

BLOP-AF Relay Box

Instruction Manual

As of January 2017 Registration Number: No.ET-A061 17A

- (4) Turn on the power of the power supply for BL.
- (5) The OPC signal is output from the CN3 connector according to the operation of the BL-OPC screwdriver.

*For OPC signal output specifications and timing, refer to 4. OPC Signal Output Specifications.

4. OPC Signal Output Specifications

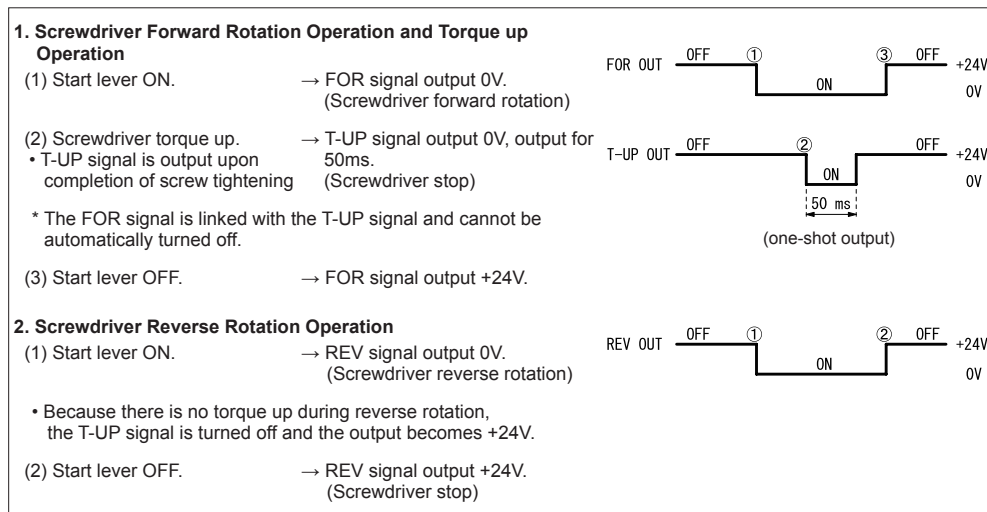
For the OPC signal output specifications, refer to Table 1. For the timing chart of the OPC signal output, refer to Figure 3.

*Do not use the device with any current exceeding the ratings of +30V and 10mA for each OPC signal output pin.

Table 1. OPC Signal Output Specifications

Signal Name	CN3 Connector Signal Output PIN	Output Conditions	Output Method
FOR signal	PIN4	Screwdriver forward rotation	Open collector output (Low active)
T-UP signal	PIN2	Screwdriver torque up	
REV signal	PIN6	Screwdriver reverse rotation	

Figure 3 Timing Chart of the OPC Signal Output



5. Accessories

- (1) Instruction Manual (1 copy)
- (2) Brackets (2 pcs)
- (3) OPC signal plug (1 pc)
- (4) 5P screwdriver cord [for power supply connection] <1.5m> (1pc)

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1. Overview of the Device

The BLOP-AF Relay Box has been developed to easily extract the OPC signals that indicate the forward rotation, reverse rotation, and torque up of a BL-OPC screwdriver to allow other external devices to make use of the signals.

In addition, to facilitate the use of the OPC signal by external devices, the device converts the +30V, which is the rated voltage of BL series screwdrivers, to +24V by using a regulator and outputs it to the CN3 connector, the same output location as the OPC signal.

2. Precautions about Usage <<Please read the instructions below before use>>

Be aware that using the device without following these instructions may result in a malfunction of or breakdown with the device and its power supply and screwdriver.

