# **LEVELNIC DL-S4W SERIES**







The latest model of Levelnic series. Built-in wireless.

Measurement value can be checked both on PC screen and the device's display panel.

- High precision Digital Level
- Resolution 0.001mm/m
- Switchable between wired and wireless
- Stainless steel base type that not requires rust prevention maintenance (DL-S4W SUS)











#### USE

•High precision leveling of machine tools and surface plates. Straightness and flatness measurement. MATERIAL

■Body: Aluminum

#### **FEATURES**

- Wireless data transmission
- PC screen becomes display of Levelnic
- •Measurement data can be displayed on PC, using receiver and data display software
- Switchable between wireless / wired for saving of electricity and long-time use
- •USB receiving unit installed. The driver is supported by the automatic recognition system.
- Equipped with two rechargeable batteries, enables running measuring by using a spare battery while the other is being charged
- •Custom-made base can be attached to the threaded screw holes (M5 × P0.8) at the bottom base

#### **SPECIFICATIONS**

Measuring Range*1	± 5.00mm/m ± 0.286°		
Minimum Reading	0.001mm/m 0.0001° (within ± 1.999mm/m) 0.01mm/m 0.001° (over ± 2mm/m)		
Operating Temperature	0 ~ 40℃		
Accuracy*2	Operating temperature $17 \sim 23^{\circ}$ C $\pm 0.85\%$ rdg (within $\pm 1.999$ mm/m) $\pm 1.0\%$ rdg (over $\pm 2$ mm/m)  Operating temperature $0 \sim 40^{\circ}$ C $\pm 2.6\%$ rdg (within $\pm 1.999$ mm/m) $\pm 2.7\%$ rdg (over $\pm 2$ mm/m)		
Repeatability	Within ± 0.005mm/m ± 0.0003°		
Output Signal	Conforms to RS-232C, wired *4, built-in wireless system (Bluetooth Class1 *5, wireless range: 30 ~ 50m)		
Power Source	9V 006P type dry cell 1pc 8.4V 006P type rechargeable battery 1pc AC adapter (DC9V output · AC100V ~ 240V) included		
Run time (continuous use) *3	Zinc-carbon cell: Approx. 12 hrs. (wireless use approx. 3 hrs.) Alkaline cell: Approx. 30 hrs. (wireless use approx. 10 hrs.) Rechargeable battery 10 hrs. (wireless use approx. 4 hrs.)		
Dimensions	L158 × W61 × H107mm (Base dimensions: L150 × W55mm)		
Accessories	<ul> <li>Shock resistant aluminum case</li> <li>■ Warranty · Instruction manual · Inspection report</li> <li>■ AC adapter (DC9V output · AC100V ~ 240V)</li> <li>■ Battery charger</li> <li>■ Dedicated display software</li> <li>■ USB receiving unit</li> </ul>		

\* 1: For DEG (°) Display mode, "0 (Zero)" before the decimal point is not displayed.

For 0.001mm/m (0.0001°) display mode, maximum reading which can be displayed is less than  $\pm$  1.999mm/m ( $\pm$  0.1145°).

- ※ 2: % rdg indicates the percentage of displayed value
- ※ 3: May vary depending upon measurement conditions
- # 4: PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)
- \* 5: Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU), KCC (South Korea)

Order No.	Model No.	Software Language	Base Material	Weight
010053	DL-S4W	lananoco	Cast iron	2.0kg
010111	DL-S4W SUS	Japanese	Stainless steel SUS303	2.0kg
010085	DL-S4W-E	English	Cast iron	2.0kg



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LEVEL

**PRECISION** 

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# LEVELNIC DL-S3 SERIES





High accuracy Level with simple & clear operation.

The world's first Digital Level with built-in Microcomputer.

- High precision Digital Level
- Resolution 0.001mm/m
- Rechargable Battery (DL-S3C / DL-S3C SUS)
- Stainless steel base type that not requires rust prevention maintenance (DL-S3 SUS / DL-S3C SUS)









#### USE

•High precision leveling of machine tools and surface plates. Straightness, flatness and vertical measurement.

#### **MATERIAL**

■Body: Aluminum

#### **FEATURES**

- Easy to fix the datum point, divide measurement value into halves with one-touch operation (with "0" cal. switch, 1/2 cal. switch)
- Measurement value can be output with RS232 signal
- lacktriangle Custom-made base can be attached to the threaded screw holes (M5 imes P0.8) at the bottom base
- •DL-S3C is rechargeable type. It can be charged when not in use.

