

Beckhoff — IL Coupler Box Units

IL2302-B110-0000 **In-Stock, Ships Today**

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The **IL2302-B110-0000** is an I/O coupler box produced by Beckhoff within the IL Coupler Box Units series. It serves as a compact EtherCAT node that links machine-mounted sensors and actuators to a higher-level controller, allowing decentralized I/O to be installed directly on the equipment frame without control-cabinet wiring. On the process side, the device offers four digital inputs and four digital outputs, and it can supervise as many as **624** remote digital input channels and an equal number of remote digital output channels when additional terminals are stacked downstream.

This unit communicates over EtherCAT at a data rate of **100 Mbaud**, and the signal is carried over a **4 × 2 twisted-pair copper Cat 5** cable so standard industrial Ethernet leads can be used. Two fieldbus trunks are provided through **2 × M12 D-coded sockets**, enabling a daisy-chain topology while maintaining ingress protection up to **IP65/66/67**. The coupler operates in **EtherCAT Direct Mode**, and its hardware-based protocol processing forwards I/O data with microsecond-level delay. Remote extension segments can span up to **100 m** between modules, providing routing flexibility in large conveyor or packaging lines. All local sensors and actuators connect through sealed M12 bolted ports, and the housing tolerates washdown cleaning procedures commonly used in food or chemical plants.

For analog processing, expansion capacity reaches 128 input points and 128 output points, all mapped through the same cyclic fieldbus frames. The internal power feed permits a maximum control current of **0.5 A** to operate sensors, indicator lamps, or other low-power loads connected to the local output pins. Up to **512 bytes** of input data

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and the same amount of output data can be exchanged during each EtherCAT cycle. This capacity allows the full peripheral count to be transported deterministically without fragmenting the process image.

Specifications

'0' Signal Voltage:	-3...+5 V	'1' Signal Voltage:	11...30 V, 6 mA input current	Approvals/markings:	CE, UL
Baud Rate:	100 Mbaud	Data Medium:	4 x 2 Twisted Pair Copper, Cat 5	Digital Inputs:	4
Digital Outputs:	4	Fieldbus Connection:	2 x M12 D-Coded Socket	I/o Connection:	M12 Bolted
Input Filter:	3.0 ms	Input/output Connections:	M12, screw type	Max Analog Peripheral Inputs:	128
Max Analog Peripheral Outputs:	128	Max Control Current:	0.5 A	Max Digital Peripheral Inputs:	624
Max Digital Peripheral Outputs:	624	Max Fieldbus Input Bytes:	512 bytes	Max Fieldbus Output Bytes:	512 bytes
Max Module Distance:	100 m	Max. Output Current:	0.5 A per channel, short-circuit-proof	Number Of Channels:	4 inputs + 4 outputs
Operating Temperature:	0...55°C	Power Supply Connection:	1 x M8 male socket and 1 x M8 female socket, 4-pin, a-coded	Protect. Rating/installation Pos.:	IP65/66/67 (EN 60529)/Variable
Protection Class:	IP65/66/67	Protocol:	EtherCAT (Direct Mode)	Rated Load Voltage:	24 V DC (-15%/+20%)
Sensor Supply:	Up to 0.5 A, short-circuit proof from control voltage	Specification:	EN 61131-2, type 2	Storage Temperature:	-25...+85°C
Last Verified:	10/24/2026 10:10 PM				

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Shipping Options



Payment Methods



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