

Magnescale

DIGITAL GAUGE Catalog



Digital gauge

Magnescale Co., Ltd.

Magnescale

Magnescale Co., Ltd.

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Applications

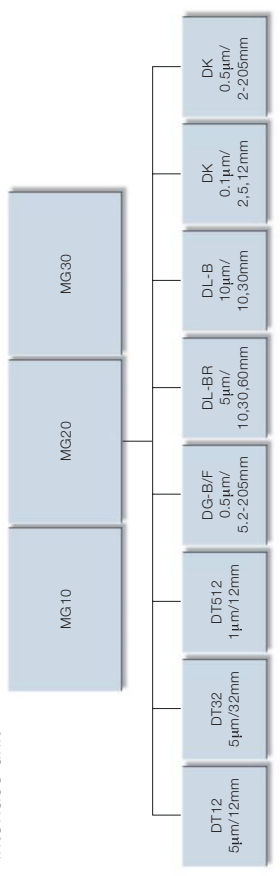
<p>Multipoint measurement of turbine blades Measures the blade shape of aircraft turbine blades.</p>	<p>Camshaft displacement measurement Measuring the height of camshaft lobes and journals.</p>	<p>Measurement of crimp height Measures the crimp height of crimp terminal.</p>
<p>Multipoint measurement of liquid crystal panels Measurement can be conducted easily in a small space by using a slim-shape measuring unit with fixture.</p>	<p>Measurement of hard disc fitness Measuring the fitness of mass produced discs.</p>	<p>Measurement of fastener height Measures the height of screws in order to control the amount of torque.</p>
<p>Measurement of the height of chassis height Measurement can be conducted easily in a small space by using a slim-shape measuring unit. Measuring multiple points of a chassis.</p>	<p>Measurement of motor shaft deviation Measurement of a high speed spinning object is possible by utilizing a vibration-resistant gauge.</p>	<p>Measurement of the height of high-density mounting wiring boards High-density measurement is possible with a slim-shaped measuring unit.</p>
<p>Automatic measurement and screening Measurement/DA decisions can be performed on the production line.</p>	<p>Combination with machine tools Measuring the position of the grinding stone of surface grinding machines.</p>	<p>Measurement of inner diameter Measuring the inner diameter of work.</p>

Lineup

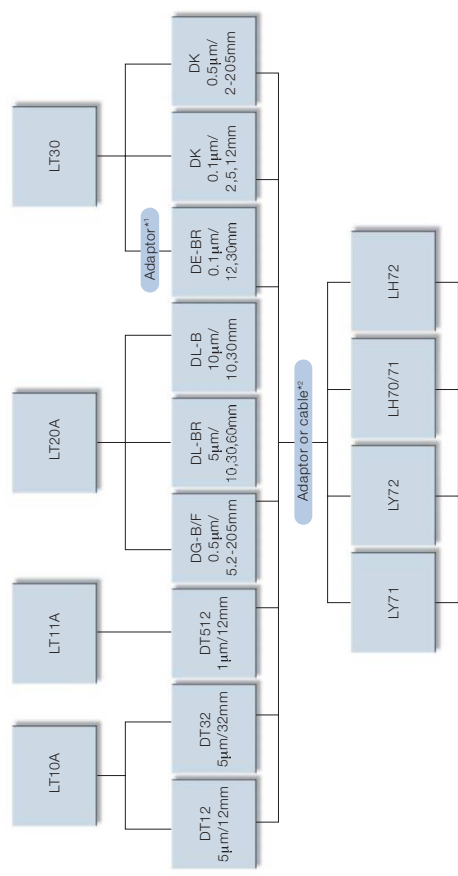
Resolution (µm)	0.1	0.5	1	5	10
Measuring range (mm)	DK	DK	DG	DT	DT
2	DK802AR, DK802BR (Straight) DK802ALR, DK802BLR (Right angle)	DK802AR5, DK802BR5 (Straight) DK802ALR5, DK802BLR5 (Right angle)			
5.2	DK803AR, DK803BR (Straight) DK803ALR, DK803BLR (Right angle) DK803APR, DK803BPR (Straight + Flange) DK803APLR, DK803BPLR (Right angle + Flange)	DK803AR5, DK803BR5 (Straight) DK803ALR5, DK803BLR5 (Right angle) DK803APR5, DK803BPR5 (Straight + Flange) DK803APLR5, DK803BPLR5 (Right angle + Flange)	DG805BL (Right angle - Low measuring force) DG805FL (Right angle + Flange - Low measuring force)		
10		DK10PR5 (Straight + Protect sealing) DK10BR5 (Right angle) DK10NR5 (Straight) DK10PLR5 (Right angle + Protect sealing)	DG810B (Straight) DG810BL (Right angle) DG810F (Straight + Flange) DG810FL (Right angle + Flange) DG10S (Straight)		DL310B (Straight + Protect sealing)
12	DK812AR, DK812BR (Straight) DK812ALR, DK812BLR (Right angle)	DK812AR5, DK812BR5 (Straight) DK812ALR5, DK812BLR5 (Right angle)		DT12N (Straight) DT12P (Straight + Protect sealing)	
25		DK25PR5 (Straight + Protect sealing) DK25NR5 (Straight) DK25PLR5 (Right angle + Protect sealing) DK25NLR5 (Right angle)	DG25BN (Straight) DG25BP (Straight + Protect sealing) DG25BL (Right angle) DG25BS (Right angle) DG25F (Straight + Protect sealing)		
30 32	DE30BR (Straight)			DT32N (Box type) DT32NV (Box type-Pneumatic push) DT32P (Box type+Protect sealing) DT32PV (Box type+Protect sealing+Pneumatic push)	DL330B (Straight)
50 60					
100 110					
155					
205					
DIN size	LT30 + SZ70-2 (Adapter)	LT30	LT20A	LT10A	LT20A
Fl/J type	•LY71 •LY72 (Connection cable CE29)	•LY71 •LY72 (Connection cable CE29)	•LY71, LY72 (+SZ70-1)	•LY71, LY72 (+MT13 +CE29)	•LY71 •LY72 (+DZ51 +SZ70-1)
Interface	MG30 MG20-DK MG10	MG30 MG20-DK MG10	MG30 MG20-DG MG10	MG30 MG20-DT MG10	MG30 MG20-DG MG10

System

Interface unit



Counter



1: Please see PB-7 'Linear' about the type name.
 2: Please see PB-7 'Linear' about the type name.

