Made in Germany

www.lenord.com



Technical Information

GEL SEPOD

SeGMo-Assist

Position Display for Rotary and Linear Position Measurements

D-51T-SEPOD | Date of issue 2026-09-29

CANopen

IO-Link

c UL us

LENORD +BAUER

Finding solutions.
Founding trust.

Motion sensors and integrated drive technology

SeGMo-System

The SeGMo-System is designed for the efficient integration of multiple positioning drives and position indicators into a machine or system.

The system consists of the following components:

- SeGMo-Positioning:
  Positioning drive for fully automatic format adjustment
- SeGMo-Assist:
  Position indicator for manual adjustment operations
- SeGMo-Lib:
  Pre-built function blocks for integration into the system control
- SeGMo-Support Tool:
  Software for advanced commissioning and configuration
- SeGMo-ImgConv Tool:
  Tool for converting image files into pictograms for SeGMo-Assist
- SeGMo-Service Tool:
  Software for advanced commissioning and configuration of Industrial Ethernet interfaces

SeGMo-Positioning

The positioning drives are complete mechatronic systems featuring a battery-free multiturn encoder, gearbox, and motor, as well as integrated power and control electronics. We also offer these for standalone use. With rated torques of up to 18 Nm [13.28 ft•lbf], they cover the performance range typical for secondary axes.

SeGMo-Assist

The position displays facilitate manual adjustment processes by showing target and actual positions. Products are available for rotary and linear applications. Another product without a Measuring system assists the operator, for example, during format or tool changes.

SeGMo-Positioning

6109 6110 6113



6008 6009 6013



SeGMo-Assist

SEPODR SEPODL SEHMI



SEROT SELIN



Overview Position display

General

- Display indication of nominal and actual position to facilitate manual adjustment processes
- Available for either rotary or linear position measurements

Features

- Housing material: Plastic housing, ABS
- Operating temperature range:
  0 °C to +60 °C [32 °F to 140 °F]
- Bright graphical display
  – Representation of customized pictograms
- Degree of protection: IP65
- Communication interfaces:
  CAN bus with CANopen protocol (profile CiA 406)
  or IO-Link
- cULus Component Recognition

SEPODR
- Batteryless magnetic absolute multiturn encoder
- Through hollow shaft: 20 mm H7 [0.79 in H7],
  stainless steel

Advantages

- Not sensitive to EMC interference
- Simple cabling
- Extremely compact for confined installation situations
- Ready for use directly after switching on the power supply due to absolute position detection of the magnetic-absolute multiturn encoder
- Freely programmable pictograms for easy user navigation
- Maintenance-free electrical parts

Applications

- Packaging Machinery
- Food and Filling Systems
- Wood and plastic processing machinery
- General machinery and plant engineering



All trademarks/brands quoted in this document are the property of their respective owner. Protected trademarks/brands are not marked as such in this document.

Type code and notes on certification

Type code

SEPOD	Product type				
	Measuring system				
	L Linear measuring system				
	R Rotary measuring system with hollow shaft				
		Detection range of measuring system in de-energized state			
		0 Only available for measuring system **L**			
		1 129 revolutions - only available for measuring system **R**			
			Design		
			C cULus Recognized Component		
				Communication interface	
				CO CAN bus with CANopen protocol, profile CiA 406 (System-internal communication)	
				IL IO-Link	
					Position torque support for rotary measuring systems
					A 22 mm [0.87 in] (1)
					B 30 mm [1.18 in]
▼	▼	▼	▼	▼	▼
SEPOD	_	_	_	_ _	_ ◄ **Product code**

(1) upon request

Certification: cULus Recognized Component (document E538098)

- The devices were tested as control devices without calibration checks.
- The device housing does not offer protection against spilled liquids.
- Only connection cables certified according to category CYJV/7 or PVVA/7 may be used.
- Only flexible copper cables with a temperature resistance of at least 75 °C [167.0 °F] may be used for connection purposes.
- The input and output connectors are suitable for field wiring.
- The devices are not intended for direct connection to the power grid. Power supply must ensure electrical isolation to the main power supply.
  Power supply class I and II:
  - A breaker compliant with UL 248 must be fitted in the supply cable between the power supply unit and the device. Irrespective of the supply voltage, the breaker must have a nominal value of $I = 100W/U_B$ (supply voltage U_B: 20 V to 30 V DC)
- The following power supplies are permitted:
  - Class III (SELV, PELV, and limited energy in accordance with Section 9.4 of standard UL/CSA 61010-1 3rd edition)
  - Class II, limited to 100 VA and maximum 30 V (meets the requirements of standards UL 1310 or UL60950-1 or UL 62368-1)
  - Class I in accordance with IEC 61010-2-201, UL61010-2-201, limited to 100 VA and maximum 30 V
- The devices have been evaluated for use in overvoltage category II.
- Protective measures against surge voltages must be provided in accordance with overvoltage category II.
- The SEPODL temperature test was conducted using an additional SEROT sensor, which was connected as an external sensor. If an external sensor is used that consumes more current than the SEROT sensor, the temperature test, the durability test of the non-metallic housing, and the impact test must be taken into account in the end product of the SEPODL device.