#### **SPECIFICATIONS**

Model No.	DL-S3/DL-S3 SUS	DL-S3C/DL-S3C SUS	
Measuring Range*1	± 5.00mm/m · ± 0.286°		
Minimum Reading	$0.001 \text{mm/m} \cdot 0.0001^{\circ} \ (0 \sim \pm 2 \text{mm/m} \cdot 0 \sim \pm 0.115^{\circ})$ $0.01 \text{mm/m} \cdot 0.001^{\circ}$		
Operating Temperature	0 ~ 40℃		
Accuracy *2	Operating temperature17 ~ 23℃ ± 0.85%rdg (0	$\sim$ ± 2mm/m · 0 $\sim$ ± 0.115°)	
	Operating temperature $0 \sim 40^{\circ}$ C $\pm 2.6\%$ rdg (0 $\sim$	$2 \sim \pm 5 \text{mm/m} \cdot \pm 0.115^{\circ} \sim \pm 0.286^{\circ}$ ) $\sim \pm 2 \text{mm/m} \cdot 0 \sim \pm 0.115^{\circ}$ ) $2 \sim \pm 5 \text{mm/m} \cdot \pm 0.115^{\circ} \sim \pm 0.286^{\circ}$ )	
Repeatability	Within $\pm$ 0.005mm/m $\cdot$ $\pm$ 0.0003 $^{\circ}$		
Output Signal	Conforms to RS-232C **4		
Charging time	_	12 hrs. (when fully charged)	
Power Source	9V 006P type dry cell 1pc AC adapter (DC9V output $\cdot$ AC100V $\sim$ 240V) included	Ni-MH battery (8.4V 200mAh)	
Run time	Zinc-carbon cell: Approx. 10 hrs.	12 hrs. charge: Approx. 9 hrs.	
(continuous use) *3	Alkaline cell: Approx. 20 hrs.	8 hrs. charge: Approx. 6 hrs.	
		4 hrs. charge: Approx. 2 hrs.	
Dimensions	L172 × W65 × H129mm (base dimension: L150 >	( W55mm)	
Accessories	<ul> <li>Shock resistant aluminum case</li> <li>Warranty · Instruction manual · Inspection report</li> <li>AC adapter (DC9V output · AC100V ~ 240V)</li> <li>9V dry cell</li> </ul>	<ul> <li>Shock resistant aluminum case</li> <li>Warranty · Instruction manual · Inspection report</li> <li>AC adapter (DC15V output)</li> <li>Ni-MH battery (8.4V 200mAh)</li> </ul>	

\* 1: For DEG (°) Display mode, "0 (Zero)" before the decimal point is not displayed.

For 0.001 mm/m  $(0.0001^{\circ})$  display mode, maximum reading which can be displayed is less than  $\pm 1.999$  mm/m  $(\pm 0.1145^{\circ})$ .

- \* 2: % rdg indicates the percentage of displayed value
- ※ 3: May vary depending upon measurement conditions
- # 4: PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)

Order No.	Model No.	Battery Type	Base Material	Weight
010013	DL-S3	9V dry cell	Cast iron	2.2kg
010030	DL-S3C	Ni-MH battery	Cast IIOII	2.2kg
010112	DL-S3 SUS	9V dry cell	Stainless steel SUS303	2.2kg
010113	DL-S3C SUS	Ni-MH battery	Stairliess steet 303303	2.2kg

#### With V groove base - available on request

Model	DL-S3V
Tolerance	Within 0.1mm/m ( on condition that the bubble in the sub-bubble tube is within the base line)
Tolerance Between Flat and V Groove	Within 0.05mm/m
Angle of V Groove	130° ( for cylindrical objects up to $\phi$ 65mm )



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ANGLE

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# LEVELNIC DL-S3L





HOW TO MOVIE



LEVELNIC DL-S3 with magnetic L-type base.

Magnetic base enables Z-axis measurement in addition to X-axis and Y-axis.

#### USE

High precision leveling of machine tools and surface plates.
 Straightness, flatness and vertical measurement.

#### **MATERIAL**

- ●DL-S3 / Body: Aluminum
- L-type base: Cast iron

#### **FEATURES**

- Quick digital display of the measured value
- Measurement value can be output with RS-232 signal
- L-type magnetic base enables vertical (Z-axis) measurement
- ●With 130°V groove

#### POWER

- ●9V dry cell 1pc
- ■AC adapter (DC9V output · AC100V~240V)

#### **ACCESSORIES**

- Shock resistant aluminum case
- Warranty · Instruction manual · Inspection report
- ■AC adapter (DC9V output · AC100V~240V)
- ●9V dry cell



Please refer to DL-S3(P126) for detailed specifications for this unit

Order No.	Model No.	Base Squareness (mm)	Weight
010027	DL-S3L	Within ± 0.04	5.5kg

# L-TYPE BASE FOR LEVELNIC DL-SL

LEVELNIC DL-S4 series • DL-S3 series • DL-S2W series, equipped with L-type base enables measurement in the Z-axis in addition to X-axis and Y-axis



DIMENSIONS

HANDI F

**BASE** 

MAGNET HOLDER

Units: mm

#### USE

- L-type base for Levelnic
- MATERIAL
  - Cast iron

#### **FEATURES**

- Applicable Levelnic: DL-S4W series, DL-S3 series, DL-S2W series
- •Vertical (Z-axis) measurement is available by applicable Levelnic mounted on
- L-type magnetic base enables vertical (Z axis) measurement
- With 130° V groove

#### **ACCESSORIES**

Shock resistant aluminum case

Order No.	Model No.	Base Squareness (mm)	Weight
010028	DL-SL	Within ± 0.04	4.9kg

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**PRECISION** 

LEVEL

# **LEVELNIC DL-S2W SERIES**





HOW TO MOV

Wireless Data transmission. Same specification as DL-S3, and wireless system equipped. The maximum longitudinal coverage is  $50 \sim 100$ m.

- High precision Digital Level (Wireless by Bluetooth)
- Resolution 0.001mm/m
- Stainless steel base type that not requires rust prevention maintenance (DL-S2W SUS / DL-S2W (USB) SUS)



For setting a fixed pitch
Levelnic Base with Adjustable Pitch
P137

For flatness and straightness calculation
Levelnic Measurement Software
P138
~139

For vertical measurement



#### USE

•High precision leveling of machine tools and surface plates. Straightness, flatness and vertical measurement.

#### **MATERIAL**

■Body: Aluminum

#### **FEATURES**

- Wireless data transmission
- •Wireless type Levelnic, useful for leveling and tilt measurement;
  - -In overhead location
- -In places where the cable can not reach
- PC screen becomes display of Levelnic
- -Measurement data can be displayed on PC, using receiver and data display software
- lacktriangle Custom-made base can be attached to the threaded screw holes (M5 imes P0.8) at the bottom base
- \*This model does not have display on the unit. PC or display unit is required for display the measured values.

