

# What are the different operating modes in PLC? - PLC (Programmable Logic Controllers) - Industrial Automation, PLC Programming, scada & Pid Control System

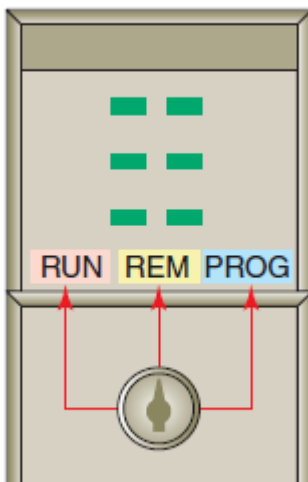
Published: 2017-10-21 · Archived: 2026-04-29 07:10:32 UTC

[Skip to main content](#)

# ForumAutomation.Com

S

There are basically two modes of operation for plc processors program mode and variations of run mode. Number of modes changes with the manufacturer.



There are key switches shown above that allow selecting the modes.

## Program Mode:

The mode in which new programs are entered. The program mode also used to edit or update existing program and used to upload, download files, document program (print out). When the PLC is switched into the program mode, all outputs from the PLC are forced off regardless of their rung logic status, and the ladder I/O scan sequence is halted.

## Run Mode:

The run mode is used to execute the user program. Input devices are monitored and output devices are energized accordingly. After entering all instruction to a PLC program, the processor is put into run mode.

**Test Mode:**

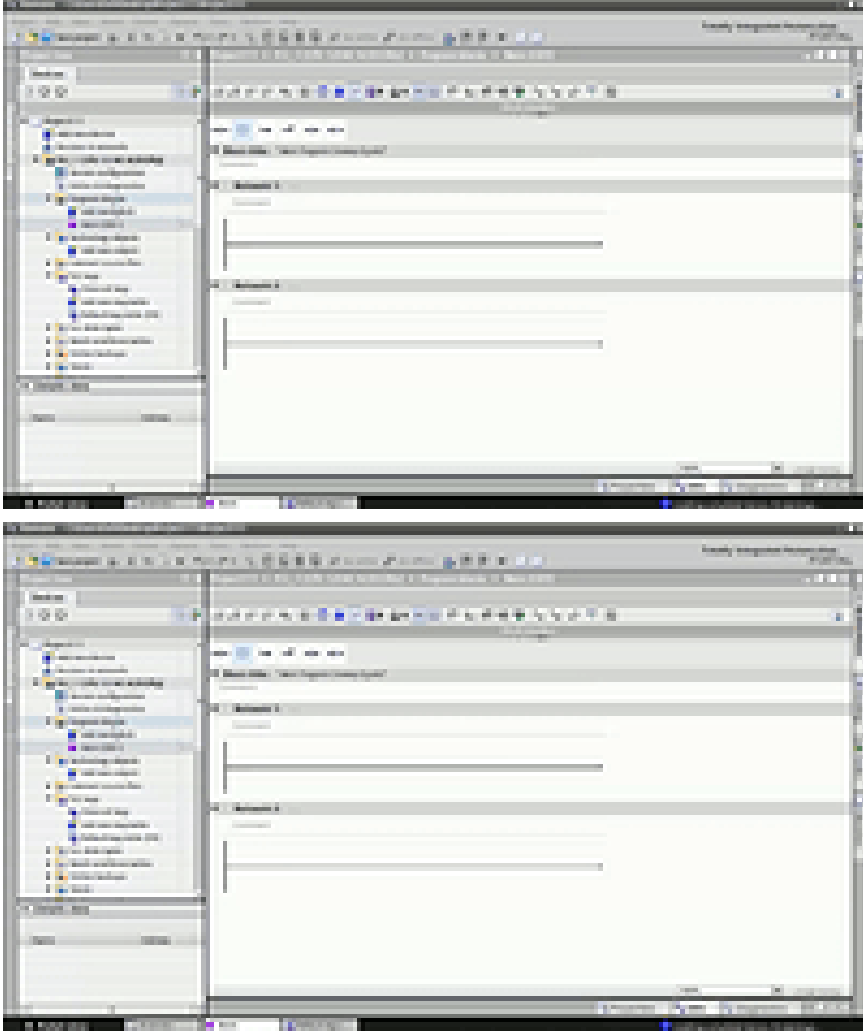
This feature is often used after developing or editing a program to test the program execution before allowing the PLC to operate real-world outputs. Without energizing any output a new or modified program is tested with the inputs. There are different types of the test mode can include the single-step test mode, which directs the processor to execute a selected single rung or group of rungs; the single-scan test mode, which executes a single processor operating scan or cycle; and the continuous-scan test mode, which directs the processor to continuously run the program for checking or troubleshooting.