Accessories and Spare Parts

GEL SEPODR Mechanical Accessories

Designation	Item number
ZB Reducing sleeve di = 14 mm [0.55 in]	ZBSGX08

Connection and Mounting Accessories GEL SEPODL

Linear sensor

Designation	Item number
Linear sensor	GEL SELINL0␣␣␣␣␣␣
Magnetic tape	ZBSGX10

Rotary sensor

Designation	Item number
Rotary sensor	GEL SEROT␣␣␣␣␣␣
ZB cable sensor 1.5 m, [59.06] M12, 8-pole	ZBSGX14
ZB cable sensor 3 m, [118.11] M12, 8-pole	ZBSGX15

CAN-Bus Connection Accessories

Description	Item number
ZB CAN-Bus Cable, 2 m [78.74 in], M12	ZBSGX01
ZB CAN-Bus Cable, 5 m [196.85 in], M12	ZBSGX02
ZB CAN-Bus Cable 10 m [393.70 in] M12	ZBSGX03
ZB CAN-Bus Cable, 2 m [78.74 in], M12, open-ended	ZBSGX04
ZB CAN bus cable, 10 m [393.70 in], M12, open-ended	ZBSGX05
ZB CAN-Bus T-Splitter, M12 (1)	ZBSGX06
ZB CAN-Bus Y-Splitter, M12 (1)	ZBSGX09
ZB Terminating Resistor, CAN Bus, M12 (1)	ZBSGX07

(1) Not UL-certified

IO-Link Connection Accessories

Description	Item number
ZB IO-Link Cable 2 m [78.74 in] M12	ZBSGX11
ZB IO-Link Cable 5 m [196.85 in] M12	ZBSGX12
ZB IO-Link Cable 10 m [393.70 in] M12	ZBSGX13

Spare Parts

Designation
Functional Ground Label: “Low-interference ground” pictogram, white-black, Ø 12.5 mm [0.49 in], in accordance with IEC 60417

GEL SEPODR — Rotary Measuring System

General Description

The position display is intended for rotary position measurement.

The position display is designed for mounting on a machine shaft or spindle. It is connected to a higher level control system directly via the communication interface.

Connection

The position display is operated with a supply voltage of 20 to 30 V DC. The communication interface controls bus communication and power supply to the position display.

The position display requires a functional ground cable to be connected. Connection is via a flat connector. We recommend a wire cross section of 4 mm² [12 AWG].

Magnetic Absolute Multiturn Encoder

A magnetic absolute multiturn encoder eliminates the need for reference runs after a power failure or an “EMERGENCY STOP.” Thanks to the battery-free multiturn encoder, the position indicator detects its position as soon as power is restored and is immediately ready for use.

When powered off, the sensor shaft can be adjusted by ±64 revolutions without losing its absolute position.

The multiturn encoder withstands high shock and vibration loads.

Displays and Controls

The position display is equipped with a graphic display.

The following values can be read for position measurement:
- Actual position
- Nominal position
- Direction of rotation
- Operating states

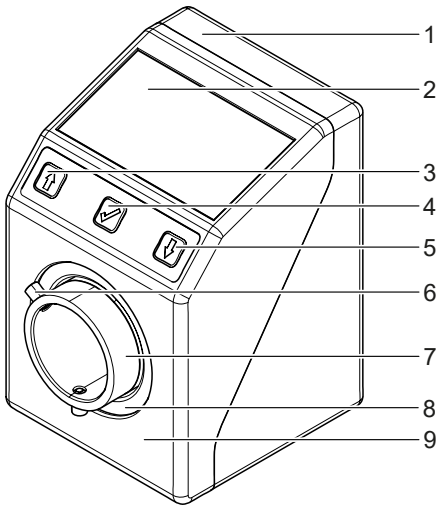
Diagnostic displays support the user in troubleshooting.

Menu navigation is via three membrane buttons below the display.