- (1) Correctly connect the BL-OPC screwdriver and the power supply for BL to the specified connectors of the device. Wrong connection may result in malfunction or breakdown.
- (2) Do not directly connect the +24V pin of the CN3 connector or the external +24V power supply to the OPC signal pins of the CN3 connector.
- (3) Set the speed selector switch of the power supply for BL to HI. If it is used at LOW, the output voltage of the +24V pin of the CN3 connector decreases accordingly, resulting in a malfunction.
- (4) Do not overload to the BL-OPC screwdriver. If the +30V voltage of the power supply for BL decreases to +25V or lower due to overloading, the voltage at the +24V pin of the CN3 connector decreases accordingly, resulting in a malfunction.
- (5) If an external device requires a constant voltage of +24V without being affected by overloading, prepare a separate external power supply for the external output circuit.
- (6) Do not use the +24V output of the CN3 connector for any purpose other than for the OPC signal. Otherwise, overcurrent will flow through the internal circuit of the BL-OPC screwdriver, resulting in a breakdown. Other unspecified usage will affect the screwdriver's tightening performance or result in a malfunction or breakdown.
- (7) Avoid any usage in which the ratings of +30V and 10mA will be exceeded for each OPC signal pin of the CN3 connector. Overcurrent will result in a malfunction of or breakdown with the device and the BL-OPC screwdriver.
- (8) Do not directly connect external devices in which noise may occur, such as relays, motors, buzzers, and lamps, to the OPC signal pins of the CN3 connector. Drive noise or overcurrent from external devices will result in a malfunction of or breakdown with the device and the BL-OPC screwdriver. If external devices in which noise may occur need to be connected, mount noise suppression components such as photo couplers and diodes with reference to Examples 5 and 6 in Figure 2, and carefully confirm the effectiveness before use.

3. How to Use the Device

- (1) Connect the device with the BL-OPC screwdriver and the power supply for BL using a screwdriver cord, as shown in Figure 1.
- (2) Connect external devices to the CN3 connector of the device.
- (3) Set the speed selector switch of the power supply for BL to HI.

Figure 1 Connection drawing

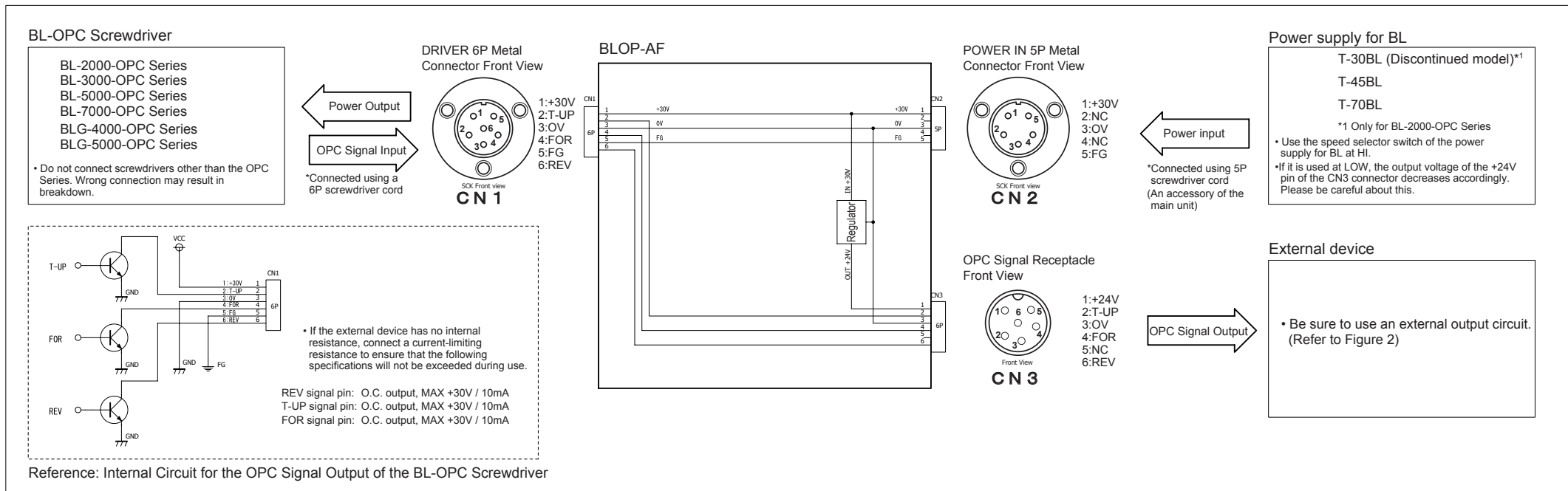


Figure 2 External Output Circuit Example

