

Bus coupler - ILB S3 24 DI8 DO4 AO2 INC-IN2 - 2700174

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Sercos III module in Inline block design for position regulation or control of two drive axis allows a variable frequency drive (with +/-10-V signal), a position encoder (with incremental signal) and relevant limit switch or home position switch for each axis

Product Description

The Sercos III module in Inline block design adopts the position regulation or control of two drive axis. For each axis, a variable frequency drive (using +/-10-V signal) and a position encoder (using incremental signal) can be connected together with digital I/Os for the limit switch or home position switch. The module is thus suitable for the integration of motion control functions in Sercos systems, for which drive electronics is not available with integrated Sercos III interface. These include servo valve control for pneumatic or hydraulic cylinders, drive amplifier for electrical low-power motors or simple frequency inverters. In this way, axis systems are also coupled to SPS or motion control controller without direct Sercos III interface in realtime that are based on the Sercos III.

General functions:

Bus interface according to Sercos III specification stand V1.1.2, in acc. with Sercos III roadmap for 28.11.2008.

Sercos III device model
Sercos III communication model
Sercos III parameter model

Functional profile FSP-IO and FSP drives

The following drive functions are available:

Position controller
Speed controller
Cam controller
Homing function
Touch probe function

Signal connections:

The module is equipped with the following inputs/outputs:

#2x analog output (+/-10 V)
#2x incremental encoder input
#8x digital input
#4 x digital output

Your advantages

- ☒ Probe function
 - ☒ Position controller
 - ☒ Speed controller
 - ☒ Homing
 - ☒ Point-to-point positioning controller
 - ☒ Cam controller
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Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 495677
GTIN	4046356495677

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	156 mm
Height	141 mm
Depth	57 mm
Note on dimensions	Specifications with connectors

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	max. 85 % (non-condensing)
Air pressure (operation)	80 kPa ... 108 kPa (up to 2000 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (up to 3500 m above sea level)
Degree of protection	IP20

General

Mounting type	DIN rail
Net weight	405 g
Note on weight specifications	with connectors
Diagnostics messages	Short-circuit / overload of the digital outputs Message in the diagnostics register
	Short-circuit, sensor supply Message in the diagnostics register
	Undervoltage Power supply for sensors Message in the diagnostics register
Mounting type	NS 35/7,5

Interfaces

Designation	Sercos
No. of channels	2
Connection method	RJ45 socket
Transmission speed	100 Mbps

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Technical data

Interfaces

Transmission physics	Copper
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Digital inputs

Input name	Digital inputs
Connection method	Spring-cage connection
Connection technology	2, 3-wire
Number of inputs	8
Protective circuit	Short-circuit protection, overload protection of the sensor supply
Nominal input voltage U_{IN}	24 V DC
Input voltage range "0" signal	-30 V DC ... 5 V DC
Input voltage range "1" signal	15 V DC ... 30 V DC
Input voltage range	-30 V DC ... 30 V DC

Digital outputs

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	2-wire
Number of outputs	4
Protective circuit	Short-circuit and overload protection
Output voltage	24 V DC
Maximum output current per channel	500 mA
Maximum output current per module / terminal block	2 A
Nominal load, inductive	12 VA (1.2 H, 50 Ω)
Nominal load, lamp	12 W
Nominal load, ohmic	12 W (48 Ω)
Behavior with overload	Auto restart
Behavior with inductive overload	Output can be destroyed
Reverse voltage resistance to short pulses	Reverse voltage proof

Analog outputs

Number of outputs	2
Connection technology	2-wire
D/A converter resolution	10 bit
Type of protection	Short-circuit/overload protection
Voltage output signal	-10 V ... 10 V

Inline potentials

Designation	Supply of the logic voltage U_L
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current consumption	typ. 750 mA
	max. 950 mA
Designation	Feed-in of the sensor supply U_{S1}

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Technical data

Inline potentials

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply unit	max. 8 A
Current consumption	max. 1 A
Designation	Feed-in of the sensor supply U_{S2}
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply unit	max. 8 A
Current consumption	max. 1 A
Designation	Feed-in of the actuator supply U_{A1}
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply unit	max. 8 A
Current consumption	max. 2 A
Designation	Feed-in of the actuator supply U_{A2}
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply unit	max. 8 A
Current consumption	max. 2 A

Encoder inputs

Input name	Encoder input, 2 square-wave signals with 90 degree offset
Description of the input	Position detection with incremental signal from rotary/linear encoder
Number of inputs	2
Input frequency	to 300 kHz
Encoder supply voltage	24 V
Encoder supply current	250 mA (Short-circuit and overload protection)

