

Automation Technician interview questions

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What to expect

Automation technician interviews blend technical assessment with safety and fault-finding scenarios. Employers want to know you can program and commission control systems, diagnose faults on live plant, and work safely around production pressure.

- **Technical knowledge:** Questions on PLC, HMI and SCADA platforms, variable speed drives, sensors and instrumentation.
- **Fault-finding scenario:** A described plant fault where you talk through your diagnostic process step by step.
- **Safety and compliance:** Questions on safety interlocks, emergency stops, lockout tagout, electrical licensing and standards.
- **Behavioural:** Past examples of working under pressure, communicating with operators and engineers, and documenting changes.
- **Process and commissioning:** How you install, commission and hand over automated equipment.

A typical process starts with a phone or video screen covering your background and electrical or automation qualifications. If you progress, you attend a site or panel interview with a maintenance or engineering manager and sometimes a senior technician. That interview usually includes technical questions, a fault-finding walkthrough or practical assessment, and safety questions. Some employers ask you to interpret a wiring diagram or describe a program change on a whiteboard. You may also tour the plant and meet the team you would work with.

1. Walk me through how you would commission a new PLC and variable speed drive on a production line.

Why they ask

This tests whether you understand the commissioning sequence, not just the programming.

How to structure your answer

A process question. Give a step by step walkthrough in the order you would actually work: check the installation and wiring, confirm safe isolation, power up, set drive parameters, download and test the program, verify inputs and outputs, then hand over. Mention documentation and operator checks along the way.

Example answer

"First I check the electrical installation against the drawings, confirm the drive and PLC are mounted and wired correctly, and make sure the panel is clean and isolated. Once I have the go ahead to power up, I set the drive parameters for the motor, including ramp times and current limits, and do a no load test. Then I download the PLC program and test each input and output point, starting with safety circuits and emergency stops before anything moves. I jog the motor at low speed, check direction and feedback, then run it through the full sequence. I record the final parameters and program version, update the drawings, and walk the operator through the new start and stop sequence before handover."

2. Tell me about a time you diagnosed a fault on live automated plant under production pressure.

Why they ask

Fault finding on running plant is the core of the job, and employers want to see how you stay methodical when production is waiting.

How to structure your answer

Behavioural. Use STAR: situation, task, action, result. Keep the result about restoring production, finding the root cause, and preventing repeat faults.

Example answer

"A conveyor on our filling line kept stopping mid shift, and every restart only lasted a few minutes. The operator called me while the line was still running, so I checked the PLC fault log first and saw an intermittent input from a photo sensor. I watched the sensor LED while the conveyor ran and traced it to a loose terminal in the junction box. I isolated the conveyor, fixed the terminal, tested the sensor through several cycles, and the line ran clean for the rest of the shift. I also added the terminal check to our planned maintenance list so we would catch it earlier next time."

3. You arrive at a machine that has tripped on an emergency stop and production is waiting. What do you do?

Why they ask

This is a judgement and safety scenario. Employers want to see that you do not just reset and restart.

How to structure your answer

A scenario question. Show your judgement under pressure: make the area safe, gather information, inspect the cause, test before reset, and communicate with production. Safety comes before speed.

Example answer

"I would first make sure the machine is isolated and the area is safe, and ask the operator what happened and whether anyone was near the guard. I would check the emergency stop circuit and the guard switches, then look for the reason it tripped, such as a jammed product or a faulty interlock. I would not reset it until I understood the cause and tested the circuit. If it was a simple jam, I would clear it, test the emergency stop and guard interlocks, then restart and watch the first few cycles. If the fault kept coming back, I would keep the machine isolated and involve the engineer or supervisor rather than keep resetting it. I would also tell production what I found and how long the repair would take."

4. How do you go about modifying PLC logic or an HMI screen to support a product changeover?

Why they ask

This checks your programming discipline and how you manage changes on a live system.

How to structure your answer

A technical and process question. Explain your change control: understand the requirement, review the existing program, make the change offline where possible, test it, document it, and communicate it.

Example answer

"I start by talking to production and the engineer to understand exactly what needs to change, then I review the existing logic and screens so I do not break something else. I take a backup of the current program and make the change offline if I can, then test it on the machine during a planned window. For an HMI change, I update the screen, add any new alarms or messages, and check that the operator can follow the new sequence. Once it works, I save the new version, update the change record and drawings, and tell the operators and maintenance team what changed. If the change affects safety or interlocks, I make sure it is reviewed and signed off before it goes live."

5. Describe how you test safety interlocks and emergency stops, and what you do if one fails.

Why they ask

Safety circuits are non negotiable in automation. This question tests your standards and your willingness to stop the job.

How to structure your answer

A safety and technical question. Walk through your test method, then explain the escalation path when something fails. Be clear that you do not sign off a failed interlock.

Example answer

"I test to the site procedure and the relevant standards, usually by operating each interlock and emergency stop in turn and checking that the circuit drops out and the machine cannot restart until it is reset correctly. I record each result and note any device that is slow to operate or not latching properly. If an interlock fails, I leave the machine isolated and tag it out, then report it to the supervisor and engineer straight away. I would not bypass it or reset it to keep production going. I would help arrange the repair, retest the circuit once it is fixed, and update the records before the machine goes back into service."

6. Tell me about a time you had to explain a control system change to an operator or engineer who was not familiar with the program.

Why they ask

Automation technicians work between the plant floor and engineering, so communication matters as much as the technical fix.

How to structure your answer

Behavioural. Use STAR, and make the result about understanding and smoother operation, not just the technical change.

Example answer

"We changed a filling sequence on the HMI, and the afternoon operators were used to the old screen layout. I sat with them at the panel, showed them the new start and stop buttons, and talked through what each alarm meant. One operator was worried about a new purge step, so I ran a dry cycle with them watching and explained what the PLC was doing at each stage. By the end of the shift they were running the new sequence without calling me. I also left a one page guide at the panel and told the next shift what had changed."