

CONTROL BLOCK I/O EXPANSION

REMOTE I/O

Motion. Logic. Safety. HMI. — One Platform.

PLUG-IN MODULES FOR THE CONTROL BLOCK · BUS-FED · ZERO-CONFIG



Plug-in I/O modules for the Control Block. 24 V DC supply — or tap the Control Block 24 V bus directly. Snap expansions onto the side and pick the module from the dropdown in AutoCode. No driver. No glue code.

MOTION

Drive solenoids, indexers, and conveyors from the same program that runs your axes. 5 A relay outputs at 30 VDC / 250 VAC. Pulse or level output mode. Trigger ancillary motion from any AutoCode block.

LOGIC

Pick the module from a dropdown in AutoCode. No driver to install. No address to set. Add an expansion and it shows up on the next scan. Reference channels by name from any block.

SAFETY

Optical isolation on every digital channel. Tri-coated enclosure (anti-mold · anti-moisture · anti-salt spray). Type-A normally-open relay outputs for predictable fail-safe behavior. Reverse-polarity-protected bus tap.

HMI

Live channel state on the Pendant and Web HMI. Per-channel green LEDs on the module itself. Force outputs and watch inputs from any browser. No second commissioning tool.

One platform — I/O without a second protocol.

Autoblocks Remote I/O is a Control Block expansion. The head module accepts 24 V DC from a standard supply — or taps the Control Block's 24 V bus directly. Expansion modules snap to the side of the head — no addressing, no wiring. AutoCode recognizes the module on the next scan and exposes every channel by name.

I/O TYPES
DIGITAL & ANALOG
8 DI · 8 DO · 16-bit AI

INTEGRATION
PLUG & PLAY
Dropdown in AutoCode

DIGITAL OUT
RELAY OUTPUTS
5 A · 30 VDC · 250 VAC

PROTOCOL
MODBUS TCP
Third-party PLC · SCADA · HMI

HARDWARE

Supply voltage	24 V DC · external supply or Control Block bus
Power consumption	2 – 4 W per module typical
Operating temperature	–40 °C to +85 °C, 5 – 95 % RH, no condensation
Storage temperature	–40 °C to +105 °C
Mounting	35 mm DIN rail · positioning-hole screw mount
Coating	Tri-coated: anti-mold · anti-moisture · anti-salt spray
Dimensions (LxWxH)	Head 110 × 40 × 100 mm · Expansion 110 × 25 × 100 mm
Weight	≈ 135 g per module
Indicators	PWR (red) · per-channel DI / DO / AI (green) · RUN · STA

I/O CHANNELS

Digital input (DI)	NPN / PNP · 12 – 24 VDC · 7.2 kΩ · optically isolated per channel
DI sample / count rate	1,000 Hz sample · < 500 Hz counter · 6 ms default filter
Digital output (DO)	Type-A NO relay · level or pulse · 5 A @ 30 VDC / 250 VAC
DO common	8 A max total per COM terminal
Analog input (AI)	Differential current · 0–20 mA · 4–20 mA · ±20 mA
AI resolution / accuracy	16-bit · ±0.1 % FS · 70 Hz max sample rate



EXPANSION MODULE AB_RIO_88R

Snaps onto the side of AB_RIO_88E. Adds 8 DI + 8 DO. No additional power or wiring.

EXTERNAL PORTS

- ▶ **AB_RIO_88E** — Head module. Connects to the Control Block 24 V bus. 8 DI + 8 DO relay.
- ▶ **AB_RIO_88R** — Expansion module. Snaps onto the side of the 88E. 8 DI + 8 DO relay.
- ▶ **Stackable** — Snap additional AB_RIO_88R expansions onto the stack; AutoCode picks them up on the next scan.
- ▶ **Reset** — USB-C front-panel reload port for factory-default recovery.
- ▶ **Indicators** — RUN · STA · per-channel DI / DO / AI activity LEDs on every module.

COMMUNICATION & SOFTWARE

- ▶ **AutoCode** — Pick the module from the dropdown. Read DI, drive DO, scale AI by channel name.
- ▶ **Autoblocks Studio** — Diagnose channels and tune filter parameters from a laptop.
- ▶ **Web HMI** — Per-channel live state and forced-output diagnostics from any browser.
- ▶ **Pendant** — Inspect and force I/O from the shop floor.
- ▶ **Modbus TCP** — Open the same registers to third-party PLCs, SCADA, and HMIs over the network.

SUPPORTED DEVICES — PLUG & CONFIGURE

SENSORS

Proximity (NPN / PNP) · photoelectric · limit · safety contacts · push buttons

ACTUATORS

Solenoid valves · relays · contactors · indicator stacks · pneumatic manifolds

ANALOG SOURCES

4–20 mA loop transmitters · flow meters · pressure transducers · load cells

CONTROLLER

Autoblocks Control Block · all current revisions · no add-on driver

MOUNTING

Direct DIN-rail drop next to the Control Block · or remote-mount via the 24 V bus extension

CONFIGURATION OPTIONS

Start with **AB_RIO_88E** as the head module. Snap additional **AB_RIO_88R** expansions onto the side as more channels are needed. 24 V DC supply or Control Block bus. No driver, no addressing. See the current configuration guide at autoblocks.co.



SCAN FOR LIVE PRODUCT PAGE
autoblocks.co/product/remote-io