Thrive

Efficiency Realized

Power the PLC

Note: We have provided two visual aids: one with overlays on a photograph referenced as the Visual Guide (to your right) and an electrical schematic (turn the page). Both are the same, just presented in different formats.

Step 1 - Wire Power to Base and Power Supply Modules

- [ ] The Wago PLC needs to receive 24V DC power in two places - on the Base Unit and on the Power Supply Module.
- [ ] Land 24V / DC+ to the red terminal on the Base Unit and Power Supply Module (Visual Guide: Section 2-2 & 2-5).
- [ ] Land 0V / DC- to the blue terminal on the Base Unit and Power Supply Module (Visual Guide: Section 2-3 & 2-6).

Step 2 - Plug Ethernet to Base Module

Plug in Ethernet to Base Module (Visual Guide: Section 1-7). This will come from either the T-Box directly or a network that will be connected to the T-Box.

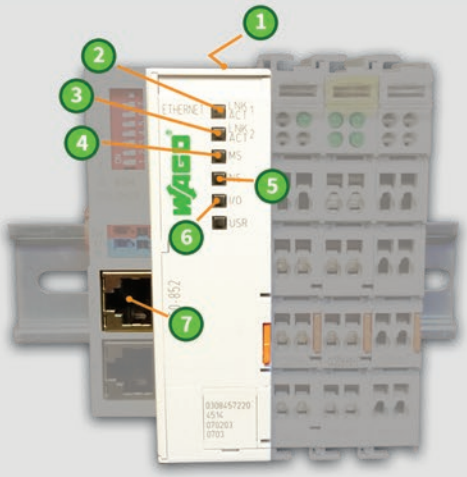
Note: Wago PLCs can be daisy-chained if convenient with the extra port as per diagram.

Example: **T-Box** ⟷ **Wago 1** ⟷ **Wago 2** ⟷ **Wago 3**

Power Up the PLCs

Section 1 - Status Lights

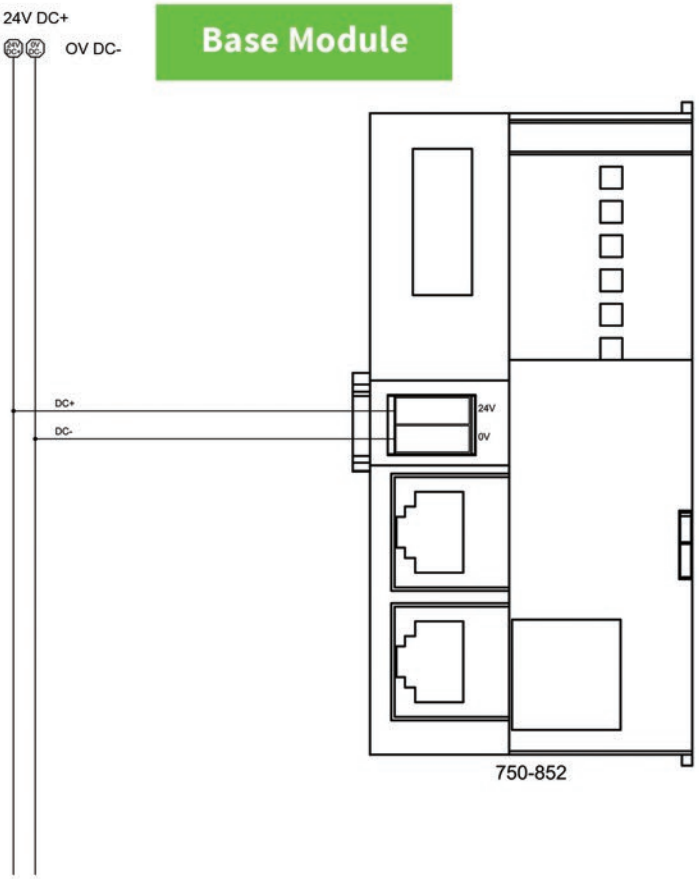
1. **Wago 750-852 PLC** - Name of Device
2. **Link Act 1 Light** - Flashing Fast
3. **Link Act 2 Light** - Off
4. **MS Indicator Light** - Steady Green
5. **NS Indicator Light** - Slow Blinking Green
6. **IO Status Light** - Steady Green
7. **Ethernet Plug**