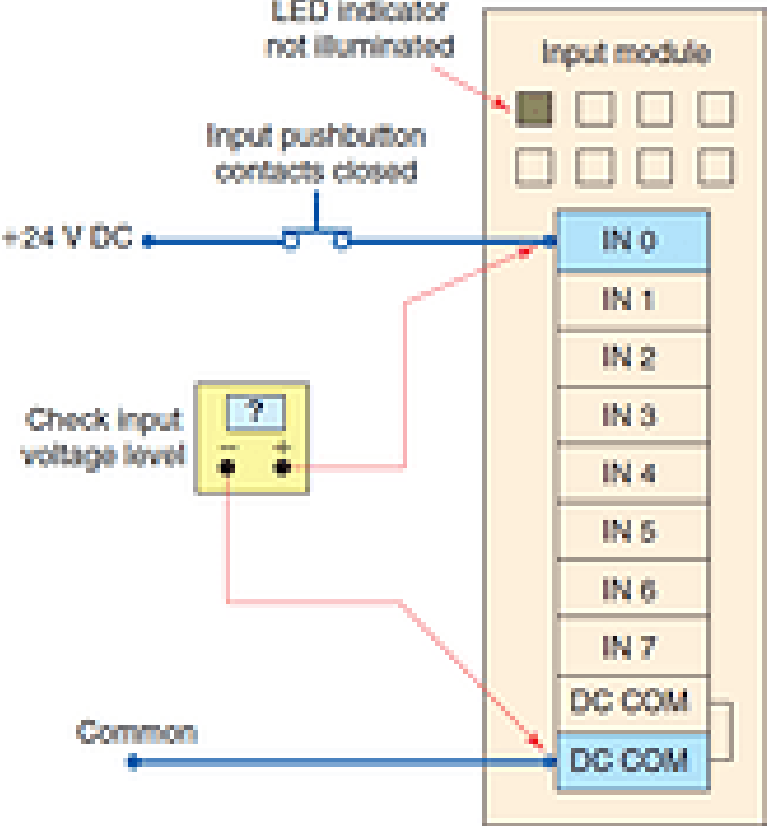
**Remote Mode:**

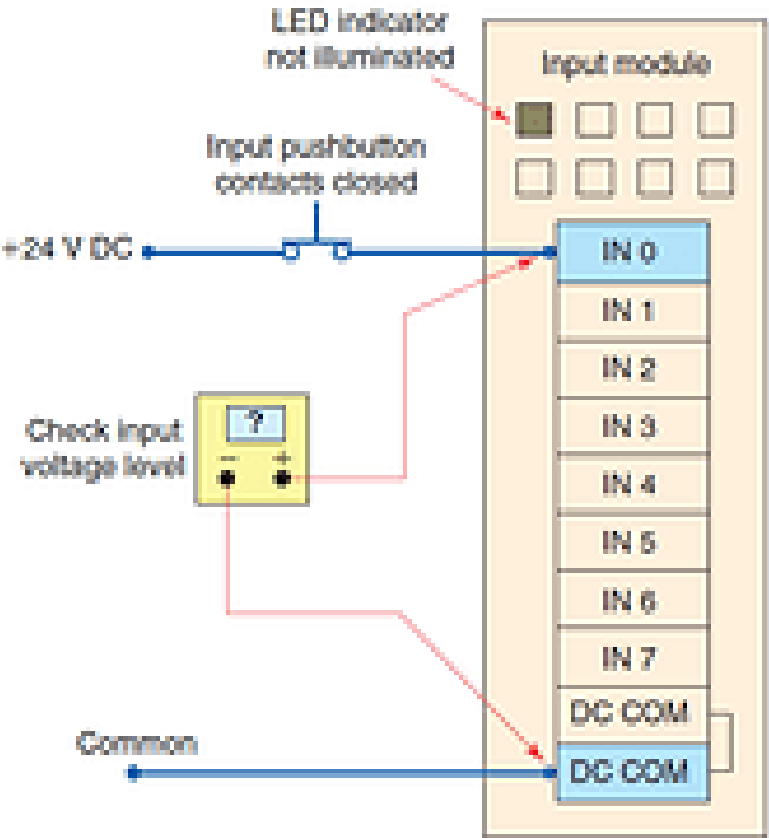
The Remote position gives remote access to a PLC to select the program and run mode by a personal computer connected to the PLC processor. The remote mode may be beneficial when the controller is in a location that is not easily accessible.



