

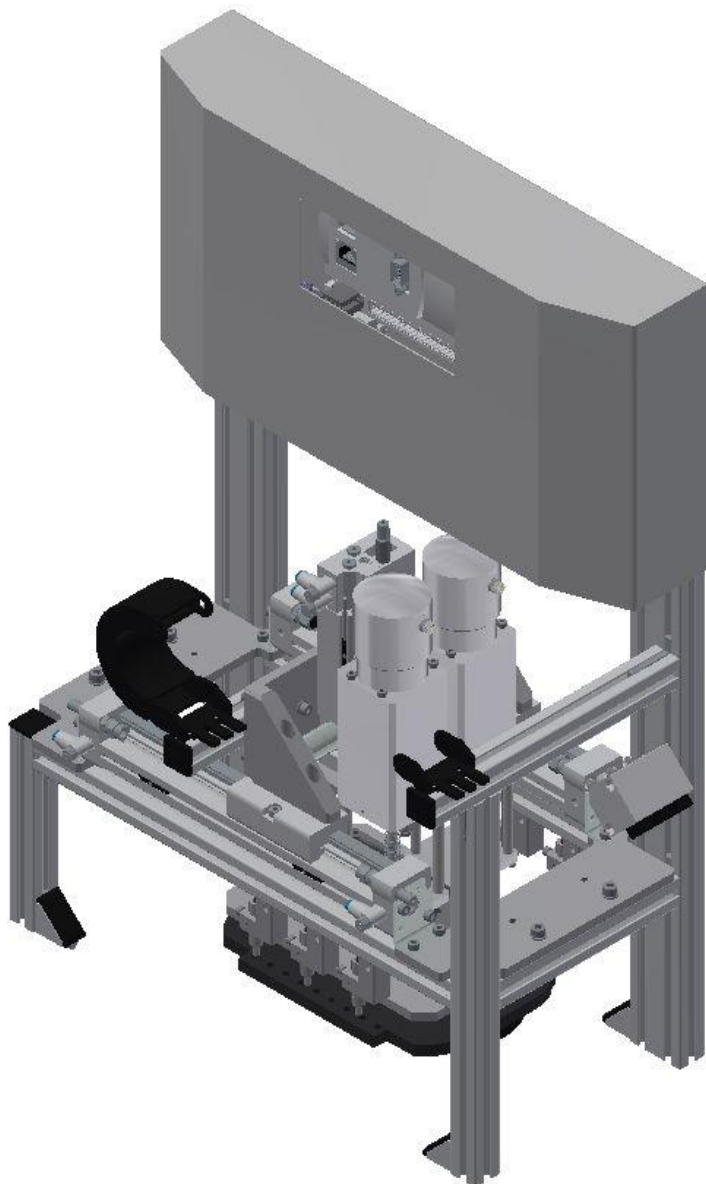
**8043598**

iDrilling

**FESTO**

**CP Factory / CP Lab  
Application Modules**

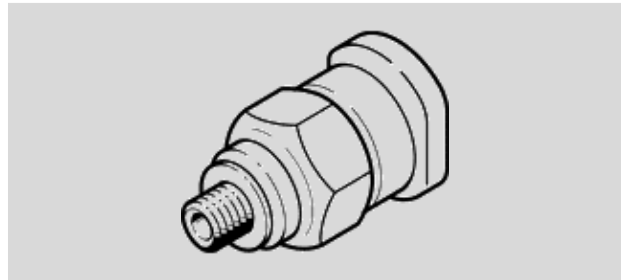
Data sheets



## Data sheet: Push-in fitting QSM-M5-4 – #153304

FESTO

Function

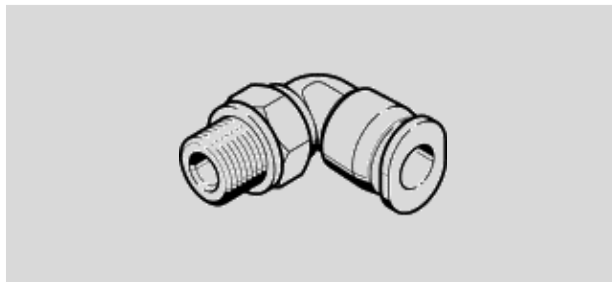


Feature	values
Size	Mini
Nominal size	2.2 mm
Type of seal on screw-in stud	Sealing ring
Assembly position	Any
Container size	10
Design structure	Push/pull principle
Temperature dependent operating pressure	-0.95 ... 14 bar
Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:-:-]
Corrosion resistance classification CRC	1
Ambient temperature	-10 ... 80 °C
Authorisation	Germanischer Lloyd
Max. tightening torque	1.5 Nm
Product weight	3.3 g
Pneumatic connection	Male thread M5 for tubing, 4mm outside diameter
Colour of release ring	blue
Materials note	Conforms to RoHS
Materials information, housing	Brass Nickel plated
Release ring material data	POM
Materials information for tubing seal	NBR
Hose clamping segment material data	High alloy steel, non-corrosive

## Data sheet: Push-in L-fitting QSML-M5-4 – #153333

FESTO

Function

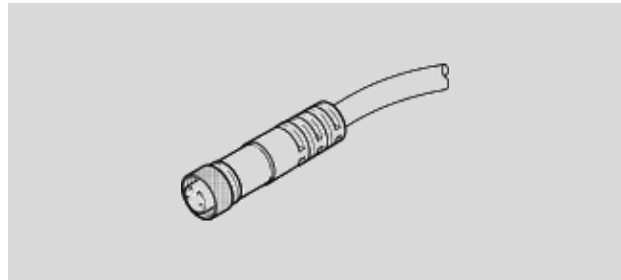
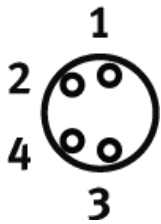


Feature	values
Size	Mini
Nominal size	1.7 mm
Type of seal on screw-in stud	Sealing ring
Assembly position	Any
Container size	10
Design structure	Push/pull principle
Temperature dependent operating pressure	-0.95 ... 14 bar
Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:-:-]
Corrosion resistance classification CRC	1
