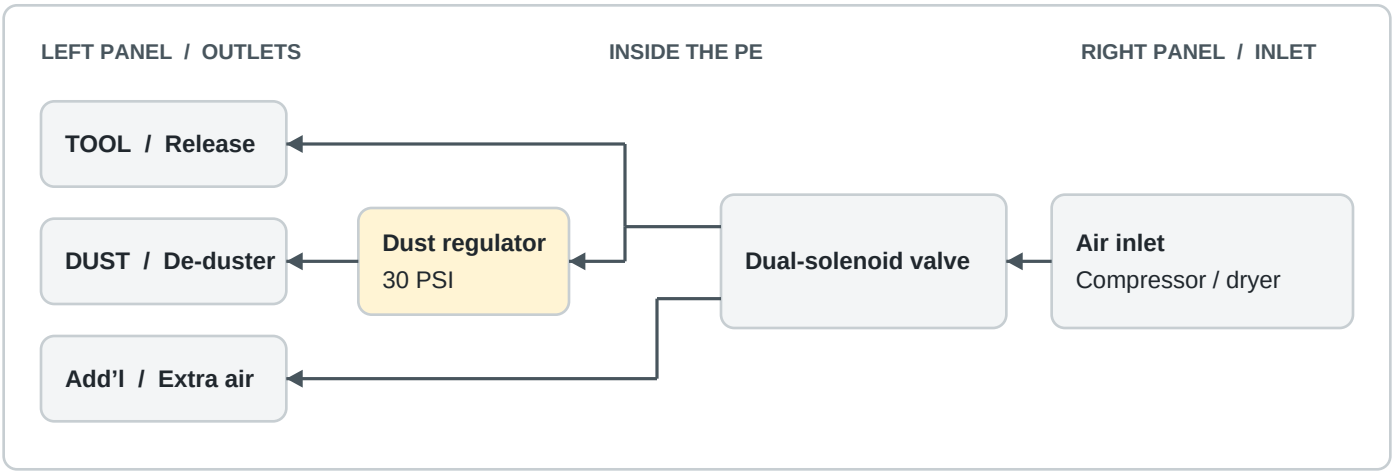
Airflow and panel layout

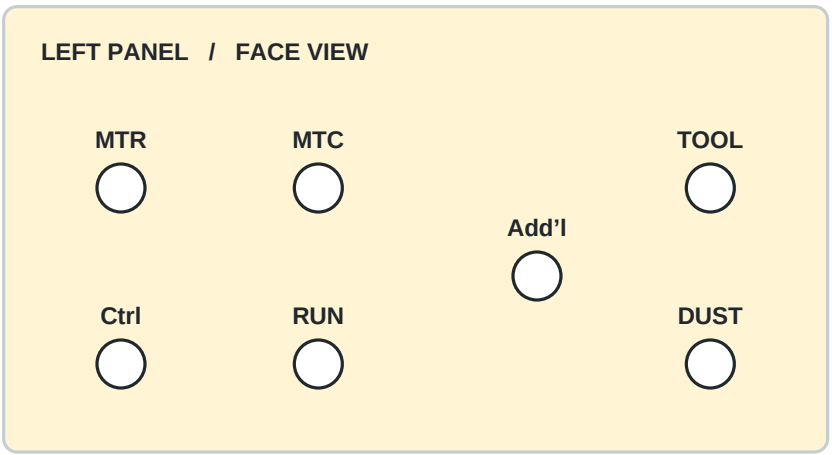
The PE routes compressed air to the ATC spindle and provides an additional air outlet.

Pneumatic flow



The valve selects the TOOL and DUST path or the Add'l path. The DUST branch passes through a regulator set to 30 PSI before reaching the DUST outlet. The setup guide shows a splitter on the external DUST hose.