**New & Unread Topics**

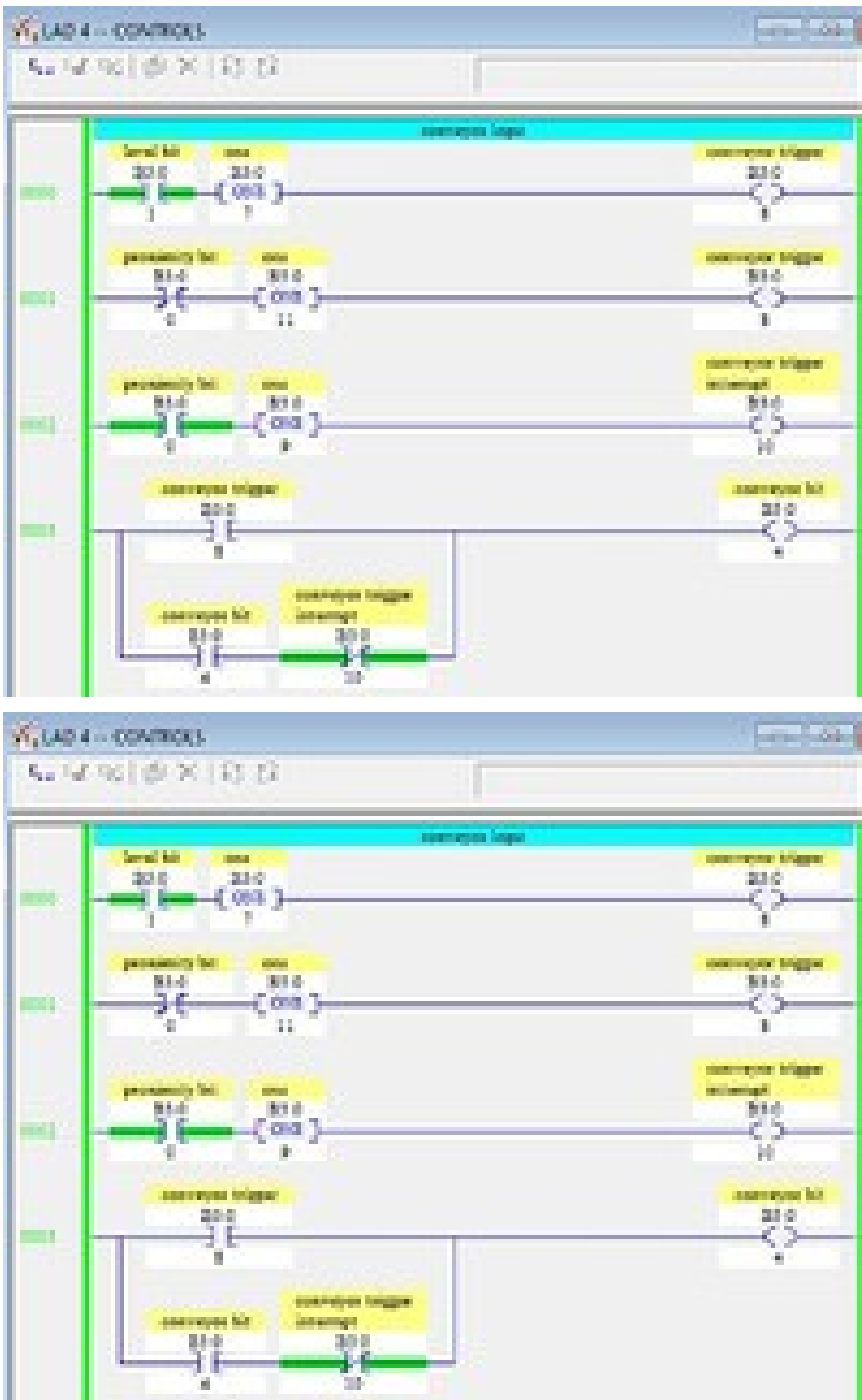
Topic	Replies	Views	Activity
 <p><a href="#">How to configure PID controller in Siemens PLC?</a> <a href="#">PLC (Programmable Logic Controllers)</a> <a href="#">pid</a></p>		19.0k	<a href="#">Feb 2018</a>

