LH

LH70/71 SERIES

High performance counter for Mille and Lathe applications.

- Counter for Milling machine (LH70/71) and Lathe (LH70-3/LH71-3)
- Display Resolution Switching
- Machine error compensation
- Data Storage. ● Reset/Preset
- Reference Point Detection
- Program function ● Multi datum point ● Scaling
- Milling function (Bolt hole circle/Easy Radius cutting/Line hole)
- Lathe function (Tool coordinating / Adding function)

Specifications

Common Specifications

Model	LH70/71-1	LH70/71-2	LH70/71-3
Display	7 digits and minus display, Color amber		
Connectable measuring unit	GB-ER, SJ300 series, SJ700A, PL20C series (Direct) DG-B (Necessary to use the conversion adaptor which is sold separately.)		
Measuring unit input resolution	Standard: 0.1 µm, 0.5 µm, 1 µm, 5 µm, 10 µm, 1 s, 10 s, 1 min, 10 min Expanded: 100 µm, 50 µm, 25 µm, 20 µm, 2 µm, 0.05 µm and 1 degree can be added.		
Display resolution	Measuring unit input resolution or higher and diameter display (except for angle display)		
Input signal	A/B quadrature signal, Z signal (Conforms to EIA-422.)		
Minimum input phase difference	100 ns		
Quantization error	±1 count		
Alarm display	Measuring unit disconnected, Excess speed, Maximum display amount exceeded, Power failure, Error in stored data		
Reset	Resettable by key switch		
Preset	It is possible to store/call 3 kinds of numbers.		
Reference point detection	The reference point of the measuring unit can be detected, and the datum point can be relocated (during connection of measuring unit with a reference point)		
Data storage	The value displayed before the power was turned off and setting values are stored		
Linear error compensation	A fixed compensation is applied to the measuring unit's count value. Compensation amount Standard: ±600 um/m (Expanded: ±1000 um/m)		
Segmented error compensation	The movement range of the measuring unit with a reference point can be divided into amaximum of 32 sections, and error compensation is performed for each of these sections. Compensation amount: ±600 um (at each section)(LH71 only)		
Scaling	Scaling factor: 0.100000 to 9.999999(LH71 only)		
Program	Machining coordinates can be programmed (number of program steps: 850 max.) 1. Manual programming by key switch 2. Automatic programming by playback 3. Mirror image during program execution 4. A canned cycle (bolt hole, line hole, simple R cutting) can be inserted in the program. (LH71 only)		
Angle display	Can be displayed as an angle value when the Digiruler is pasted to the arc surface, and the diameter and Digiruler resolution are entered		
Sleep	The display is turned off when no operations are made for a preset time. (The time can be set.)		
Power supply	DC 12 V Rating 0.75 A Max. 1 A AC 100 V to 240 V ±10 % When using the AC adaptor PSC-22 (For U.S. only) or PSC-23 (For Europe and other countries) *Option		
Power consumption	MAX. 32 VA connected at the AC adaptor.		
Operating temperature range	0 to 40℃ (no condensation)		
Storage temperature range	-20 to 60℃ (no condensation)		
Mass	Approx. 1.5 kg		

When the LH70/71 general-purpose applications or milling machine function are selected (General setting in the model type selection mode of the basic settings)

Model	LH70-1	LH71-1	LH70-2	LH71-2	LH70-3	LH71-3
Display	1-axis		2-axis		3-axis	
Multi datum point	10	150	10	150	10	150
Bolt hole circle	—		Displays coordinates for opening equidistant holes along the perimeter of a designated diameter			
Simple R cutting	—		Display coordinates for simple R cutting			
Line hole	—		Displays coordinates for opening equidistant holes along a designated straight line(LH71 only)			

When the LH70/71 lathe function is selected (Lathe setting in the model type selection mode of the basic settings)

Model	LH70-3	LH71-3
Display axes	2-axis display (2-axis or 3-axis input)	
Tool offset	12	99
Measuring unit input addition	2-axis addition display is available	
Display hold	The displayed value can be held and the tool coordinate entered.	