#### **SPECIFICATIONS**

Measuri	ng Range	± 5.000mm/m · ± 0.2865°		
Minimur	n Reading	0.001mm/m · 0.0001°		
Operatir	ng Temperature	0 ~ 40℃		
Accurac	y *1	Operating temperature $17 \sim 23^{\circ}\text{C}$ $\pm 0.85\%$ rdg $(0 \sim \pm 2\text{mm/m}, 0 \sim \pm 0.1146^{\circ})$ $\pm 1.0\%$ rdg $(\pm 2 \sim \pm 5\text{mm/m}, \pm 0.1146 \sim \pm 0.2865^{\circ})$ Operating temperature $0 \sim 40^{\circ}\text{C}$ $\pm 2.6\%$ rdg $(0 \sim \pm 2\text{mm/m}, 0 \sim \pm 0.1146^{\circ})$ $\pm 2.7\%$ rdg $(\pm 2 \sim \pm 5\text{mm/m}, \pm 0.1146 \sim \pm 0.2865^{\circ})$		
Repeata	bility	Within $\pm$ 0.005mm/m $\cdot$ $\pm$ 0.0003 $^{\circ}$		
Radio Sy	rstem	Bluetooth Class 1 **2		
Power S	Power Source  9V 006P type dry cell 1 pc (nominal voltage 8.4V rechargeable battery can also be used) AC adapter (DC9V output · AC100V ~ 240V) included			
Run time (Continu	nonz nze)	Alkaline dry cell: Approx. 10 hrs (nominal voltage 8.4V rechargeable battery: Approx. $3\sim4$ hrs.) % May vary depending upon measurement conditions		
Dimensi	ons	L173 × W59 × H147mm (H: up to top of antenna) (base dimensions: L150 × W55mm)		
Accessories	DL-S2W, DL-S2W SUS DL-S2W-E	<ul> <li>Shock resistant aluminum case</li> <li>Warranty · Instruction manual · Inspection report</li> <li>AC adapter (DC9V output · AC100V ~ 240V)</li> <li>Power source cable for wireless unit</li> <li>Dedicated display software</li> </ul>		
Accessories	DL-S2W (USB) SUS DL-S2W (USB)	<ul> <li>Shock resistant aluminum case</li> <li>Warranty · Instruction manual · Inspection report</li> <li>AC adapter (DC9V output · AC100V ~ 240V)</li> <li>USB receiving unit</li> <li>Dedicated display software</li> </ul>		

- $\ \ \, \text{1:}\,\,\mbox{\%}$  rdg indicates percentage of displayed value
- \* 2: Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU), KCC (South Korea)
- \* 3: PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)

Order No.	Model No.	Receiving Unit Type	Software Language	Base Material	Weight
010017	DL-S2W	D-SUB9		Cast iron	2.1kg
010054	DL-S2W(USB)	USB	lananoco	Cast IIOII	2.1kg
010114	DL-S2W SUS	D-SUB9	Japanese Stainless steel SUS303	2.1kg	
010115	DL-S2W (USB) SUS	USB		Stairtiess steet 303303	2.1kg
010029	DL-S2W-E	D-SUB9	English	Cast iron	2.1kg



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# LEVELNIC DL-m1 SERIES







HOW TO MOVIE

waiting for reading to settle, reducing human error.

■ High precision Digital Level
■ Stainless steel base type (DL-m1 SUS)

Digital display with 0.01mm/m resolution. Unlike bubble level, there is no delay

■ Resolution 0.01mm/m

USE

High precision leveling of machine tools and surface plates. Straightness and flatness measurement.

#### MATERIAL

■Body: Aluminum

**SPECIFICATIONS** 

#### **FEATURES**

- Compact, lightweight and simple operation
- Easy to fix the datum point, divide measurement value into half with one touch operation
- Fast output reduces installation time for field work

DL-m1 SUS

Order No.	Model No.	Base Material	Weight
010014	DL-m1	Cast iron	880g
010117	DL-m1 SUS	Stainless steel SUS303	920g

Measuring Range	± 5.00mm/m		
Minimum Reading	0.01mm/m		
Operating Temperature	0 ~ 40℃		
Accuracy *	Operating temperature $17 \sim 23^{\circ}C \pm 0.02$ mm/m or $\pm 3\%$ rdg whichever is larger ( $0 \sim \pm 2$ mm/m) $\pm 4\%$ rdg ( $\pm 2 \sim \pm 5$ mm/m) Operating temperature $0 \sim 40^{\circ}C \pm 0.02$ mm/m or $\pm 5\%$ rdg whichever is larger ( $0 \sim \pm 2$ mm/m) $\pm 6\%$ rdg ( $\pm 2 \sim \pm 5$ mm/m)		
Repeatability	Within ± 0.01mm/m		
Power Source	9V dry cell 1 pc		
Run time (continuous use)	Zinc-carbon cell: Approx. 45 hrs. / Alkaline cell: Approx. 90 hrs. *May vary depending upon the measurement conditions		
Dimensions	L105 × W50 × H73mm (base dimensions: L100 × W50mm)		
Accessories	● Shock resistant aluminum case		

<sup>\* %</sup> rdg indicates the percentage of displayed value

# LEVELNIC DL-m3 SERIES

Digital display with 0.01mm/m resolution. Unlike bubble level, there is no delay waiting for reading to settle, reducing human error.

■ High precision Digital Level
■ Stainless steel base type ■ Resolution 0.01mm/m (DL-m3 SUS)

## With data output

USE

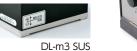
•High precision leveling of machine tools and surface plates. Straightness and flatness measurement.