Pictograms

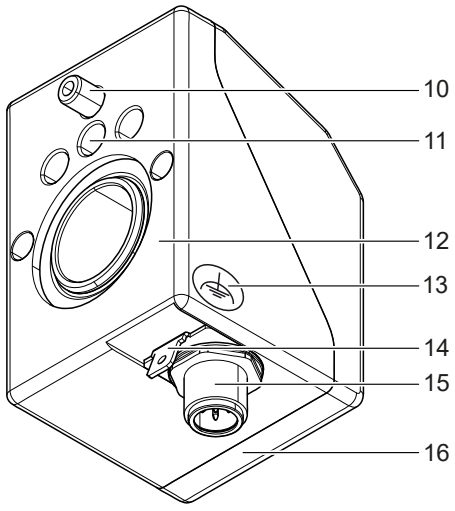
The SeGMo-ImgConv tool allows you to design your own pictograms, thereby simplifying user guidance. The position display can store up to 40 custom pictograms.

Parts named



Front

1 Housing: Top
2 Display
3 Navigation button
4 Confirmation button
5 Navigation button
6 Setscrew (fastening machine shaft – sensor shaft)
7 Sensor shaft
8 Shaft sealing ring
9 Housing: Front

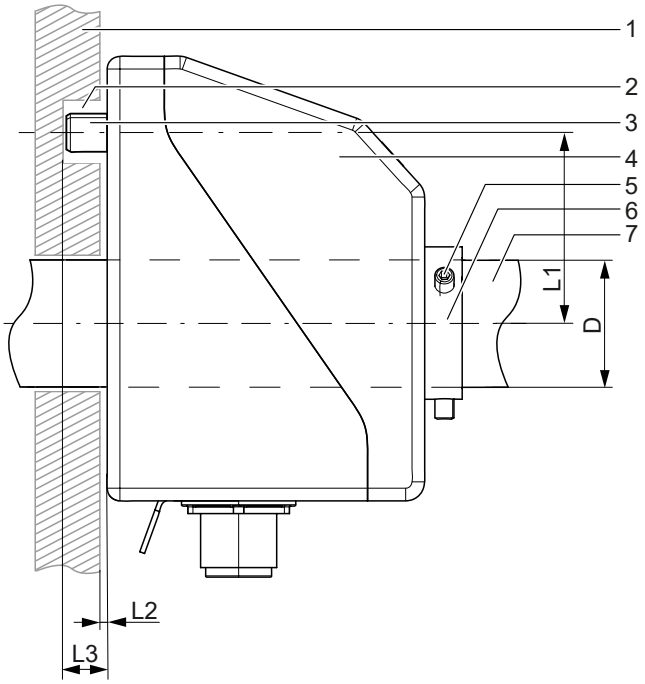


Rear side

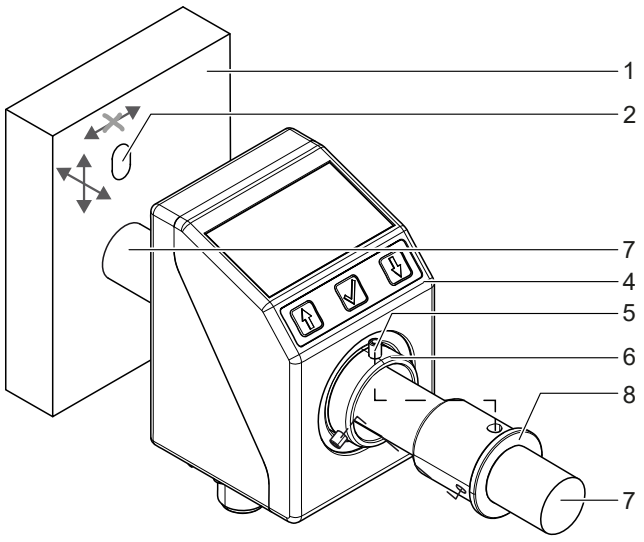
10 Position torque support GEL SEPODR␣␣␣␣B
11 Position torque support GEL SEPODR␣␣␣␣A
12 Housing: Rear side
13 “Functional Ground” label:
14 6.3 mm [0.25 in] flat connector: Functional ground
15 5-pin male connector M12, A-coded:
Communication interface and supply voltage
16 Housing: Underside

Assembly

The mounting concept provides for fixed-moving bearings. The machine shaft bears the weight of the position display via the fixed bearing. The position display is mounted directly onto the machine shaft via a force-fit connection. A torque support as moving bearing prevents the position display from rotating.