Topic	Replies	Views	Activity
 <p>The diagram illustrates an input module with the following components and connections:</p> <ul style="list-style-type: none"><li><b>Input module:</b> A vertical panel with eight digital input terminals labeled IN 0 through IN 7, and two DC COM terminals at the bottom.</li><li><b>LED indicator:</b> Located at the top left of the module, it is labeled "LED indicator not illuminated".</li><li><b>Input pushbutton:</b> A switch labeled "Input pushbutton contacts closed" is connected to the IN 0 terminal.</li><li><b>+24 V DC:</b> A power source connected to the IN 0 terminal.</li><li><b>Common:</b> A ground connection connected to the bottom DC COM terminal.</li><li><b>Voltmeter:</b> A yellow voltmeter labeled "Check input voltage level" is connected across the IN 0 terminal and the DC COM terminal.</li></ul> <p>AutomationForum.in</p>		15.0k	<a href="#">May 2018</a>

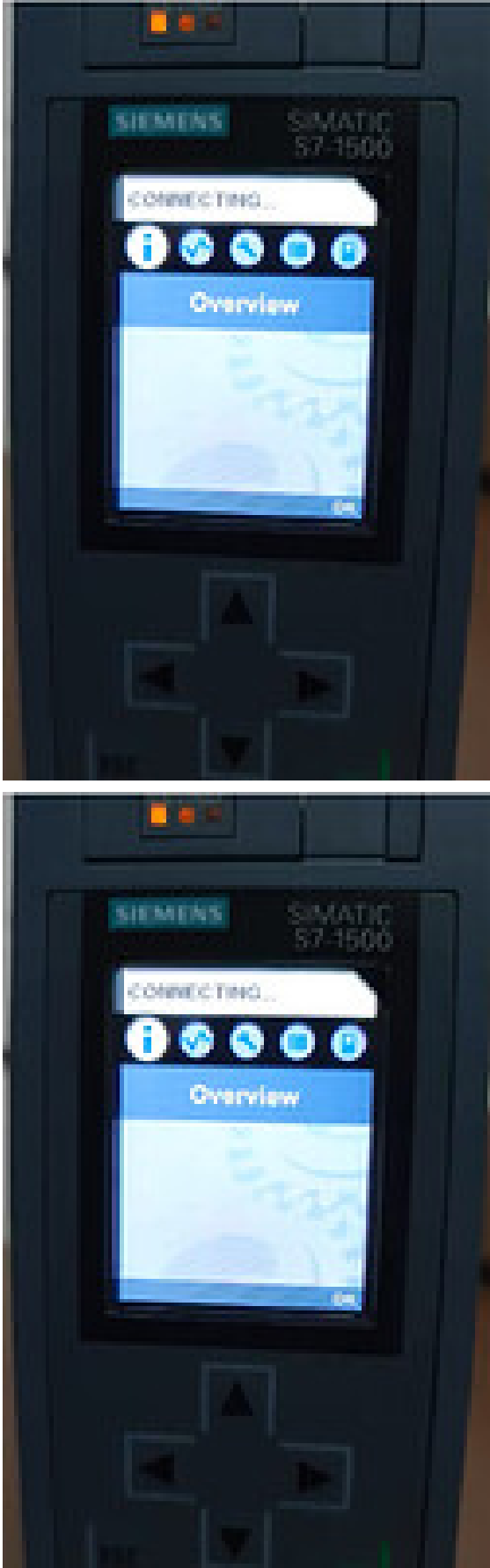
Topic	Replies	Views	Activity
 <p>LED indicator not illuminated</p> <p>Input pushbutton contacts closed</p> <p>+24 V DC</p> <p>Check input voltage level</p> <p>Common</p> <p>Input module</p> <p>IN 0</p> <p>IN 1</p> <p>IN 2</p> <p>IN 3</p> <p>IN 4</p> <p>IN 5</p> <p>IN 6</p> <p>IN 7</p> <p>DC COM</p> <p>DC COM</p> <p><b>AutomationForum.in</b></p>			

