

KI Maker OUT-4

Protected 4-channel low-side DC output driver for switching real-world low-voltage DC loads from maker and control electronics.

Best for use with Arduino®-compatible boards, ESP32 modules, Raspberry Pi® GPIO projects, STM32 development boards, CNC accessories, fans, lights, relays, solenoids, pumps, and enclosed low-voltage wiring.



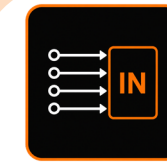
5-24 VDC Input

DC load supply input. 30 VDC absolute max. No AC mains anywhere on the board.



4 Low-Side Outputs

OUT1-OUT4 switch the negative/low side of low-voltage DC loads.



Logic Inputs

IN1-IN4 accept controller signals. 3.3 V / 5 V logic compatible. HIGH = ON.



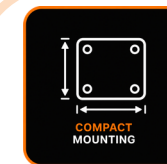
Protected Load Wiring

Fused input path, reverse-polarity protection, input TVS, flyback diodes, and gate protection.



Status + Test Points

PWR OK, one OUT LED per channel, and test points for troubleshooting.



Compact Mounting

65.00 mm x 50.00 mm board with four M3 mounting holes.

- Supply: 5-24 VDC nominal; 30 VDC absolute maximum
- Outputs: four low-side N-channel MOSFET switched outputs
- Wiring rule: load between V+ and OUTx; OUTx switches low side
- Inputs: IN1-IN4 logic/control inputs; HIGH turns matching output ON

- Protection: input PPTC fuse, reverse polarity, TVS, flyback diodes, gate protection
- Status: PWR OK plus OUT1-OUT4 channel LEDs
- Mechanical: 65.00 mm x 50.00 mm board; 4x M3 mounting holes
- Use: DC loads only; not isolated relay contacts

Use Limits | DC only. No AC mains. Load between V+ and OUTx. OUTx switches low side.

DETAILED SPECIFICATION

Technical details for the KI Maker OUT-4 protected low-side DC output driver board.

Category	Specification
Product purpose	Four-channel low-side DC output driver for controller-driven loads, enclosure accessories, CNC add-ons, fans, lights, relays, solenoids, pumps, and maker automation.
Input supply	5-24 VDC nominal, 30 VDC absolute maximum. DC input only; observe polarity.
Output type	Four low-side N-channel MOSFET switched outputs: OUT1, OUT2, OUT3, OUT4.
Load wiring	Wire each load between V+ and OUTx. OUTx is the switched low-side connection.
Logic inputs	IN1-IN4 logic/control inputs. 3.3 V / 5 V logic compatible. HIGH turns the matching output ON.
Input protection	Board-level reverse-polarity MOSFET protection, F1 resettable PPTC fuse, and input TVS surge clamp.
Output protection	Per-channel Schottky flyback diodes for common inductive DC loads; gate resistors, pull-downs, and zener gate clamps.
Indicators / test points	PWR OK LED, one OUT status LED per channel, plus troubleshooting test points for VIN, VCC, GND, gates, and outputs.
Mechanical	65.00 mm x 50.00 mm board outline; 55.00 mm x 40.00 mm mounting pattern; 4x Ø3.20 mm M3 clearance holes.
Current / thermal	Use within published limits. Verify load current, duty cycle, MOSFET temperature, connector temperature, and enclosure airflow during first tests.
Use condition	Indoor low-voltage DC electronics. Mount on insulated standoffs and protect from conductive debris.

LOAD WIRING RULE

Load positive goes to V+. Load negative goes to OUTx. Do not wire the load between OUTx and GND. Controller GND must connect to CN2 GND for valid input signaling.

CONNECTORS

CN1: DC+ / DC- load supply input
CN2: IN1-IN4 controller inputs plus GND reference
CN3-CN6: Paired V+ and OUTx load terminals
LEDs / TPs: PWR OK, OUT1-OUT4 LEDs, and test points for troubleshooting

SAFETY / BOUNDARIES

- Use only within published voltage, current, thermal, and duty-cycle limits.
- Do not connect AC mains anywhere on the board.
- Not an isolated relay-contact board. OUTx switches low side only.
- Not for medical, life-safety, automotive safety, emergency-stop, or fail-safe systems.



Documents

Scan for documentation
Manuals, specifications, and more

<https://www.ki-maker.com>