■ Outline
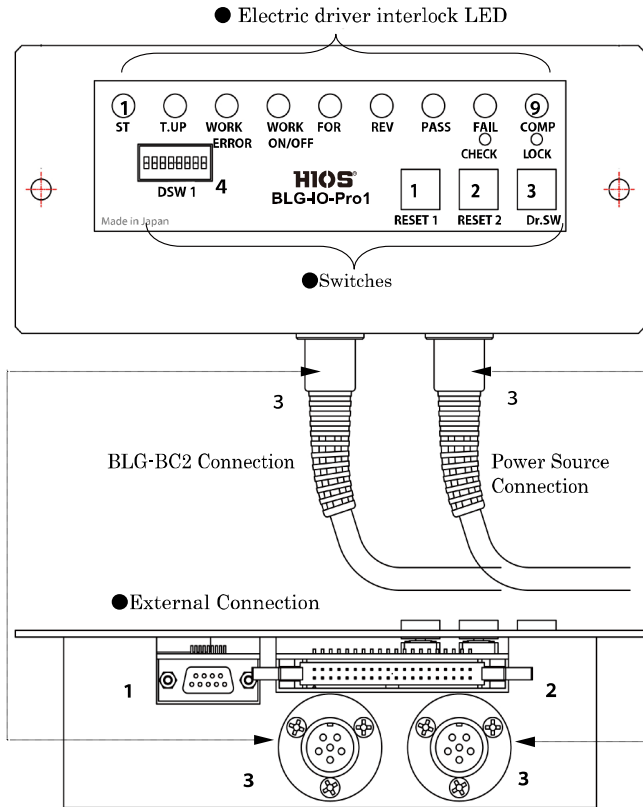
A simplified I/O BOX enables to interlock external devices such as switch, LED lights and buzzer by connecting the driver BLG-BC2 Series.

■ Part Names

● Electric driver interlock LED

●Switches

BLG-BC2 Connection

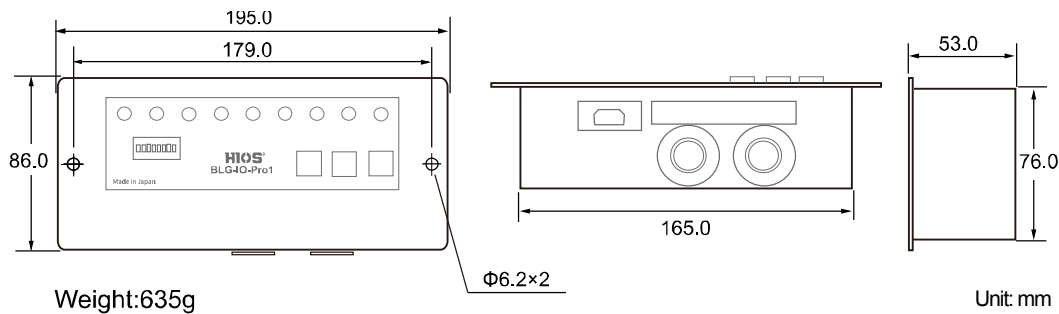Power Source Connection

●External Connection

● **Electric Driver Interlock LED**
1. ST (ON from start to stop)
2. T.UP (ON when the driver clutched out)
3. WORK-Err (ON when work pieces are not set)
4. WORK-ON/OFF (presence/absence of work -piece)
5. FOR (ON during normal rotation)
6. REV (ON during reverse rotation)
7. PASS (ON when screw-fastening errors did not occur)
8. Fail (ON when screw-fastening errors occured)
9. COMP (ON after cycle complete.)

● **Switches on the Front Panel**
1. RESET1
2. RESET2
3. Dr-SW
   (BLG-BC2 can be forcibly turned off.)
   When this switch is OFF,
    BC2 is OFF,
        LED "LOCK " is ON.
4. DSW1 (Reference 1)

● **External Connection**
Turn ON after all the connections are completed.
1. BLG-BC2-3010 Connector
2. I/O Port (Reference 2)
3. 6-pin Metal Connector (2 pieces)
   Right -> Power Supply for T-45BL or T-70BL
   Left -> BLG-BC2 screwdriver

■ External Dimension Drawing

195.0
179.0
86.0
Φ6.2×2
Weight:635g

53.0
76.0
165.0
Unit: mm

■ DSW ON/OFF Operational Conditions (Reference Table 1)

DSW1 #	Setting name	Contents (DSW1)	
		ON	**OFF**
1	Work-piece Set	BC2 is operable regardless of presence /absence of work-piece (WORK LED is turned on)	BC2 can be operable/inoperable using the Work –piece set signals output by a switch, sensor, etc. (WORK LED is turned off)
2	Reset BC2 after a screw-fastening error (Fail)	ON: the count is returned to the value just before the error occurred	OFF: reset, the count is returned to the default value.
3	Set up mode buttons on BC2	All BC2 set up mode buttons are locked. BC2 set up modes cannot be changed with the buttons on the BC2. LED "M" light on the BC2 is ON.	All BC2 set up mode buttons are unlocked. BC2 set up modes can be changed with the buttons on the BC2. LED "M" light on the BC2 is OFF.
4	Operation of screwdriver after batch count complete	BC2 is not operable from batch count complete until a new work-piece is set.	BC2 is operable after batch count complete.
5	IO Pro1 Buzzer	Buzzer works upon PASS, Fail and cycle complete.	Buzzer does not work.
6	Operation after an error (Fail)	BC2 is still enabled upon Fail.	BC2 becomes disabled upon Fail. Release (* Note: Same as DSW1-2)
7	NC		
8	NC		

(Note) The default factory setting is "ON" for DSW1   #1 and 6.

