

$\mu$ MATE<sup>+</sup>

×

**Digital Gauge**

DS series

Magnescale Co., Ltd.



# μMATE<sup>+</sup>

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## Digital Gauge

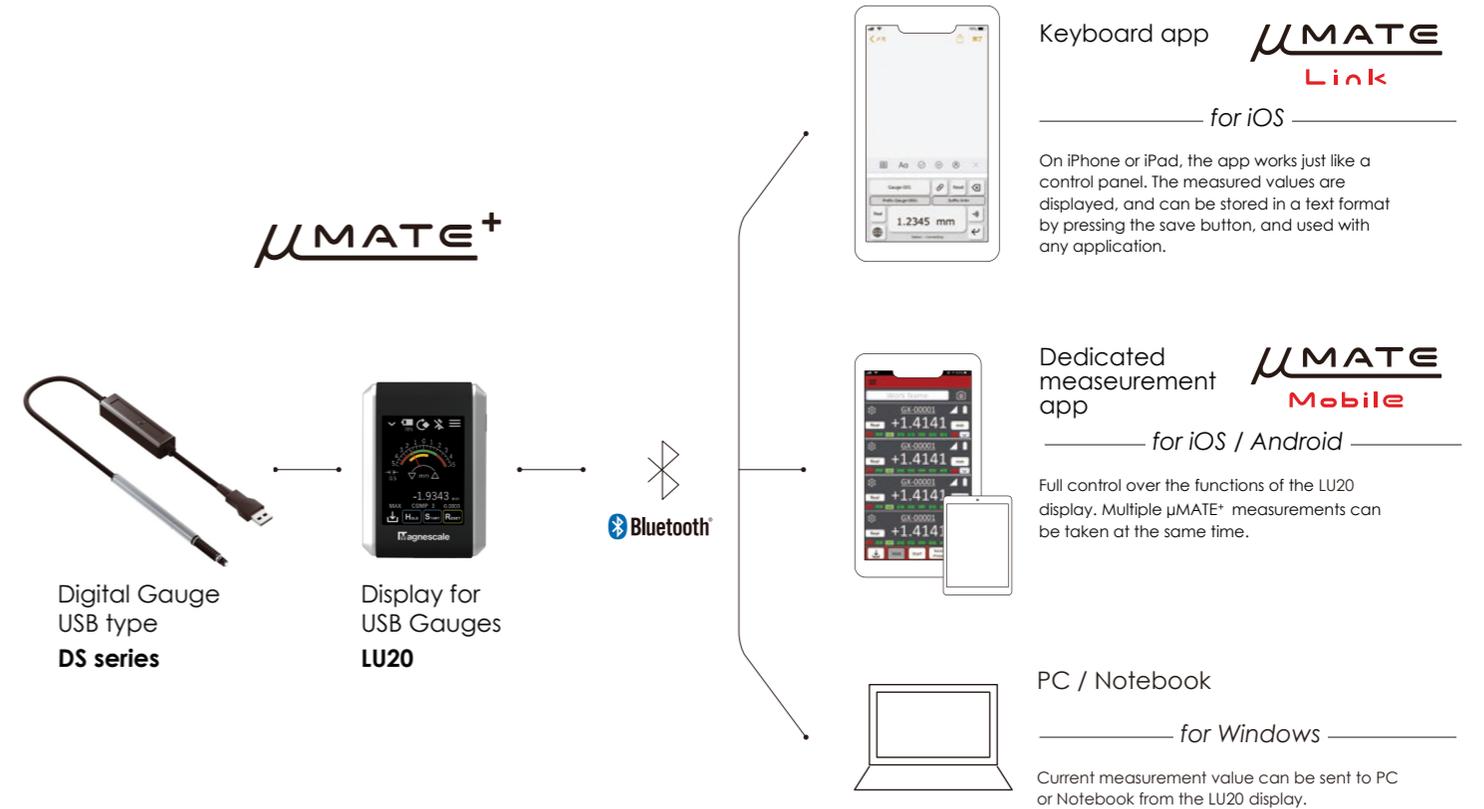
DS series

High accuracy measurements in a compact form.