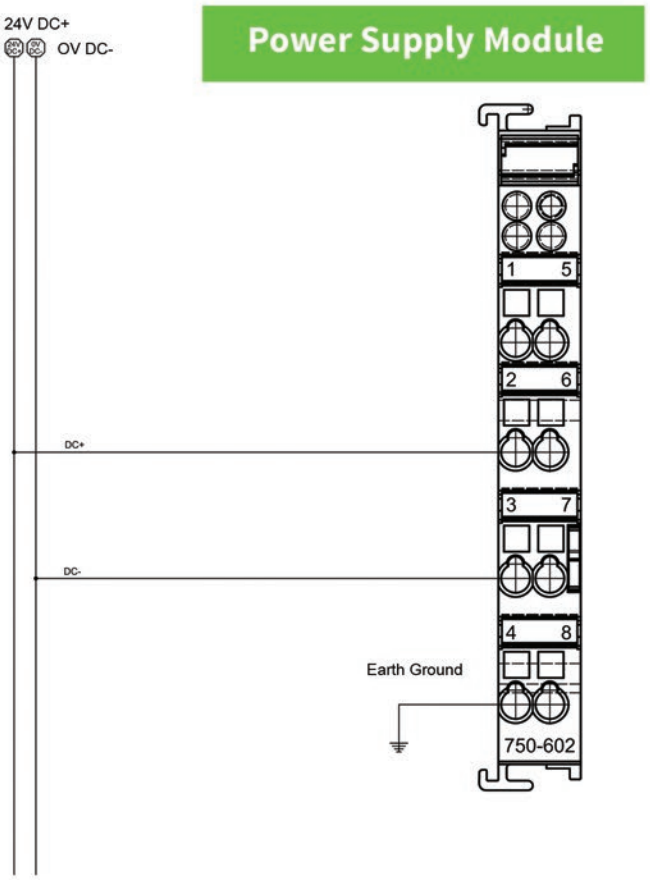


Section 2 - Powering the Unit

1. **Wago 750-602 Power Module** - Name of Device
2. **Incoming 24V / DC+**
3. **Incoming 0V / DC-**
4. **Functional Earth Ground**
5. **Incoming 24V / DC+**
6. **Incoming 0V / DC-**

Power PLC Diagram





Wago PLC Setup (2-Input)

Step 1 - Connect your Line's Counter & Heartbeat

Wire the heartbeats (Visual Guide: Section 3-6, 7) and counts (Visual Guide: Section 3-8, 9) for each line.

Note: This step is the only difference compared to the 1-Input Logic. 2-Input Logic has 2 inputs; one for a heartbeat signal from the machine and one for the finished good counts. Ideal for long distance assembly. The 1-Input logic is typically chosen so that 1 signal is used to count finished goods and to determine line downtime. If finished goods are not counted for a predetermined amount of time a downtime event is started.

Step 2 - Green Light Test

- [ ] PLC should have power. The power green light MS (Visual Guide: Section 1-4) should be lit or blinking.
- [ ] The counter green light (Visual Guide: Section 3-2, 3 ,4, 5) should blink in correspondence with each of the line's finished goods that are counted.
- [ ] The PLC should have network connectivity. The network connectivity green light should be blinking (Visual Guide: Section 1-2). This will not be complete until the T-BOX is installed.

Step 3 - All Done!

You are all done! Ensure that your T-Box is installed. Then contact your Success Manager for next steps.

Troubleshooting Tips

Problem: The green light on the 750-602 Power Supply card is not lit.

Possible Cause: There is not enough voltage on the card or wiring is incorrect.
Solution: Check for DC voltage between terminals 2 and 3 and make sure you see 24 volts. If there is no voltage, make sure DC+ and DC- are landed to terminals 2 and 3 respectively. If voltage is too low, make sure you are using a 24 Volt DC power supply (rather than 12 or 5 volt) and that it is not too far away from the PLC

Possible Cause: Power supply card is not seated correctly on the bus.
Solution: Press the card down towards the din rail to make sure it is seated all the way down. If there is a screw underneath the card it will not go down all the way.

Problem: Green light for counter or heartbeat signal is not lit when expected.

Possible Cause: Wire to input does not have 24 volts DC on it.
Solution: Measure DC voltage between the input terminal in question (1, 5, 4, or 8) and a DC- terminal (3 or 7) and make sure you see 24 volts.

Possible Cause: Signal circuit does not share DC- (common) with the power supply card.
Solution: Join the DC- from the power supply card to the DC- of the circuit that is powering your sensor/signal (photoeye, PLC output, etc)

Possible Cause: Sensor is not properly positioned.
Solution: Adjust your photoeye, proximity sensor, etc.

Problem: Green light for network connectivity is not lit when expected.

Possible Cause: Is the T-Box setup and connected to the other end of the ethernet cable?
Solution: Follow the T-Box setup instructions. Plug in the ethernet cable to the T-Box or try new ethernet cable.

2 Input/Heartbeat & Count Visual Wiring Guide *(Electrical Diagram on Next Page)*

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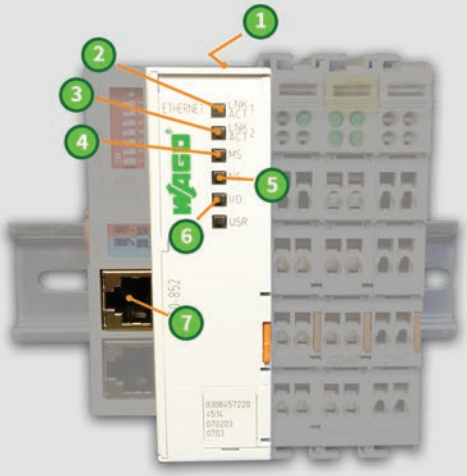
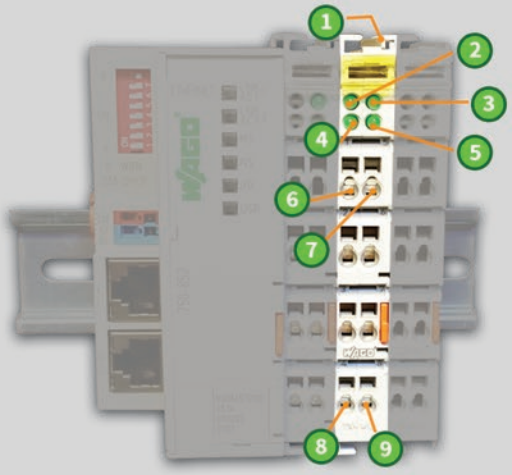