Installation dimensions



Installation position

1	Machine housing
2	Mounting bore for torque support (Recommendation: slotted hole)
3	Torque support
4	Housing
5	Setscrew
6	Sensor shaft
7	Machine shaft
8	Reducing sleeve (optional)
D	Machine shaft diameter
L1	Spacing “Center sensor shaft— Center bore” ▪ GEL SEPODR␣␣␣␣A: 22 mm [0.87 in] ▪ GEL SEPODR␣␣␣␣B: 30 mm [1.18 in]
L2	Spacing Machine housing – Housing: 1 mm [39.37 mil]
L3	Minimum bore depth: 7 mm [0.28 in]

Technical Data

Electrical data	
Supply voltage U_B (polarity reversal protection, overvoltage protection)	20 to 30 V DC
Current consumption	≈30 mA at 24 V DC
Power consumption	Requirements for the power supply unit: Maximum supply output: 100 VA
Communication interfaces	CAN bus with CANopen protocol (profile CiA 406); IO-Link; no electrical isolation
Mechanical data	
Sensor shaft	Through hollow shaft ▪ Diameter: 20 mm ^{H7} [0.79^{H7}] ▪ Material: stainless steel Shaft sealing ring ▪ Material: FKM
Maximum permissible rotational speed	100 min^{-1} at DuCy = 25 % (DuCy = duty cycle)
Housing material	Plastic ABS, anthracite
Viewing window material	Plastic, impact protection
Housing dimensions (not including connection elements, not including torque support)	48 mm × 56 mm × 70 mm [1.89 in × 2.20 in × 2.76 in]
Weight	≈170 g [6.0 oz]
Encoder data	
Scanning	Magnetic, absolute
Resolution	1000 increments per 360° (freely parameterizable)
Measuring system detection range	▪ In energized state: unlimited ▪ In de-energized state: 129 revolutions
Connection elements	
Communication interface and supply voltage	5-pin male connector M12, A-coded
Functional ground	6.3 mm [0.25 in] flat connector
Controls	
Push-button	3 membrane buttons
Indicators	
Display	OLED 1.54” monochrome, yellow (128 × 64 pixels, graphic), Language: English
Ambient data	
Operating temperature range	0 °C to +60 °C [32 °F to 140 °F]
Storage temperature range	-20 °C to +80 °C [-4 °F to 176 °F]
Maximum relative air humidity	Condensation not permitted
Degree of protection	IP65; as per DIN EN 60529:2014-09 (Degree of protection not rated by UL!)
Dielectric strength	500 V AC; as per DIN EN 61439-1:2012-06
EMC(1)	DIN EN 61326-1:2013-07; Class B device with immunity requirements for industrial environments
Vibration resistance	1 to 100 m/s² [3.28. to 328.08 ft/s²], 5 to 15 Hz; 100 m/s² [328.08 ft/s²], 15 to 159 Hz; as per DIN EN 60068-2-6:2008-10

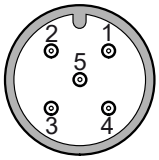
Shock resistance	800 m/s² [2624.67 ft/s²], 6 ms, as per DIN EN 60068-2-27:2010-02
Data for "cULus Recognized Component"	
Housing type	Closed
Device function	Process control device
Connection to main power supply	No
Overvoltage category	II
Contamination level	2
Guards	Class III (Class SELV or PELV and limited power or LPS)
Atmospheric humidity	Maximum 80 % at temperatures up to 31 °C [87.8 °F], linear decreasing to 50 % relative atmospheric humidity at 40 °C [104 °F]
Installation altitude	≤ 2000 m [1.24 mi]
Use in wet areas	No
Device mobility	Immovable
Operating conditions	Continuous
Classification according to UL61010-1	Type 1
Approvals	
European Economic Area	Conformity in accordance with EMC Directive 2014/30/EU CE
USA and Canada	Certification as cULus Recognized Component c UL us

(1) Only use screened connection cables for CAN-Bus (**CO**) communication interface.

