

KI Maker PWR INTF

Power and interface PCB for low-voltage DC distribution, regulated rails, fan power, utility I/O, and accessory wiring.

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



18-30 VDC Input

DC input only. Built around common 24 V maker and control-panel supplies.



Fused Rail Distribution

Fused/distributed 24 V plus regulated 12 V, 5 V, and 3.3 V outputs.



USB-C 5 V Output Only

Convenient 5 V service/accessory output. No data, no USB-PD, no backfeed.



Fan Interface

Selectable 12 V / 24 V fan power with PWM and TACH-related connections.



2 MOSFET Outputs

Two utility low-side DC outputs. Not isolated relay contacts.



Dry Contact + Analog

IN1/IN2 dry-contact inputs. A1/A2 are 0-3.3 V analog/passive NTC only.

- Main input: 18-30 VDC only; 24 V nominal expected use
- Rails: fused/distributed 24 V plus regulated 12 V, 5 V, and 3.3 V outputs
- USB-C: 5 V output only; no USB data, no USB-PD, do not backfeed
- Fan: selectable 12 V / 24 V fan output with PWM/TACH-related connections

- Utility outputs: two MOSFET low-side outputs; not isolated relay contacts
- Utility inputs: IN1/IN2 dry-contact only; A1/A2 are 0-3.3 V analog/passive NTC only
- Mechanical: 68.00 mm x 103.00 mm board; four M3 mounting holes

Use Limits | DC only. No AC mains. USB-C 5 V output only. Do not backfeed.

DETAILED SPECIFICATION

Technical details for the KI Maker PWR INTF board.

Category	Specification
Product purpose	Clean low-voltage DC power distribution for controllers, sensors, fans, enclosure accessories, and small utility loads.
Input supply	18-30 VDC input range; 24 V nominal expected use. DC input only.
Input protection	Fused/protected input path with board-level conditioning. Observe polarity and do not exceed stated voltage limits.
24 V output	Fused/distributed 24 V rail for field accessories.
12 V rail	Regulated 12 V output. Draft design target: 1 A continuous / 2 A peak
5 V rail	Regulated 5 V output. Draft design target: 1 A continuous / 2 A peak
3.3 V rail	Regulated 3.3 V output. Draft design target: 500 mA continuous / 1 A peak;
USB-C port	5 V output only for service/accessory power. No USB data, no USB-PD negotiation, and not intended as a power input.
Status LEDs	Rail status LEDs for input/output visibility.

Area	Specification
Fan connector	Selectable 12 V / 24 V fan supply with PWM input and TACH-related user connections. Confirm fan voltage before wiring and power ON
Low-side outputs	OUT1/OUT2 are utility MOSFET low-side outputs for DC loads. They are not isolated relay contacts and do not provide AC switching.
Dry-contact inputs	IN1/IN2 are dry-contact inputs only. Do not drive them directly with external voltage unless the manual explicitly allows it.
Analog / NTC inputs	A1/A2 are intended for 0-3.3 V analog or passive NTC use only. Do not apply 5 V, 12 V, or 24 V signals.
Logic / pull-up area	Board includes user I/O pull-up related connections. Use the published manual pinout before connecting external controllers.
Mechanical	68.00 mm x 103.00 mm board outline with four M3 mounting holes. Mount with adequate clearance from conductive surfaces.
Not intended for	AC mains, high-voltage systems, life-safety controls, medical use, vehicle safety-critical wiring, or unattended loads beyond published ratings.

Connector / Function Areas

- DC Input: 18-30 VDC input and GND
- Rail outputs: 24 V, 12 V, 5 V, 3.3 V outputs with GND returns
- USB-C: 5 V output-only service/accessory port
- Fan: Voltage, GND, TACH and PWM connections
- User I/O: OUT1/OUT2 controls, dry-contact inputs, analog/NTC inputs



Documents

Scan for documentation
Manuals, specifications, and more

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

Safety / Boundaries

Use only within published voltage and current limits. Do not connect AC mains. Do not backfeed USB-C. Verify wiring polarity before power up. Ensure proper enclosure strain relief, insulation and ventilation for real-world loads.