#### MATERIAL

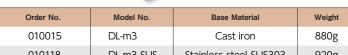
Body: Aluminum

#### **FEATURES**

- Digital display for easy to read measurement
- Compact, lightweight and simple operation
- Equipped with RS-232C output for combination use of Data recording, Straighness and Flatness software



Order No.	Model No.	Base Material	Weight
010015	DL-m3	Cast iron	880g
010118	DL-m3 SUS	Stainless steel SUS303	920g



# **SPECIFICATIONS**

Measuring Range	± 5.00mm/m		
Minimum Reading	0.01mm/m		
Operating Temperature	0 ~ 40℃		
Accuracy *1	Operating temperature $17\sim23^{\circ}$ $\pm0.02$ mm/m or $\pm3\%$ rdg whichever is larger ( $0\sim\pm2$ mm/m) $\pm4\%$ rdg ( $\pm2\sim\pm5$ mm/m) Operating temperature $0\sim40^{\circ}$ $\pm0.02$ mm/m or $\pm5\%$ rdg whichever is larger ( $0\sim\pm2$ mm/m) $\pm6\%$ rdg ( $\pm2\sim\pm5$ mm/m)		
Repeatability	Within ± 0.01mm/m		
Output Signal	Conforms to RS-232C **2		
Power Source	9V dry cell 1 pc		
Run time (continuous use)	Zinc-carbon cell: Approx. 35 hrs. / Alkaline cell: Approx. 70 hrs. *May vary depending upon measurement conditions		
Dimensions	$L105 \times W50 \times H73$ mm (base dimensions: $L100 \times W50$ mm)		
Accessories	● Shock resistant aluminum case ● Warranty · Instruction manual · Inspection report ● 9V dry cell		

\* 1: % rdg indicates percentage of displayed value







LEVELNIC

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PDI

L-type Base

For vertical measurement

For flatness and straightness calculation

Zerust Film for Steel

P130

P138

 $\sim$ 139

P380

**ANGLE** 

LEVEL

<sup>※ 2:</sup> PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)

# LEVELNIC DL-m3LS





HOW TO MOV



X-axis, Y-axis as well as Z-axis measurements are possible.

# straightness calculation Levelric Measurement Software P138 ~139





High precision leveling of machine tools and surface plates.
 Straightness, flatness and vertical measurement.

#### **MATERIAL**

- ●DL-m3 / Body: Aluminum
- L-type base: Cast iron

#### **FEATURES**

- Digital display
- Compact and lightweight
- Equipped with RS-232C output for combination use of Data recording, Straighness and Flatness software
- L-type base allows measurements in the vertical direction
- With 130° V groove

#### **ACCESSORIES**

- Shock resistant aluminum case
- ■Warranty · Instruction manual · Inspection report
- ●9V dry cell

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**PRECISION** 

**ANGLE** 

LEVEL

PROTRA CTOR

LEVEL

Please refer to DL-m3 (P129) for detailed specifications for this unit

\* Base does not have magnetic capability

Order No.	Model No.	Base Squareness (mm)	Weight
010019	DL-m3LS	Within $\pm 0.035$	2.8kg

# L-TYPE BASE FOR LEVELNIC DL-mL

Levelnic DL-m1, m3 mounted on base will be able to take vertical measurements





DIMENSIONS

Units: mm

## USE

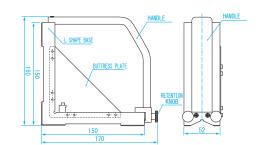
- L-type base for Levelnic
- MATERIAL
- Cast iron

#### **FEATURES**

- Applicable Levelnic: DL-m1 series, DL-m3 series
- Vertical (Z-axis) measurement is available by applicable Levelnic mounted on
- ■With 130° V groove

#### **ACCESSORIES**

Shock resistant aluminum case



\* Base does not have magnetic capability

Order No.	Model No.	Base Squareness (mm)	Weight
010022	DL-mL	Within $\pm$ 0.035	1.9kg

# **BLUETOOTH BOX**

Attach Bluetooth Box to applicable levelnic for wireless data transmitting. Can be functioned in any countries by using Bluetooth dongle.



#### USE

 Wireless data transmitting is available by attaching to applicable Levelnics

#### **MATERIAL**

- Body: Aluminum
- Switch Panel: ABS

#### **FEATURES**

- RS-232C output signal from Levelnic is transmitted by Bluetooth
- Can be used in any country with a locally available dongle
- Eliminating cables greatly improves work efficiency





Mounting example to DL-S3

#### **SPECIFICATIONS**

Input	Levelnic RS-232C signal only			
Wireless	Bluetooth * Class depends on USB dongle			
Applicable USB Dongle adaptor	Bluetooth 3.0 and higher, SPP profile			
Power Source	Lithium polymer battery (chargeable with USB charging cable)			
Run time (continuous use)	Approx. 7 hrs.	Approx. 7 hrs. Charging Approx. 2 hrs.		
Dimensions	L82 × W35 × H24mm	L82 × W35 × H24mm		
Applicable Levelnic	DL-S3 series, DL-m3 series, DL-m3LS, DL-D3, DL-S3L			
Accessories	Data cable, USB charging cable, mounting	plate, instruction manual, Bluetootl	n USB dongle adaptor Class 1 (Japan Only)	

Order No.	Model No.	Weight
152036	DTW-DL01	80g

# LEVELNIC WIRELESS ADAPTER DL-BW / DL-BW (USB)

Allows communicating with Levelnic using Bluetooth. Wireless range of 50-100mm line-of-sight.



