



BTL7 -P- SERIES - ANALOG VOLTAGE	
Interface	Analog, voltage
Measuring length	50...7620 mm
Repeat accuracy	± 10 µm
Linearity deviation	nmm = 0050...0500: ± 50 µm nmm = 0501...5500: ± 0.01% FS nmm > 5500: ± 0.02% FS
Operating voltage Ub	10...30 VDC
Ambient temperature	-40...85 °C
Mechanical configuration	Block-style profile - 37 x 35 mm
Housing material	Aluminum
Protection degree	I = S: IP67 with connector I = KA: IP68
Approval/Conformity	CE cULus EAC

BTL7-abcd-Mnnnn-f-lm

BTL7

Magnetostrictive linear position sensor
Generation 7

a interface

A = Voltage output 0 ... 10 V
G = voltage output -10 ... 10 V

b Operating voltage

5 = 10 ... 30 V

c + d Interface characteristic 1 + 2

01 = 2 outputs, each 1 x rising/falling
settable/programmable

Mnnnn Nominal length (4-position)

M0500 = metric in mm
(M0050...M7620)

f Style

P = Profile

l Connection type

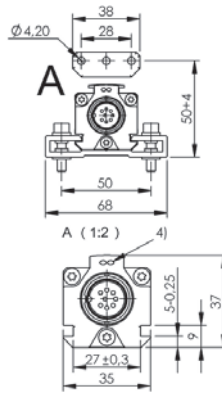
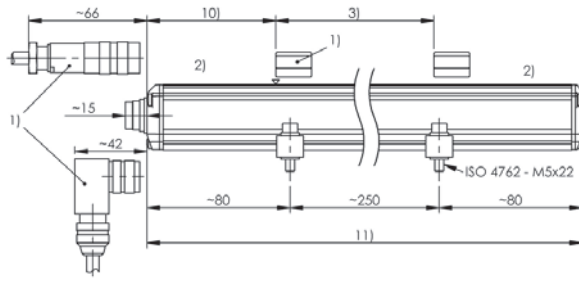
S = Connector
KA = Cable (PUR)

m Connection type characteristic 1

for connector:
32 = M16x0.75 connector with 8 pins
115 = M12x1 connector with 8 pins

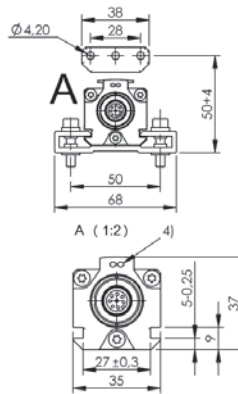
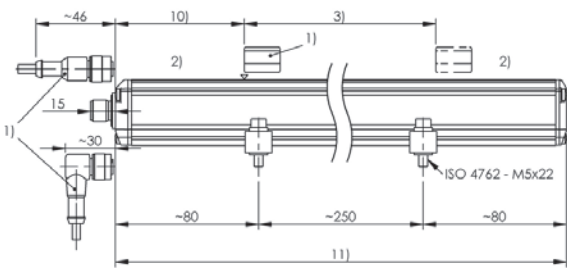
for cable (length in meters):
02, 05, 10, 15, 20, 30

BTL7-A501-Mxxxx-P-S32



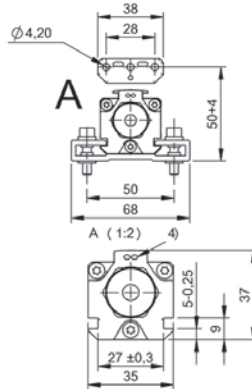
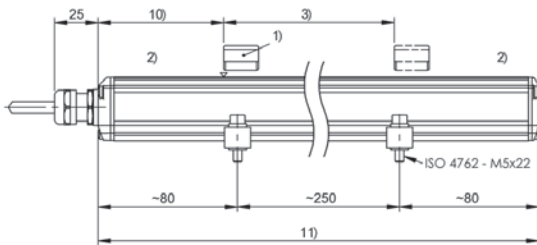
- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length

BTL7-G501-Mxxxx-P-S115



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length

BTL7-A501-Mxxxx-P-KAxx



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length



	BTL7 -P- SERIES - ANALOG CURRENT
Interface	Analog, current
Measuring length	50...7620 mm
Repeat accuracy	± 5 µm
Linearity deviation	nxxx = 0050...0500: ± 50 µm nxxx = 0501...5500: ± 0.01% FS nxxx > 5500: ± 0.02% FS
Operating voltage Ub	10...30 VDC
Ambient temperature	-40...85 °C
Mechanical configuration	Block-style profile - 37 x 35 mm
Housing material	Aluminum
Protection degree	I = S: IP67 with connector I = KA: IP68
Approval/Conformity	CE cULus EAC