Ambient temperature	-10 ... 80 °C
Authorisation	Germanischer Lloyd
Max. tightening torque	1.5 Nm
Product weight	3.5 g
Pneumatic connection	Male thread M5 for tubing, 4mm outside diameter
Colour of release ring	blue
Materials note	Conforms to RoHS
Materials information, housing	PBT
Release ring material data	POM
Materials information for tubing seal	NBR
Hose clamping segment material data	High alloy steel, non-corrosive

# Data sheet: Connecting cable SIM-M8-4GD-2,5-PU – #158960

FESTO

Function

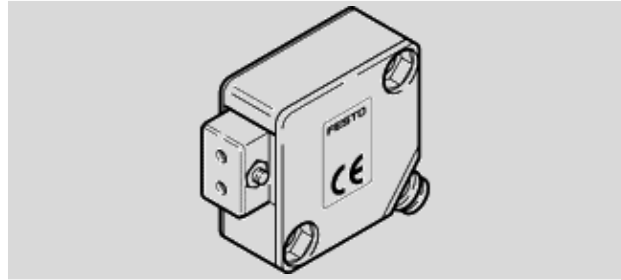
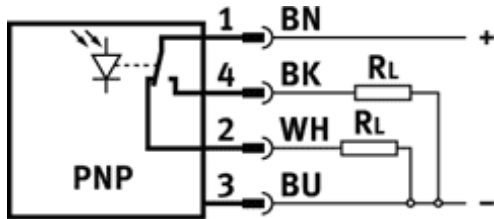


Feature	values
Conforms to standard	EN 61076-2-104 EN 61984
Cable attribute	Standard
Test conditions of cable	Chain link trunking: 5 million cycles, bending radius 75 mm Bending strength according to Festo standard Test conditions on request
Operating voltage range AC	0 ... 30 V
Operating voltage range DC	0 ... 30 V
Surge strength	1.5 kV
Acceptable current load at 40°C	3 A
Degree of contamination	3
Protection class	IP65 IP68
Ambient temperature	-5 ... 70 °C -25 ... 70 °C
Cable structure	4 x 0,25 mm <sup>2</sup>
Cable diameter	4.5 mm
Cable length	2.5 m
Nominal conductor cross-section	0.25 mm <sup>2</sup>
Colour code, core insulation	blue brown Black white
Housing colour	Black
Cable sheath colour	Grey
Materials information for locknut	Brass Nickel plated
Materials note	Free of copper and PTFE Conforms to RoHS
Materials information, housing	TPE-U(PU)
Material information, isolating sleeve	PVC
Materials information, cable sheaths	TPE-U(PU)