Wireless adapter for Levelnic

#### MATERIAL

Body: Stainless

#### **FEATURES**

- The RS232C output signal is transmitted using Bluetooth wireless
- Eliminating cables greatly improves work efficiency





Mounting example to DL-S3C

## SPECIFICATIONS

	Input	Levelnic RS-232C signals (Levlnic use only)
	Wireless Bluetooth Class 1 **1	
	Power Source	AA battery 6 pcs (rechargeable batteries can be used)
	Run time (continuous use)	Alkaline cell: Approx. 70 hrs. / Zinc-carbon cell: Approx. 30 hrs. 1700mAh rechargeable battery: Approx. 45 hrs. * May vary depending upon measurement conditions
	Dimensions	L143 × W50 × H173mm (including trasmission unit)
	Applicable Levelnic	DL-S3 series, DL-S3L, DL-m3, DL-m3LS, DL-D3 * DL-S3 series can direct mount
Accessories Mounting parts, receiving unit, USB power cable for receiving unit (DL-BW only), AA battery × 6, instru		Mounting parts, receiving unit, USB power cable for receiving unit (DL-BW only), AA battery $\times$ 6, instruction manual

- \* A small thermal printer can not be used
- \* 1: Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU), KCC (South Korea)
- \* 2: PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)

Order No.	Model No.	Receiving Unit Type	Weight
010038	DL-BW	D-SUB9 <sup>*2</sup>	530g
010055	DL-BW (USB)	USB	530g



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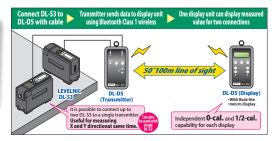
LEVEL

# TRANSMITTER / DISPLAY SET

For displaying measurements from two DL-S3 series products in one handy device at the same time. Suitable for X and Y direction measurement.

#### USE

- Transmit and display measurements for up to two Levelnic DL-S3 series products FEATURES
  - Simultaneous display of two connected DL-S3 series products.
     Useful for measuring X and Y directions.
  - Eases installation of large machine tools by allowing multiple operators to work at same time
  - •Measured data is more easily visible, especially when used in locations which are remote or have low clearance height
  - Since transmitter and receiver are a paired set, there is no need to set up after purchase -- it can be used immediately



#### **SPECIFICATIONS**

	Transmitter	Display	
Input	Levelnic DL-S3 series external signal (×2)	_	
Display	-	16 char $\times$ 2 lines character size = 4.9 $\times$ 2.5mm with backlight	
Wireless Bluetooth Class1 **1			
Communication Range	$50\sim$ 100m line-of-sight (depending on conditions)		
Operating Temperature	0 ~ 40℃		
Power 2 × AA battery (can also use commercially available rechargeable b		echargeable batteries)	
Operating life (continuous use)	Communicating with display device: Approx. 17 hrs. attempting communication with display: Approx. 3 hrs.		
Dimensions 144 × W76 × D27mm (including lanyard ring) (when mounted in silicone cover: L147 × W81 × D35mm)		imm)	
Accessories	2 × connecting cable (approx. 80cm length) 2 × AA battery, silicone cover		

- \* 1: Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU), KCC (South Korea)
- \* 2: The value of three decimal places digit of the display may show inappropriate number when using DL-m3
- \* 3: Including batteries and silicone cover

Order No.	Model No.	Compatible Model	Weight
010043	DL-D5	DL-S3 series • DL-S3L • DL-m3 * 2	290g each <sup>*3</sup>

# LEVELNIC DISPLAY

Can display data at a distance. Enables measurement process to be done by one person.

The work for two can be done by one person

#### USE

Levelnic measurement data display

#### MATERIAL

Body: Stainless steel

#### FEATURES

**SPECIFICATIONS** 

 Can divide measurement value into half with one-touch operation (DL-S2W series only)



Combination example with DL-S2W

Order No.	Model No.	Weight
010024	DL-D4	330g

Display Range	As per Levelnic spec.
Minimum Reading	As per Levelnic spec.
Operating Temperature	0 ~ 40℃
Input Signal	Conforms to RS-232C (Levelnic digital output signal only)
Power Source	9V dry cell (nominal voltage 8.4V rechargeable battery can also be used) / AC adapter (included)
Run time (continuous use)	With wireless connection: Alkaline cell: Approx. 5 hrs. With cable connection: Alkaline cell: Approx. 60 hrs. May vary depending upon measurement conditions
Dimensions	L116 × W62 × H48mm
Applicable Levelnic	DL-S3 series, DL-S3L, DL-m3 series, DL-m3LS, DL-S2W series, DL-S4W series (wired)  # DL-P5AD, DL-P6 can also use cable connection  # DL-S2W, DL-BW can connect using buit-in wireless capability  # DL-S4W (USB receiving unit), DL-S2W (USB), DL-BW (USB) cannot be used on this unit
Accessories	AC adaptor (DC9V output $\cdot$ AC100V $\sim$ 240V), 9V dry cell, instruction manual



LEVELNIC

PRECISION LEVEL

ANGLE

LEVEL

# LEVELNIC DATA SYSTEM

#### Enables data display and saving of up to eight Levelnic with one PC



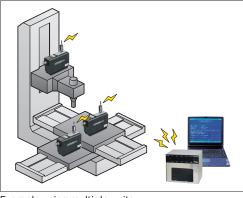
#### USE

 For data management of multiple Levelnics MATERIAL

Body: Stainless steel

#### **FEATURES**

- •Eight Levelnics can be connected at once
- Data display & recording software included (auto capture function)



Example using multiple units with Bluetooth wireless communication

Order No.	Model No.	Software Language	Weight
010037	DL-ADP	Japanese	1.6kg
010089	DL-ADP-E	English	1.6kg