Standards and Regulations

Noise emission	Industrial environment
Mechanical tests	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 25g

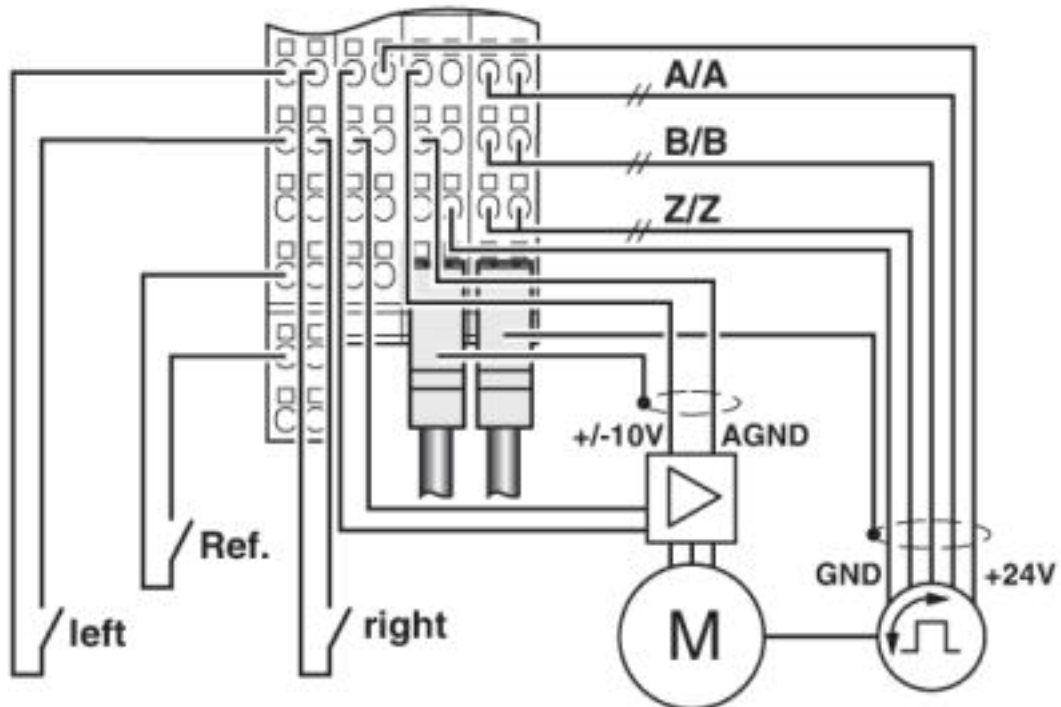
Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

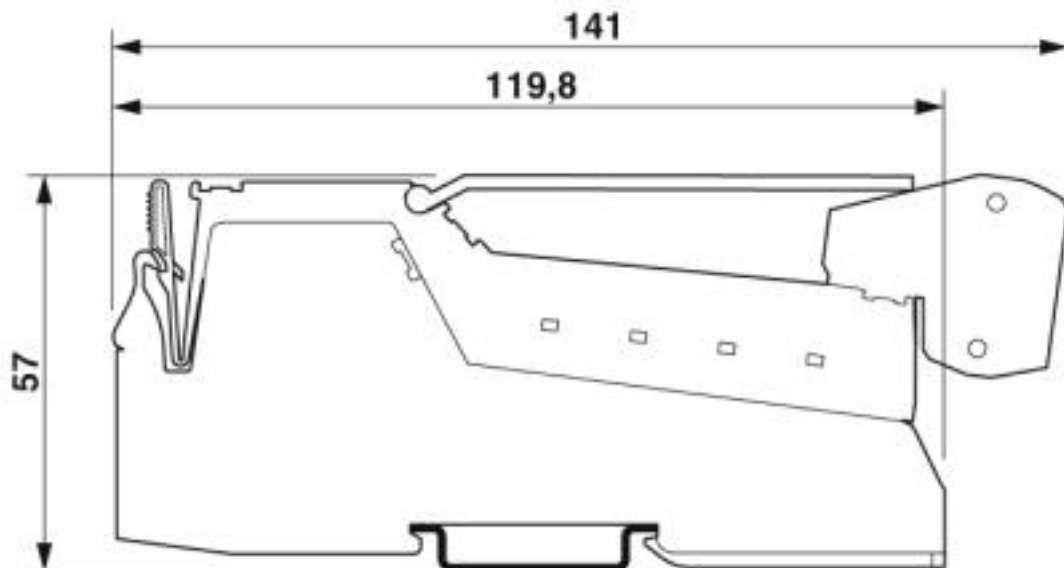
Drawings

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Connection diagram



Dimensional drawing



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