# Data sheet: Fibre-optic unit SOEG-L-Q30-P-A-S-2L – #165327

**FESTO**

Function



Feature	values
Conforms to standard	EN 60947-5-2
Authorisation	C-Tick c UL us - Listed (OL)
CE mark (see declaration of conformity)	to EU directive for EMC
Materials note	Free of copper and PTFE
Measurement method	Fibre-optic unit
Type of light	Red
Working range	0 ... 120 mm
Ambient temperature	-25 ... 55 °C
Switch output	PNP
Switching element function	Antivalent
Max. switching frequency	1,000 Hz
Max. output current	200 mA
Voltage drop	2 V
Short circuit strength	Pulsing
Operating voltage range DC	10 ... 30 V
Residual ripple	20 %
Idle current	25 mA
Polarity protected	for all electrical connections
Electrical connection	Plug M8x1 4-pin
Size	30x30x15 mm
Mounting type	with through hole
Product weight	18 g
Materials information, housing	PBT-reinforced
Operating status display	Yellow LED
Operating reserve display	Green LED
Setting options	Potentiometer
Upper limit of adjustment range	100 ... 400 mm
Setting range upper limit depends upon fibre-optics	100 mm for SOEZ-LLG-RT-0,5-M6 120 mm for SOEZ-LLK-RT-2,0-M6 280 mm for SOEZ-LLG-SE-0,5-M4 400 mm for SOEZ-LLK-SE-2,0-M4
Ambient temperature	-5 ... 55 °C
Protection class	IP65
Corrosion resistance classification CRC	2

**Data sheet: Fibre-optic cable SOEZ-LLK-SE-2,0-M4 – #165360**



Function

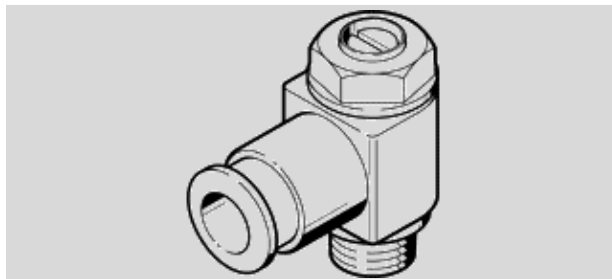
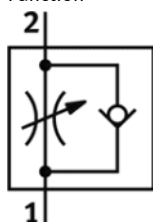


Feature	values
Measurement method	Through-beam sensor Fibre optics
Ambient temperature	-40 ... 70 °C
Size	M4
Product weight	20 g
Materials information, housing	PE
Upper limit of adjustment range	400 mm
Protection class	IP65