#### SPECIFICATIONS

Input	D-SUB (9 pins, male) RS-232C compliant, 8 inputs (for Levelnic connection only) 1200 baud, 1 stop bit, no parity, no handshaking)
Output	D-SUB (9 pins, male)* RS-232C compliant, 1 output (PC connection) 9600 baud, 1 stop bit, no parity Hardware flow control
Operating Temperature	0 ~ 40°C
Power Source	AC100V adapter (DC9V output) AA batteries 6 pcs (rechargeable battery can also be used)  Run time depends on number of Levelnics
Dimensions	W180 × H150 × D130mm
Applicable Levelnic	DL-S3 series, DL-S3L, DL-m3 series, DL-m3LS, DL-S2W series, DL-S4W series (wired)  ** DL-P5AD, DL-P6 can also use cable connection  ** DL-S2W, DL-BW can connect using buit-in wireless capability  ** DL-S4W (USB receiving unit), DL-S2W (USB), DL-BW (USB) cannot be used on this unit
Accessories	Data recording software, RS-232C cross cable, AC adaptor (DC9V output 100V), AA battery $\times$ 6, instruction manual

<sup>#</sup> PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)

LEVELNIC

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LEVEL

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# **LEVELNIC SD LOGGER 3**

Measured value is recorded directly on SD card. Loading data automatically at a specific interval by script function.

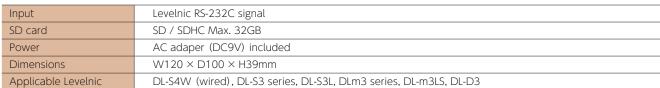
#### USE

- To record measured value by Levelnic
- •Measured value can be recorded on SD card without PC

#### FEATURES

- To record data on sites that PC is not suitable
- Recorded data by text format can be used with other software
- Loading data automatically at a specific interval by script written in advance on SD card
- Paperless by saving data on SD card





Order No.	Model No.	Weight
010044	DT-MCK3-XS-SK	170g



# SEPARATE SYSTEM / LEVELNIC CABLE







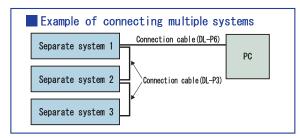
# ■ High accuracy Digital Level

## ■ Resolution 0.001mm/m



• Digital sensor (DL-S2) • Digital display (DL-D3) • Cable (DL-P1) as combined system

#### **\* PC** is not included



#### USE

- High precision leveling of machine tools and surface plates. Straightness and flatness measurement for digital display. **MATERIAL** 
  - Body: Aluminum
  - Sensor base: Cast iron

#### **FEATURES**

- Display allows machine tool data obtained by Levelnic to be close at hand
- Output data is available on built in RS-232C interface for connection to computer or printer
- •Multiple output signals can be combined onto one signal allowing expansion to 2, 3, or 4 devices for easy processing
- Easy to fix the Datum point, divide measurement value into half with one touch operation
- Custom-made base can be attached to the threaded screw holes (M5 × P0.8) at the bottom base

#### **SPECIFICATIONS**

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Measuring Range	± 5.000mm/m · ± 0.2865°
Minimum Reading	0.001mm/m · 0.0001° 0.01mm/m · 0.001°
Operating Temperature	0 ~ 40℃
Accuracy	Operating temperature $17 \sim 23^{\circ}$ C $\pm 0.85\%$ rdg $(0 \sim \pm 2 \text{mm/m} \cdot 0 \sim \pm 0.1146^{\circ})$ $\pm 1.0\%$ rdg $(\pm 2 \sim \pm 5 \text{mm/m} \cdot \pm 0.1146 \sim \pm 0.2865^{\circ})$ Operating temperature $0 \sim 40^{\circ}$ C $\pm 2.6\%$ rdg $(0 \sim \pm 2 \text{mm/m} \cdot 0 \sim \pm 0.1146^{\circ})$ $\pm 2.6\%$ rdg $(0 \sim \pm 2 \text{mm/m} \cdot 0 \sim \pm 0.1146^{\circ})$ $\pm 2.7\%$ rdg $(\pm 2 \sim \pm 5 \text{mm/m} \cdot \pm 0.1146 \sim \pm 0.2865^{\circ})$
Repeatability	Within $\pm$ 0.005mm/m $\cdot$ $\pm$ 0.0003 $^{\circ}$
Output Signal	Conforms to RS-232C*
Power Source	AA battery 6 pcs AC adapter (DC9V output $\cdot$ AC100V $\sim$ 240V) included
Run time (continuous use)	Zinc-carbon cell: Approx. 27 hrs. Alkaline cell: Approx. 55 hrs. ※ May vary depending upon measurement conditions
Dimensions	DL-S2 L167 × W59 × H111mm (base dimension: L150 × W55mm) DL-D3 L235 × W106 × H51mm DL-P1 Length: 5m (standard cable) / DL-P3 Length: 4.5m
Accessories	<ul> <li>Shock resistant aluminum case</li> <li>Warranty · Instruction manual · Inspection report</li> <li>AC adapter (DC9V output · AC100V ~ 240V)</li> </ul>
* PC without D-LISB pin port	(RS-232C) requires LISB social transmitter (ontional)

<sup>\*</sup> PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)

Order No.	Product	Model No.	Weight
010023	DISPLAY UNIT	DL-D3	1kg
010012	LEVELNIC	DL-S2	2kg
010031	CONNECTING CABLE FOR LEVELNIC	DL-P1	400g
010033	CONNECTING CABLE FOR DISPLAY UNIT	DL-P3	100g

#### ■ PC connection cable

#### USE

For connecting Levelnic to PC

#### **SPECIFICATIONS**

- •Length: φ3mm×5m
- 9 pins connector (serial port connection)
- Applicable Levelnic: DL-S4W series, DL-S3 series, DL-S3L, DL-m3 series, DL-m3L, Separate system
- \* PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)

Order No.	Model No.	Material
010040	DL-P6	2 cond. w/ shield (Cu)



# LEVELNIC DL-S1

T PDI

Digital display with 0.01mm/m resolution.
Unlike bubble level, there is no delay waiting for reading to settle, reducing human error.

