

Light-5A

The BL QUICK-CHANGE Model Light-5A is a device for automatic tool changing, specially designed for low payload capacity robots, generally used in the assembly and handling of electrical parts, precision equipment and mechanical parts. During the unlocking process, the Light-5A Master plate pushes the Tool plate off (self-separating function). An optional shaft receptacle adaptor is available with the Light-5A to attach it to a shaft-type robot.

Self-separating function

The Light-5A locking mechanism has been designed to push the Tool plate off during the unlocking process, providing reliable separation.

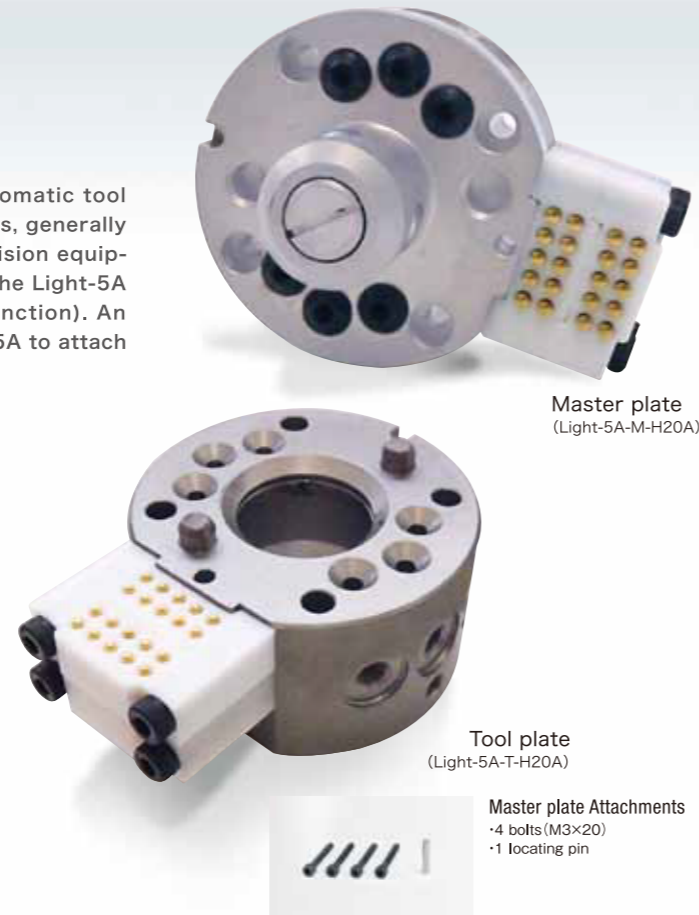
Lock without touching

The Master plate can lock onto the Tool plate with a gap between them.

Superior fail-safe locking mechanism

BL's unique lock/unlock mechanism contains a mechanical fail-safe feature which does not allow the Master and Tool plates to uncouple if the air pressure is shut off.

(Notice): Please refer to page 56 for the minimum clearance between the Master Plate and Tool Plate and the gap between the Tool Plate and tool stand for teaching.



Master plate
(Light-5A-M-H20A)

Tool plate
(Light-5A-T-H20A)

Master plate Attachments
·4 bolts (M3×20)
·1 locating pin

Specifications

Main Body		
Load capacity (rated load)	49N(5kg)	
Positional repeatability	±0.01mm	
Allowable dynamic moment	Bending direction(Tx,Ty)	25.4N·m(260 kgf·cm)
	Twisting direction(Tz)	33.2N·m(340 kgf·cm)
Coupling force (with air pressure of 0.49MPa) ※1	612.5N(62.5kgf)	
materials	Master plate	Stainless steel
	Tool plate	Aluminum alloy (The lock/unlock mechanism is stainless steel)
Overall dimension (when coupled)	φ49xH48.5mm	
Weight (main body)	Master plate	260g
	Tool plate	100g
Self-separating mechanism	Ball-locking mechanism (Self-separating function)	
Required air pressure	0.39~0.68MPa (4~7kgf/cm ²)	
Allowable temperature and humidity ranges	0~50°C, 35~90%(Non-condensing)	
Utilities	Pneumatic ports	M5×6

Options		
Utilities	H10A	3A×10 (solder terminal)
	H20A	3A×20 (solder terminal)
	H30A	3A×30 (solder terminal)
	H10L	3A×10 (with 1m lead wires)
	H20L	3A×20 (with 1m lead wires)
Shaft receptacle adaptor		For shaft diameters of 8,9,10,11, 12,13,14,15,16,20,24 and 25mm

Light-5A Ordering Information

Master plate **Light-5A** -M- (Option) (Shaft receptacle adaptor)