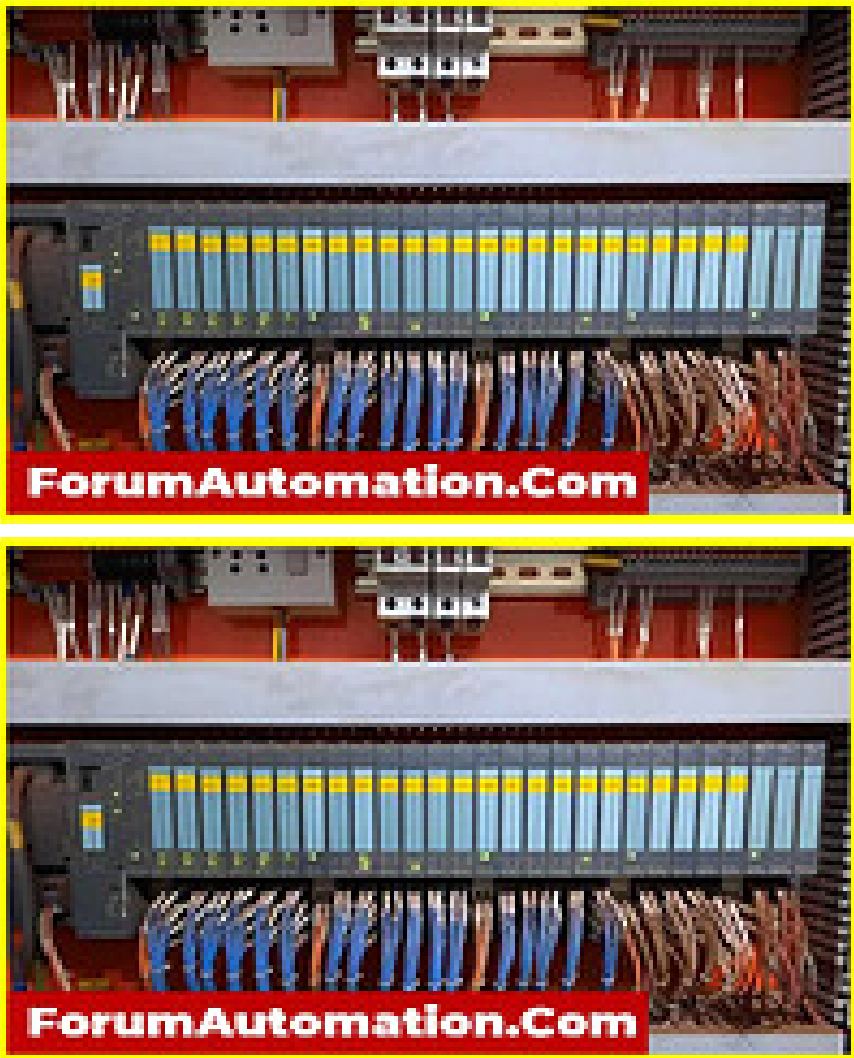
[Troubleshooting PLCs](#)

[PLC \(Programmable Logic Controllers\)](#)

Topic	Replies	Views	Activity
 <p>The image shows two identical screenshots of the RSLogix Emulate Ladder Logic (LAD) editor. The title bar reads 'LAD 4 - CONTROL'. The main workspace displays a ladder logic network with four rungs. Rung 0000 contains a normally open contact labeled 'Conveyor Bit' (B1:0) in series with a coil labeled 'Conveyor Trigger' (O1:0). Rung 0001 contains a normally open contact labeled 'Conveyor Bit' (B1:0) in series with a coil labeled 'Conveyor Trigger' (O1:0). Rung 0002 contains a normally open contact labeled 'Conveyor Bit' (B1:0) in series with a coil labeled 'Conveyor Trigger' (O1:0). Rung 0003 contains a normally open contact labeled 'Conveyor Bit' (B1:0) in series with a coil labeled 'Conveyor Bit' (B1:0). A feedback loop is shown below rung 0003, consisting of a normally open contact labeled 'Conveyor Bit' (B1:0) in series with a normally open contact labeled 'Conveyor Trigger' (O1:0), which is connected back to the start of rung 0003. The interface includes a toolbar at the top with icons for file operations and a status bar at the bottom.</p>		1.2k	<a href="#">Jul 2024</a>

[Issue with Conveyor Bit and One Shot in RSLogix Emulate PLC \(Programmable Logic Controllers\) plc](#)

Topic	Replies	Views	Activity
		1.9k	<a href="#">Apr 2021</a>

Topic	Replies	Views	Activity
<p data-bbox="172 264 839 338"><a href="#">Problems related to connecting the PLC CPU to TIA portal</a> <a href="#">PLC (Programmable Logic Controllers)</a></p>  <p data-bbox="172 1458 624 1576"><a href="#">What is a Modular PLC?</a> <a href="#">PLC (Programmable Logic Controllers)</a> <a href="#">plc</a></p>		3.9k	<a href="#">Mar 2023</a>
<p data-bbox="172 1928 624 2002"><a href="#">Sensors and Stepper motor</a> <a href="#">PLC (Programmable Logic Controllers)</a></p>		2.9k	<a href="#">Dec 2016</a>

**Want to read more? Browse other topics in [PLC \(Programmable Logic Controllers\)](#) or [view latest topics](#).**

---

Source: <https://forumautomation.com/t/what-are-the-different-operating-modes-in-plc/2489>