- **■** High precision Digital Level
- Resolution 0.01mm/m





•High precision leveling of machine tools and surface plates, straightness and flatness measurement MATERIAL

- ■Body: Aluminum
- ■Base: Cast iron

#### **FEATURES**

- Faster response than bubble level
- •Wider range of measurement than conventional level
- Measurement can be taken in difficult-to-see position by pressing hold switch and then reading

#### **SPECIFICATIONS**

Measuring Range	± 9.99mm/m		
Minimum Reading	0.01mm/m		
Operating Temperature	0 ~ 40℃		
Accuracy *1	Operating temperature $17 \sim 23^{\circ}$ C ± 1.3% rdg		
	Operating temperature 0 $\sim$ 40°C $\pm$ 3.0% rdg		
Repeatability	Within ± 0.01mm/m		
Power Source *2	9V dry cell 1 pc		
	AC adapter (100V $\sim$ 240V) (optional)		
Run time (continuous use)	Zinc-carbon cell: Approx. 25 hrs.		
	Alkaline cell: Approx. 50 hrs.		
	May vary depending upon measurement conditions		
Dimensions	L159 × W78 × H104mm (base dimension: L150 × W55mm)		
Accessories	● Shock resistant aluminum case		

% 1: % rdg indicates percentage of displayed value

※ 2: AC adapter sold separately

Order No.	Model No.	Weight
010011	DL-S1	2.0kg

#### With V groove base - available on request

Model	DL-S1V
Rolling Error	Within 0.1mm/m when the bubble of auxiliary bubble tube is centered
Plane and V groove error	Within 0.05mm/m
V groove angle	130° (for cylindrical objects up to $\phi$ 65mm )



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# **LEVELNIC EL-01A SERIES**



High-sensitive (0.01mm/m). Pendulum type level with analog output. Three levels of sensitivity.

# **■** High precision Analog Level

## ■ Resolution 0.01mm/m

#### USE

Leveling of machine tools and surface plates. Straightness and flatness measurements.

#### **MATERIAL**

■Body: Aluminum

**SPECIFICATIONS** 

#### **FEATURES**

- Quicker response than bubble level
- Sensitivity is switchable in three steps
- Connectible directly to commonly-available analog recorder through analog output
- Custom-made base can be attached to the threaded screw holes  $(M5 \times P0.8)$  at the bottom base
- Pendulum system prevents any hysteresis errors and is not influenced by temperature change



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Sensitivity	I: 1Division = 0.01mm/m
	II: 1Division = 0.05mm/m
	Ⅲ: 1Division = 0.1mm/m
Measuring Range	± 0.2mm/m (1Division 0.01mm/m)
(3 Range)	± 1mm/m (1Division 0.05mm/m)
	± 2mm/m (1Division 0.1mm/m)
Operating Temperature	0 ~ 40°C
Pointing Error	Within ± 0.5 Division
Repeatability Accuracy	Within ± 0.005mm/m
Output Signal	Analog output
	± 200mV F.S. (for all range)
	Connectible load resistance: No less than 100 $\Omega$
Power Source	9V dry cell 1 pc
	AC adapter (DC9V output $\cdot$ AC100V $\sim$ 240V) included
Run time (continuous use)	Zinc-carbon cell: Approx. 25 hrs.
	Alkaline cell: Approx. 50 hrs.
	* May vary depending upon measurement condition
Base Dimension	L150 × W85 × H195mm
Accessories	Shock resistant aluminum case  Warranty • Instruction manual • Inspection report  On AG adapter (DCOV) output • AC100V • 240VV
	● AC adapter (DC9V output · AC100V ~ 240V) ● 9V dry cell

Order No.	Model No.	Base Material	Weight
010005	EL-01A	Cast iron	2.9kg
010116	EL-01A SUS	Stainless steeel SUS303	2.9kg

#### ■ Connection Cable / EL-K2

Connects to analog recorder with analog output of EL-01A

#### **SPECIFICATIONS**

■Length: φ3 × 5m
■Recorder: Banana plug

Levelnic: M3 plug

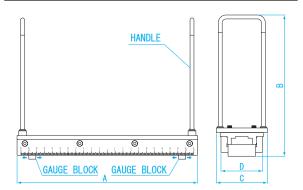
Order No.	Model No.	Weight
010082	EL-K2	150g

# LEVELNIC BASE WITH ADJUSTABLE PITCH

# By attaching Levelnic to this base, any desired measurement pitch can be set



#### DIMENSIONS



#### USE

- Setting a fixed pitch for straightness and flatness measurements MATERIAL
  - Carbon steel for machine structural use

#### **FEATURES**

- Applicable levelnic: DL-S4 series, DL-S3 series, DL-S2W series, DL-S2, EL-01A series
- The base is graduated in mm and enables setting measurement pitch
- •Measuring face consists of 2 pcs of 15mm Gauge block

			Unit	s: mm
Model No.	Α	В	С	D
LP-200	230	180	65	55
LP-300	330	180	65	55

Order No.	Model No.	Measurement pitch range (mm)	Weight
010020	LP-200	50 ~ 200	1.8kg
010021	LP-300	50 ~ 300	2kg

# CARRYING CASE FOR LEVELNIC







Carrying case for Levelnic

(Levelnic is a precision instrument, we recommend that you use a carrying case)

#### MATERIAL

USE

- ■Body: Aluminum
- Inside: Urethane foam

#### **FEATURES**

Applicable levelnic:

LV-CS3: DL-S4W series, DL-S3 series, DL-S2W serires, DL-S2, DL-S1

LV-CM1: DL-m1 series, DL-m3 series

Shock protection during transport

Order No.	Model No.	Dimensions (mm)	Weight
010025	LV-CS3	362 × 236 × 184	1.50kg
010026	LV-CM1	250 × 200 × 150	0.97kg



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## SOFTWARE FOR LEVELNIC

Software for Levelnic.