View in table

Type
Minimum resolution/ effective length

*The standard, the specification, and external
 might change without a previous notice
 for the improvement.
 *Please refer to the end of the back of this catalog
 for details of the connecting cable.

Gauge

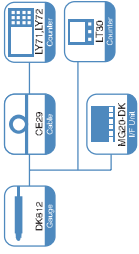
DK802A/B Series	10
DK805A/B Series	11
DK812A/B Series	12
DK10/25 Series	13
DK50/100 Series	14
DK155/205 Series	15
DK110 Series	18
DE-BR Series	20
DG805/DG810 Series	22
DG10B/DG25B Series	23
DG50, DG100, DG155, DG205B Series	25
DG110B	29
DT512N/P Series	31
DT12, 32 Series	32
MT12/13/14	33
DL-B Series	35
U Series	36

DK812AVB Series

High accuracy, rugged gauges.
Suitable for installation on machine.



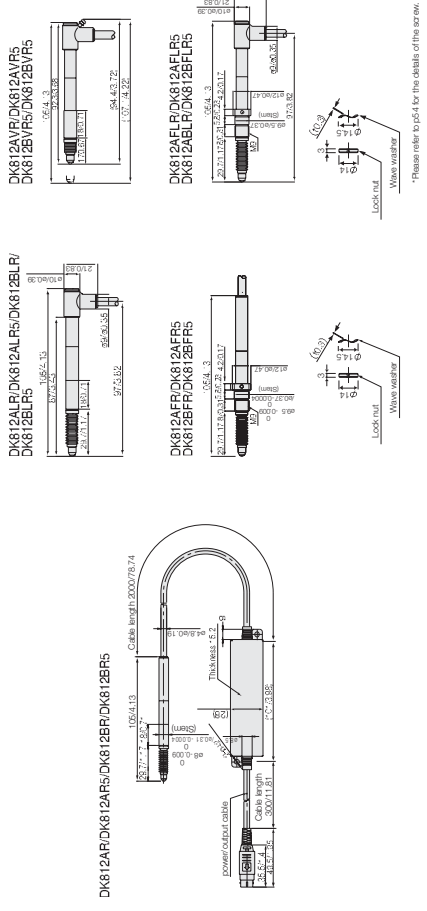
- Measuring range: 12 mm ● Accuracy: 1 µm, 1.5 µm ● Resolution: 0.1 µm, 0.5 µm
- Max. response speed: 80m/min (Resolution: 0.1 µm) 250m/min (Resolution: 0.5 µm)
- Built-in reference point ● Excellent resistance to workshop conditions.
- Robust design for harsh environments.



DK812AR/DK812ARS/
DK812BR/DK812BRs

Digital Gauge

Dimensions

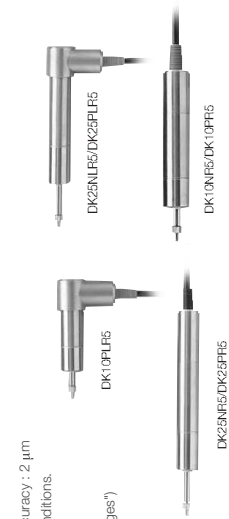


*Please refer to p.64 for the details of the screw.

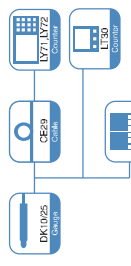
Model	High-resolution models	General-purpose resolution models
DK812AR, DK812ARS, DK812BR, DK812BRs	DK812AR5, DK812ARS5, DK812BR5, DK812BRs5	DK812AR, DK812ARS, DK812BR, DK812BRs
Output	A/B/Z phase voltage-differential line driver output (except with E64-122)	
Resolution	0.1 µm	0.5 µm
Measuring range	12 mm (0.471")	12 mm
Accuracy (at 20°C / 68°F)	1 µm	1.5 µm
Measuring force (at 20°C / 68°F)	Downward: 0.6 ± 0.3 N Upward: 0.4 ± 0.3 N	Air pressure of 0.03MPa: 1N or less in all directions Air pressure of 0.04MPa: 1.7N or less in all directions
Reference point	One location (at 1 mm/0.04" position of spindle movement)	One location (at 1 mm/0.04" position of spindle movement)
Maximum response speed	80 m/min	100 m/min
Air driving	Vacuum suction (DK812AR/L7, DK812AR/L7, DK812BR/L7, DK812BR/L7s) Pneumatic push type (DK812AR/S, DK812ARS, DK812BR/S, DK812BR/S)	
Vibration resistance (10 to 2000 Hz)	100mg*	
Impact resistance (11 ms)	1000mg*	
Protective structure	IP68 (not including the extension cable box and connector)	
Storage temperature	-20°C to 50°C (0°F to 122°F)	
Power supply voltage	-20V to 200V AC for 140F DC +5V ±5%	
Power consumption	1 W	
Cable length ¹⁾	2.5 m/8.2'	
Diameter of stem	ø0.5 (0.0197") (pneumatic push type)	
Mass ²⁾	Approx. 30 g (1.06 oz)	
Feet/sler	Provided with a carbide ball tip (DZ-122 Mount screw M2.5)	
Accessories	-P M3 screw (DZ63), Installation spacers, Instruction Manual, Supplement	
Notes	*1: Cable length up to the bobbin is shown. *2: The mass indicates the total mass including the cable and interposition box.	

