK805SALR DK805SAFR, DK805SAFLR	DK805SBR, DK805SBLR DK805SBFR, DK805SBFLR	DK805SAR5, DK805SALR5 DK805SAFR5, DK805SAFLR5	DK805SBR5, DK805SBLR5 DK805SBFR5, DK805SBFLR5
Measurement range	5 mm			
Resolution	0.1 μm		0.5 μm	
Linearity (20°C)	1 μm		1.5 μm	
Max. displacement speed	80 m/min	42 m/min	250 m/min	100 m/min
Output	A/ B/ reference point, TTL-Linedriver according to EIA-422			
Power supply	5 VDC \pm 5 %			
Power consumption	1 W			
Reference point	one location at 1 mm			
Working temperature	0...50 °C			
Storage temperature	-20...60 °C			
Measuring force horizontal (20°C)	0.40 \pm 0.25 N			
Vacuum function	DK805SALR, DK805SAFLR, DK805SBLR, DK805SBFLR, DK805SALR5, DK805SAFLR5, DK805SBLR5, DK805SBFLR5			
Pneumatic push function	-			
Protection class	straight model: IP66, right-angle model: IP64 (IP67 when \varnothing 4 mm tube is connected to right angle model)			
Vibration	20...2000 Hz, 100 m/s ²			
Shock	1000 m/s ² , 11 ms			
Weight	approx. 30 g (without interpolator, cable and connector)			
Life cycle (tested)	60 million strokes, versions with bellow: 5 million strokes			
Feeler	Carbide ball tip, mounting screw M2,5 (different types available)		Steel ball tip, mounting screw M2,5 (different types available)	
Cable length	2.4 m			
Max. cable length (to electronics)	22 m			

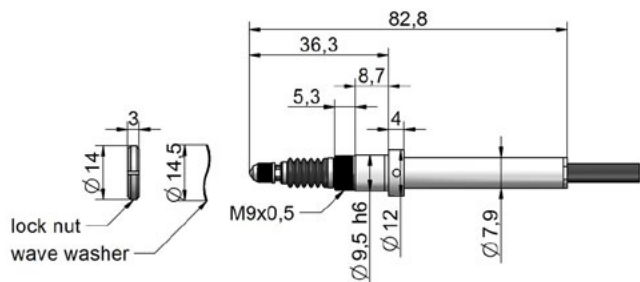
DK805SAR / DK805SAR5
DK805SBR / DK805SBR5



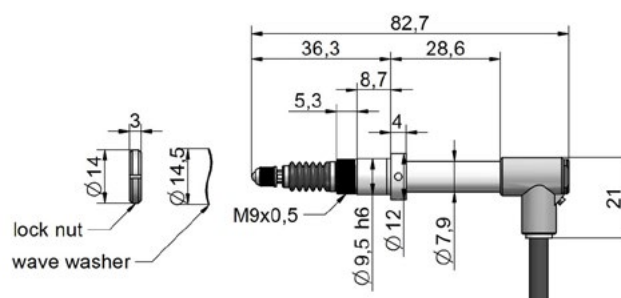
DK805SALR / DK805SALR5
DK805SBLR / DK805SBLR5



