

S-DIAS Control Module EtherCAT

EC 121



with 1 EtherCAT IN
1 EtherCAT OUT
1 S-DIAS Bus OUT

The S-DIAS EtherCAT control module EC 121 is an interface module between an S-DIAS control system and EtherCAT bus. The module provides the voltage supply for up to 32 S-DIAS modules. With an additional power boost module (PSB 001), up to 64 modules can be connected via the EtherCAT control module. The EC 121 detects the connected S-DIAS modules automatically. It provides the EtherCAT slave configuration for the EtherCAT master and exchanges data between the EtherCAT and S-DIAS bus during operation.

Performance Data

Interfaces	1x EtherCAT In (RJ45) 1x EtherCAT Out (RJ45) 1x S-DIAS bus
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Spezifikation EtherCAT

Configuration	2x shielded RJ45 port
Cable length	maximum 100 m between stations
Propagation delay	approximately 1 µs
Potential separation	500 V (EtherCAT - S-DIAS-Bus)
FMMU	3
Sync Manager	4
Process data RAM	8-kbyte
Synchronization	64-bit distributed clock
Process image	modular device profile

Asynchronous data exchange	Protocol	Supported functions	Description
	CoE	Complete Access Support SDO-Info Support PDO Assign	CANopen over EtherCAT is required for transmitting parameters
	FoE	X	File over EtherCAT for transferring files (only in BOOTSTRAP mode)
	FSoE	X	UL in preparation
Max. number of S-DIAS modules		up to 32 (64 with PSB 001) S-DIAS modules	

Electrical Requirements

Power supply +24 V	+18-30 V DC UL: Class 2 or LVLC ⁽¹⁾	
Current consumption of +24 V power supply	the current consumption depends on the connected loads (max. 2.75 A)	
Power supply on the S-Dias bus	via the EC 121	
Current capacity on the S-Dias bus (power supply for the modules).	+5 V	+24 V
	maximum 1.6 A	maximum 1.6 A

Article Number and Miscellaneous

Article number	20-003-121
Dimensions	25 x 104.2 x 72 mm (W x H x D)
Approvals	CE, UL 508 (E247993)

Environmental Conditions

Storage temperature	-40 ... +85 °C	
Environmental temperature	-25 ... +60 °C	
Humidity	0-95 %, non-condensing	
Installation altitude above sea level	0-2000 m without derating > 2000 m up to a maximum of 5000 m with derating of the maximum environmental temperature by 0.5 °C per 100 m	
Operating conditions	pollution degree 2	
EMC resistance	in accordance with EN 61000-6-2 (industrial area)	
EMC noise generation	in accordance with EN 61000-6-4 (industrial area)	
Vibration resistance	EN 60068-2-6	5-150 Hz: amplitude 3.5 mm transition frequency: 8.42454 Hz acceleration: 1 g duration: 10 cycles cycle: 1 octave/minute
Shock resistance	EN 60068-2-27	15 g (147,15 m/s ²)
Protection type	EN 60529	IP20