KI MAKER
PWR INTF SPEC SHEET

Protected Low-Voltage DC Power Interface Board

Model KI-MPB-RevB | Rev-B / PCBV1.02 | Released 2026-06-25

18–30 VDC INPUT | 24 V / 12 V / 5 V / 3.3 V RAILS | USB-C 5 V OUTPUT ONLY

KI Maker PWR INTF

Released customer specification sheet for low-voltage DC distribution, regulated rails, fan power, utility I/O, and accessory wiring.

18-30 VDC Input

18-30 VDC input only for common 24 V maker and control-panel systems. No AC mains.

Fused Rail Distribution

Distributed 24 V plus regulated 12 V, 5 V, and 3.3 V rails for low-voltage DC accessories and controller integration.

USB-C 5 V Output Only

5 V service/accessory output only. No USB data, no USB-PD, no backfeed, and not a power input.

Fan Interface

Selectable 12 V / 24 V fan power with PWM/TACH-related connections. Verify fan voltage before power-up.

2 Low-Side MOSFET Outputs

OUT1/OUT2 are DC low-side switched outputs. OUT2 counts against the 12 V rail budget; OUT1 counts against the 24 V accessory-path budget.

Dry Contact + Analog

IN1/IN2 are dry-contact inputs only. A1/A2 and sensor signals are 0–3.3 V only.

- Main input: 18–30 VDC only; 24 V nominal expected use
- Rails: 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: OUT1/OUT2 low-side MOSFET outputs; not isolated relay contacts
- Utility inputs: IN1/IN2 dry-contact only; A1/A2 and sensor inputs are 0–3.3 V only
- Mechanical: 103.00 mm × 68.00 mm board; four M3 mounting holes

Docs & Manual

www.ki-maker.com/docs

Use Limits | Low-voltage DC only. No AC mains. USB-C 5 V output only. Do not backfeed.
Do not assume all rails and outputs can be used at maximum at the same time.

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DETAILED SPECIFICATION

Released customer-facing limits, boundaries, and connection rules 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	1.0 A continuous
5 V rail	1.0 A continuous
3.3 V rail	0.5 A continuous
USB-C port	USB-C: 5 V output only, 0.5 A max. No USB data, no USB-PD negotiation, and not intended as a power input.
OUT1	24V, 1.0 A cont. max
OUT2	12V, 1.0 A cont. max, shared with 12 V rail
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 / switch-to-ground inputs only. Do not apply external voltage.
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	103.00 mm × 68.00 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.

Safety / Boundaries

Use only within published voltage, current, and thermal limits. This board is a bare low-voltage DC electronics module and is not a certified safety device. The installer is responsible for enclosure, strain relief, wire sizing, external current limiting, ventilation, and compliance of the finished system. Inductive loads may require external flyback, TVS, snubber, or a separate driver module.

Do not exceed individual output limits or the total board power/thermal limits.Cooling / airflow is recommended near maximum current, especially in warm or enclosed environments.