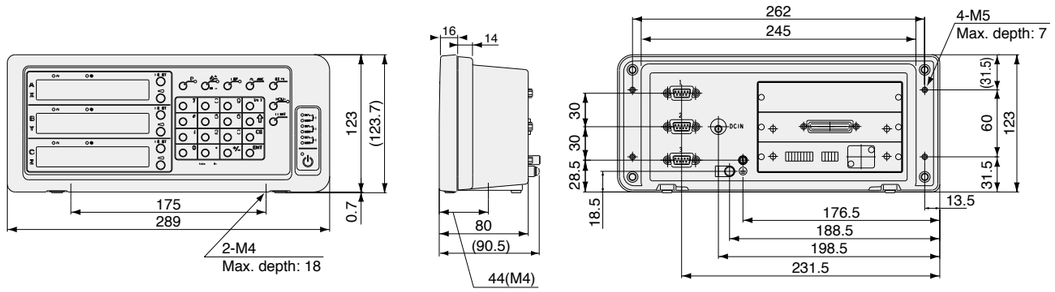
LY LY72

Output RS-232C



Unit: mm

Specifications

Model	LY72	
Compatible measuring units	DK Series (connection cable CE29 required), GB-ER, SJ700A Series (Magnescale)/PL20 Series (Digiruler)	
Number of input axes	1 axis, 2 axes, or 3 axes (by parameter setting)	
Input resolution	Linear standard: 0.1 / 0.5 / 1 / 5 / 10 μm (expanded linear: 0.05 / 2 / 20 / 25 / 50 / 100 μm), Angle: 1 s / 10 s / 1 min / 10 min, (Expanded angle: 1 degree)	
Number of display axes	3 axes (A-, B-, and C-axis display)	3 axes (X-, Y-, and Z-axis display)
Display data	When axis label A, B, and C are selected	When axis label X, Y, and Z are selected
	Current, max., min., and peak-to-peak values (= max. value − min value) of each axis	Current value of each axis
Display resolution	Measuring unit input resolution or more. It is possible to provide simple angle display by adhering Digiruler in arc. (There are limitations on displayable resolution depending on radius size.)	
Direction	Parameter-based polarity setting for each axis	
Alarm display	Measuring unit unconnected, excess speed, display-digit overflow	
Addition and subtraction function	—	
Peak hold function	Peak calculation of each axis is possible.	None
Restart	Starts peak hold calculation of each axis/all axes. Operation is made by key operation or general external input.	
Hold function (latch and pause) Latch = display and output holding Pause = peak calculation holding	Operable using RS-232C command in addition to those at the left	Only latch function is possible. Operation is made by key operation or general external input only (no RS-232C command).
Comparator function	None	
Positioning function	None	
Input signal	External reset and external print for each axis (4 in total), 1 general input for each axis (3 in total)	
	External reset of each axis and general input (One of latch, reference point loaded, display switching, and preset recall is selected)	External reset of each axis and general input (One of latch, reference-point load, and pre-set recall is selected)
	Input circuit: +12-24 V photocoupler (isolation from internal circuit = power supply Vcc = 12-24 V required)	
Output signal	1 for each axis (3 in total)	
	General output (One of alarm, display data, reference-point passing, and reference-point alarm is selected.)	General output (One of alarm, reference-point passing, and reference-point alarm is selected.)
	Output circuit: open collector (photocoupler) 12-24 V, isolated from internal circuit	
Comparator judgment output	—	
BCD output	—	
RS-232C input/output	Each function can be activated using RS-232C command instead of key operation.	
	Current, max., min., and peak-to-peak values of each axis can be output using RS-232C data output commands.	Current value of each axis can be output using RS-232C data output command.
A/B phase output	—	
Expansion unit	—	
Reset	Reset can be made by key operation or external reset input.	
Preset	Value is settable by key operation or using RS-232C command. A value set by external preset recall can be recalled.	
Master calibration function	Provided	None
Datum point/Reference point function	Provided	
Key lock function	Provided (presence/absence of setting is set by parameter)	
Data storage	Storage/no-storage can be set.	
Scaling function	Provided (0.100000 to 9.99999)	
Linear correction	Provided (±600 μm/m)	
Power supply	Optional PSC-21/22/23 adapter is used.	
Power consumption	32 VA max. (when optional AC adapter is used)	
Operating temperature range	0 to 40 °C	
Storage temperature range	–20 to 60 °C	
Mass	Approx. 1.5 kg	