DK805SAFR / DK805SAFR5
DK805SBFR / DK805SBFR5

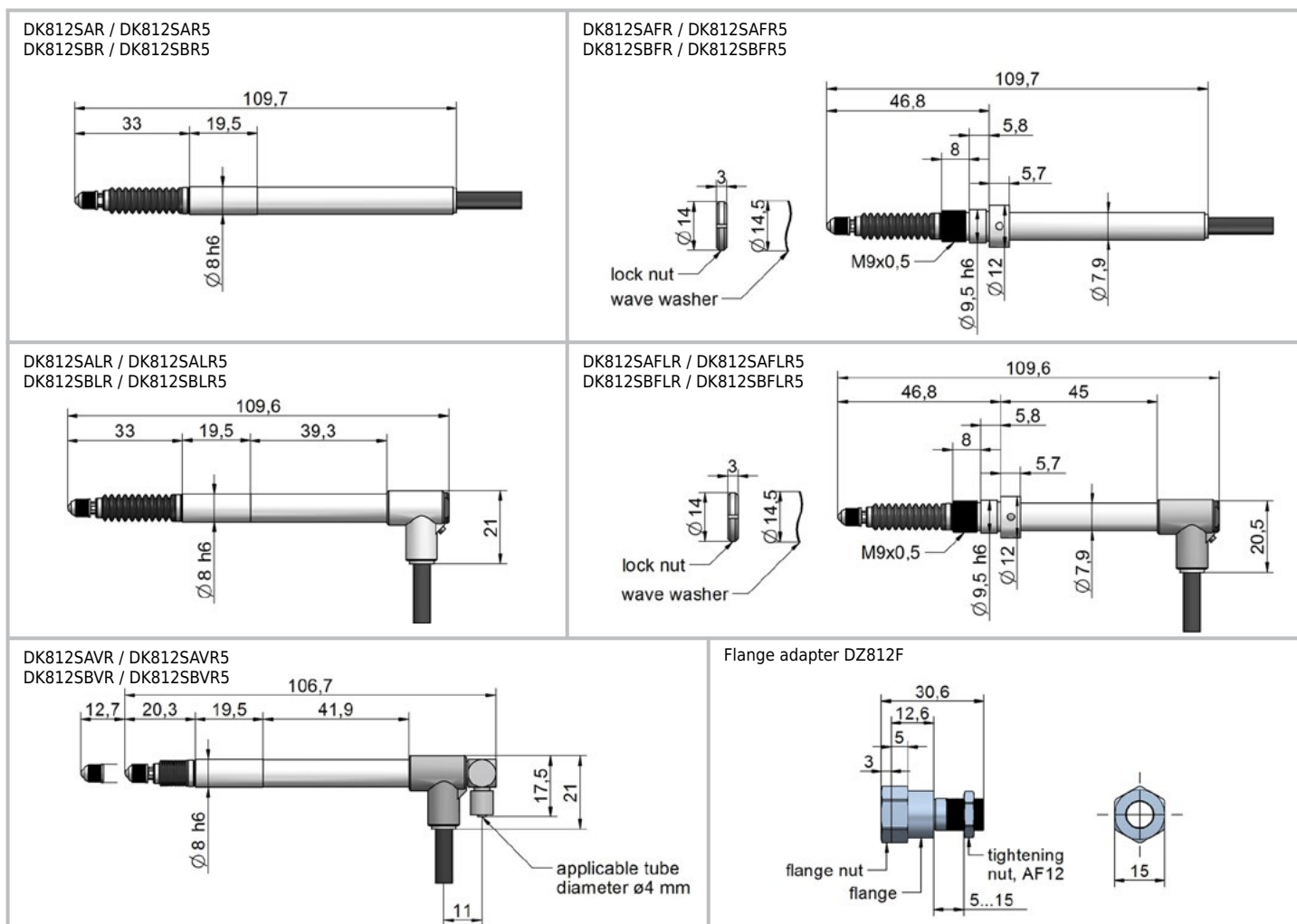


DK805SAFLR / DK805SAFLR5
DK805SBFLR / DK805SBFLR5



MAGNESCALE DK812S - MEASUREMENT RANGE 12 mm

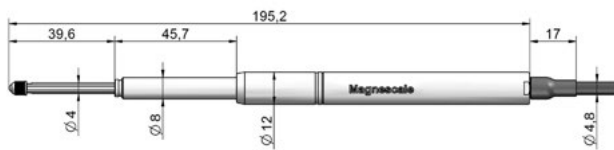
Model	DK812SAR, DK812SALR DK812SAFR, DK812SAFLR DK812SAVR	DK812SBR, DK812SBLR DK812SBFR, DK812SBFLR DK812SBVR	DK812SAR5, DK812SALR5 DK812SAFR5, DK812SAFLR5 DK812SAVR5	DK812SBR5, DK812SBLR5 DK812SBFR5, DK812SBFLR5 DK812SBVR5
Measurement range	12 mm			
Resolution	0.1 µm		0.5 µm	
Linearity (20°C)	1 µm		1.5 µm	
Max. displacement speed	80 m/min	42 m/min	250 m/min	100 m/min
Output	A/ B/ reference point, TTL-Linedriver according to EIA-422			
Power supply	5 VDC ±5 %			
Power consumption	1 W			
Reference point	one location at 1 mm			
Working temperature	0...50 °C			
Storage temperature	-20...60 °C			
Measuring force horizontal (20°C)	0.50 ±0.30 N, 0.70 ±0.50 N with pneumatic push type (0.55 bar)			
Vacuum function	DK812SALR, DK812SAFLR, DK812SBLR, DK812SBFLR, DK812SALR5, DK812SAFLR5, DK812SBLR5, DK812SBFLR5			
Pneumatic push function	DK812SAVR, DK812SBVR, DK812SAVR5, DK812SBVR5 (pressure causes extending of rod)			
Air pressure	0.45...0.65 bar			
Protection class	straight model: IP66, right-angle model: IP64 (IP67 when Ø 4 mm tube is connected to right angle model)			
Vibration	20...2000 Hz, 100 m/s ²			
Shock	1000 m/s ² , 11 ms			
Weight	approx. 30 g (without interpolator, cable and connector)			
Life cycle (tested)	60 million strokes, versions with bellow: 5 million strokes			
Feeler	Carbide ball tip, mounting screw M2,5 (different types available)		Steel ball tip, mounting screw M2,5 (different types available)	
Cable length	2.4 m			
Max. cable length (to electronics)	22 m			



