

LT

LT30 SERIES (for DK series)

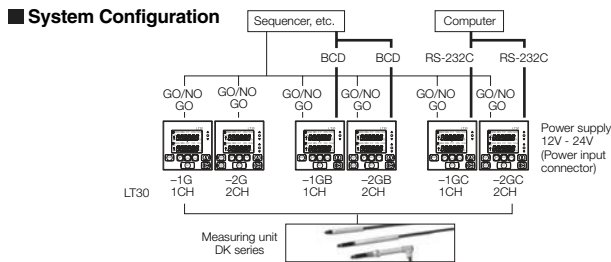
Counter compatible with our compact, high-precision DK series of digital gauges.



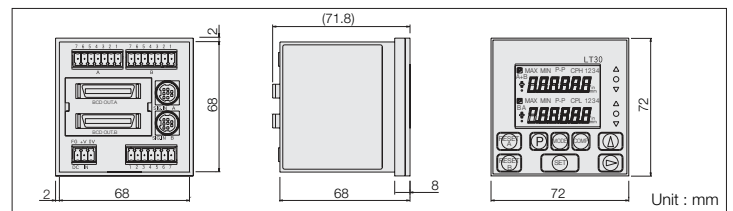
Counter unit

- Maximum display resolution : 0.1 μm
- Zero point detection
- BCD and RS-232C I/O models are available.
- Compact and lightweight: DIN standardsize (W 72mm x H 72mm)
- Comparator ● Reset/Preset
- Alarm for exceeded max. response speed and disconnected measuring unit
- Setting value storage
- 2-axis ADD/SUB (2-axis model only)

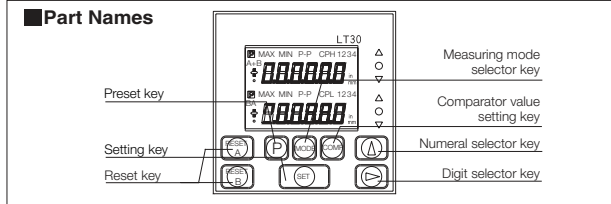
System structure



■ Dimensions(LT30-2GB)



■ Part Names



■ Input/output Pins

- I/O connector
Inputs : Reset, Peak hold start, Peak hold pause
Outputs : GO/NO GO ● Power input connector : 12 to 24V DC power
- BCD (36-pin half-pitch connector)
Inputs : Comparator value selection (4 settings), Mode selection (Current value, Maximum measured value, Minimum measured value, P-P value) Outputs (Open collector) : Measured data (6 digits), Alarm output
- RS-232C (8-pin mini-DIN connector) Reset, Preset value setting/recall, Peak hold start, Peak hold pause, Comparator value setting, Mode selection and output (Current value, Maximum measured value, Minimum measured value, P-P value)
- RS-TRG Trigger inputs for RS-232C data outputs

■ Separate accessories (Connectable to LT30-1GC/2GC)

- RS-232C cable DZ252 : D-sub 9-pin DZ253A : D-sub 25-pin

Common Specifications

Model	LT30-1G	LT30-1GB	LT30-1GC	LT30-2G	LT30-2GB	LT30-2GC
Display	6 digit backlit LCD, mode display					
I/O	Measuring unit input	1 channel		2 channel		
	I/O connectors *1	—		○	—	
	BCD *2	—	○	—	○	—
	RS-232C *3	—	—	○	—	○
Reset function	Reset key or external input (I/O connectors)					
	—	—	RS-232C command	—	—	RS-232C command
Preset function	Preset value set with preset key, recalled with reset key.					
	—	—	Set or recalled with RS-232C command	—	—	Set or recalled with RS-232C command
Comparator function	Three-level comparator Comparator value set with keys on the front panel. Result evaluation: LED and I/O connector output (photocoupler)					
	—	Up to 4 values can be set for comparator (key input). Switched with BCD terminal.	Set with RS-232C command	—	Up to 4 values can be set for comparator (key input). Switched with BCD terminal.	Set with RS-232C command
Peak hold function	Maximum, minimum, and peak-to-peak values. Measuring started by the start input of the I/O connector; update stop by pause input.					
	—	—	RS-232C can set or start.	—	—	RS-232C can set or start.
Input resolution	0.0001 mm, 0.0005 mm, 0.001 mm, 0.005 mm, 0.01 mm selectable					
Display resolution	0.0001 mm, 0.0005 mm, 0.001 mm, 0.005 mm, 0.01 mm (0.00002", 0.00005", 0.0002", 0.0005") selectable					
Direction	Can be switched					
Reference point function	Function use enabled/disabled can be selected (if use is enabled, the unit enters reference point signal input wait status at the same time as power-on).					
Maximum response speed	20 MHz (A/B phase difference)					
Addition and subtraction function	—			A+B, A-B, B-A can be set with the direction setting.		
Alarm	Speed over or measuring unit cable disconnected (Displayed on LCD or the I/O connector's comparator outputs are all "H" (OFF).)					
	—	BCD alarm terminal "H" (OFF)	—	—	BCD alarm terminal "H" (OFF)	—
Data storage	Resolution, direction, comparator value, preset value, modes, etc.					
	—	BCD sign, etc	Data signalling rate, etc.	—	BCD sign, etc	Data signalling rate, etc.
Temperature	Operating temperature: 0 to 40°C Storage temperature: -10 to 50°C					
Power consumption *5	5 W	5.5 W	5 W	8.5 W	9 W	8.5 W
Mass	Approx. 200 g	Approx. 230 g	Approx. 220 g	Approx. 210 g	Approx. 270 g	Approx. 230 g
Power voltage	Power input connector (3 pins) : DC9.0 to 26.4 V.					
Compatible measuring unit	DK series					