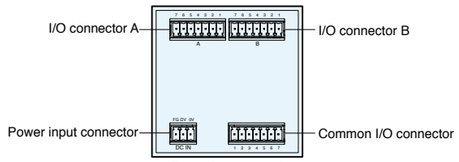
Technical information

LT Series Usage Notes

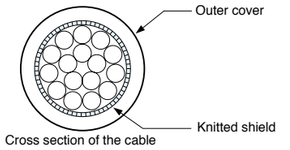
I/O connector

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 >



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



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

I/O connector (common)

Pin No.	Signal name	IN/OUT	Description
1	GND	-	
2	START(A)	IN	Start/latch input (A)
3	PAUSE (A)	IN	Pause input (A)
4	START(B)	IN	Start/latch input (B) *1
5	PAUSE (B)	IN	Pause input (B)
6	RS-TRG	IN	RS-232C data output and trigger input *2
7	GND	-	

*1 Connection is prohibited for 1-channel model.
*2 Connection is prohibited for models other than RS-232C model.

I/O connector description
I/O connector A

Pin No.	Signal name	IN/OUT	Description
1	GND	-	
2	NC	-	Connection prohibited
3	RESET (A)	IN	Reset input (A CH)
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	Description
1	GND	-	
2	NC	-	Connection prohibited
3	RESET (B)	IN	Reset input (B CH)
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	-	

< Go/no-go judgment output >
High: Display value > upper limit →"L" (ON)
Go: Upper limit ≥ display value ≥ lower limit →"L" (ON)
Low: Lower limit > display value →"L" (ON)
Note: All go/no-go judgment outputs become "H" (OFF) if alarm occurs.

<Start/latch input>
- If judgment output is "L" (ON), the max. and min. values are set to the current value (and peak-to-peak value is "0"), and new holding starts (start function).
- When initial settings are set to shipment settings, if the measuring mode is in current value mode, go/no-go judgment output (I/O connector) and display are held at "L" (ON) (latch function).

Note: While judgment output is "L" (ON), reset/present value recall by reset key or using an external reset/preset value recall input signal becomes invalid.

<Reset input>
Measured value is set to "0" if judgment output is "L" (ON). If a preset is made, a preset value is recalled.
Note: Even if "L" (ON) is left as is, go/no-go judgment output (I/O connector) and display are not held.

Installing the LT10A/11A/30 counter 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.

Note: When attaching the installation brackets to the display unit, leave sufficient space (min. 30mm) between it and the panel (Fig.3).

Fig.1

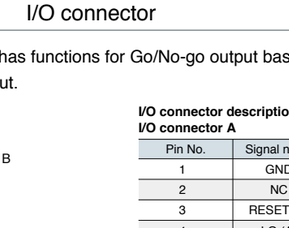


Fig.2

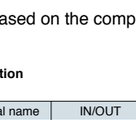
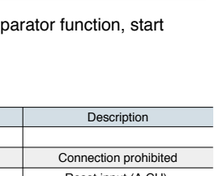


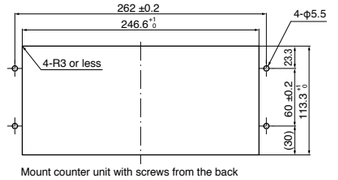
Fig.3



Unit: mm/inch

LY71/72 panel mounting

Panel cutout diagram



Unit: mm