BTL7-abcd-Mnnnn-f-lm

BTL7

Magnetostrictive linear position sensor
Generation 7

a interface

C = Current output 0 ... 20 mA
E = Current output 4 ... 20 mA

b Operating voltage

5 = 10 ... 30 V

c + d Interface characteristic 1 + 2

01 = 2 outputs, each 1 x rising/falling
settable/programmable
08 = 1 output, rising, 1 auxiliary output
voltage, rising settable/programmable
09 = 1 output, rising, 1 auxiliary output
voltage, falling settable/programmable
12 = 1 output, falling, 1 auxiliary output
voltage, rising settable/programmable
13 = 1 output, falling, 1 auxiliary output
voltage, falling settable/programmable

Mnnnn Nominal length (4-position)

M0500 = metric in mm
(M0050...M7620)

f Style

P = Profile

l Connection type

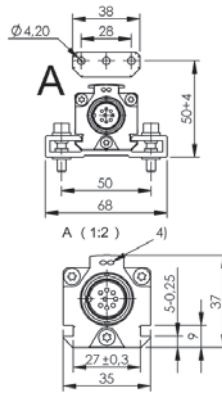
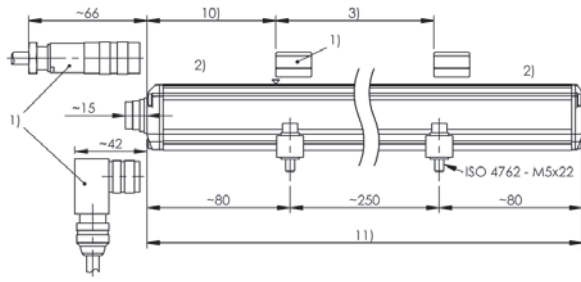
S = Connector
KA = Cable (PUR)

m Connection type characteristic 1

for connector:
32 = M16x0.75 connector with 8 pins
115 = M12x1 connector with 8 pins

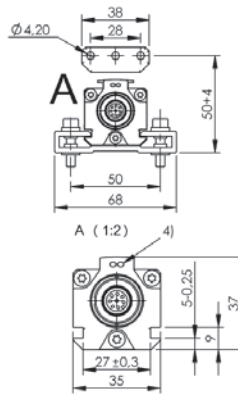
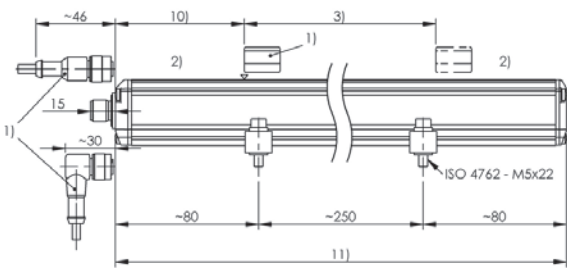
for cable (length in meters):
02, 05, 10, 15, 20, 50, 100

BTL7-E501-Mxxxx-P-S32



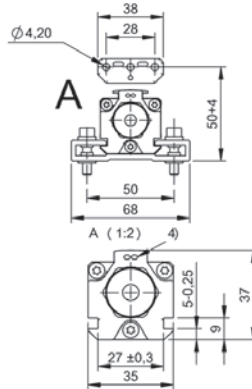
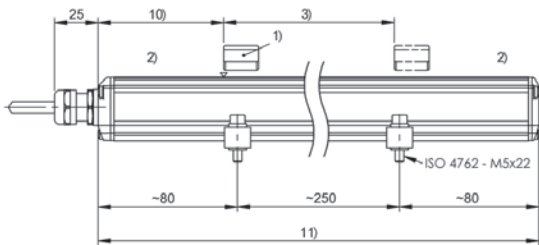
- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length

BTL7-C501-Mxxxx-P-S115



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length

BTL7-E508-Mxxxx-P-KAxx



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length



	BTL7 -P- SERIES - DIGITAL
Interface	Digital pulse
Measuring length	50...7620 mm
Repeat accuracy	≤ ± 5 µm
Linearity deviation	nmm = 0050...5500: ± 50 µm nmm > 5500: ± 0.02% FS
Operating voltage Ub	10...30 VDC
Ambient temperature	-40...85 °C
Mechanical configuration	Block-style profile - 37 x 35 mm
Housing material	Aluminum
Protection degree	I = S: IP67 with connector I = KA: IP68
Approval/Conformity	CE cULus EAC

