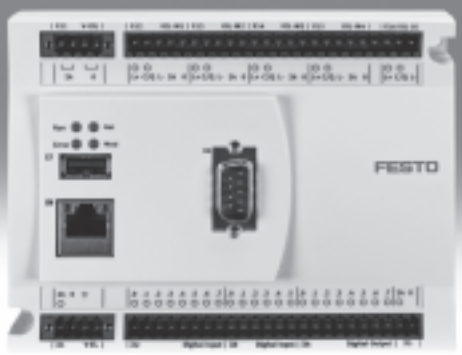
Controllers CECC

FESTO



New

Controllers CECC

Key features

Application

Controller

The controllers CECC are modern, compact and versatile controllers that enable programming with CoDeSys according to IEC 61131-3.

State-of-the-art programming

CoDeSys V3 pbF offers a user-friendly interface with the following new functions:

- Object-oriented programming
- Modern editors for simplified input
- Simplified configuration for fieldbus
- New configurator for IO-Link masters
- Multiple controllers in one project
- Improved troubleshooting function
- Simplified project navigation

Basic functions of the CECC-D

The controllers CECC (CECC-D) offer the following basic functions:

- 12 digital inputs, 8 digital outputs, additionally 2 high-speed counters up to 250 kHz
- Ethernet 10/100 Mbps, Modbus TCP client/server, EasyIP, TCP/IP, OPC Server available
- CANopen master: connection of the electric drives
- USB interface for data transfer
- Can be connected directly with modern HMI devices: CDPX

Basic functions of the CECC-LK

- This variant of the CECC offers four IO-Link masters and one IO-Link device interface
- The integrated IO-Link interface of the CECC-LK enables quick and easy connection of Festo valve terminals and sensors to a controller
- All modern, compact valve terminals from the CTEU series can be connected to IO-Link masters: VTUB, VTUG, MPA, CPV, VTOC and upcoming devices, as well as the input box CTSL

Fieldbus interfaces

The CECC-LK can be connected to a combination of node CTEU and CAPC on various fieldbuses via the IO-Link device interface:

- PROFIBUS
- EtherCAT
- DeviceNet
- CANopen
- AS-interface

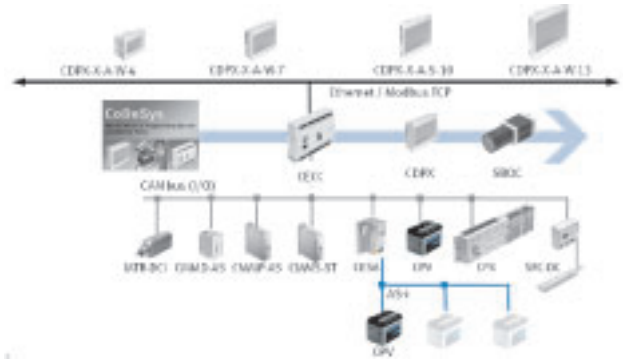
System configuration

The CECC can communicate with all electric drive controllers from Festo and actuate all valve terminals via CANopen.

The CECC communicates with other controllers and operator units from Festo via Ethernet. For example with the modern, new HMI device series CDPX and the camera SBOx-Q for image evaluation.