Pin Assignments

CAN Bus (**CO**) Communication Interface and Supply Voltage

M12 A-coded



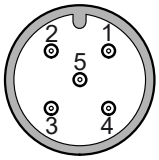
male contact
(plug-in view)

Pin designation	Signal designation
1	Functional ground (cable shield)
2	U_B (1)
3	CAN GND (1)
4	CAN-High
5	CAN-Low
Connector housing	Functional ground

(1) Power supply to the product and power supply to the communication interface

IO-Link (**IL**) Communication Interface and Supply Voltage

M12 A-coded



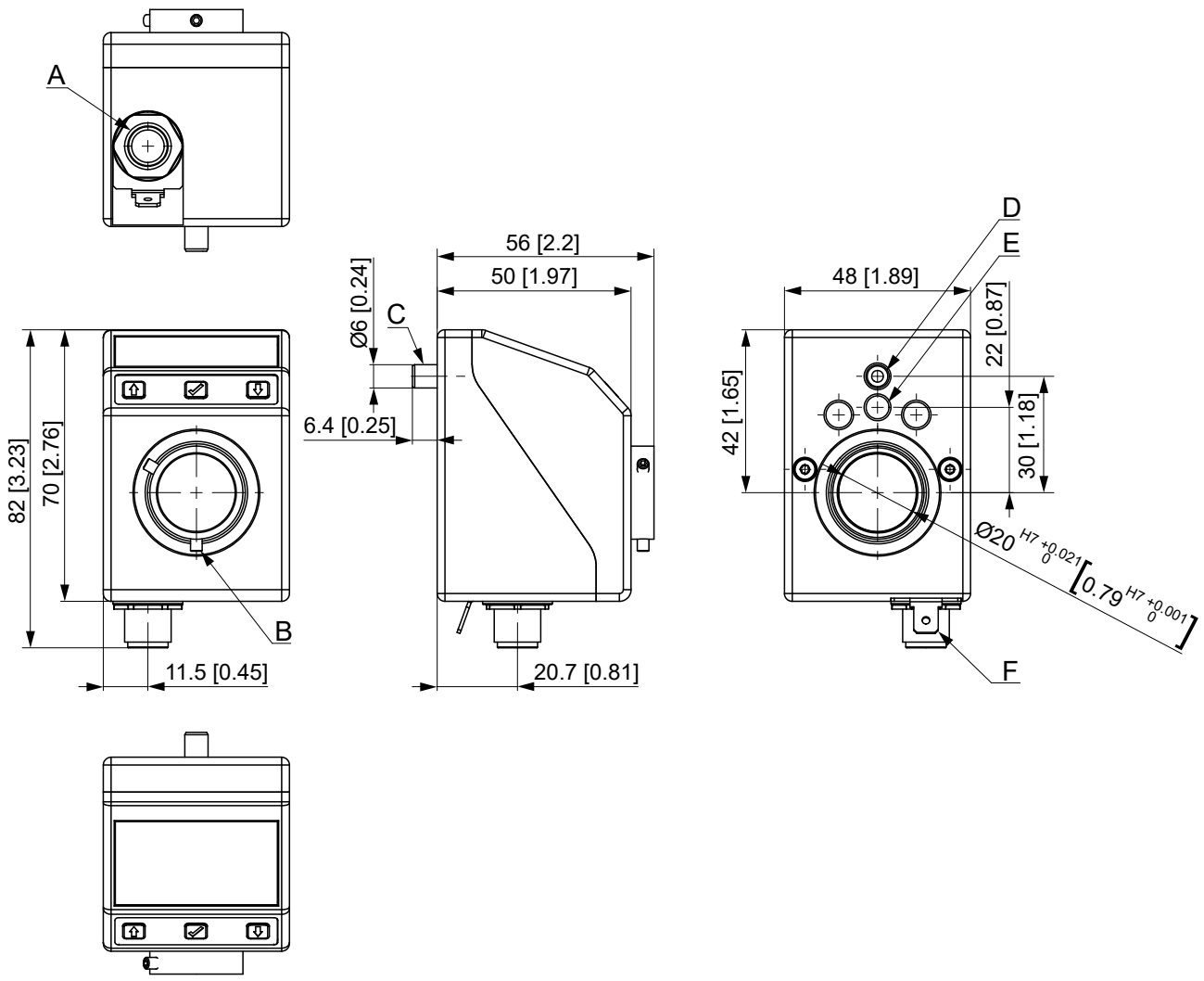
male contact
(plug-in view)

Pin designation	Signal designation
1	U_B (1)
2	Not Assigned
3	GND (1)
4	IO-Link C/Q
5	Not Assigned
Connector housing	Functional ground

(1) Power supply to the product and power supply to the communication interface

Dimension Drawing

All dimensions in millimeters [inches]



A Communication Interface and Supply Voltage
B 2 M3x5 A2 threaded pins (DIN 916) for securing the machine shaft (a thread locker is recommended); tightening torque: 0.4 Nm [0.30 ft•lbf]
C Torque support
D Position of the torque support GEL SEPODR␣␣␣␣ B
E Position of the GEL SEPODR␣␣␣␣ A torque support
F 6.3 mm [0.25 in] flat plug: Functional ground

GEL SEPODL — Linear and External Rotary Measuring System

General Description

The position display is intended both for linear position measurement with the external linear sensor GEL SELIN and for external rotational position measurement using the GEL SEROT.