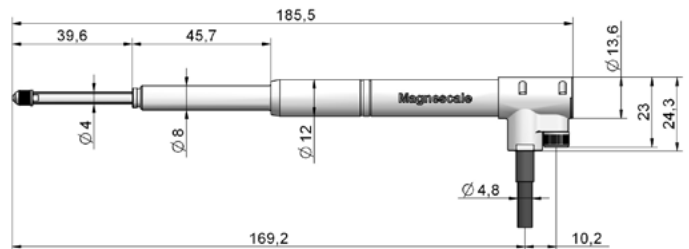
MAGNESCALE DK830S - MEASUREMENT RANGE 30 mm

Model	DK830SRB, DK830SLRB, DK830SVRB	DK830SRB05, DK830SLRB05, DK830SVRB05	DK830SRB10, DK830SLRB10, DK830SVRB10
Measurement range	30 mm		
Resolution	0.1 µm	0.5 µm	1.0 µm
Linearity (20°C)	1.3 µm, air driven versions: 1.7 µm		
Max. displacement speed	42 m/min (on request also with 80 m/min)	100 m/min	200 m/min
Output	A/B (signal frequency 2.5 MHz / min. phase difference A/B: 100 ns), reference point, TTL-Linedriver according to EIA-422		
Power supply	5 VDC ± 5 %		
Power consumption	1 W		
Reference point	at 1 mm		
Working temperature	0...50 °C		
Storage temperature	-20...60 °C		
Versions with Air drive function	DK830SVRB, DK830SVRB05, DK830SVRB10		
Measuring force horizontal (20°C)	0.60 ± 0.35 N, air driven versions: 1.9 N at 0,7 bar, 2.6 N at 0.9 bar		
Protection class	IP53/ angular and air driven versions also IP67 (with optional bellows)		
Vibration	20...2000 Hz, 100 m/s ²		
Shock	1000 m/s ² , 11 ms		
Weight	70...80 g (without interpolator, cable and connector)		
Life cycle (tested)	60 Mio cycles, air driven versions: 30 Mio cycles		
Feeler	Carbide ball tip, mounting screw M2,5 (different types available)		
Cable length	2.4 m		
Max. cable length (to electronics)	22 m		