DK10/25 Series

High accuracy, rugged gauges.
Suitable for installation on machine.



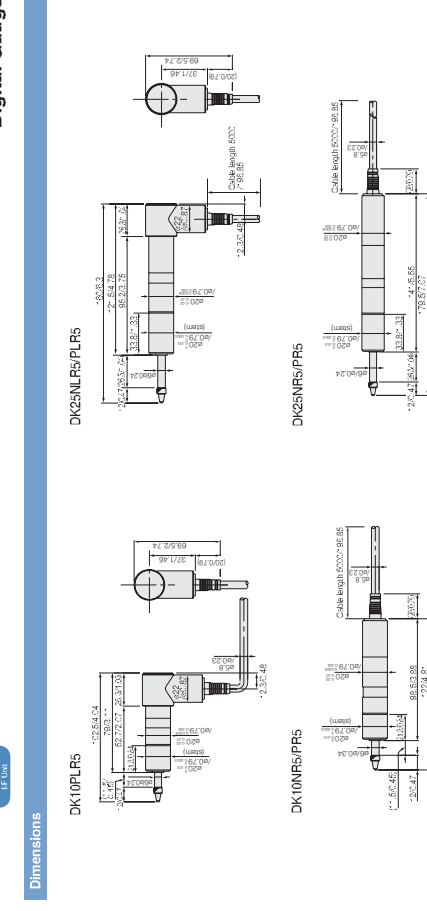
- Measuring range: 10 mm / 0.39" and 25 mm / 0.98" ● Accuracy: 2 µm
- Resolution: 0.5 µm ● Excellent resistance to workshop conditions.
- High measuring force (10PR5/10PLR5/25PR5/25PLR5)
- Low measuring force (10NR5/25NR5/25NLR)
- A variety of accessories available (See "Accessories for Gauges")
- Direct connected to A/B quadrature counter



DK10NR5/DK10PLR5

Digital Gauge

Dimensions



Unit: mm/inch

Model	DK10NR5	DK10PLR5	DK25NR5	DK25PLR5
Output	A/B/Z phase voltage-differential line driver output (except with E64-122)			
Resolution	2 µm	2 µm	2 µm	2 µm
Measuring range	10 mm	10 mm	25 mm	25 mm
Accuracy (at 20°C)	Upward: 0.5 ± 0.25 N Downward: 0.3 ± 0.25 N	Upward: 0.5 ± 0.25 N Downward: 0.3 ± 0.25 N	Upward: 0.4 ± 0.2 N Downward: 0.2 ± 0.2 N	Upward: 0.4 ± 0.2 N Downward: 0.2 ± 0.2 N
Measuring force (at 20°C)	Upward: 4.9 N or less Downward: 3.3 N or less	Upward: 4.9 N or less Downward: 3.3 N or less	Upward: 4.9 N or less Downward: 3.3 N or less	Upward: 4.9 N or less Downward: 3.3 N or less
Reference point	One location (at 1 mm position of spindle movement)	One location (at 1 mm position of spindle movement)	One location (at 1 mm position of spindle movement)	One location (at 1 mm position of spindle movement)
Maximum response speed	250 m/min	250 m/min	250 m/min	250 m/min
Air driving	Vacuum suction (DK10NR5/L7, DK10NR5/L7, DK10PLR5/L7, DK10PLR5/L7s) Pneumatic push type (DK10NR5/S, DK10NR5/S, DK10PLR5/S, DK10PLR5/S)			
Vibration resistance (10 to 2000 Hz)	150 mg*	150 mg*	150 mg*	150 mg*
Impact resistance (11 ms)	IP68	IP68	IP68	IP68
Protective structure	IP68 (not including the extension cable box and connector)	IP68	IP68	IP68
Storage temperature	-20°C to 50°C (0°F to 122°F)	-20°C to 50°C (0°F to 122°F)	-20°C to 50°C (0°F to 122°F)	-20°C to 50°C (0°F to 122°F)
Power supply voltage	-20V to 200V AC for 140F DC +5V ±5%	-20V to 200V AC for 140F DC +5V ±5%	-20V to 200V AC for 140F DC +5V ±5%	-20V to 200V AC for 140F DC +5V ±5%
Power consumption	1 W	1 W	1 W	1 W
Cable length ¹⁾	2.5 m/8.2'	2.5 m/8.2'	2.5 m/8.2'	2.5 m/8.2'
Diameter of stem	ø0.5 (0.0197") (pneumatic push type)	ø0.5 (0.0197") (pneumatic push type)	ø0.5 (0.0197") (pneumatic push type)	ø0.5 (0.0197") (pneumatic push type)
Mass ²⁾	Approx. 20 g	Approx. 20 g	Approx. 50 g	Approx. 50 g
Feet/sler	Provided with a carbide ball tip (DZ-122 Mount screw M2.5)	Provided with a carbide ball tip (DZ-122 Mount screw M2.5)	Provided with a carbide ball tip (DZ-122 Mount screw M2.5)	Provided with a carbide ball tip (DZ-122 Mount screw M2.5)
Accessories	-P M3 screw (DZ63), Installation spacers, Instruction Manual, Supplement	-P M3 screw (DZ63), Installation spacers, Instruction Manual, Supplement	-P M3 screw (DZ63), Installation spacers, Instruction Manual, Supplement	-P M3 screw (DZ63), Installation spacers, Instruction Manual, Supplement
Notes	*1: Cable length up to the bobbin is shown. *2: The mass indicates the total mass including the cable and interposition box.	*1: Cable length up to the bobbin is shown. *2: The mass indicates the total mass including the cable and interposition box.	*1: Cable length up to the bobbin is shown. *2: The mass indicates the total mass including the cable and interposition box.	*1: Cable length up to the bobbin is shown. *2: The mass indicates the total mass including the cable and interposition box.