[Resolution]	[Accuracy]	[Repeatability]
0.1 μm	1 μm <small>(DS800S model)</small>	±0.1 μm

### Bluetooth Standard

μMATE<sup>+</sup> can be directly connected via Bluetooth.



#### Extensive Functions

-   
 Digital display
-   
 Analog display
-   
 Digital storage
-   
 Bluetooth connection
-   
 App provision
-   
 MicroSD on board
-   
 TULIP linkage

# Digital Gauge

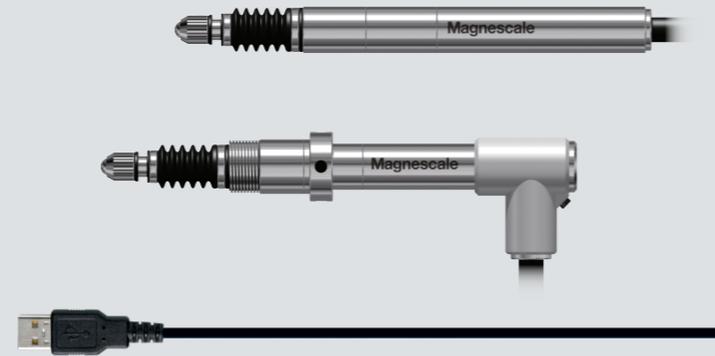
## Digital Gauge DS800S series

High-precision digital gauge in slim shape with  
Ø8mm main body size

Maximum resolution: 0.1µm

Bearings groove construction allows superior sliding  
radial force and durability

Magnetical linear encoder technology allows high  
precision measuring over the entire range



### DS800S series

Model	DS805S□□R / DS812S□□R	DS805S□□R5 / DS812S□□R5	DS830SLR
Measuring range	DS805S: 5mm DS812S: 12mm		30mm
Maximum resolution	0.1µm		0.1µm
Accuracy	1µm		1.5µm
Measuring force (at 20°C)	Upwards	DS805S: 0.35 ± 0.25N DS812S: 0.40 ± 0.30N*1 DS812SVR/DS812SVR5: 0.60 ± 0.50N*2	0.50 ± 0.35N
	Horizontal	DS805S: 0.40 ± 0.25N DS812S: 0.50 ± 0.30N*1 DS812SVR/DS812SVR5: 0.70 ± 0.50N*2	0.60 ± 0.35N
	Downwards	DS805S: 0.45 ± 0.25N DS812S: 0.60 ± 0.30N*1	0.70 ± 0.35N
		DS812SVR/DS812SVR5: 0.80 ± 0.50N*2	
Protection grade (cable and interpolator box not included)	Straight model: IP67 Right-angle model: IP64 (IP67**)		IP53 (IP67**)
Vibration resistance	100m/s <sup>2</sup> (20Hz to 2kHz)		
Impact resistance	1,000m/s <sup>2</sup> (11ms)		
Operating temperature	0 to 50°C (No condensation)		
Storage temperature	-20 to 60°C (90% RH or less)		
Power supply	5V DC ± 5%		
Power consumption	120mA max.		
Mass (Probe)	Approximately 30g		Approximately 70g
Cable length	Gauge ↔ Interpolator: 2m Interpolator ↔ USB: 0.5m		
Feeler	Carbide ball tip with M2.5 thread	Steel ball tip with M2.5 thread	Carbide ball tip with M2.5 thread
Accessory	Instruction manual, tightening nut, clamp spanner, wave washer, hose elbow, spanner		Instruction manual, spanner
Communication interface	USB2.0FS		

\*1 Except SVR/SVR5 \*2 When air pressure in 0.055Mpa \*3 When Ø4mm tube is connected  
\*4 When bellow set (optional accessory) is mounted and Ø4mm tube is connected

# Digital Gauge

## Digital Gauge DS series

High rigidity Ø20mm body is suitable for harsh  
environments

Available in lengths up to 100mm with 0.5µm  
resolution

Magnetical linear encoder technology allows high  
precision measuring over the entire range



