



**Automatización Eléctrica**  
Especialistas en Automatización

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Servo controller for EC motors

The IB IL EC AR 48/10A Inline servo controller is a universal power output module with a 4 quadrant function for permanently excited DC motors with brushgears or electronically commutated DC motors (EC motors) with up to 450 W power output.

Features:

- Variable frequency drive with positioning function
- Electronic commutation with Hall sensors
- Point-to-point positioning function
- Speed profile: trapezoid or S curve
- Position, speed, and torque control
- Position detection with incremental encoder
- Homing
- Max. 48 V/10 A
- 97.6 mm design width
- Software tool for operation and startup including oscilloscope function
- Cycle time of the position controller: 1 ms
- For single and multi-axis applications

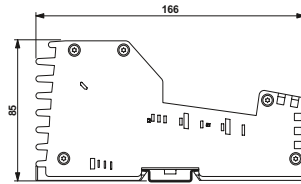
Applications:

- Handling machines in the semiconductor industry, in small parts protection, in the electronics industry, and in test engineering
- Assembly machines in small appliance production
- Bearing and conveying technology for small loads
- Format adjustment in processing machines and packaging machines
- Laboratory technology

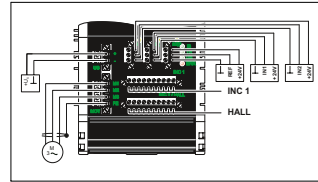
Notes:

The driver function blocks can be obtained free of charge on the Internet at [www.phoenixcontact.net/products](http://www.phoenixcontact.net/products) under Download on the product page of the corresponding module.

1) EMC: Class A product, see page 553



Servo controller for 24 V motors with positioning and homing function



Technical data

Interface	Inline local bus
Startup and diagnostics	RS-232
Power supply for module electronics	7.5 V DC (via voltage jumper)
Communications power U <sub>c</sub>	Typ. 30 mA
Power supply	2-pos. COMBICON connector
Connection method	12 V DC ... 48 V DC ±15% (surge voltage shutdown U <sub>b</sub> > 60 V DC)
Supply voltage range	
Motor output	1 permanently excited DC motor with or without brushgear
Output name	
Connection method	4-pos. COMBICON plug with shield connection clamp
Nominal current range	max. 10 A (starting/continuous current)
Nominal motor power	450 W (power consumption)
Function	4 quadrant servo controller
Incremental encoder input	
Symmetrical incremental encoders	max. 1 MHz
Input frequency (5 V)	
Asymmetrical incremental encoders	max. 500 kHz (at 4 V voltage level) / max. 100 kHz (at 20 V voltage level)
Input frequency (5 V) / Input frequency (24 V)	
Digital inputs	
Number of inputs	3
Connection method	MINI COMBICON
Connection technology	3-wire (signal, Us, GND)
General data	
Connection method	Screw connection
Connection data solid/stranded/AWG Front MSTB	0.2 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 24 - 12
Connection data solid/stranded/AWG Front MC	0.14 ... 2.5 mm <sup>2</sup> / 0.2 ... 2.5 mm <sup>2</sup> / 28 - 16
Weight	880 g
Width	97.6 mm
Ambient temperature (operation)	-25 °C ... 55 °C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Inline variable frequency drive, including connector plug			
- For DC motors with brushgear and EC motors (without brushgear)	IB IL EC AR 48/10A-PAC <sup>1)</sup>	2819587	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Startup and diagnostic software, including cable for connecting to the RS-232 interface of a PC	EC AR CAB SW TOOL	2819545	1
Connector set, including shield connection clamps	IB IL ECAR-PLSET	2819561	1

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- Purchasing management, order record and tracking of shipments.

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<b>Product</b>	<b>Code</b>	<b>Reference</b>	<b>Product link</b>
Startup and diagnostics software for the Inline servo amplifier IB IL EC AR 48/10A, including cable for connection to the RS-232 interface of a PC.	2819545	EC AR CAB SW TOOL	<a href="#">Buy on EAN</a>
Connector set, including shield connection clamps for Inline servo amplifier IB IL EC AR 48/10A	2819561	IB IL ECAR-PLSET	<a href="#">Buy on EAN</a>