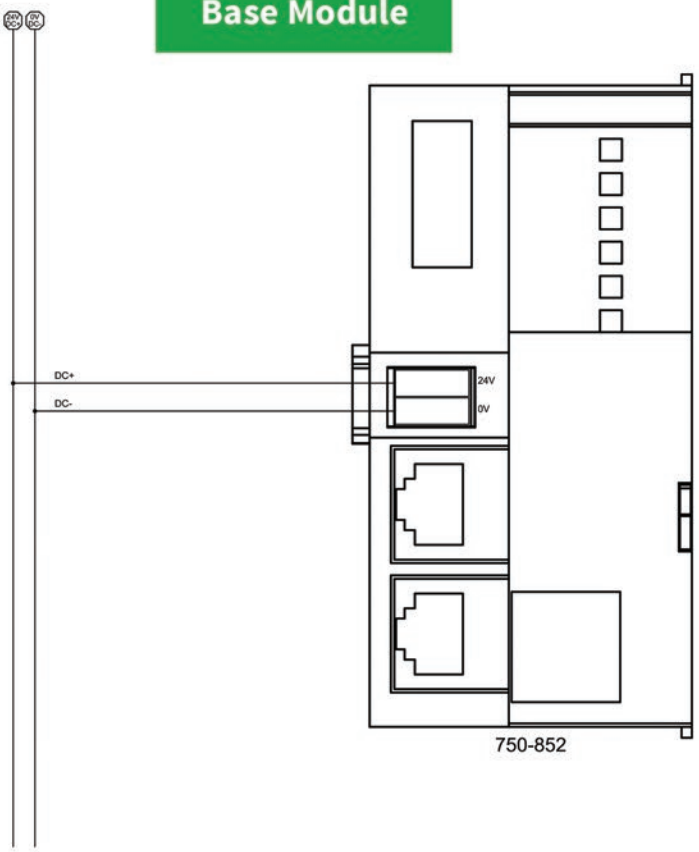
Section 3 - 2 Input/Heartbeart & Count Configuration

1. **Wago 750-402/408 Input Module**- Name of Device
2. **Line 1 Heartbeat / Line Running Activity Light**
3. **Line 2 Heartbeat / Line Running Activity Light**
4. **Line 1 Count Activity Light**
5. **Line 2 Count Activity Light**
6. **Line 1 Heartbeat / Line Running Signal**
7. **Line 2 Heartbeat / Line Running Signal**
8. **Line 1 Case Count Input Signal**
9. **Line 2 Case Count Input Signal**

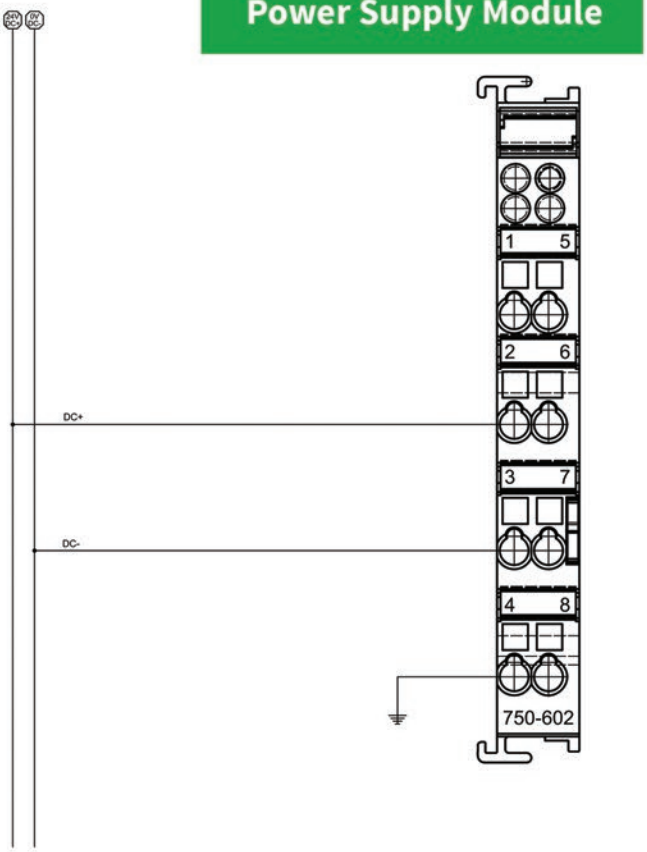


2-Input Electrical Wiring Diagram

Base Module



Power Supply Module



Digital Input Module