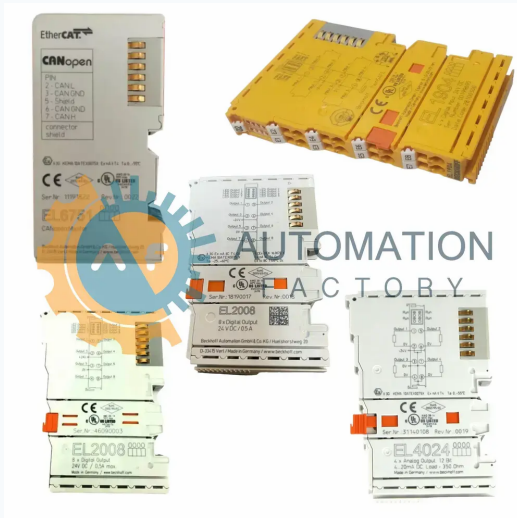




Beckhoff — EL EtherCAT Terminals

EL3048



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The **EL3048** is an analog input terminal produced by Beckhoff within the EL EtherCAT Terminals series. Installed on a DIN rail in a modular I/O station, the unit digitizes low-level current signals and forwards the resulting data across the EtherCAT E-bus to the controller. By providing eight independent channels in a 12 mm housing, it consolidates sensor wiring and streamlines data acquisition for machine monitoring, process control, and building automation systems.

It accepts **8 single-ended current channels**, and each channel is converted with **12 bits** of resolution so the controller receives 4,096 quantization steps per signal. The sigma-delta converter completes one full scan in **1.25 ms**, permitting time-aligned updates in applications that run faster than conventional PLC cycles. Each analog input passes through a hardware low-pass stage that attenuates frequencies above **1 kHz**, helping suppress switching noise from nearby drives. The front end has an input impedance of **85 Ω**, so connected transmitters must be able to supply the required current without distortion. Communication and logic draw **130 mA** from the internal E-bus, eliminating the need for a separate supply for the terminal electronics.

Each input channel accepts up to **40 mA**, providing headroom above the normal measurement range without describing this value as contact current. The module supports **30 V** of electrical separation between the field wiring and the logic domain. Its **IP20** protection rating makes it suitable for installation inside an enclosed control cabinet. The module samples the channels in a multiplexed sequence referenced to a common ground, and the raw values are packed into a 2-byte status word and a 2-byte data word for each channel in the process image. A 35 mm

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mounting rail provides the mechanical interface, while spring-clamp terminals simplify field wiring and module installation. The narrow housing also reduces the rail space required for applications that need several analog measurement points.

Specifications

Analog Inputs:	8	Conversion Time:	1.25 ms	Current Consumption E-bus:	approx. 80 mA
Dielectric Strength:	30 V	Dimensions (w X H X D):	12 mm x 100 mm x 68 mm	E-bus Current:	130 mA
Electronics Supply:	E-bus	Ground Reference:	Single Ended	Input Channels:	4
Input Contact Current:	40 mA	Input Current:	approx. 3 mA per channel	Input Filter:	3.0 ms
Input Filter Cutoff:	1 kHz	Input Type:	24 V DC, single-ended	Internal Resistance:	85 ?
Mounting:	DIN rail	Mounting Rail:	35 mm	Operating Temperature:	0 °C to +55 °C
Process Image:	2 B status, 2 B value/ch	Protection Class:	IP20	Protection Rating:	IP20
Resolution:	12 bits (16-bit presentation)	Sampling Type:	Multiplex	Signal Connection:	2-wire
Last Verified:	10/23/2026 8:22 PM				

Contact Us

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