Simple operation and graphics for easy use and understanding.

# Straightness measurement computer software (ST) Flatness measurement computer software (FL)

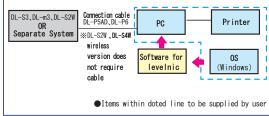
- Greatly reduces measurement time by recording the results for straightness and flatness measurements
- For cabled and wireless system
- Supported OS: Windows XP, Vista, 7, 8, 10
- Direct input from DL-S4W series, DL-S3 series, DL-S3L, DL-S2W series, DL-S2+D3, DL-m3 series, DL-m3LS, and Separate System

■ Flatness measurement

■ Straightness measurement while connected to PC







## No need to install the software to PC

Only drag and drop EXE file, and double click to start. Also can be used directly from USB memory.

## Input selection

Data can be manually typed in from any level, including bubble tube type level

## Input signal from Levelnic over RS-232C

With computer connected to the Levelnic output, sequential measurements taken at regular intervals can be used to calculate flatness and straightness for display, printing and storage. (saved measurement data can not be revised)

## Input typed onto keyboard from bubble level for display, calculation and storage

Using a bubble level and keyboard to enter data, sequential measurement taken at regular intervals can be used for calculation, display and storage

#### Displacement measurements (µm) typed onto keyboard for display, calculation and storage

Measurement of displacement from a reference plane made with a linear gauge or dial indicator at regular intervals can be used in place of an electronic angle gauge (goniometer) and entered into keyboard for calculation, display and storage

# LEVELNIC MEASUREMENT SOFTWARE

now to mov

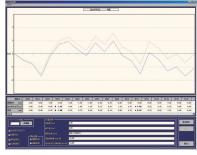
Use to easily calculate straightness when connect to Levelnic with cable or wireless connection

# Straightness software

With Straightness software Levelnic can easily perform the straightness measurements that once required an autocollimator, and for a lower cost

Straightness measurement





#### USE

Software to perform straightness calculations FEATURES

- Both wired and wireless capability
- Model compatibility: DL-S4W series, DL-S3 series, DL-S3L, DL-S2W series, DL-S2+D3, DL-m3 series, DL-m3LS
  - \*\*Above compatibility applies for direct connection. Data can be manually typed in

from any model, including bubble tube type level.

#### **SPECIFICATIONS**

Supports: Windows XP, Vista, 7, 8, 10

Order No.	Model No.	Language
010066	ST	Japanese
010070	ST-E	English
010073	ST-C	Chinese

# LEVELNIC MEASUREMENT SOFTWARE

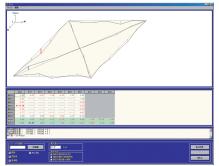


Use to easily calculate flatness when connect to Levelnic with cable or wireless connection

#### ■ Flatness software

- With Flatness software Levelnic can easily perform the flatness measurements that once required an autocollimator, and for a lower cost
- Flatness measurement





USE

- Software to perform flatness calculationsFEATURES
  - Both wired and wireless capability
  - Model compatibility: DL-S4W series, DL-S3 series, DL-S3L, DL-S2W series, DL-S2+D3, DL-m3 series, DL-m3LS
    - \*\*Above compatibility applies for direct connection. Data can be manually typed in from any model, including bubble tube type level.

**SPECIFICATIONS** 

Supports: Windows XP, Vista, 7, 8, 10

Order No.	Model No.	Language
010065	FL	Japanese
010069	FL-E	English
010072	FL-C	Chinese



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# LEVELNIC DATA RECORDING SOFTWARE

# ■ Data recording software LEVELOG

USE

Records output data from Levelnic

**FEATURES** 

- Levelnic measurements are recorded to text file
- •Model compatibility: DL-S4W series, DL-S3 series, DL-S3L,

DL-S2W series, DL-S2+D3, DL-m3 series, DL-m3LS

**SPECIFICATIONS** 

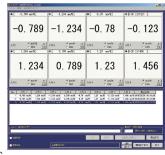
Order No.	Model No.	Language
010067	LEVELOG	Japanese
010068	LEVELOG-E	English

# Supports: Windows XP, Vista, 7, 8, 10 010068 LEVELC

#### ■ Data recording software LEVELOG-M

For data management of multiple use of Levelnic. Display and record up to eight data channels.





USE

- For displaying measurement values on PC screen and loading its data into PC for up to eight units of Levelnic FEATURES
- ●Loadable up to 14,400 data points which can be saved as plain text
- Selectable data loading Manual loading / Auto-loading at set time interval
- Model compatibility: DL-S4W series, DL-S3 series, DL-S2W series, DL-S2+DL-D3, DL-m3 series SPECIFICATIONS
  - Supports: Windows XP, Vista, 7, 8, 10
- Computer requires COM port or USB port for each connected Levelnic

Order No.	Model No.	Language
010074	LEVELOG-M	Japanese
010075	LEVELOG-M-E	English