DK DK50/100 Series

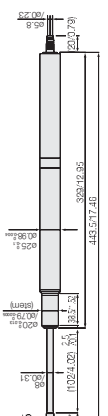
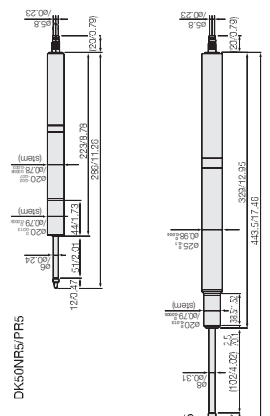
High accuracy, rugged gauges.
Suitable for installation on machine.

- Measuring range : 50 mm / 1.97", 100 mm / 3.94",
- Accuracy : 2 µm (DK50PRS/50NRS), 4 µm (DK100PRS/100NRS)
- Resolution : 0.5 µm ● Excellent resistance to workshop conditions
- High measuring force (DK50PRS/100PRS) ● Low measuring force (DK50NRS/100NRS)
- Direct connected to A/B quadrature counter



Digital Gauge

Dimensions



Unit : mm/inch

Model	DK50PRS	DK100NRS	DK100PRS
Output	A/B/Z phase voltage-differential line other output (compliant with EA-122) Phase scc P17 Output Signal Phase Difference.		
Resolution ¹	0.5 µm		
Measuring range	50 mm	100 mm	100 mm
Accuracy (at 20°C)	2 µm	4 µm	4 µm
Measuring force	Upward	1.8 ± 0.05 N	4.0 N or less
	Downward	2.7 ± 0.56 N	
Reference point	Oric location (at 1 mm position of spindle movement)		
Maximum response speed	250 mm/min		
Vibration resistance (10 to 2000 Hz)	150 m/s ²		
Impact resistance (11 ms)	1500 m/s ²		
Protective structure	IP50	IP50	IP61
Operating temperature	0°C to 50°C		
Storage temperature	-20°C to 60°C		
Power supply voltage	DC +5V ±5%		
Power consumption	1 W or less		
Cable length ²	Approx. 2.5 m		
Diameter of stem	ø 20 ±0.04 mm		
Mass ³	Approx. 360 g	Approx. 630 g	Approx. 630 g
Feeler	Protected with a carbide ball (D2-T22 Mount Error M2.5)		
Output cable length	22 m max.		
Guaranteed number of strokes	Minimum 5 million cycles without shock 4P MMS series (2 pcs), Instruction Manual		

1: The resolution setting needs to be made when connecting to the L330 series, M3 series, and LV70 series. For details, please refer to the respective instruction manual.
2: The mass indicated is the total mass including the cable and the position box.
3: The mass indicated is the total mass including the cable and the position box.

DK DK155/205

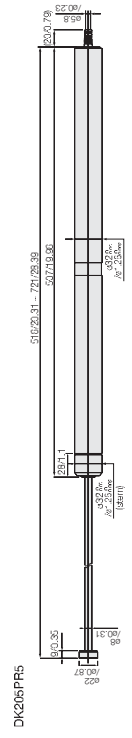
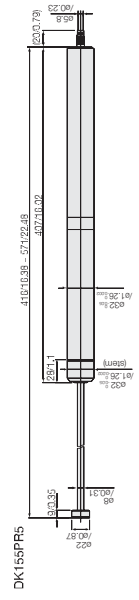
High accuracy, rugged gauges.
Suitable for installation on machine.

- Measuring range : 155 mm / 6.1" and 205 mm / 8.07"
- Accuracy : 5 µm (DK155PRS), 6 µm (DK205PRS)
- Resolution : 0.5 µm ● Excellent resistance to workshop conditions
- Magnet feeler (DG155BP/205BP)
- Direct connected to A/B quadrature counter



Digital Gauge

Dimensions



Unit : mm/inch

Model	DK155PRS	DK205PRS
Output	A/B/Z phase voltage-differential line other output (compliant with EA-122) Phase scc P17 Output Signal Phase Difference.	
Resolution ¹	0.5 µm	
Measuring range	155 mm	205 mm
Accuracy (at 20°C)	5 µm	6 µm
Reference point	Oric location (at 5 mm position of spindle movement)	
Maximum response speed	250 mm/min	
Vibration resistance (10 to 2000 Hz)	150 m/s ²	
Impact resistance (11 ms)	1500 m/s ²	
Protective structure	IP61	
Operating temperature	0°C to 50°C	
Storage temperature	-20°C to 60°C	
Power supply voltage	DC +5V ±5%	
Power consumption	1 W or less	
Cable length ²	Approx. 2.5 m	
Diameter of stem	ø 22 mm	
Mass ³	Approx. 1100 g	
Feeler mounting base	Magnetic substance	
Magnetically attachable feeler	Magnetic attraction: 10 N, resistance applied horizontal slip: 2.7 N (Provided with 0.1 mm carbide ball tip)	
Spindle ⁴	ø 8 mm, radial swing: 0.04 mm max.	
Output cable length	22 m max.	
Guaranteed number of strokes	Minimum 5 million cycles without shock 4P MMS series (2 pcs), Instruction Manual	

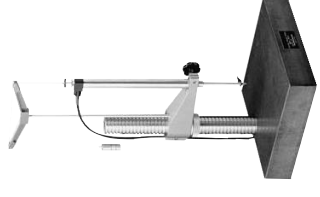
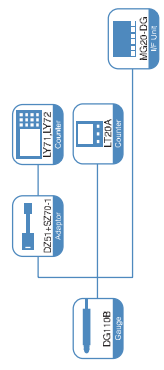
1: The resolution setting needs to be made when connecting to the L330 series, M3 series, and LV70 series. For details, please refer to the respective instruction manual.
2: The mass indicated is the total mass including the cable and the position box.
3: The mass indicated is the total mass including the cable and the position box.
4: The spindle weighs about 400g.