### DS series

Model	DS10NR5	DS25NR5	DS25NLR5	DS50NR5	DS50PR5	DS100NR5	DS100PR5
Measuring range	10mm	25mm		50mm		100mm	
Maximum resolution	0.5µm						
Accuracy	3µm			4µm		5µm	
Measuring force (at 20°C)	Upwards	0.30 ± 0.25N	0.40 ± 0.30N		-	-	-
	Horizontal	0.60 ± 0.30N	0.70 ± 0.35N		0.90 ± 0.40N	6.20N or less	9.30N or less
	Downwards	0.80 ± 0.35N	1.00 ± 0.40N		1.30 ± 0.50N		
Protection grade (cable and interpolator box not included)	IP50				IP64	IP50	IP64
Vibration resistance	150m/s <sup>2</sup> (10Hz to 2kHz)						
Impact resistance	1,500m/s <sup>2</sup> (11ms)						
Operating temperature	0 to 50°C (No condensation)						
Storage temperature	-20 to 60°C (90% RH or less)						
Power supply	5V DC ± 5%						
Power consumption	120mA max.						
Mass (Probe)	Approximately 230g	Approximately 300g		Approximately 360g		Approximately 630g	
Cable length	Gauge ↔ Interpolator: 2m Interpolator ↔ USB: 0.5m						
Feeler	Carbide ball tip with M2.5 thread						
Accessory	Instruction manual						
Communication interface	USB2.0FS						

# Digital Display LU20

Color touch panel LCD display, with convenient lithium-ion rechargeable battery

Intuitive operation with analogue display

Simple and accurate digital data storage

Mounting flexibility is dramatically improved with a powerful magnetic stand to hold the display in place



Mounting stand for LU20

## LU20 [European version]

Model	LU20	
Display	2.7" color-LCD / Touch Panel	
Input/Output connector	Connection to DS series: USB Type-A	Power supply/Signal interface point: USB Type-C
Data-I/F	Data transmitted by Bluetooth (BLE): Display controlled by custom apps; current measurement value can be sent to PC/Notebook from LU20 display. MicroSD card slot: Measuring data can be stored on a commercial MicroSD card (max. 32GB)	
Main function	Display	Digital numerical display, analog meter display, bar graph display, real-time chart, simple circle measurement
	Measuring function	Current, maximum, minimum, peak-to-peak, data hold, display resolution switching (digital, analog), comparator function
	Other	Key lock, display rotation, display in inch (oversea model only)
Power consumption	1W or less	
Power supply	Powered by built-in lithium-ion battery, power supplied by USB Type-C connector (rechargeable)	
Operating temperature	0 to +40°C (no condensation)	
Storage temperature	-10 to +60°C (no condensation)	
External dimensions	64(W) x 40(D) x 91(H) mm	
Accessories	Mounting stand, instruction manual, lithium-ion battery x2 (replaceable); USB-C cable (power supply)	

# Various measurement can be made on 5 different display views

**1** Function extension  
Display mode, screen lock settings, etc.

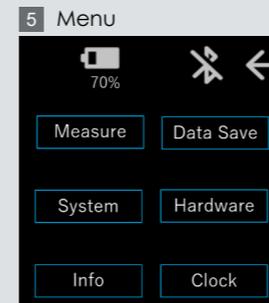


**2** Battery level display



**3** Display screen rotation  
Center area can be rotated 90 degrees to the right.

**4** Bluetooth connection status display



**6** Data save

**7** Hold  
Holds the update of the of current, maximum, minimum, and P-P values.

**8** Measurement start  
Maximum, minimum and P-P values are set to the current value.

**9** Reset, Preset  
Zero reset and preset values are available.

Analog display



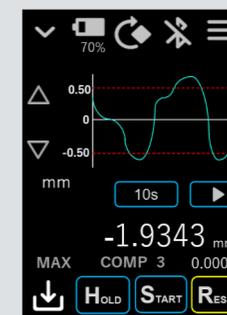
Bar graph display



Digital numerical display



Real-time chart



Simple circle measurement



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Magnescale reserves the right to change product specifications without prior notice.

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