Dimensions
LH70/71, LH72
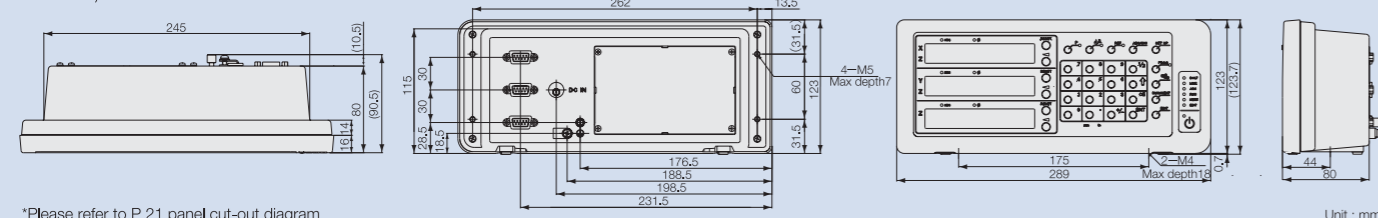
*Please refer to P.21 panel cut-out diagram.

Unit : mm

LH

LH72

High performance Lathe specific counter.

- Counter for Lathe (LH72-3)
- Display Resolution Switching
- Machine error compensation
- Data Storage
- Reset/Preset
- Reference Point Detection
- Program function ● Scaling
- Lathe function (Tool coordinating / Adding function)

Specifications

Common Specifications
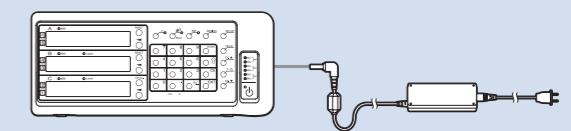
Model	LH72-3
Display	7 digits and minus display, Color amber
Connectable measuring unit	GB-ER, SJ300 series, SJ700A, PL20C series (Direct) DG-B (Necessary to use the conversion adaptor which is sold separately.)
Measuring unit input resolution	Standard: 0.1 µm, 0.5 µm, 1 µm, 5 µm, 10 µm, 1 s, 10 s, 1 min, 10 min Expanded: 100 µm, 50 µm, 25 µm, 20 µm, 2 µm, 0.05 µm and 1 degree can be added.
Display resolution	Measuring unit input resolution or higher and diameter display (except for angle display)
Input signal	A/B quadrature signal, Z signal (Conforms to EIA-422.)
Minimum input phase difference	100 ns
Quantization error	±1 count
Alarm display	Measuring unit disconnected, Excess speed, Maximum display amount exceeded, Power failure, Error in stored data
Reset	Resettable by key switch or remote reset.
Preset	It is possible to store/recall 3 kinds of numbers.
Reference point detection	The reference point of the measuring unit can be detected, and the datum point can be relocated (during connection of measuring unit with a reference point)
Data storage	The value displayed before the power was turned off and setting values are stored
Linear error compensation	A fixed compensation is applied to the measuring unit's count value. Compensation amount Standard: ±600 um/m (Expanded: ±1000 um/m)
Segmented error compensation	The movement range of the measuring unit with a reference point can be divided into amaximum of 32 sections, and error compensation is performed for each of these sections. Compensation amount: ±600 um (at each section)
Scaling	Scaling factor: 0.100000 to 9.999999
Program	Machining coordinates can be programmed (number of program steps: 850 max.) 1. Manual programming by key switch 2. Automatic programming by playback 3. Mirror image during program execution
Angle display	Can be displayed as an angle value when the Digiruler is pasted to the arc surface, and the diameter and Digiruler resolution are entered
Sleep	The display is turned off when no operations are made for a preset time. (The time can be set.)
Display axes	2-axis display (2-axis or 3-axis input)
Tool offset	99
Measuring unit input addition	2-axis addition display is available
Display hold	The displayed value can be held and the tool coordinate entered.
Power supply	DC 12 V Rating 0.75 A Max. 1 A AC 100 V to 240 V ±10 % When using the AC adaptor PSC-22 (For U.S. only) or PSC-23 (For Europe and other countries) *Option
Power consumption	MAX. 32 VA connected at the AC adaptor.
Operating temperature range	0 to 40℃ (no condensation)
Storage temperature range	-20 to 60℃ (no condensation)
Mass	Approx. 1.5 kg

Power supply AC adapter

The AC adapter for LH70/71, LH72 and LG20 counter unit.
- PSC-21(For Japan only)
- PSC-22(For U.S. only)
- PSC-23(For Europe and other country.)

Note: For use at the supply voltages of around 200V, please choose PSC-23, which is equipped with a Europlug compatible with CE.

AC adaptor (option)