

DK

DK802_{R/LR}, DK812_{R/LR/FR/FLR/VR}

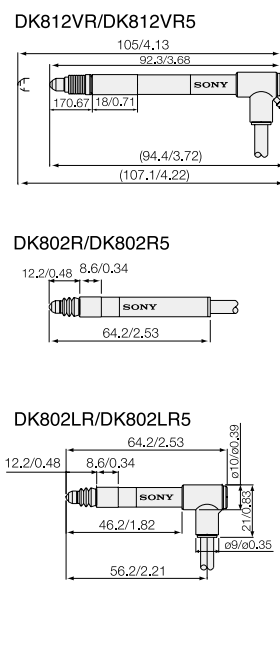
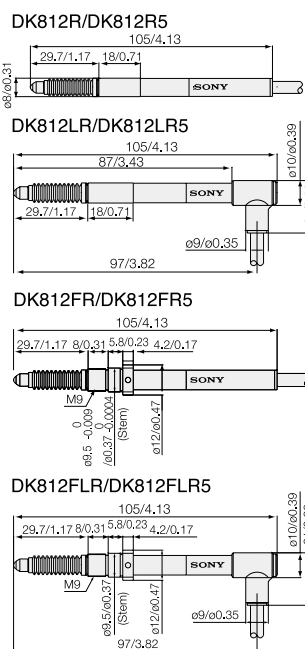
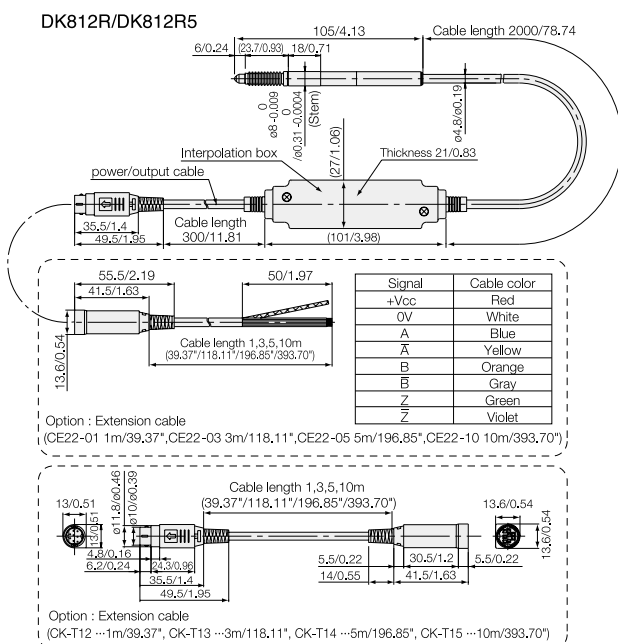
The DK series are slim and compact digital gauges that provide high resolution (0.1 μm) and high accuracy ($\pm 0.5 \mu\text{m}$) linear measurements for a variety of applications.

- Measuring range: 2mm or 12mm
- Built-in reference point
- Vacuum retract, spring push or pneumatic push
- Robust design for harsh environments (IP66)
- Flange mount available
- Linear over entire stroke
- TTL Output, Easily connects to a PC, PLC or to Sony's "MG" series of Multi-interface units.



Digital Gauge

Dimensions



Unit : mm/inch

Resolution	Measuring length	Models				
		Straight	Right Angle	Flange/Straight	Flange/Right angle	Pneumatic push/Right angle
0.1 μm	2mm	DK802R	DK802LR	DK812FR	DK812FLR	DK812VR
	12mm	DK812R	DK812LR	DK812FR	DK812FLR	DK812VR
0.5 μm	2mm	DK802R5	DK802LR5	DK812FR5	DK812FLR5	DK812VR5
	12mm	DK812R5	DK812LR5	DK812FR5	DK812FLR5	DK812VR5

Specifications

Model name	DK812R, DK812LR, DK812FR, DK812FLR, DK812VR, DK802R, DK802LR	DK812R5, DK812LR5, DK812FR5, DK812FLR5, DK812VR5, DK802R5, DK802LR5
Output	A / B / Z Quadrature (Line Driver EIA-422 or equivalent)	
Measuring range	2mm/12mm	
Minimum resolution	0.1 μm	0.5 μm
Minimum phase difference*1	100ns	
Accuracy (at 20°C)	$\pm 0.5 \mu\text{m}$	
Measuring Force	Measuring range : 2mm Downward : 0.45 \pm 0.25N Lateral : 0.40 \pm 0.25N Upward : 0.35 \pm 0.25N	Measuring range : 12mm Downward : 0.6 \pm 0.3N Lateral : 0.5 \pm 0.3N Upward : 0.4 \pm 0.3N
Reference point	1 (1mm from spindle start)	
Maximum response speed	42m/min	100m/min
Feeler	carbide ball $\phi 3$ (Mounting screw: M2.5x0.45)	steel ball $\phi 3$ (Mounting screw: M2.5x0.45)
Spindle action by air	Vacuum retraction (type LR) Pneumatic push (type VR)	
Vibration resistance	100m/s ² (10~2000Hz)	
Shock resistance	1000m/s ² (11ms)	
Protective design grade	IP66 (not including Interpolation box and connector)	
Operating temperature	0~50°C (Interpolation box : 0~40°C)	
Storage temperature	-20~60°C	
Power supply voltage	+5VDC \pm 5% *2	
Power consumption	1.8W	
Mass*3	Approx. 20g (measuring range: 2mm) Approx. 30g (measuring range:12mm)	
Length of output cable	12m max. (Cable length to subsequent electronics)	

*1 : Contact us for models with a larger phase difference. *2 : The power supply should be between +5V and +5.25V with cable fully extended. *3 : Cable and Interpolation box are not included.