

S-DIAS Control Module EtherCAT EC 122



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

The S-DIAS EtherCAT control module EC 122 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 122 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. S-DIAS safety modules can also be connected.

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	59-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	yes	File over EtherCAT for transferring FW updates and S-DIAS module descriptions
	FSoE	FSoE Master	in conjunction with up to 2 SCP 211
Max. number of S-DIAS modules		up to 32 (64 with PSB 001)	

Electrical Requirements

Power supply +24 V	typically +24 V DC ±20 % (SELV/PELV) UL: NEC Class 2	
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 122	
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	20-003-122	
Dimensions	25 x 104.2 x 72 mm (W x H x D)	
Approvals	CE	yes
	UL	designed according to UL
	Functional Safety	no
	UKCA	no

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	EN 61000-6-2 (industrial area)	
EMC noise generation	EN 61000-6-4 (industrial area)	
Vibration resistance	EN 60068-2-6	3.5 mm from 5-8.4 Hz 1 g from 8.4-150 Hz
Shock resistance	EN 60068-2-27	15 g (147,15 m/s ²)
Protection type	EN 60529	IP20