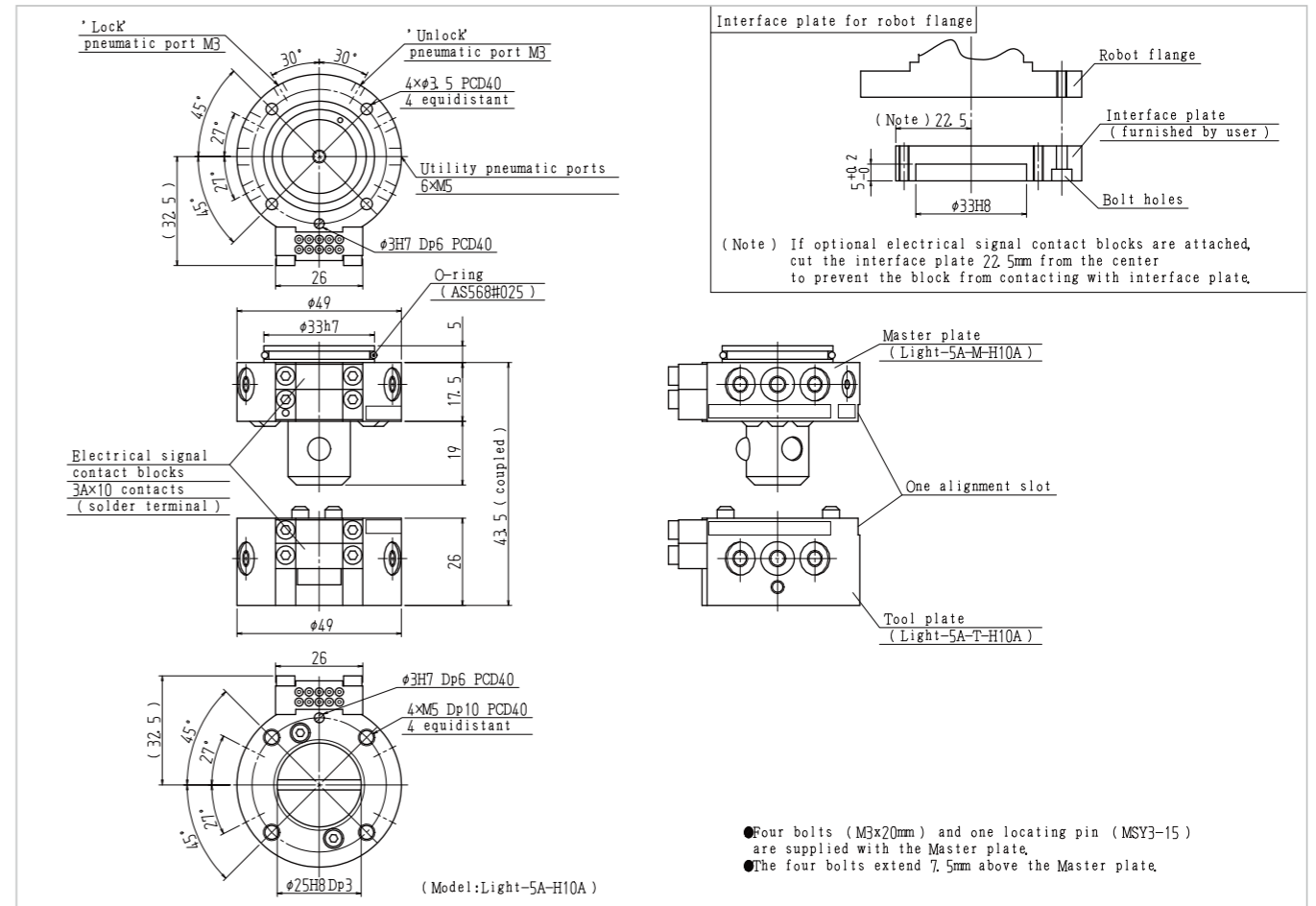
Tool plate **Light-5A** -T- (Option)

XXXX No electrical signal
H10A Electrical signals3A×10 (solder terminal)
H20A Electrical signals3A×20 (solder terminal)
H30A Electrical signals3A×30 (solder terminal)
H10L Electrical signals3A×10 (with 1m lead wires)
H20L Electrical signals3A×20 (with 1m lead wires)

XXXB No adaptor
SAOO Shaft receptacle adaptor

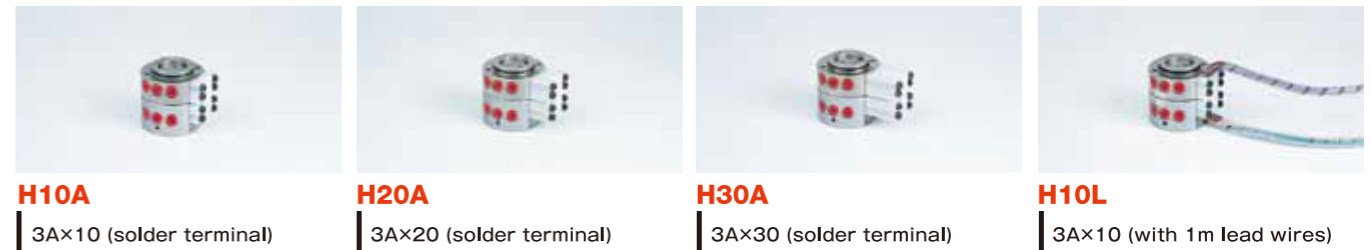
Note : ○ is shaft diameter.
(For example, for a diameter of φ8mm, use 08, for a diameter of φ16mm,use 16.)

Main Body Dimensions



Options

Electrical signal contact bloc



Shaft receptacle adaptor



Please contact BL Autotec, Ltd. for detailed information on the options.

※1 Coupling force is the force to achieve specified repeatability. Coupling will be maintained until unlock pressure is applied or device is damaged.

Next-Generation Robots
ZEUS
GIGA
Automatic Tool Changer
1kg
5kg
10kg
20kg
40kg
60kg
70kg
100kg
150kg
220kg
300kg
Press Handling Specification
100kg
Spot-Welding Gun-Changer
300kg
Options
Wire-Saving module / Contact Block
Non-contact electric signal block
A mechanical safety valve prevents Tool plate drops
List
Product Overview
Rotary Joint
PIN-ZERO Series
Wrist Compliance
RCC DEVICE / LOCK-PRC DEVICE
Couple Joint
CJ2