# Data sheet: One-way flow control valve GRLA-M5-QS-4-LF-C – #175056

FESTO

Function

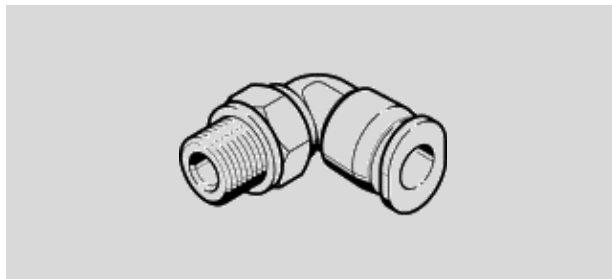


Feature	values
Valve function	One-way flow control function for exhaust air
Pneumatic connection, port 1	QS-4
Pneumatic connection, port 2	M5
Adjusting element	Slotted head screw
Mounting type	Threaded
Standard nominal flow rate in flow control direction	40 l/min
Standard nominal flow rate in non-return direction	50 ... 75 l/min
Operating pressure	0.2 ... 10 bar
Ambient temperature	-10 ... 60 °C
Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:4:4]
Authorisation	Germanischer Lloyd
Assembly position	Any
Standard flow rate in direction of flow control: 6 -> 0 bar	80 l/min
Standard flow rate in blocked direction: 6 -> 0 bar	100 ... 150 l/min
Note on operating and pilot medium	Lubricated operation possible (subsequently required for further operation)
Medium temperature	-10 ... 60 °C
Max. tightening torque	1.5 Nm
Product weight	9 g
Materials information for screw-in stud	Nickel plated Brass
Materials information for seals	NBR
Release ring material data	POM
Regulating screw material data	Brass
Swivel joint material data	Zinc die-casting

## Data sheet: Push-in L-fitting QSML-M7-6 – #186353

FESTO

Function



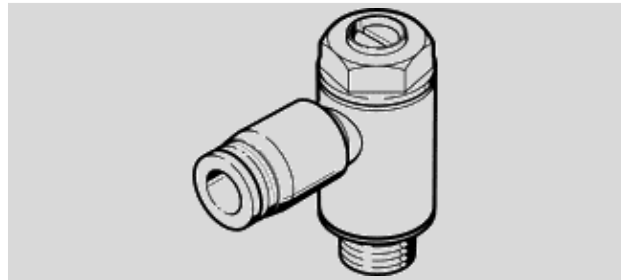
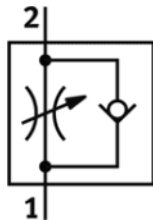
Feature	values
Size	Mini
Nominal size	2.4 mm
Type of seal on screw-in stud	Sealing ring
Assembly position	Any
Container size	10
Design structure	Push/pull principle
Temperature dependent operating pressure	-0.95 ... 14 bar
Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:-:-]
Corrosion resistance classification CRC	1
Ambient temperature	-10 ... 80 °C
Authorisation	Germanischer Lloyd
Max. tightening torque	2 Nm
Product weight	6.2 g
Pneumatic connection	Male thread M7 for tubing, 6mm outside diameter
Colour of release ring	blue
Materials note	Conforms to RoHS
Materials information, housing	PBT
Release ring material data	POM
Materials information for tubing seal	NBR
Hose clamping segment material data	High alloy steel, non-corrosive



# Data sheet: One-way flow control valve GRLA-M5-QS-4-D – #193138

FESTO

Function

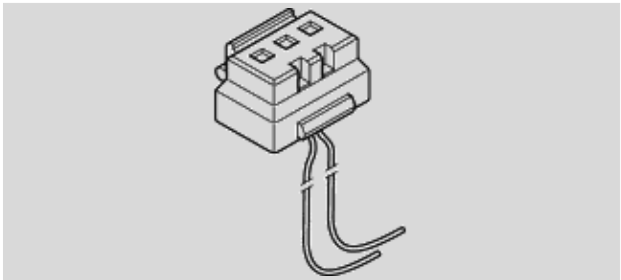


Feature	values
Valve function	One-way flow control function for exhaust air
Pneumatic connection, port 1	QS-4
Pneumatic connection, port 2	M5
Adjusting element	Slotted head screw
Mounting type	Threaded
Standard nominal flow rate in flow control direction	110 l/min
Standard nominal flow rate in non-return direction	65 ... 110 l/min
Operating pressure	0.2 ... 10 bar
Ambient temperature	-10 ... 60 °C
Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:4:4]
Authorisation	Germanischer Lloyd
Assembly position	Any
Standard flow rate in direction of flow control: 6 -> 0 bar	165 l/min
Standard flow rate in blocked direction: 6 -> 0 bar	140 ... 160 l/min
Note on operating and pilot medium	Lubricated operation possible (subsequently required for further operation)
Medium temperature	-10 ... 60 °C
Max. tightening torque	1.5 Nm
Product weight	13 g
Materials information for screw-in stud	Brass
Materials information for seals	NBR
Release ring material data	POM
Regulating screw material data	Brass
Swivel joint material data	Zinc die-casting Chromed