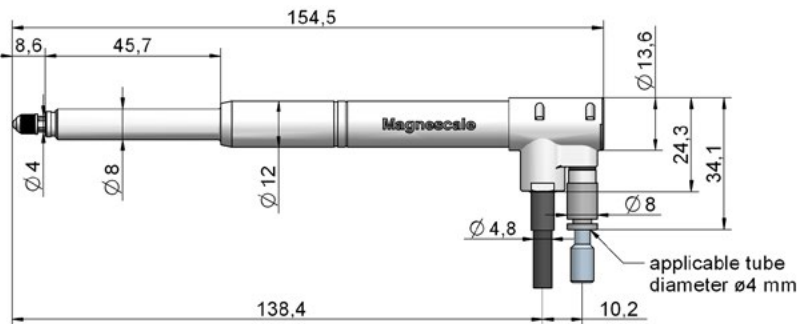
DK830SRB, DK830SRB05, DK830SRB10



DK830SLRB, DK830SLRB05, DK830SLRB10



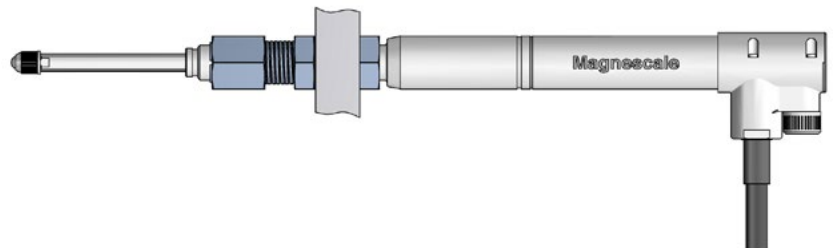
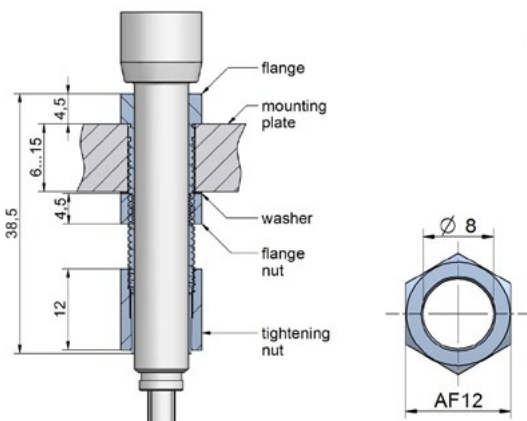
DK830SVRB, DK830SVRB05, DK830SVRB10



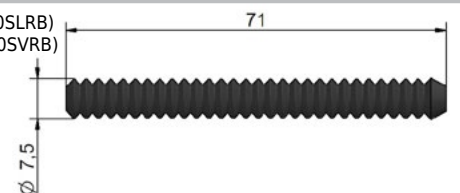
Note: The letter V in the order code indicates a pneumatic push type model:

By exposing to air pressure the rod is being pushed out. If the supply of pressurised air is interrupted an internal spring makes sure that the rod is being pulled inside again (see drawing).

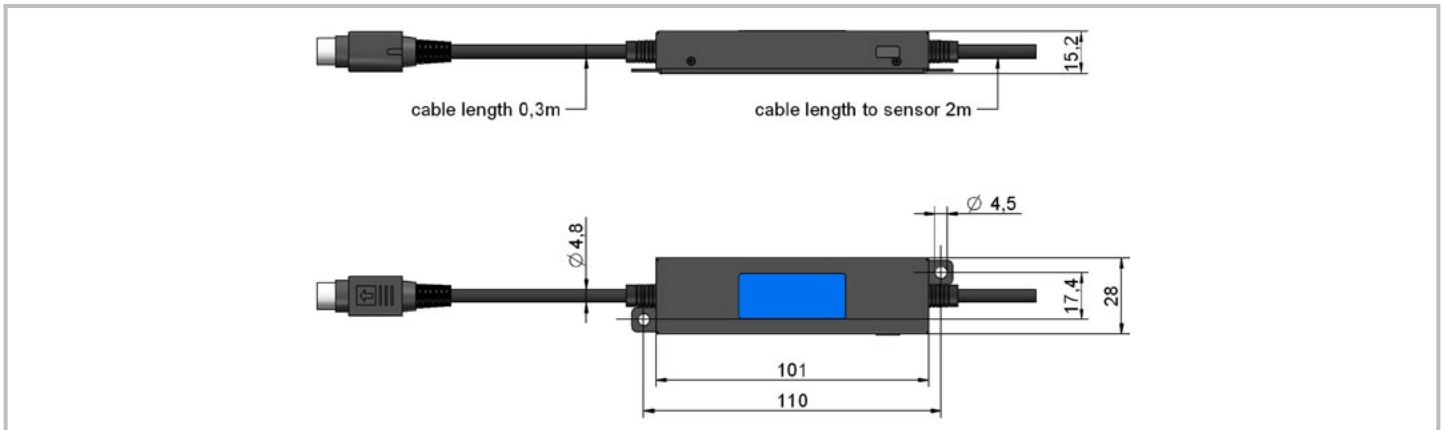
Flanschadapter DZ830F



Bellows set DZ830BL (for DK830SLRB)
Bellows set DZ830BV (for DK830SVRB)