The position display is attached to the system with two screws. It is connected to the external sensor and to a higher level control system.

Connection

The position display is operated with a supply voltage of 20 to 30 V DC. The communication interface controls bus communication and power supply to the position display and the external sensor.

The position display requires a functional ground cable to be connected. Connection is via a flat connector. We recommend a wire cross section of 4 mm² [12 AWG].

Displays and Controls

The position display is equipped with a graphic display.

The following values can be read for position measurement:
- Actual position
- Nominal position
- Direction indication
- Operating states

Diagnostic displays support the user in troubleshooting.

Menu navigation is via three membrane buttons below the display.

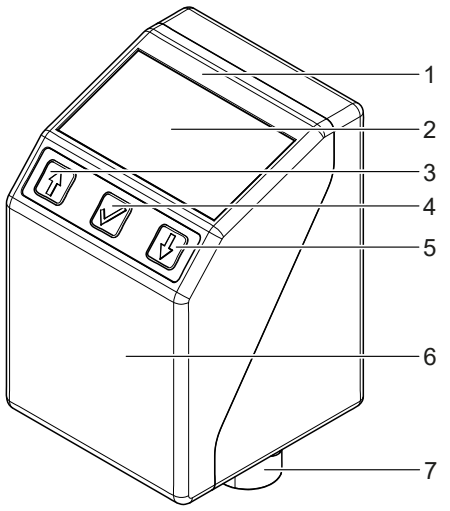
Pictograms

The SeGMo-ImgConv tool allows you to design your own pictograms, thereby simplifying user guidance. The position display can store up to 40 custom pictograms.

Assembly

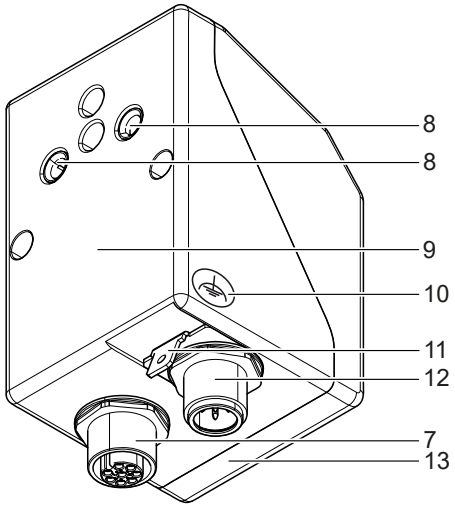
The position display is fastened using two M5 screws. We recommend greasing the screw threads before screwing them in. The maximum screw-in depth of the position display is 7 mm [0.28 in].

Parts named



Front

1 Housing: Top
2 Display
3 Navigation button
4 Confirmation button
5 Navigation button
6 Housing: Front
7 Sensor connection



Rear side

8 M5 threaded bores
9 Housing: Rear side
10 “Functional Ground” label:
11 6.3 mm [0.25 in] flat connector: Functional ground
12 5-pin male connector M12, A-coded: Communication interface and supply voltage
13 Housing: Underside

Technical Data

Electrical data	
Supply voltage U_B (polarity reversal protection, overvoltage protection)	20 to 30 V DC
Current consumption	Without external sensor: ≈30 mA at 24 V DC; Maximum current consumption with connected external sensor: 80 mA
Power consumption	Requirements for the power supply unit: Maximum supply output: 100 VA
Communication interfaces	CAN bus with CANopen protocol (profile CiA 406); IO-Link; no electrical isolation
Mechanical data	
Housing material	Plastic ABS, anthracite
Viewing window material	Plastic, impact protection
Housing dimensions (not including connection elements)	48 mm × 50 mm × 70 mm [1.89 in × 1.97 in × 2.76 in]
Weight	≈100 g [3.53 oz]
Connection elements	
Communication interface and supply voltage	5-pin male connector M12, A-coded
Sensor connection	8-pin female connector M12, A-coded
Functional ground	6.3 mm [0.25 in] flat connector
Controls	
Push-button	3 membrane buttons
Indicators	
Display	OLED 1.54” monochrome, yellow (128 × 64 pixels, graphic), Language: English
Ambient data	
Operating temperature range	0 °C to +60 °C [32 °F to 140 °F]
Storage temperature range	-20 °C to +80 °C [-4 °F to 176 °F]
Maximum relative air humidity	Condensation not permitted
Degree of protection	IP65; as per DIN EN 60529:2014-09 (Degree of protection not rated by UL!)
Dielectric strength	500 V AC; as per DIN EN 61439-1:2012-06
EMC(1)	DIN EN 61326-1:2013-07; Class B device with immunity requirements for industrial environments
Vibration resistance	1 to 100 m/s² [3.28. to 328.08 ft/s²], 5 to 15 Hz; 100 m/s² [328.08 ft/s²], 15 to 159 Hz; as per DIN EN 60068-2-6:2008-10
Shock resistance	800 m/s² [2624.67 ft/s²], 6 ms, as per DIN EN 60068-2-27:2010-02
Data for "cULus Recognized Component"	
Housing type	Closed
Device function	Process control device
Connection to main power supply	No
Overvoltage category	II
Contamination level	2
Guards	Class III (Class SELV or PELV and limited power or LPS)