# Data sheet: Plug socket with cable KMH-1 – #197264



Function

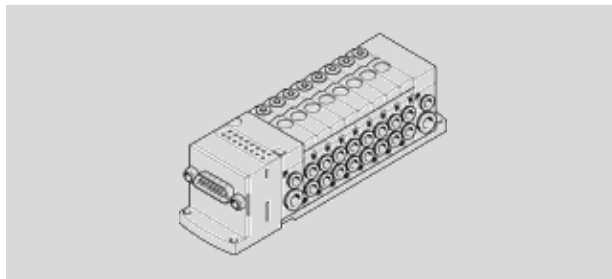


Feature	values
Assembly position	Any
Operating voltage range DC	24 V
Protection class	IP40 in assembled condition
Ambient temperature	-40 ... 80 °C
Product weight	7 g
Electrical connection	Plug socket 2-pin
Cable length	1 m
Mounting type	Clip
Housing colour	Black
Materials note	Conforms to RoHS
Materials information, housing	POM
Materials information, cable sheaths	PVC

# Data sheet: Valve terminal CPV-SC-MP-VI – #525675



Function

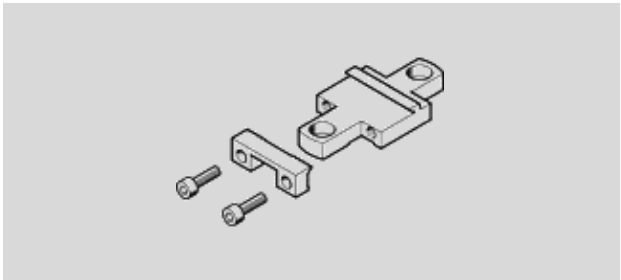


Feature	values
Valve function	2/2 closed, monostable 3/2 closed, monostable 3/2 open, monostable 5/2 bistable 5/2 monostable
Valve grid	10 mm
Operating pressure	-0.9 ... 7 bar
Electrical connection	CPI-Installationssystem Individual connection Multi-pin plug
Max. number of valve positions	16
Max. no. of pressure zones	8
Electrical I/O system	Yes
Ambient temperature	-5 ... 50 °C
Width	10 mm
Protection class	IP40
Authorisation	c UL us - Recognized (OL)
Nominal size	2.5 mm
Grid dimension	10 mm
Exhaust-air function	not throttleable
Type of actuation	electrical
Valve terminal type	80
Design structure	Piston slide
Pilot air supply	external Internal
Valve terminal structure	Fixed-grid
Switching position indicator	LED
Operating pressure for valve terminal with internal pilot air supply	3 ... 7 bar
Pilot pressure	3 ... 7 bar
Suitability for vacuum	Yes
Nominal operating voltage DC	24 V
Permissible voltage fluctuation	+/- 10 %
Operating medium	Filtered compressed air, grade of filtration 40 µm, lubricated or unlubricated
Note on operating and pilot medium	Lubricated operation possible (subsequently required for further operation)
CE mark (see declaration of conformity)	to EU directive for EMC
Corrosion resistance classification CRC	1
Medium temperature	-5 ... 50 °C
Materials note	Conforms to RoHS

**Data sheet: Profile mounting MUC-12 – #526387**



Function

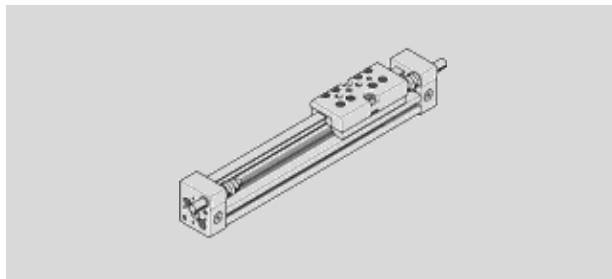
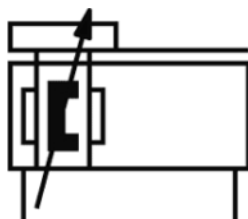


Feature	values
Size	12
Assembly position	Any
Corrosion resistance classification CRC	2
Product weight	32 g
Materials note	Free of copper and PTFE Conforms to RoHS
Material information, mounting	High alloy steel

