

SONY

Digital Gauge
Measuring Unit **DK SERIES**

Field-proven highly reliable magnetic digital gauges



DIGITAL GAUGE

The DK series is a slim, compact Digital Gauge

Provides high resolution ($0.1\mu\text{m}$), high accuracy ($\pm 0.5\mu\text{m}$) 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

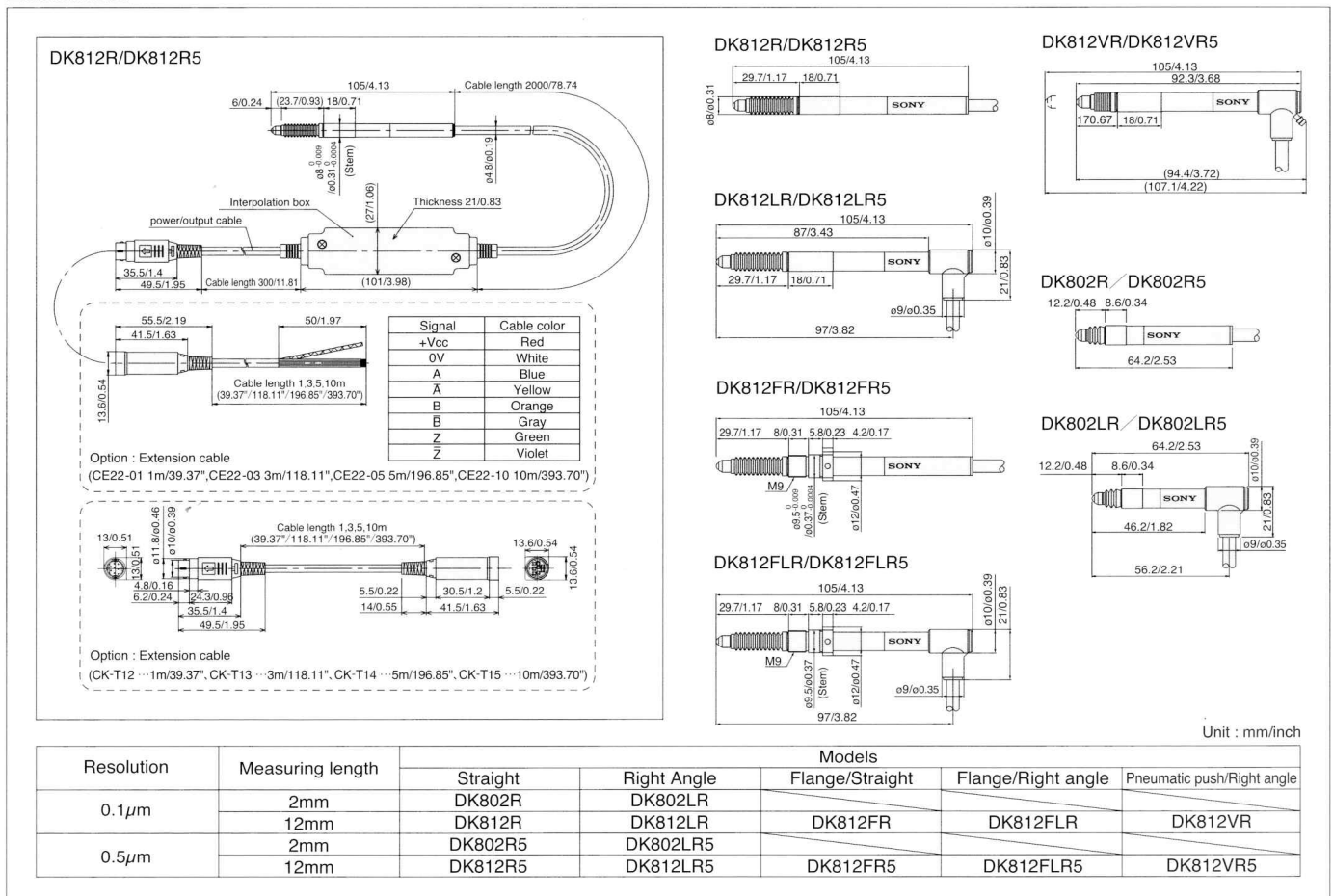
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|----------------------------|---|--|
| Model name | DK812R,DK812LR,DK812FR,DK812FLR, DK812VR,DK802R,DK802LR | DK812R5,DK812LR5,DK812FR5,DK812FLR5, DK812VR5,DK802R5,DK802LR5 |
| Output | A / B / Z Quadrature (Line Driver EIA-422 or equivalent) | |
| 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 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±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.sonysms.co.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.sonysms.co.jp/>

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



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