External connections



RIGHT PANEL / INPUTS

Air inlet from compressor or dryer

AC power inlet for the internal 24 VDC supply

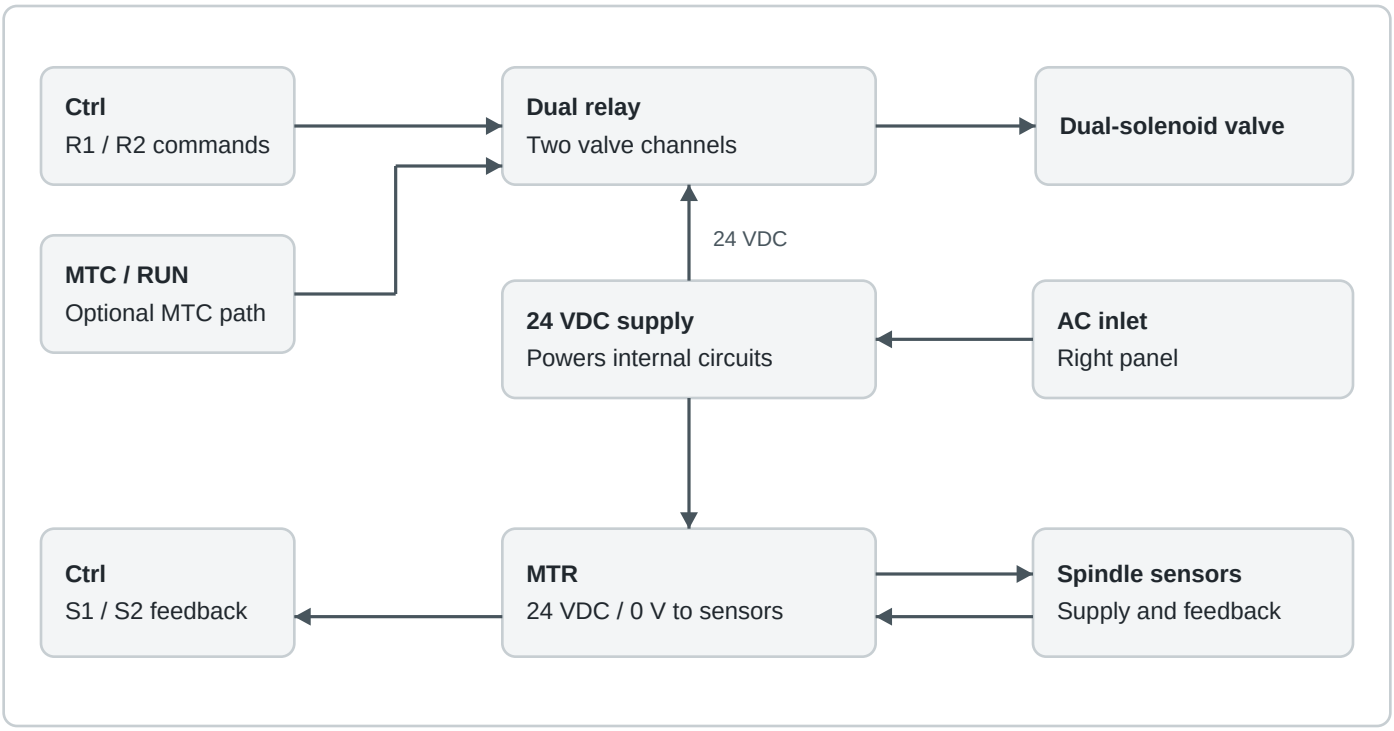
Left panel follows the PwnCNC setup guide photo. The right panel lists inlet functions. Layout is schematic and dimensions are omitted.

Use the enclosure label and current PwnCNC installation instructions for supply requirements and setup.

Power control and feedback

The controller commands the valve through the PE. The PE powers the spindle sensors and passes their two signals back to the controller.

Electrical and signal flow



External electrical connectors

MTR	4-pin	Supplies 24 VDC and 0 V to the two spindle sensors.
Ctrl	5-pin	Accepts R1/R2 commands and returns S1/S2 sensor signals.
MTC	3-pin	Connects the optional manual tool change button.
RUN	2-pin	Connects to the VFD for the optional MTC setup.

S1 and S2 pass directly from MTR to Ctrl. The CNC controller interprets those signals as part of its tool change sequence.

Electrical connector pinouts

Use the pin numbers marked on the connector. Match the connector and hardware revision to the documented harness before wiring.

MTR / 4-pin

Pin	Signal	Function
1	0 V	Sensor supply common
2	+24 VDC	Sensor power from PE
3	S1	Sensor signal to Ctrl pin 3
4	S2	Sensor signal to Ctrl pin 4

Ctrl / 5-pin

Pin	Signal	Function
1	0 V	Signal common
2	R1	Relay 1 command input
3	S1	Feedback from MTR pin 3
4	S2	Feedback from MTR pin 4
5	R2	Relay 2 command input

MTC / 3-pin

Pin	Signal	Function
1	0 V	Button circuit common
2	V+	Button feed via RUN circuit
3	MTC R1	Manual command to relay 1

RUN / 2-pin

Pin	Signal	Function
1	TA	VFD contact terminal label
2	TC	VFD contact terminal label

Before connecting a third-party controller

Follow the installation instructions for your enclosure revision and verify the connector pinout before wiring third-party equipment.

Confirm the R1/R2 input voltage and trigger polarity, the S1/S2 output type, and the RUN contact behavior for your combination of PE, spindle, and VFD.

RUN uses the terminal names from the PwnCNC harness drawing. Verify the VFD contact assignment for your model.