# Data sheet: Linear drive DGC-12- - - #530907

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Function

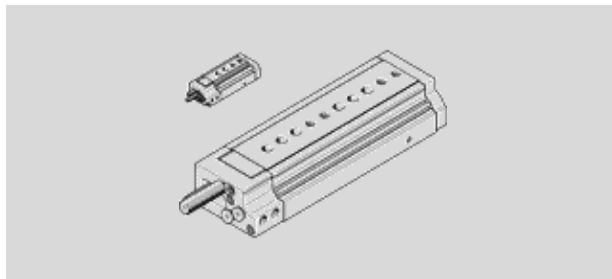
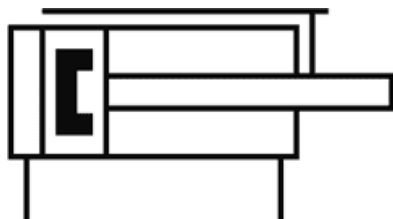


Feature	values
Stroke	1 ... 2,000 mm
Piston diameter	12 mm
Cushioning	P: Flexible cushioning rings/plates at both ends YXR: Shock absorber, hard characteristic curve YSRW: Shock absorber, soft characteristic curve
Assembly position	Any
Guide	Basic guide Recirculating ball bearing guide
Position detection	For proximity sensor
Variants	Additional slide, on left as standard Additional slide, on right as standard
Operating pressure	2.5 ... 8 bar
Mode of operation	double-acting
ATEX category Gas	II 3G
Explosion ignition protection type Gas	c T4 X
ATEX category Dust	II 3D
Explosion ignition protection type Dust	c 120°C X
Explosion-proof ambient temperature	-10°C ≤ Ta ≤ +60°C
Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:::]
Note on operating and pilot medium	Lubricated operation possible (subsequently required for further operation)
CE mark (see declaration of conformity)	to EU directive explosion protection (ATEX)
Corrosion resistance classification CRC	1 2
Ambient temperature	-10 ... 60 °C
Theoretical force at 6 bar, return stroke	68 N
Theoretical force at 6 bar, advance stroke	68 N
Mounting type	with accessories
Materials note	Free of copper and PTFE Conforms to RoHS
Materials information for cover	Wrought Aluminium alloy
Materials information for seals	POM TPE-U(PU)

## Data sheet: Mini slide DGSL-10- - - #543905

FESTO

Function

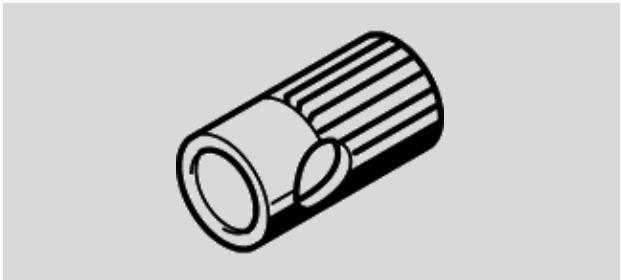


Feature	values
Stroke	10 ... 100 mm
Piston diameter	12 mm
Operating mode of drive unit	Yoke
Cushioning	P: Flexible cushioning rings/plates at both ends P1: Flexible cushioning rings/plates with stop at both ends Y3: Shock absorber at both ends, progressive
Assembly position	Any
Guide	Ball bearing cage guide
Design structure	Yoke kinematics
Position detection	For proximity sensor
Operating pressure	1.5 ... 8 bar
Max. speed	0.8 m/s
Mode of operation	double-acting
Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:4:4]
Note on operating and pilot medium	Lubricated operation possible (subsequently required for further operation)
Corrosion resistance classification CRC	0
Ambient temperature	0 ... 60 °C
Theoretical force at 6 bar, return stroke	51 N
Theoretical force at 6 bar, advance stroke	68 N
alternative connections	See product drawing
Mounting type	with through hole
Pneumatic connection	M5
Materials note	Free of copper and PTFE Conforms to RoHS
Materials information for cover	Wrought Aluminium alloy
Materials information for seals	HNBR
Materials information, housing	Wrought Aluminium alloy
Materials information for piston rod	High alloy steel, non-corrosive