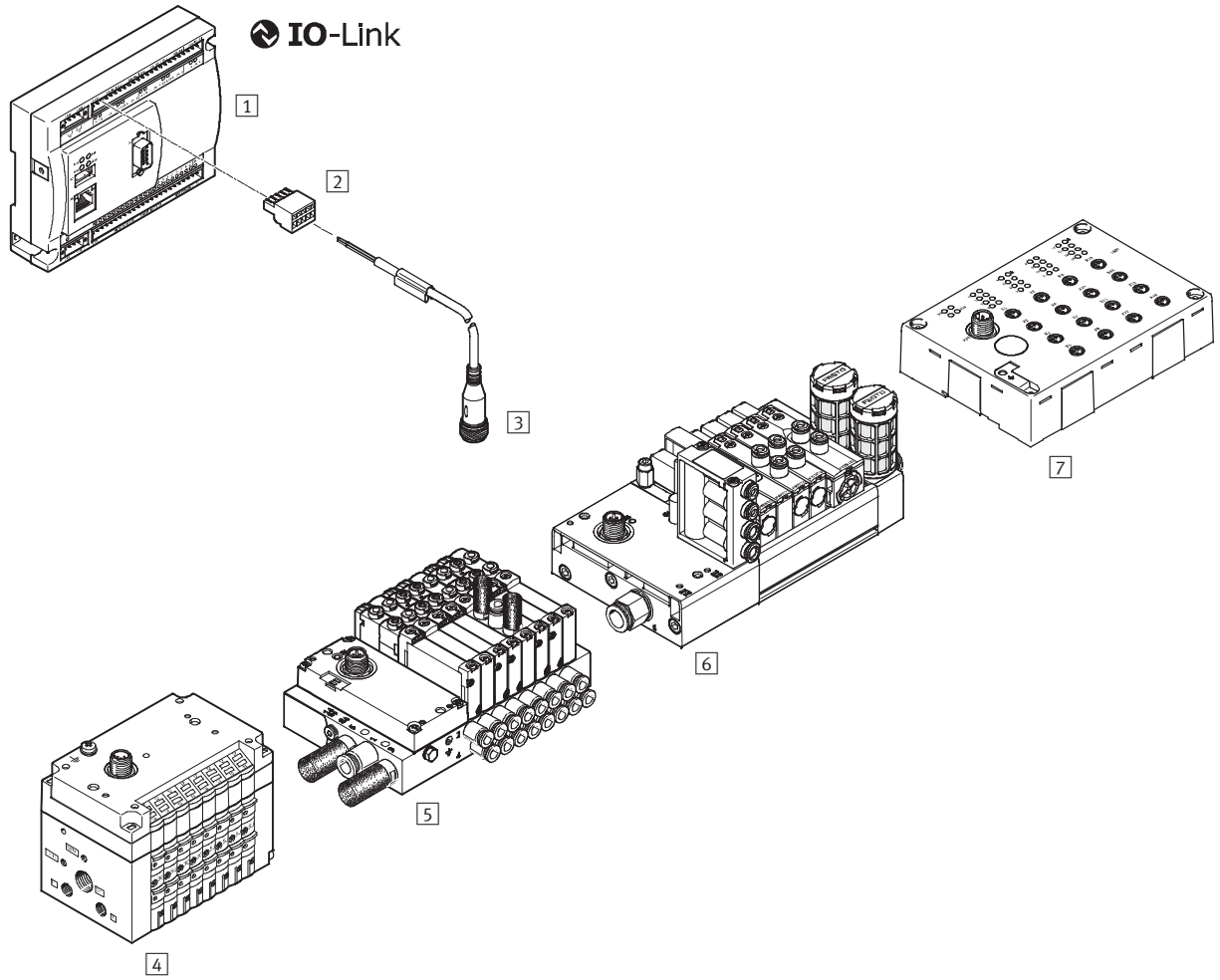
System configuration (example)

CECC with CANopen



Controllers CECC

Peripherals overview



Mounting attachments and accessories		
	Brief description	**➔ Page/Internet**
1 Controller CECC	The integrated IO-Link interface of the CECC enables quick and easy connection of Festo valve terminals and sensors to a controller	4
2 Plug NECC	Plug connector for self-assembly with 2, 5, 6, 8 or 24 pins	8
3 Connecting cable NEBU	–	9
4 Valve terminal CPV	–	cpv
5 Valve terminal VTUG	–	vtug
6 Valve terminal VTUB	–	vtub
7 Input module CTSL	–	cteu
– Software CoDeSys V3	The software CoDeSys V3 with the order code GSPF-CD-3 enables standardised programming according to IEC 61131-3 using object-oriented additional functions	9

New

Controllers CECC

Technical data

Voltage
19.2 ... 30 V DC

Temperature range
0 ... +50 °C

General technical data			
Type		CECC-LK	CECC-D
CPU data		400 MHz processor	
Status displays		LED	
Electrical connection technology for I/O		Socket strip, grid 3.5 mm	
Resistance to vibration		As per EN 61131-2	
Resistance to shock		As per EN 61131-2	
Relative air humidity	[%]	95, non-condensing	
Protection class		IP20	
Electrical protection class		III	
Product weight	[g]	200	
Note on materials		RoHS-compliant	

Digital inputs			
		CECC-LK	CECC-D
Number		12	
Switching logic		Positive logic (PNP)	
Fast clock pulse inputs		2, each with max. 200 kHz	
Input signal delay		Typically 3 ms	
Input voltage	[V DC]	24	
Nominal value for TRUE	[V DC]	≥ 15	
Nominal value for FALSE	[V DC]	≤ 5	
Electrical isolation		Yes, via optocoupler	
Status display		LED	
Permissible connecting cable length	[m]	30	