[Precaution]

■ DSW1 setting must be done when the I/O BOX is powered off.

● DSW1 #1

should be "OFF" when an external work-piece set is used through the I/O Port.

● DSW1 #2

* When DSW1 #6 are "OFF"

BC2 is not disabled when the Fail LED is on. Press the RESET button on the front panel of I/O BOX to release.

* RESET buttons sequence

1. RESET1 -> For turning off the buzzer (BC2 is not enabled at this point.)

After confirming everything is ready to restart operation, press RESET2 button.

2. RESET2 -> BC2 becomes enabled.

* When DSW1 #5 are "ON", #6 are "OFF"

When Fail LED turns on and buzzer sounds, BC2 becomes disabled. Press the RESET buttons to release.

* Order to push the RESET buttons

1. RESET1 -> For turning off the buzzer (BC2 is still disabled at this point.)

After confirming everything is ready to restart operation, press RESET2 button.

2. RESET2 -> BC2 becomes enabled.

● DSW1 #4

* When DSW1-4 is ON, DSW1-1 needs to be "OFF" and use Work-piece set signals by a switch, sensor, etc.

● DSW1 #5

* External buzzers can be used by connecting to the I/O Port.

■ Pin Configuration of the I/O Port Connector (Reference 2)

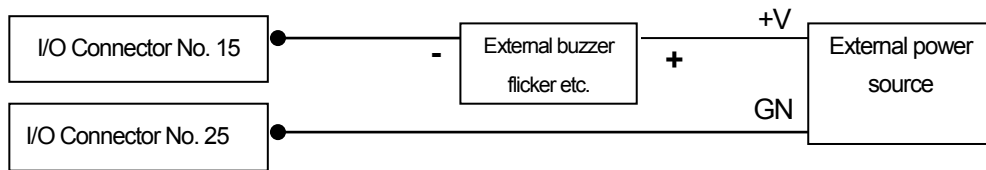(Please share connection with GND.) HIF3BA Type 40-pin

	Pin numbers and names	
GND	22, 23, 24, 25, 36, 37	
Low active input (Operable on the input signal at Low level.)	26, 27	Work-piece Set
	32, 33	RESET1
	34, 35	RESET2
Open collector output	11	PASS/COMP (revolving lights, etc.)
	12	T-UP/COMP (revolving lights, etc.)
	13	Fail/COMP (revolving lights, etc.)
	15	Buzzer (DSW1 interlock)
	20	PASS
	21	Fail
For connecting devices such as PC (RS232C). Refer to "BLG-BC2 communication specifications"	38	RXD
	39	GND
	40	TXD

Connection direction

1 2
39 40

How to use Low Active Internal Circuit

・The voltage should be less than 0.3V at Low
・The voltage should be less than 30V for pull-up resister of an external voltage supply

Internal Circuit   +5V

Input signal, etc.
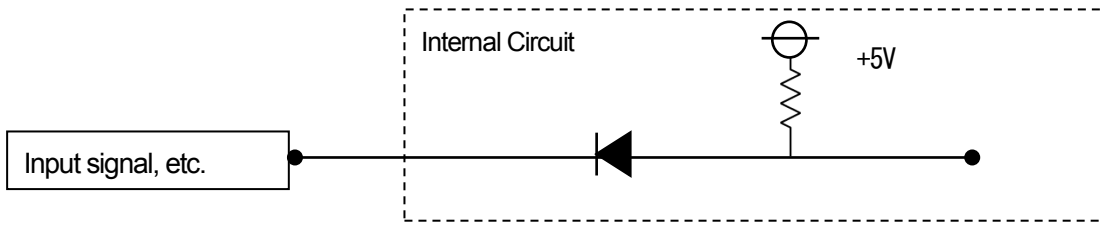
The reference structural outline when an external buzzer is installed and interlocks with the I/O BOX buzzer is externally installed
(External power supply is needed for the external buzzer.)

| I/O Connector No. 15 | | - | External buzzer flicker etc. | + | +V | External power source |
| I/O Connector No. 25 | | | | | GN | |

■ Other Specifications

★Specifications
Consumption current 30V/40mA (Please use the HIOS power supply T-BL series dedicated to HIOS electric screwdriver)
Open collector output (max. 40V/40mA)

★ Items included in the package	
BLG-IO-Pro1: 1 unit	40-pin connector (250mm) : 1pc
6-pin driver cord 2m: 1pc	BLG-IO-Pro1 Operation Manual: 1copy

* The BLG-BC2 I/O Cable is optional and not included in the package.