C-DIAS EtherCAT Slave CEC 021

The C-DIAS EtherCat CEC 021 Slave module serves as an interface module between the C-DIAS control system and EtherCAT bus.

Technical Data

Performance data

Bus Controller	EtherCAT bus controller with a slot for a branch module	
Type	EtherCAT	
Configuration	2 x shielded RJ45 Port	
Cable length	Maximum of 100 m between two stations (segment length)	
Data transfer rate	100 Mbits/s Full duplex Auto negotiation Auto crossover	
Status display	Module status, bus function	
Diagnosis	Module status	Yes, Status LED and SW status
	Bus function	Yes, Status LED and SW status

Electrical requirements

Voltage supply from C-DIAS bus	+5 V	
Current consumption	Typically 40 mA	Maximum 80 mA
Voltage supply from C-DIAS bus	+24 V	
Current consumption	Typically 85 mA	Maximum 120 mA

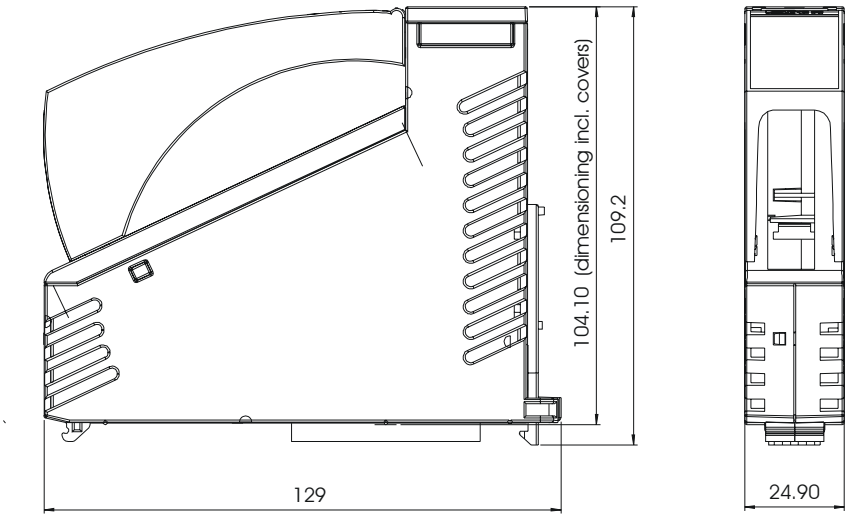
Miscellaneous

Article number	12-058-021
Hardware version	1.x
Standard	UL in preparation

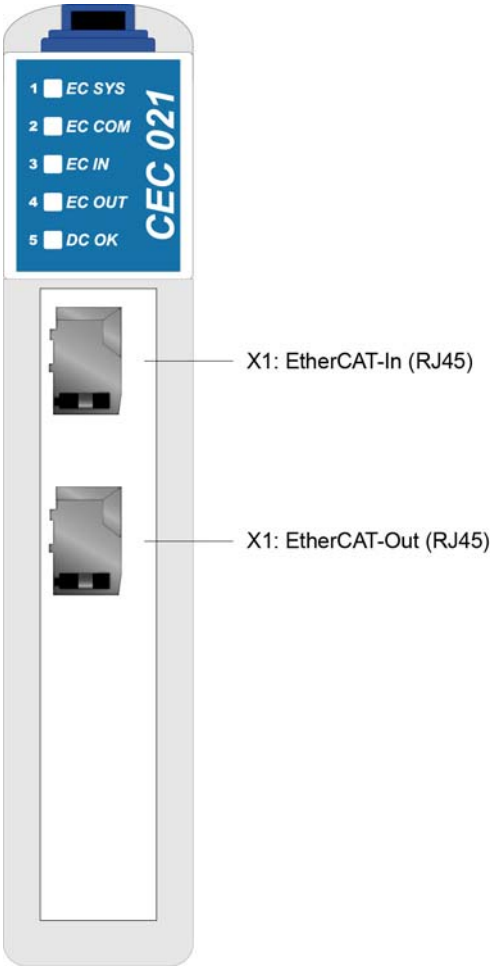
Environmental conditions

Storage temperature	-20 – +85 °C	
Operating temperature	0 – +60 °C	
Humidity	0 - 95 %, non-condensing	
EMC stability	According to EN 61000-6-2:2001 (industrial area)	
EMC - noise generation	According to EN 61000-6-4 (industrial area)	
Shock resistance	EN 60068-2-27	150 m/s²
Protection Type	EN 60529	IP 20

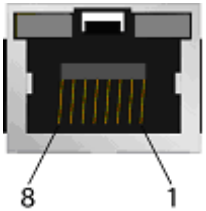
Mechanical Dimensions



Connector Layout

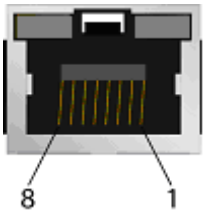


X1: EtherCAT-In



Pin	Function
1	TX +
2	TX -
3	RX +
4 – 5	-
6	RX-
7 – 8	-

X2: EtherCAT-Out



Pin	Function
1	TX +
2	TX -
3	RX +
4 – 5	-
6	RX-
7 – 8	-

Status Displays

LED number	LED color	Definition
1	Yellow / Green	EC SYS Yellow: READY Green: RUN
2	Green / Red	EC COM Green: STATUS Red: ERROR
3	Yellow / Green	EC IN Yellow Green
4	Yellow / Green	EC OUT Yellow Green
5	Green	DC OK

LED	Color	Status	Definition
EC SYS yellow/green	Green	On	Operating system active
	Yellow	Static	Boot loader waiting for the software
	Yellow / Green	Off	Supply voltage for the module missing or hardware is defective
EC COM green/red	Green	Off	**INIT:** The unit is in INIT mode
	Green	Blinking	**PRE_OPERATIONAL:** The module is in PREOPERATIONAL mode
	Green	Simple flash	**SAFFE-OPERATIONAL**: The module is in SAFE-OPERATIONAL mode
	Green	ON	**OPERATIONAL:** The module is in operation mode
	Red	Off	**No errors.** The EtherCAT communication of the module is operational
	Red	Blinking	**Invalid configuration:** General configuration error
	Red	Simple flash	**Non requested status change:** I.e. a synchronization error
	Red	Double flash	**Application watchdog time-out** An application watchdog time-out has occurred
	Red	ON	**PDI Watchdog Time-out:** A PDI Watchdog time-out has occurred
EC IN yellow/green **EC OUT yellow/green**	Green	On	A connection has been established.
	Green	Blinks	The module is sending/receiving Ethernet frames
	Green / yellow	Off	No connection has been made.
	Yellow	-	-
DC OK	Green	ON	If the module is supplied with 24 V.
	Green	OFF	No 24 V module supply

LED Status Definitions

LED Statuses	Description
On	The display lights statically
Off	The display does not light
Blinking	The display turned on and off in phases with a frequency of 2.5 Hz: On for 200 ms then off for 200 ms.
Simple flash	The display shows a short flash (200 ms) followed be an long off phase (1000 ms)
Double flash	The display shows a sequence of two short flashes (200 ms each), interrupted by a short off

	phase (200 ms). The sequence is ended with a long off phase (1000 ms).