DG

DG110B Series

High accuracy gauge with controllable measuring force

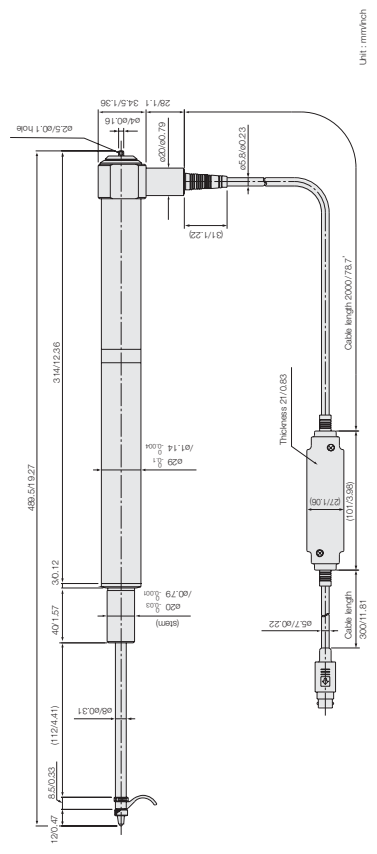
- High accuracy: 4 μm
- Resolution: 0.5 μm
- Measuring range: 110 mm / 4.33"
- Reduced measurement error
- Precision dual spindle support allows for a smooth spindle motion and virtually error free measurements.
- Reduced measuring force
- The measuring force can be reduced to a minimum of 0.3 N in three selectable steps using the measuring balancer (option). The force is maintained constant regardless of spindle movement direction.
- Soft spindle return. A braking mechanism reduces spindle return speed, thereby eliminating the danger of damaging either the surface plate or the workpiece.



Digital Gauge

*Digital gauge stand DZ-531 and Measuring force balancer DZ-581 are option.

Dimensions



Specifications	
Model	DG110B/BM/BPE
Type	For Counter, A/B quadrature signal output type (See Page 26)
Measuring range	110 mm / 4.33"
Resolution	0.5 μm
Measuring range force	Downward 1.55 ± 0.15 N*
Accuracy	0.5 to 50 μm
Operating temperature	-10 °C to 50 °C / 14 °F to 122 °F
Measuring temperature	2 to 6.55°
Cable length	2 m / 6.56'
Mounting screw diameter	ø 20 $\frac{3}{8}$ mm / ø 0.7875" $\frac{1}{8}$ "**
Feeler	Feeler tipped with ø 2.5 mm 0.0984" dia. carbide ball with M2.5x0.45 screw on fitting end (DZ-121)
Mass**	Approx. 1.50 g / 0.531 lbs
Lift lever	DZ-161 (is optional)

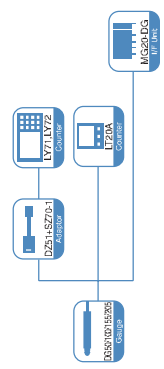
*1: use cable rail and transducer unit. ** The measurement force values given apply when DZ-581 measuring force balancer is not used. By using a measuring force balancer (option), it is possible to reduce the measuring force to a minimum of 0.3 N. The measuring force will be constant regardless of spindle position.

DG

DG50B, DG100B, DG155B, DG205B Series

High accuracy, rugged gauges. Suitable for installation on machines.

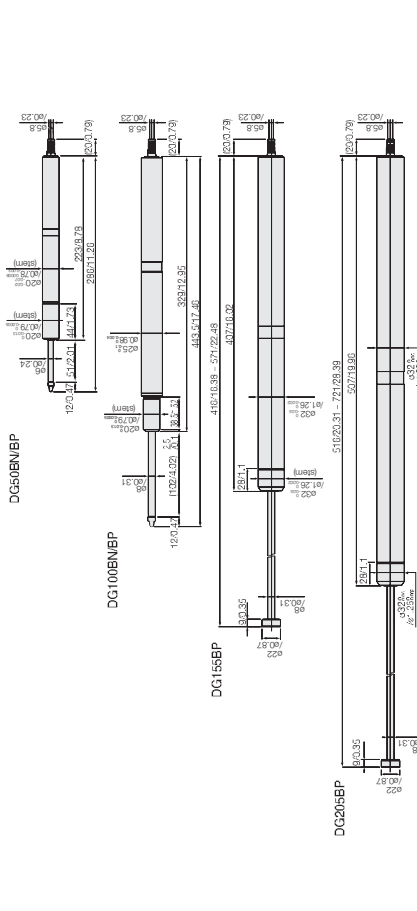
- Excellent resistance to workshop conditions (BP, IP64). Resistant to oil, water, dust, vibrations, and shocks.
- Accuracy: 2 μm (DG50BP/50BN), 4 μm (DG100BP/100BN), 5 μm (DG155BP), 6 μm (DG205BP) ● Resolution: 0.5 μm
- Measuring range: 50 mm / 1.97", 100 mm / 3.94", 155 mm / 6.1" and 205 mm / 8.07"
- High measuring force (DG50BP/100BP) ● Low measuring force (DG50BN/100BN)
- Magnet feeler (DG155BP/205BP) ● Easy installation
- A variety of accessories available (See "Accessories for Gauges")