Digital outputs			
		CECC-LK	CECC-D
Number		8	
Switching logic		Positive logic (PNP)	
Contact		Transistor	
Output voltage	[V DC]	24	
Output current	[mA]	500	
Electrical isolation		Yes, via optocoupler	
Status display		LED	
Switching frequency	[kHz]	Max. 1	
Protection against short circuit		Yes	

Controllers CECC

Technical data

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Serial interfaces			
		CECC-LK	CECC-D
USB interface		USB 1.1	
Fieldbus interface type		CAN bus	
Fieldbus interface			
Connection technology		Sub-D plug, 9-pin	
Transmission rate	[kbps]	125; 250; 500; 800; 1,000	
		Adjustable via software	
Galvanic isolation		Yes	

Ethernet			
		CECC-LK	CECC-D
Number		1	
Connector plug		RJ45	
Supported protocols		TCP/IP, EasyIP, Modbus TCP	
Transmission speed	[Mbps]	10/100	
Protocol		CANopen	
		IO-Link	–
		I-Port	–
		Modbus TCP	

Programming			
		CECC-LK	CECC-D
Programming software		CoDeSys provided by Festo	
Programming language according to IEC 61131-3		SFC	
		IL	
		FCH	
		LDR	
		ST	

Operating and environmental conditions		CECC-LK	CECC-D
Operating voltage	[V DC]	19.2 ... 30	
Current consumption at 24 V DC	[mA]	100	
Ambient temperature	[°C]	0 ... 55	
Storage temperature	[°C]	–25 ... +70	
CE marking		To EU EMC Directive	
Approval		C-Tick	

Controllers CECC

Technical data

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IO-Link			
		CECC-LK	CECC-D
Protocol		Device V 1.0	–
		Master V 1.1	–
Connection technology		Plug	–
		Cage clamp	–
		Device, 3-pin	–
		Master, 5-pin	–
Communication mode		Configurable via software	–
		Device COM1 (4.8 kB), COM2 (38.4 kB), COM3 (230 kB)	–
		Master SIO, COM1 (4.8 kB), COM2 (38.4 kB), COM3 (230 kB)	–
Port type		Device A	–
		Master B	–
Number of ports		Device 1	–
		Master 4	–
Master, output current	[A]	3.5/port	–
Communication		C/Q green LED	–
		C/Q red LED	–
Ready status display		L+ green LED on	–
		L+ green LED off	–
Process data width OUT		Master parameterisable 2 - 32 bytes	–
Process data width IN		Master parameterisable 2 - 32 bytes	–
Memory card		Master 2 kB per port	–
Minimum cycle time		Device 3.2 ms	–
		Master 5 ms	–
Device ID		0x550000	–
		0x550001	–
		0x550002	–
		0x550003	–
		0x550004	–

Controllers CECC

Technical data

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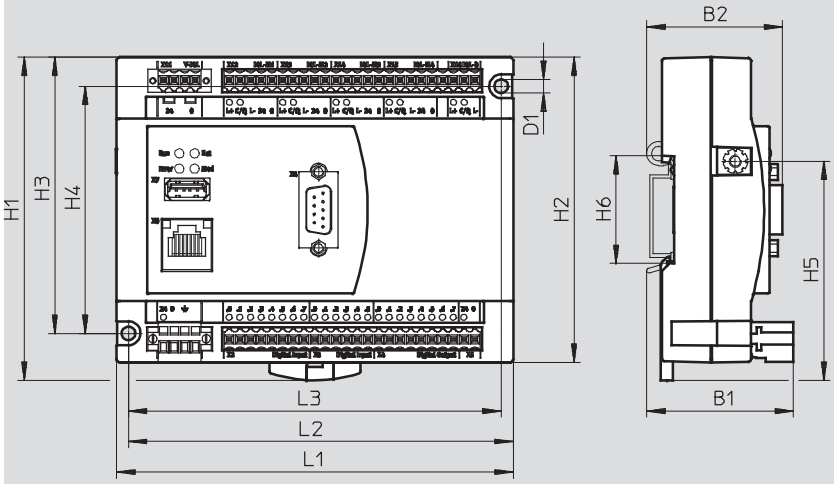
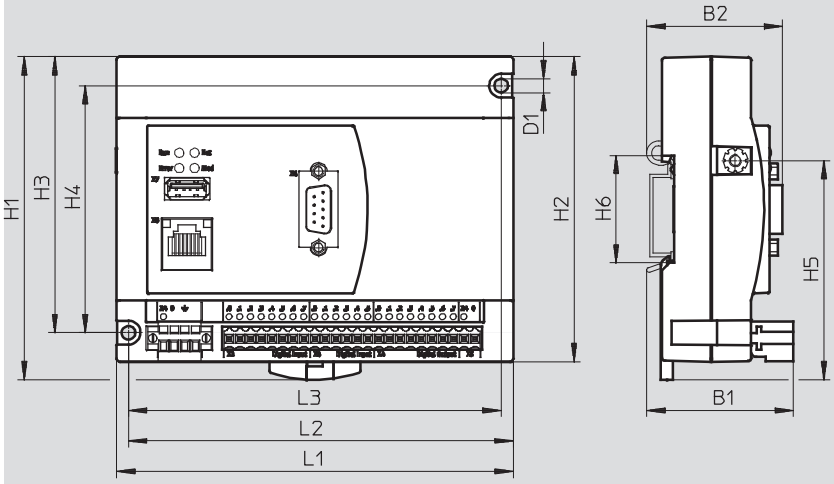
Dimensions Download CAD data ➔ **www.festo.com**

