

# SONY

Digital Gauge  
Measuring Unit **DK SERIES**

上海迈信诺  
*Field-proven highly reliable magnetic digital gauges*



T: 021 3227 0811

F: 021 6277 5787

## DIGITAL GAUGE

**The DK series is a slim, compact Digital Gauge**

**Provides high resolution (0.1 $\mu$ m), high accuracy ( $\pm$ 0.5 $\mu$ m) linear measurement 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.



**Sony Manufacturing Systems Corporation**



Isehara Center is registered to ISO 9001 (Quality)

## Specifications

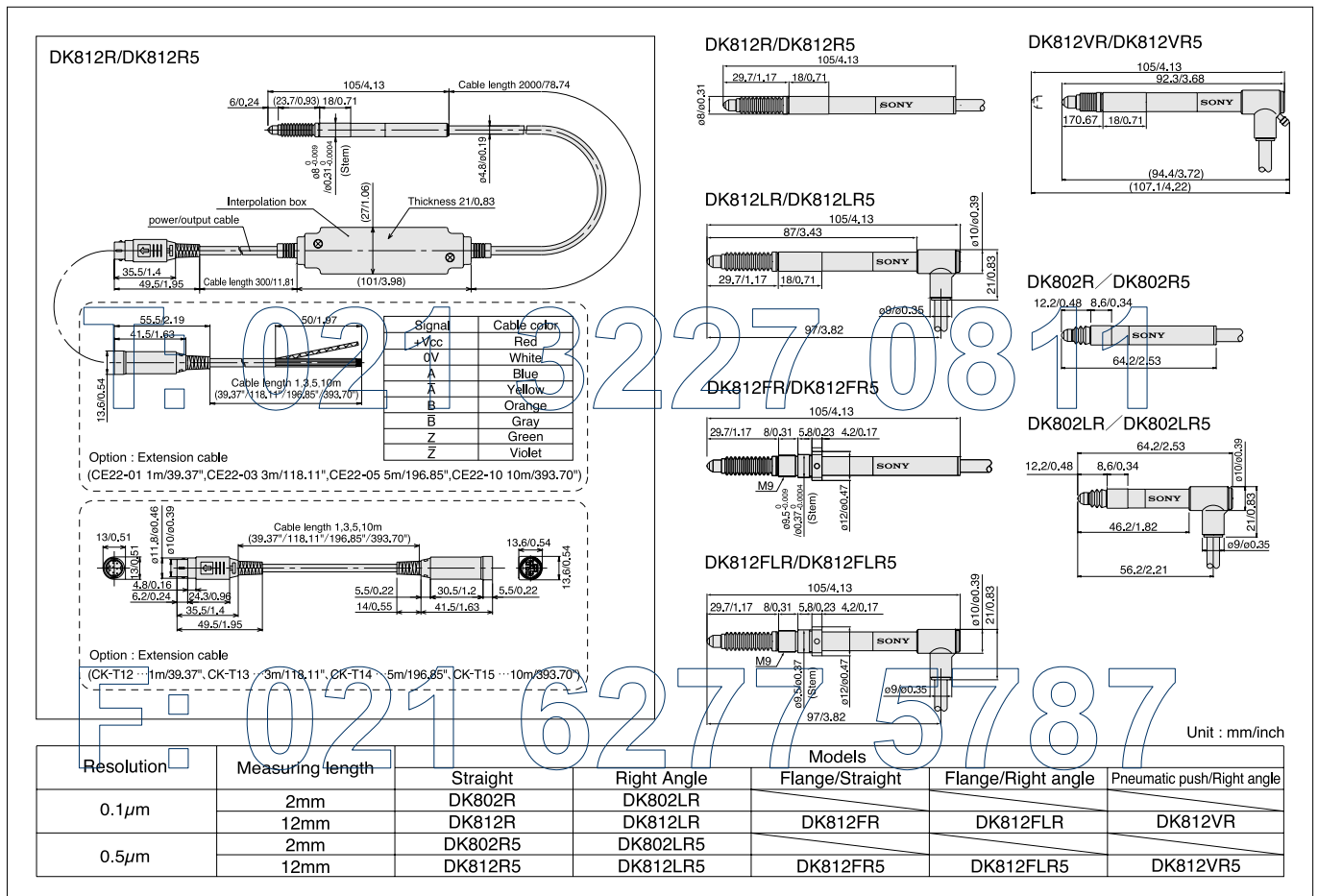
Model name	DK812R,DK812LR,DK812FR,DK812FLR,DK812VR,DK802R,DK802LR	DK812R5,DK812LR5,DK812FR5,DK812FLR5,DK812VR5,DK802R5,DK802LR5
Output	A / B / Z Quadrature (Line Driver EIA-422 or equivalent)	
Measuring range	2mm/12mm	
Minimum resolution	0.1μm	0.5μm
Minimum phase difference*1	100ns	
Accuracy (at 20°C)	±0.5μm	±0.8μm
Measuring Force	Measuring range : 2mm Downward : 0.45±0.25N Lateral : 0.40±0.25N Upward : 0.35±0.25N	Measuring range : 12mm Downward : 0.6±0.3N Lateral : 0.5±0.3N Upward : 0.4±0.3N
Reference point	1 (1mm from spindle start)	
Maximum response speed	42m/min	100m/min
Feeler	carbide ball ø3 (Mounting screw: M2.5x0.45)	steel ball ø3 (Mounting screw: M2.5x0.45)
Spindle action by air	Vacuum retraction (type LR) Pneumatic push (type VR)	
Vibration resistance	100m/s <sup>2</sup> (10~2000Hz)	
Shock resistance	1000m/s <sup>2</sup> (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±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.

## Dimensions



⚠ Safety notice: Prior to use, be absolutely certain to read and understand the Operating Instruction to ensure proper use of this product.

● Specifications and dimensions listed in this brochure are subject to change without notice due to product improvement.

## Sony Manufacturing Systems Corporation

Sony Manufacturing Systems Corporation  
Measuring Systems Sales Dept.  
Suzukawa 45 Isehara-shi, Kanagawa-ken, 259-1146, Japan  
Tel: +81-463-92-7971 Fax: +81-463-92-7979  
<http://www.sonyms.com.jp>

Sony Taiwan Limited  
FA Marketing Group  
6F, 145 Changchun Road, Taipei 104, Taiwan  
Tel: +886-2-2522-9760 Fax: +886-2-2522-2396  
<http://www.sony.com.tw/company/family/FA/FA.asp>

<http://www.sonyms.co.jp/>

This catalog follows the state at 5, 2005.

Sony Manufacturing Systems America, Inc.  
20381 Hermans Circle Lake Forest, California 92630-8701  
Tel: +1-949-770-8400 Fax: +1-949-770-8408  
<http://www.sonyms.com>

Sony Manufacturing Systems Europe  
Semiconductor & Electronic Solutions  
Measuring Systems  
Hedelfinger Strasse 61, D-70327 Stuttgart, Germany  
Tel: +49-711-5858-777 Fax: +49-711-580-715  
<http://www.sonymanufacturing.com>



Used material: 100% recycled paper, recyclable  
Zero-VOC (Volatile Organic Compound) vegetable oil ink  
©SONY catalog #497

010E-0505-05-01A