Digital Gauge

*The photo shows DG155BP

Dimensions



Specifications	
Model	DG50BP/50BNBP, DG100BP/100BNBP, DG155BP/155BNBP, DG205BP/205BNBP
Type	For Counter, A/B quadrature signal output type (See Page 26)
Resolution	0.5 μm
Measuring range force	All direction: 6.2 N or less Downward: 21.2 to 202 N
Accuracy at 20°C / 68°F	2 μm
Operating temperature	0 °C to 50 °C / 32 °F to 122 °F (range) -33 °C to 65 °C / -4 °F to 149 °F
Cable length	2 m / 6.56'
Mounting screw diameter	ø 20 $\frac{3}{8}$ mm / ø 0.7875" $\frac{1}{8}$ "**
Magnetic feeler	Equivalent to IP-4
Procedure design guide	Equivalent to IP-4
Sealing (oil, water, dust)	Oil sealing, O-ring, T-joints
Mass**	Approx. 600 g / 2.12 lbs
Lift lever	DZ-161 (optional)

** The measurement force values given apply when DZ-581 measuring force balancer is not used. By using a measuring force balancer (option), it is possible to reduce the measuring force to a minimum of 0.3 N. The measuring force will be constant regardless of spindle position.



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Interface unit

MG10/20/30 Series 40



Counter unit

LT30 SERIES	44
LT20A SERIES	45
LT11A SERIES	46
LT10A SERIES	47
LY71	48
LY72	49

LT

LT10A SERIES (for DT12/32)

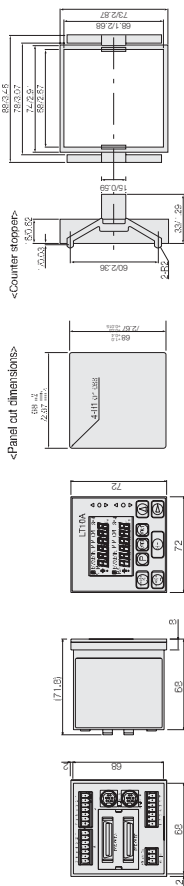
Compact, lightweight, and easy-to-mount counter.



- Compact size - DIN standard (72 mm x 72 mm / 2.83" x 2.83" W x H)
- Resolution : 5, 10 μm Selectable
- Suitable for panel mounting
- Direct interfacing from display unit to PLC or computer
- Current values, maximum, minimum, peak-to-peak values and GO/NO GO evaluation included as standard functions.
- ADD/SUB function (2-channel mode)
- Full lineup for various applications

Counter unit

Dimensions



Unit : mm/inch

Model	LT10A-105	105B	105C	205B	205C
Display	5-digit basket LCD, mode display				
Measuring unit input	1 channel				
IO connectors*1	—	—	—	—	2 channel
BCD I/O	—	—	—	—	—
RS-232C I/O	—	—	—	—	—
RS-485 I/O	—	—	—	—	—
Reset function	—	—	—	—	—
Reset function	—	—	—	—	—
Comparator function	—	—	—	—	—
Peak hold function	—	—	—	—	—
Resolution	—	—	—	—	—
Direction	—	—	—	—	—
Maximum response speed	—	—	—	—	—
Addition and subtraction function	—	—	—	—	—
Alarm	—	—	—	—	—
Data storage	—	—	—	—	—
Temperature	—	—	—	—	—
Power consumption*5	—	—	—	—	—
Power voltage	—	—	—	—	—
Compatible measuring unit	DT12/32 series				

Note 1: I/O connector
Input: Peak, peak-hold reset, peak-to-peak pause, RS trigger (RS-232C mode only);
Output: Current value, maximum, minimum, peak-to-peak, GO/NO GO evaluation
Note 2: BCD I/O pin 48H connector;
Input: Peak, peak-hold reset, comparator value selection & settings;
Output: Current value, maximum, minimum, peak-to-peak, GO/NO GO evaluation
Note 3: RS-232C 8 pin MH-DIN connector;
Reset, preset value setting local, peak-to-peak, peak-hold pause, current value hold, software version read, alarm output
Note 4: RS-232C 9 pin MH-DIN connector;
Trigger read for RS-232C data output and output key lock and release
Note 5: With measuring unit connected

LT

LT11A SERIES (for DT512)

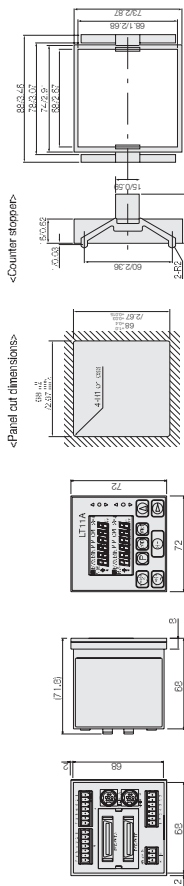
Compact, lightweight, and easy-to-mount counter.



- Compact size - DIN standard (72 mm x 72mm / 2.83" x 2.83" W x H)
- Resolution : 1, 5, 10 μm Selectable
- Suitable for panel mounting
- Direct interfacing from display unit to PLC or computer
- Current values, maximum, minimum, peak-to-peak values and GO/NO GO evaluation included as standard functions.
- ADD/SUB function (2-channel mode)
- Full lineup for various applications

Counter unit

Dimensions



Unit : mm/inch

Model	LT11A-101	101B	101C	201B	201C
Display	5-digit basket LCD, mode display				
Measuring unit input	1 channel				
IO connectors*1	—	—	—	—	2 channel
BCD I/O	—	—	—	—	—
RS-232C I/O	—	—	—	—	—
RS-485 I/O	—	—	—	—	—
Reset function	—	—	—	—	—
Reset function	—	—	—	—	—
Comparator function	—	—	—	—	—
Peak hold function	—	—	—	—	—
Resolution	—	—	—	—	—
Direction	—	—	—	—	—
Maximum response speed	—	—	—	—	—
Addition and subtraction function	—	—	—	—	—
Alarm	—	—	—	—	—
Data storage	—	—	—	—	—
Temperature	—	—	—	—	—
Power consumption*5	—	—	—	—	—
Power voltage	—	—	—	—	—
Compatible measuring unit	DT512 series				