**Data sheet: Adapter lens SASF-L1-LA-M2 – #552830**



Function



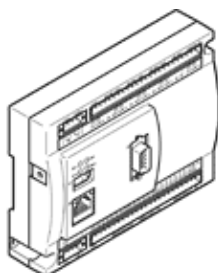
Feature	values
Ambient temperature	-30 ... 150 °C
Tightening torque	-0.2 ... 0.6 Nm
Product weight	0.7 g
Materials information, housing	Brass Nickel plated
Protection class	IP66
Corrosion resistance classification CRC	1
Lens element function	90° light exit

# Controller CECC-LK

Part number: 574418

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Compact controller Codesys V3 with I/O, CAN, Ethernet, 4 IO-Link masters.



## Data sheet

Feature	values
Corrosion resistance classification CRC	0
Authorisation	RCM Mark
Materials note	Conforms to RoHS
Operating voltage	19,2 - 30 VDC
Current consumption	100 mA nominal at 24 VDC
Ambient temperature	0 ... 55 °C
Storage temperature	-25 ... 70 °C
Relative air humidity	95% non-condensing
Protection class	IP20
Safety class	III
Product weight	200 g
Test for insensitivity to vibration	to EN 61131-2
Test for insensitivity to shock	to EN 61131-2
Electrical connector technology, I/O	Socket strip, grid 3.5 mm
Status displays	LED
CPU data	400 MHz processor
Digital inputs, number	12
Digital inputs, switching logic	Positive logic (PNP)
Digital inputs, fast counting inputs	2, each with max. 200 kHz
Digital inputs, input signal delay	3 ms typ.
Digital inputs, input voltage/current	24 VDC
Digital inputs, nominal value for True	≥ 15 VDC
Digital inputs, nominal value for False	≤ 5 VDC
Digital inputs, electrical isolation	Yes, via optocoupler
Digital inputs, status display	LED
Digital inputs, permissible connector cable length	30 m
Digital outputs, number	8
Digital outputs, switching logic	Positive logic (PNP)
Digital outputs, contact	Transistor
Digital outputs, output voltage	24 VDC
Digital outputs, output current	500 mA
Digital outputs, electrical isolation	Yes, via optocoupler
Digital outputs, switching frequency	max. 1 kHz
Digital outputs, short-circuit proof	Yes
Digital outputs, status display	LED
Protocol	I-Port Modbus TCP IO-Link CANopen
IO-Link, protocol	Device V 1.0 Master V 1.1
IO-Link, communication mode	Device COM1. COM2. COM3. Master SIO, COM1. COM2. COM3.



Feature	values
	Configurable via software
IO-Link, port type	Device A Master B
IO-Link, number of ports	Master 4 Device 1
IO-Link, process data width OUT	Master parameterisable, 2 - 32 byte
IO-Link, process data width IN	Master parameterisable, 2 - 32 byte
IO-Link, minimum cycle time	Device 3,2 ms Master 5 ms
IO-Link, memory	2 kByte / Port
IO-Link master, output current	3,5 A / Port
IO-Link, connection technology	Plug Cage Clamp Master 5-pin Device, 3-pin
IO-Link, communication	C/Q green LED C/Q red LED
IO-Link, ready status display	L+ green LED on L+ green LED off
Fieldbus interface	CAN-Bus
Fieldbus interface, connection technology	9-pin Sub-D Plug
Fieldbus interface, transmission rate	Adjustable via software 125, 250, 500, 800, 1000kBit/s
Fieldbus interface, electrical isolation	Yes
USB interface	USB 1.1
Ethernet, connector plug	RJ45
Ethernet, number	1
Ethernet, data transmission speed	10/100 Mbit/s
Ethernet, supported protocols	TCP/IP, EasyIP, Modbus TCP
Programming software	CODESYS provided by Festo V3
Programming language	Sequential function chart To IEC 61131-3 Ladder diagram (LDR) Function chart Structured text Statement list (STL)
CE mark (see declaration of conformity)	to EU directive for EMC