

Beckhoff — IL Coupler Box Units

IL2300-B520-0000 **In-Stock, Ships Today**

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The **IL2300-B520-0000** is a coupler box unit produced by Beckhoff within the IL Coupler Box Units series. It serves as a distributed interface that links discrete sensors and actuators on a machine frame to a higher-level fieldbus. This arrangement allows decentralized installation of input and output points while consolidating power and communication over short trunk lines.

This model operates with a control supply of **24 VDC**, and its internal electronics draw up to **0.5 A**; these limits determine the capacity required from upstream power supplies and circuit protection. The supply voltage may fluctuate within **a tolerance of -15% to +20%** without interrupting operation, accommodating brownouts or overvoltage on long cable runs. Logic signals remain isolated from the backplane because the control and bus domains are separated, reducing the risk of ground loops. Downstream modules are added through the **IP-Link extension bus**, so all connected nodes share power, telegram timing, and addressing. Data moves across that bus through **optical fiber**, which blocks electromagnetic interference and supports daisy-chain distances that exceed typical copper limits.

On the field side, the unit communicates through **DeviceNet**, enabling integration with PLCs that use this CAN-based protocol. Spring contacts inside each port are made from a **gold-plated CuZn alloy**, ensuring low resistance even after repeated mating cycles. The eight-millimeter connectors engage in a single motion, and the **8 mm snap-on format** eliminates the need for torque settings. The molded PA6 housing shields the circuitry and carries an **IP65/66/67 ingress rating**, protecting the coupler against dust and washdown spray. Four digital input channels

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accept signals from 24 V proximity or limit switches, while four transistor outputs drive solenoids and indicator lamps. Power enters through one four-pin M8 plug and passes directly through an identical socket, creating a daisy chain for additional boxes without extra junctions. The unit is not programmable, so the central controller manages its deterministic operation.

Specifications

Auxiliary Power Current:	typ. 20 mA	Channels:	4 inputs, 4 outputs	Contact Material:	CuZn, gold-plated
Control Current Max:	0.5 A	Control Voltage:	24 VDC	Control/bus Isolation:	Yes
Extension Bus:	IP-Link	Extension Medium:	Optical fiber	Fieldbus Protocol:	DeviceNet
Housing Material:	PA6	I/o Connection:	8 mm snap-on	I/O Connections:	8 mm, snap type
Input Channels:	4	Input Filter Time:	3.0 ms	Max Output Current:	0.5 A/channel, short-circuit proof
Operating Temp:	0...+55 °C	Output Channels:	4	Power Feed:	1 x M8 plug, 4-pin
Power Pass-through:	1 x M8 socket, 4-pin	Power Supply Inlet:	1x M8 male, 4-pin, A-coded	Power Supply Outlet:	1x M8 female, 4-pin, A-coded
Programmable:	No	Protection Class:	IP65/66/67	Protection Rating:	IP65/66/67 (EN 60529)
Rated Load Voltage:	24 V DC (-15%/+20%)	Sensor Supply:	from control voltage, max 0.5 A, short-circuit proof	Short-Circuit Current:	typ. 1.5 A
Signal Voltage High (1):	11...30 V, 6 mA input current	Signal Voltage Low (0):	-3...+5 V	Standards Compliance:	EN 61131-2 Type 2
Storage Temp:	-25...+85 °C	Supported Load Types:	ohmic, inductive, lamp	Voltage Tolerance:	-15%/+20%
Last Verified:	10/23/2026 12:59 AM				

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Contact Us

 1620 Old Apex Road, Cary, NC 27513, USA

 **Toll Free:** [1-888-551-3082](tel:1-888-551-3082)

 **International:** [1-919-443-0207](tel:1-919-443-0207)

 **Fax:** [1-919-867-6204](tel:1-919-867-6204)

 **Email:** sales@wakeindustrial.com

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