CECC-LK



CECC-D



Type	B1	B2	D1 ∅	H1	H2	H3	H4	H5	H6	L1	L2	L3
CECC-LK	48.15	44.6	4.5	106	100	90.5	81	72	35.2	130	126.11	122.2
CECC-D	48.15	44.6	4.5	106	100	90.5	81	72	35.2	130	126.11	122.2

Ordering data

Controllers	Brief description	Part No.	Type
CECC-LK	IO-Link master, Ethernet integrated	**574418**	**CECC-LK**
CECC-D	With 12 digital inputs and 8 digital outputs	**574415**	**CECC-D**

Controllers CECC

Accessories

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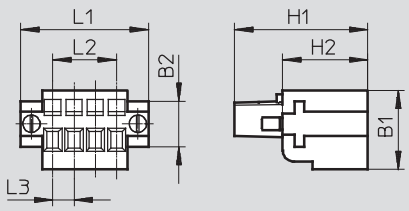
Dimensions Download CAD data ➔ **www.festo.com**

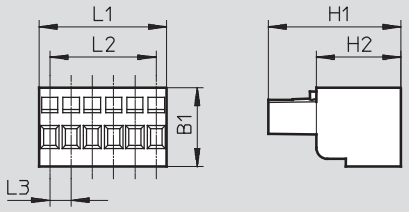
Plug



Type	B1	B2	H1	H2	L1	L2	L3
NECC-L2G4-C1-M	13	7.5	21.9	14	21	10.5	3.5

Dimensions Download CAD data ➔ **www.festo.com**

Plug



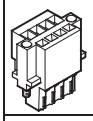
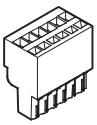
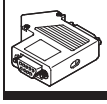
Type	B1	H1	H2	L1	L2	L3
NECC-L2G2-C1	13	21.9	14	7	3.5	3.5
NECC-L2G5-C1				17.5	14	
NECC-L2G6-C1				21	17.5	
NECC-L2G8-C1				28	24.5	
NECC-L2G24-C1				84	80.5	

Materials	
Corrosion resistance class CRC[1)]	1
Note on materials	RoHS-compliant

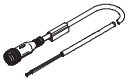
1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Controllers CECC

Accessories

Ordering data				
	Description	PU[2]	Part No.	Type
Plug				
	Plug connector for self-assembly	1	**575303**	**NECC-L2G4-C1-M**
	Plug connector for self-assembly, 2-pin	1	**575302**	**NECC-L2G2-C1**
	Plug connector for self-assembly, 5-pin	1	**575304**	**NECC-L2G5-C1**
	Plug connector for self-assembly, 6-pin	1	**575305**	**NECC-L2G6-C1**
	Plug connector for self-assembly, 8-pin	1	**575306**	**NECC-L2G8-C1**
	Plug connector for self-assembly, 24-pin	1	**575307**	**NECC-L2G24-C1**
	Sub-D plug, 9-pin with screw terminal, protection class IP40	1	**576031**	**NECC-S1G9-C2-M**

2) Packaging unit

Ordering data			
	Description	Part No.	Type
Connecting cables			
	Up to 5 m long	**539052**	**NEBU-M12W5-P-2-N-LE5**
Programming software			
	This software is optimised for configuring, programming, commissioning and maintaining automation solutions	**542000**	**GSPF-CDS-3**