Note 1 : I/O connector

Input : Reset, peak-hold start, peak-hold pause, RS trigger (RS-232C models only)
Output : Result evaluation (photocoupler)

Note 3 : RS-232C (8 pin mini-DIN connector)

Reset, preset value setting/recall, peak-hold start, peak-hold pause, current value hold, software version read, comparator value setting, current value/maximum value/minimum value/peak-to-peak measuring mode selection and output, key lock and release.

Note 2 : BCD (36 pin half-pitch connector)

Input : Reset, peak-hold start, comparator value selection (4 settings)
Output : five digits (open collector) One of current value/maximum value/minimum value/peak-to-peak value selected and output.

Alarm output

Note 4 : RS-TRG pin

Trigger input for RS-232C data output

Note 5 : With measuring unit connected.

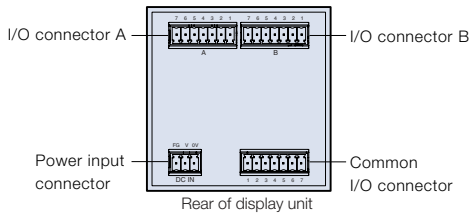
Technical information

LT Series Usage Note

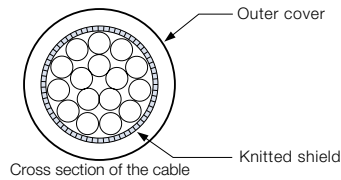
I/O connector

The I/O connector on the rear panel of the counter unit has functions for Go/No Go output based on the comparator function, start input, pause input, RS-232C trigger input and reset input.

Connector pin assignment (LT30, LT20A, LT11A, LT10A)



Use a shielded cable for connection to the FG pin on the rear of the display unit. (Prepare a shield cable by yourself.)



Connector used: MC1.5/7-ST-3.5 (provided) made by Phoenix Contact

Signal
(See "4-3. Function description".)
I/O connector A

Pin No.	Signal name	IN/OUT	Signal
1	GND	-	
2	NC	-	Connection prohibited
3	RESET (A)	IN	Reset input (A CH)AB
4	LO (A)	OUT	Go/No Go output Low (A CH)
5	GO (A)	OUT	Go/No Go output Go (A CH)
6	HI (A)	OUT	Go/No Go output High (A CH)
7	GND	-	

I/O connector B (not provided for 1-channel models)

Pin No.	Signal name	IN/OUT	Signal
1	GND	-	
2	NC	-	Connection prohibited
3	RESET (B)	IN	Reset input (A CH)AB
4	LO (B)	OUT	Go/No Go output Low (B CH)
5	GO (B)	OUT	Go/No Go output Go (B CH)
6	HI (B)	OUT	Go/No Go output High (B CH)
7	GND	-	

Installing the display unit

When mounting in a panel

1. Cut out an opening to match the dimensions shown (Fig.2)
2. Insert the display unit into the cut-out opening in the panel from the front.
3. Attach the supplied installation brackets (upper / lower) from the rear.
4. Use fingers to tighten and secure.

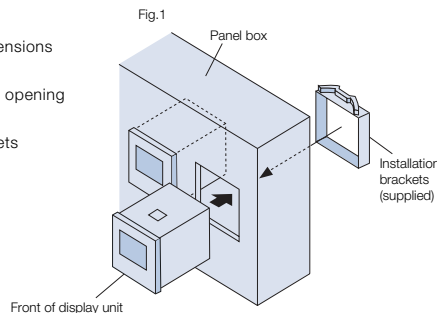


Fig.2 Cut-out dimensions

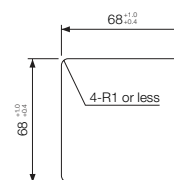
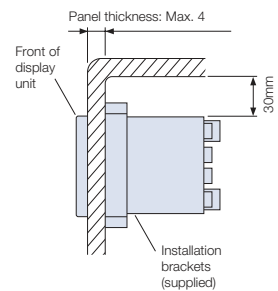


Fig.3



Note: When attaching the installation brackets to the display unit, leave enough space (min. 30mm) between it and the panel.

Unit : mm/inch