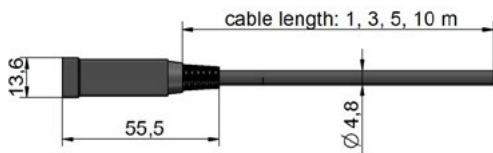


INTERPOLATOR UNIT



ACCESSORIES

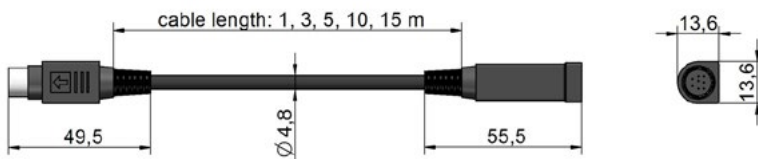
Extension cable, open end: CE22-01 (1 m), CE22-03 (3 m), CE22-05 (5 m), CE22-10 (10 m)



Cable assignment, open end

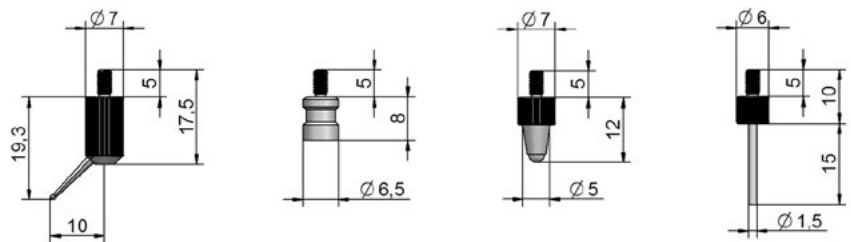
Function	+Vcc	0 V	A	A*	B	B*	Z	Z*
Cable color	red	white	blue	yellow	orange	grey	green	purple

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)



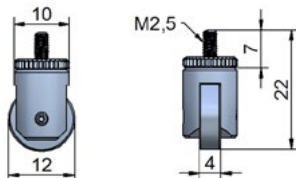
Feeler-Set DZ5100:

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



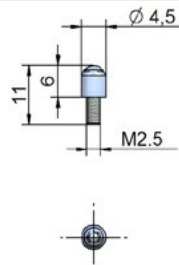
Roller DZ100:

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



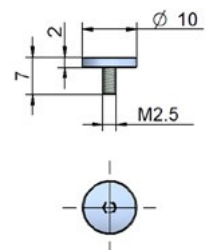
Tastkopf-01 *

- 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

OUTPUT OPTIONS



Connection cable CE22 with open end to PLCs, counters ...
A/A*, B/B*, Z

Connection cable CE29 to display units LY71/72

(no additional cable is needed for a connection to LT30)

Extension cable CKT12...15

Digital gauge with MG Module, output by RS232
or Go/no-Go via BCD Module

Extension cable CKT12...15



Type	Description	for connection to	available lengths
CE22	connection cable open end	PLC, Counter, A/A*, B/B*, Z	1, 3, 5, 10 m
CE29	connection cable , Sub-D connector	Displays, LH70/71, LG20 LY71/72	1, 3, 5, 10 m
CKT12 bis 16	extension cable	MG10/20/30, CE22, CE29	1, 3, 5, 10, 15 m