Atmospheric humidity	Maximum 80 % at temperatures up to 31 °C [87.8 °F], linear decreasing to 50 % relative atmospheric humidity at 40 °C [104 °F]
Installation altitude	≤ 2000 m [1.24 mi]
Use in wet areas	No
Device mobility	Immovable
Operating conditions	Continuous
Classification according to UL61010-1	Type 1
Approvals	
European Economic Area	Conformity in accordance with EMC Directive 2014/30/EU CE
USA and Canada(2)	Certification as cULus Recognized Component c UL us

(1) Only use screened connection cables for CAN-Bus (**CO**) communication interface.

(2) The UL certification also applies to the combination of position display and connected GEL SELIN linear sensor, even though the linear sensor does not have its own UL certification.

Pin Assignments

CAN Bus (**CO**) Communication Interface and Supply Voltage

M12 A-coded



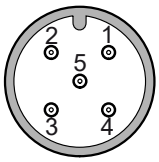
male contact
(plug-in view)

Pin designation	Signal designation
1	Functional ground (cable shield)
2	U_B (1)
3	CAN GND (1)
4	CAN-High
5	CAN-Low
Connector housing	Functional ground

(1) Power supply to the product and power supply to the communication interface

IO-Link (**IL**) Communication Interface and Supply Voltage

M12 A-coded



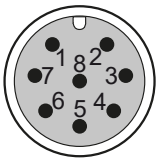
male contact
(plug-in view)

Pin designation	Signal designation
1	U_B (1)
2	Not Assigned
3	GND (1)
4	IO-Link C/Q
5	Not Assigned
Connector housing	Functional ground

(1) Power supply to the product and power supply to the communication interface

Sensor connection GEL SELIN (SSI interface)

M12 A-coded

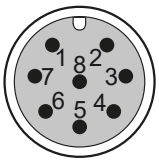


Female contact
(plug-in view)

Pin designation	Signal identifier
1	GND
2	U_B
3	CLK+
4	CLK-
5	DAT-
6	DAT+
7	unallocated
8	unallocated
Connector housing	Functional ground

Sensor connection GEL SEROT (RS422 compatible)