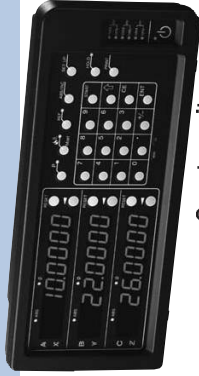
Note 1: I/O connector
Input: Peak, peak-hold reset, peak-to-peak pause, RS trigger (RS-232C mode only);
Output: Current value, maximum, minimum, peak-to-peak, GO/NO GO evaluation
Note 2: BCD I/O pin 48H connector;
Input: Peak, peak-hold reset, comparator value selection & settings;
Output: Current value, maximum, minimum, peak-to-peak, GO/NO GO evaluation
Note 3: RS-232C 8 pin MH-DIN connector;
Reset, preset value setting local, peak-to-peak, peak-hold pause, current value hold, software version read, alarm output
Note 4: RS-232C 9 pin MH-DIN connector;
Trigger read for RS-232C data output and output key lock and release
Note 5: With measuring unit connected

LY

LY72

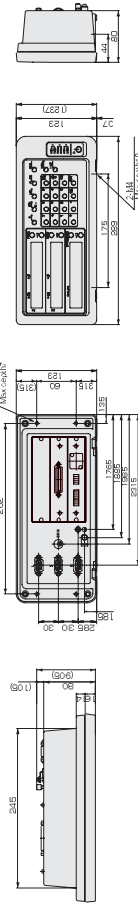
For measurements and control in diverse field uses. Multifunction counter with RS-232C interface

- RS-232C standard function
- Peak-Hold Function Convenient for Statistical Measurement
- Convenient External Input Functions for Automatic Measurement
- Display Resolution Switching
- Data Storage
- Reset/Preser/Restart
- Detecting Reference Point of Measurement Unit
- Scaling ● Flicker Control



Counter unit

Dimensions



*Please refer to LY71 level cut-out diagram.
*Please refer to p64 for the details of the screw.

Specifications	
Model	LY72
Specifications by application	Applications as gauge (set axis labels: A, B, and C)
Display	7 digits and minus display, Color amber
Number of input shafts	1 to 3 axes
Display data	Current (1st axis, 2nd axis, addition axis, minimum, maximum, and peak-to-peak values)
Measuring unit input resolution	Standard: 0.1 μm, 0.5 μm, 1 μm, 5 μm, 10 μm, 1 mm, 10 mm, 100 mm Expanded: 100 μm, 50 μm, 25 μm, 2 μm, 0.05 μm, and 1 degree can be added.
Input signal	AB quadrature signal, Z signal (Conforms to IEC 61422)
Display resolution	Measuring unit input resolution or higher and supported inch units Inch: 0.00005", 0.0001", 0.0005", 0.0002", 0.0005" Inch Expanded: 0.00002", 0.0001", 0.001", 0.002", 0.005"
Minimum input pulse frequency	100 Hz
Alarm display	Current value reset, Alarm cancel
Reset	Restart of peak value calculation for each axis at all axes
Prereset	It is possible to stop/set up to three values for each axis.
Master calibration function	The master calibration value is entered when going past the reference point after the power is turned on.
Datum point operations	It is possible to store/set one value for each axis (when not using the master calibration function). It is possible to store/set one value for each axis when not using the master calibration function.
Reference point operations	It is possible to store/set one value for each axis (when not using the master calibration function). It is possible to store/set one value for each axis when not using the master calibration function.
Hold function	Scalable from latch and pause Latch: Display hold while latched (display hold) Pause: Peak calculation stopped while paused (Peak calculation hold)
Linear compensation	A fixed compensation amount is applied to the measuring unit's count value. Compensation amount Standard: ±600 μm/in (Expanded: ±1000 μm/in)
Scaling	Scaling factor: 0.100000 to 0.999999 Data format: All axes on same line/No line for each axis Peak-to-peak value Transfer rate: 38400/19200/9600/4800/2400/1200/600 bps Parity: None / Odd / Even Stop bit: 1 or 2 Data length: 8 bits or 7 bits
RS-232C	
Timer	OFF/2.0/5.0/10.0/30.0 seconds
Output data selection	Current value/Maximum value/Minimum value/ Peak-to-Peak value
Power supply	DC 12 V Rating 0.75 A Max. 1 A AC 100 V to 240 V ±10% (When using the AC adapter PSC-22 (For U.S. only) or PSC-23 (For Europe and other countries)) Option MAX. 30 VA connected at the AC adapter.
Power consumption	0 to 40°C (no condensation) -20 to 80°C (no condensation)
Operating temperature	Approx. 1.5 kg
Storage temperature	
Mass	

LY

LY71

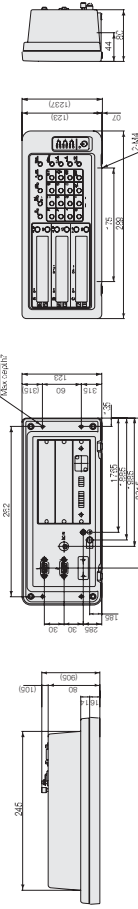
For measurements and control in diverse field uses. The required output board can be extended.

- Various outputs are enabled by mounting extension boards
- BCD Output (Option)
- Comparator Function: Relay / Open-collector (Option)
- Peak Hold Function Convenient for Statistical Measurement
- Convenient External Input Functions for Automatic Measurement
- Display Resolution Switching
- Data Storage
- Reset/Preser/Restart
- Detecting Reference Point of Measurement Unit
- Scaling ● Flicker Control



Counter unit

Dimensions



*Please refer to LY71 level cut-out diagram.
*Please refer to p64 for the details of the screw.