MAGNESCALE COUNTER LT30

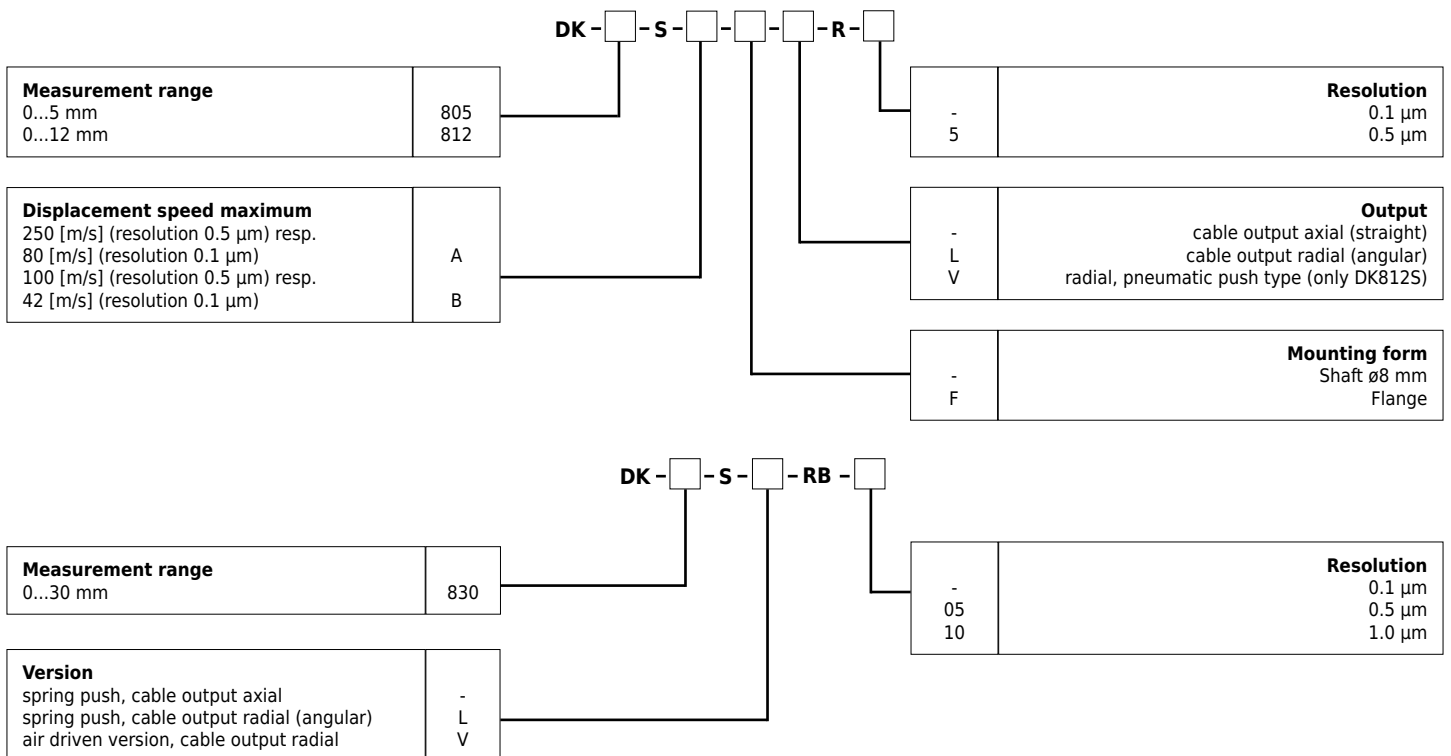
Compatible with digital gauges of the DK and DK-S series (without additional cable)

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)



ORDER CODE



ORDER CODES

DK805SAR
DK805SALR
DK805SAFR
DK805SAFLR
DK805SAR5
DK805SALR5
DK805SAFR5
DK805SAFLR5
DK805SBR
DK805SBLR
DK805SBFR
DK805SBFLR
DK805SBR5
DK805SBLR5
DK805SBFR5
DK805SBFLR5
DK812SAR
DK812SALR
DK812SAFR
DK812SAFLR
DK812SAVR
DK812SAR5
DK812SALR5

DK812SAFR5
DK812SAFLR5
DK812SAVR5
DK812SBR
DK812SBLR
DK812SBFR
DK812SBFLR
DK812SBVR
DK812SBR5
DK812SBLR5
DK812SBFR5
DK812SBFLR5
DK812SBVR5
DK830SRB
DK830SLRB
DK830SVRB
DK830SRB05
DK830SLRB05
DK830SVRB05
DK830SRB10
DK830SLRB10
DK830SVRB10

DISPLAYS, CABLES & ACCESSORIES

Displays	
LT30-1G	1 channel display
LT30-1GC	1 channel display with RS232C
LT30-1GB	1 channel display with BCD output
LT30-2G	2 channel display
LT30-2GC	2 channel display with RS232C
LT30-2GB	2 channel display with BCD output
Extension and connection cables	
CE22-01	1m, open end
CE22-03	3m, open end
CE22-05	5m, open end
CE22-10	10m, open end
CK-T12	1m, high flex extension cable
CK-T13	3m, high flex extension cable
CK-T14	5m, high flex extension cable
CK-T15	10m, high flex extension cable
CK-T16	15m, high flex extension cable

Accessories	
DZ100	Roller
DZ5100	Feeler Set
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
DZ830BL	Bellows (for DK830SLR)
DZ830BV	Bellows (for DK830SVR)
DZ830F	Flange adapter (for DK830S)



Subject to change without prior notice.

eddylab GmbH
Ludwig-Ganghofer-Str. 40
83624 Otterfing

Tel. +49 (0)8024 46772-0
Fax +49 (0)8024 46772-100

E-mail info@eddylab.de
Internet www.eddylab.de

