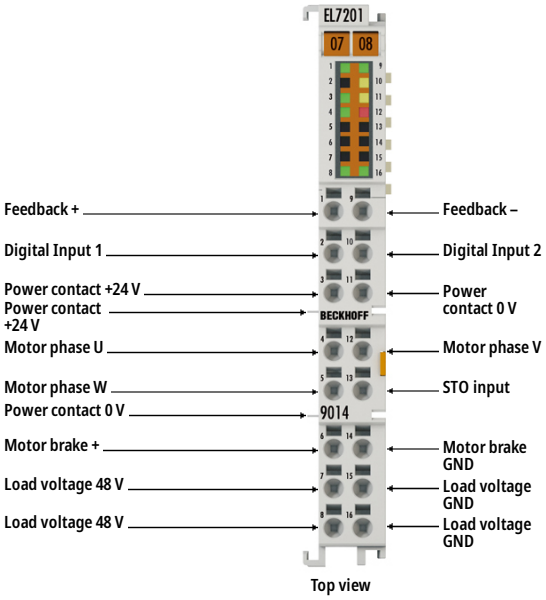
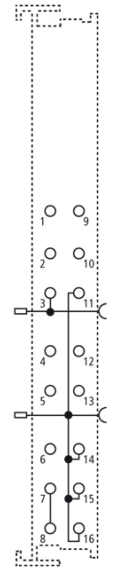
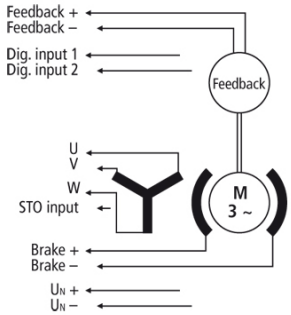
EL7201-9014 | EtherCAT Terminal, 1-channel motion interface, servomotor, 48 V DC, 2.8 A, OCT, suitable for STO applications



Top view



Contact assembly



Product status: Regular delivery

The EL7201-9014 servomotor EtherCAT Terminal with integrated absolute value interface offers high servo performance in a very compact design. The fast control technology, based on field-oriented current and PI speed control, supports fast and highly dynamic positioning tasks. The monitoring of numerous parameters, such as overvoltage and undervoltage, overcurrent, terminal temperature or motor load via the calculation of a I^2T model, offers maximum operational reliability. EtherCAT, as a high-performance system communication, and CAN-over-EtherCAT (CoE), as the application layer, enable ideal interfacing with PC-based control technology. The latest power semiconductors guarantee minimum power loss and enable feedback into the DC-Link when braking. 16 LEDs indicate status, warning and error messages as well as possibly active limitations.

With the One Cable Technology (OCT) the encoder cable is omitted by transmitting the signals of the encoder digitally via the existing motor cable. The option to read the electronic identification plates of suitable motors from the AM81xx series enables a plug-and-play solution for maximum convenience during commissioning.

The EL7201-9014 enables the user to implement the safety function STO (Safe Torque Off) that corresponds to a Cat 3, PL d safety level according to DIN EN ISO 13849-1:2015.

Product information

Technical data

Technical data	EL7201-9014
Protocol	EtherCAT
Technology	compact drive technology

Connection method	direct motor connection with OCT
Number of inputs	2 x end position, 1 x feedback, 1 x STO
Load type	permanent magnet-excited three-phase synchronous motor
Number of channels	1
Number of outputs	1 x servomotor, 1 x motor brake
Supply voltage electronics	24 V DC (via power contacts)
Supply voltage power	8...48 V DC (external)
Output current (rms)	2.8 A
Peak current (rms)	max. 5.7 A for 1 s
Performance increase	yes, through ZB8610 fan cartridge
Output current with ZB8610 (rms)	max. 4.5 A
Peak current with ZB8610 (rms)	max. 9.0 A for 1 s
Rotating field frequency	0...599 Hz
PWM clock frequency	16 kHz
Current controller frequency	32 kHz
Rated speed controller frequency	16 kHz
Output voltage motor brake	24 V DC
Output current motor brake	max. 0.5 A
Current consumption power contacts	typ. 100 mA + holding current motor brake
Current consumption E-bus	120 mA
Distributed clocks	yes
Realization STO	hard-wired via safe output
Special features	compact (only 12 mm wide), absolute feedback, One Cable Technology (OCT), integrated track control
Safe stop functions	Safe Torque Off (STO)
Electrical isolation	500 V (E-bus/field potential)
Weight	approx. 60 g
Operating/storage temperature	0...+55 °C/-25...+85 °C
Relative humidity	95 %, no condensation
EMC immunity/emission	conforms to EN 61000-6-2/EN 61000-6-4
Vibration/shock resistance	conforms to EN 60068-2-6/EN 60068-2-27
Protect. rating/installation pos.	IP20/see documentation
Approvals/markings	CE, UL

Housing data	**EL-12-16pin**
Design form	HD (High Density) housing with signal LEDs
Material	polycarbonate

Dimensions (W x H x D)	12 mm x 100 mm x 68 mm
Installation	on 35 mm DIN rail, conforming to EN 60715 with lock
Side by side mounting by means of	double slot and key connection
Marking	labeling of the BZxxx series
Wiring	solid conductors (e): direct plug-in technique; fine-stranded conductors (f) and ferrule (a): spring actuation by screwdriver
Connection cross-section	s*: 0.08...1.5 mm^2, st*: 0.25...1.5 mm^2, f*: 0.14...0.75 mm^2
Connection cross-section AWG	s*: AWG 28...16, st*: AWG 22...16, f*: AWG 26...19
Stripping length	8...9 mm
Current load power contacts	I_{max}: 10 A

*s: solid wire; st: stranded wire; f: with ferrule