M12 A-coded

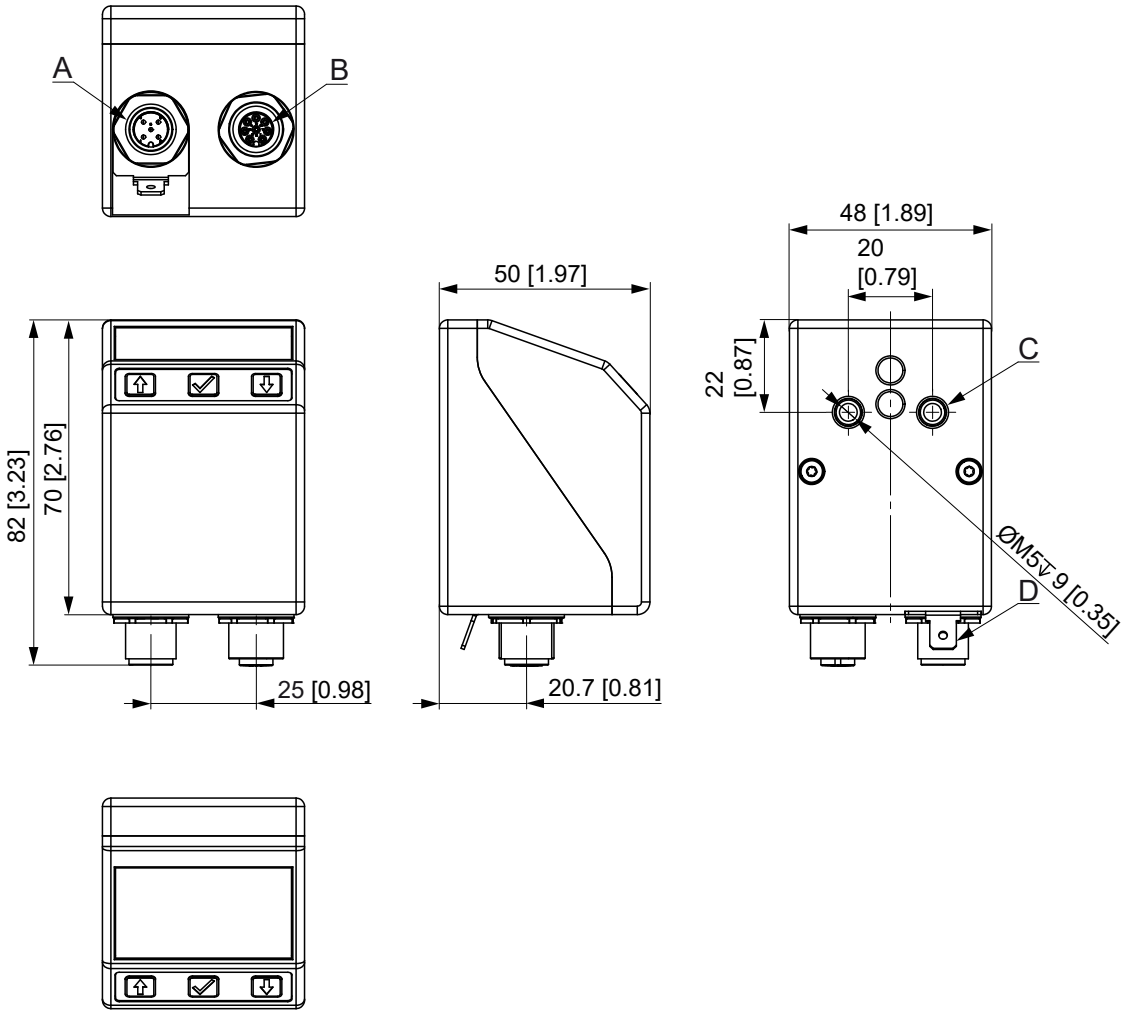


Female contact
(plug-in view)

Pin designation	Signal identifier
1	GND
2	U_B
3	TXD+
4	TXD-
5	RXD-
6	RXD+
7	Reserved
8	Reserved
Connector housing	Functional ground

Dimension Drawing

All dimensions in millimeters [inches]



A Communication Interface and Supply Voltage
B Sensor connection
C 2 M5 threaded holes, maximum screw-in depth: 7 mm [0.28 in]
D 6.3 mm [0.25 in] flat plug: functional ground

Europe

Germany

Lenord, Bauer & Co. GmbH
Dohlenstrasse 32
46145 Oberhausen
Tel. +49 (0)208 9963 0
Email info@lenord.de
www.lenord.de

Italy

Lenord+Bauer Italia S.r.l.
Viale Famagosta 61
20124 Milan
Tel. +39 02 36536936
Email salesitaly@lenord.com
www.lenord.com

Spain

Lenord Bauer Iberica, S.L.
Carrer de Balmes, 150, 5°
08008 Barcelona
Tel. +34 603 607 499
Email info@lenord.es
www.lenord.com

North America

USA

Lenord+Bauer USA Inc.
32000 Northwestern Highway, Suite 150,
Farmington Hills, MI 48334
Tel. +1 248 446 7003
Email orders@lenord.com
www.lenord.com

Asia

China

Lenord+Bauer Automation Technology (Shanghai) Co., Ltd.
Block 42, Room 302, No. 1000,
Jinhai Road, 201206 Shanghai
Tel. +86 21 50398270
Email Info@lenord.cn
www.lenord.cn

India

Lenord+Bauer India Private Limited
417 Golden Square Prime Serviced Office
Davanam Sarovar Portico Suites
Hosur Main Road, Bengaluru 560068
Karnataka
Tel. +919901516814
Email info@lenord.co.in
www.lenord.co.in

Certified quality for your safety

DIN EN ISO 9001 CERTIFIED
DIN EN ISO 14001 CERTIFIED
DIN EN ISO 22163 CERTIFIED

LENORD +BAUER
Finding solutions. Founding trust.