Specifications	
Model	LY71
Display	7 digits and minus display, Color amber
Number of input shafts	1 or 2 axes (2-axis add function available; addition only is delayed when adding)
Display data	Current (1st axis, 2nd axis, addition axis, maximum, minimum and peak-to-peak values)
Measuring unit input resolution	Standard: 0.1 μm, 0.5 μm, 1 μm, 5 μm, 10 μm, 1 mm, 10 mm, 100 mm Expanded: 100 μm, 50 μm, 25 μm, 2 μm, 0.05 μm, and 1 degree can be added.
Input signal	AB quadrature signal, Z signal (Conforms to IEC 61422)
Display resolution	Measuring unit input resolution or higher and supported inch units Inch: 0.00005", 0.0001", 0.0005", 0.0002", 0.0005" Inch Expanded: 0.00002", 0.0001", 0.001", 0.002", 0.005"
Minimum input pulse frequency	100 Hz
Alarm display	Measuring unit disconnected, Excess speed, Maximum display amount exceeded, Power failure, Error in stored data
Reset	Current value reset, Alarm cancel
Prereset	Restart of peak value calculation for each axis at all axes
Master calibration function	It is possible to store/set up to three values for each axis.
Datum point operations	The master calibration value is entered when going past the reference point after the power is turned on.
Reference point operations	It is possible to store/set one value for each axis (when not using the master calibration function). It is possible to store/set one value for each axis when not using the master calibration function.
Hold function	Scalable from latch and pause Latch: Display hold while latched (display hold) Pause: Peak calculation stopped while paused (Peak calculation hold)
Linear compensation	A fixed compensation amount is applied to the measuring unit's count value. Compensation amount Standard: ±600 μm/in (Expanded: ±1000 μm/in)
Scaling	Scaling factor: 0.100000 to 0.999999 Data format: All axes on same line/No line for each axis Peak-to-peak value Transfer rate: 38400/19200/9600/4800/2400/1200/600 bps Parity: None / Odd / Even Stop bit: 1 or 2 Data length: 8 bits or 7 bits
Power supply	DC 12 V Rating 0.75 A Max. 1 A AC 100 V to 240 V ±10% (When using the AC adapter PSC-22 (For U.S. only) or PSC-23 (For Europe and other countries)) Option MAX. 30 VA connected at the AC adapter.
Power consumption	0 to 40°C (no condensation) -20 to 80°C (no condensation)
Operating temperature	Approx. 1.5 kg
Storage temperature	
Mass	

Compatible

Measuring unit	Adapter for LT series	LT series	Adapter for Counter	Connection cable	Counter unit	Interpolators	Extension cables
DT32NNV/P/PV	Interpolator MT12 L260-P/P2 is required to connect to LT100.	LT20 LT100	MT12 + DZ51	-	LY51, LY62	-	CE-38** **=-011(m), -03(3m), -05(5m), -10(10m), -15(15m)
DT512N/P							
DT12N/P							
DT32NNV/P/PV	-	LT10	-	-	-	-	CK-T12(1m), T13(3m), T14(5m), T15(10m), T101(3m), T105(5m) (Realize for flexion)
DT512N/P							
DG305B/810B	-	LT11	-	-	-	-	-
DG10B/25B	-	LT20 LT100	DZ51	-	LY51, LY62	-	-
DG30B/100B/155B/205B							
DG110B	-	-	-	-	-	-	-
DL-B	-	LT20 LT100	DZ51	-	LY51, LY62	-	-

Connection Cables

Measuring unit	Adapter for LT series	LT series	Interface unit	Adapter for Counter	Connection cable	Counter unit	Interpolators	Extension cables
DK305AB, DK635AB, DK310AB	-	LT30	MG (MG10-P1/P2) (MG30-DG) (MG30-B1/B2)	-	CE-29*** ***=-03(30.3m) **=-01(1m) -05(5m) -10(10m)	LY71, 72	-	CE-05** **=-01(1m), -03(3m), -05(5m), -10(10m), -15(15m) CE-22** **=-01(1m), -03(3m), -05(5m), -10(10m) CK-1*** (Realize for flexion) CK-T12(1m), CK-T13(3m), T14(5m), T15(10m)
DK10/25								
DK650/100								
DK155PFS/205PFS								
DK110NLR6								
DT12N/P	-	LT10A	MG (MG10-P1/P2) (MG30-DT) (MG30-B1/B2)	-	MT13 + CE-29	LY71, 72	MT12(for LT20A) MT13(for LT30) MT14(Cable with 30kV-110V unterminated)	
DT32NNV/P/PV	-	LT11A	MG (MG10-P1/P2) (MG30-DG) (MG30-B1/B2)	-	-	-	-	-
DT512N/P								
DG305B/810B	-	LT20A	MG (MG10-P1/P2) (MG30-DG) (MG30-B1/B2)	-	-	LY71, LY72	MD10x20B ※D-sub15pin Female	-
DG10B/25B								
DG30B/100B/155B/205B								
DG-110B	-	LT20A	MG (MG10-P1/P2) (MG30-DG) (MG30-B1/B2)	DZ51 + SZ70-1	-	LY71, LY72	-	
DL-B	-	LT30	SZ70-2+ MG (MG10-P1/P2) (MG30-DG) (MG30-B1/B2)	SZ70-1	-	LY71, LY72	-	
DE-BR	SZ70-2	LT30	-	-	-	-	-	-

A description of external form chart of the screw

- When a screw thread is not mentioned in the Dimensions, It is mean numerical value base on standard pitch (National Coarse).
- The screw which conformed to ISO and JIS is enclosed.