BTL7-abcd-Mnnnn-f-lm

BTL7

Magnetostrictive linear position sensor
Generation 7

a interface

P = Digital pulse interface

b Operating voltage

5 = 10 ... 30 V

c Interface characteristic 1

1 = Digital start/stop interface

d Interface characteristic 2

1 = DPI/IP communication interface

Mnnnn Nominal length (4-position)

M0500 = metric in mm
(M0050...M7620)

f Style

P = Profile

l Connection type

S = Connector
KA = Cable (PUR)

m Connection type characteristic 1

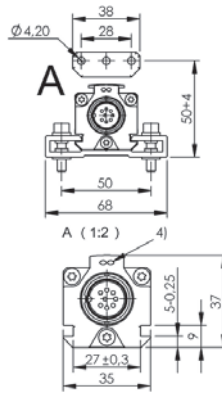
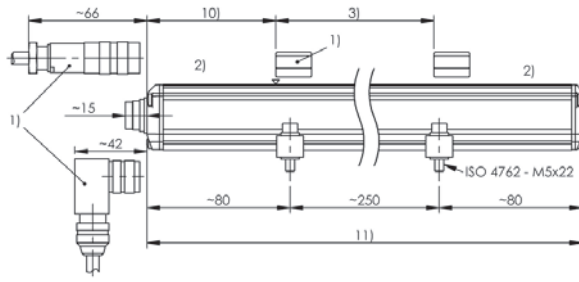
for connector:

32 = M16x0.75 connector with 8 pins
115 = M12x1 connector with 8 pins

for cable (length in meters):

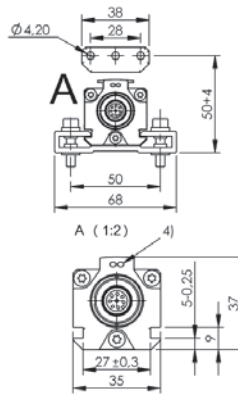
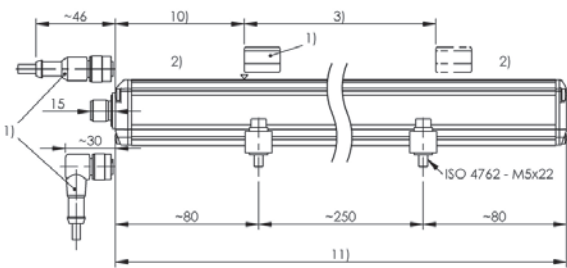
02, 05, 10, 15, 20, 30, 50, 100

BTL7-P511-Mxxxx-P-S32



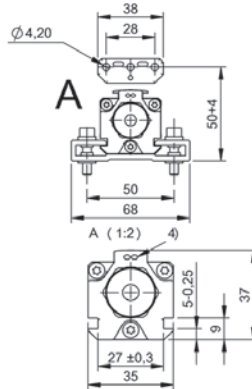
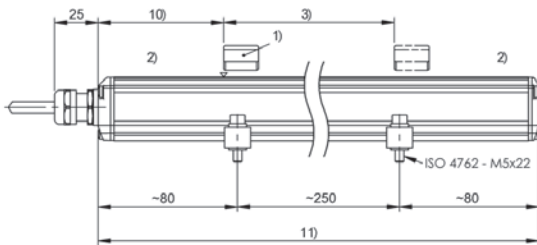
- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length

BTL7-P511-Mxxxx-P-S115



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length

BTL7-P511-Mxxxx-P-KAxx



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length



	BTL7 -P- SERIES - SSI
Interface	SSI
Measuring length	50...7620 mm
Repeat accuracy	$\leq \pm 5 \mu\text{m}$
Linearity deviation	d = 1, 2, 3, 7, 9: nnnn = 50...5500: $\pm 30\mu\text{m}$ d = 4, 5, 6, 8 nnnn = 50...5500: $\pm 2 \text{ LSB}$ nnnn > 5500: $\pm 0.02\% \text{ FS}$
Operating voltage U_b	10...30 VDC
Ambient temperature	-40...85 °C
Mechanical configuration	Block-style profile - 37 x 35 mm
Housing material	Aluminum
Protection degree	I = S: IP67 with connector I = KA: IP68
Approval/Conformity	CE cULus EAC

BTL7-abcde-Mnnnn-f-lm

BTL7

Magnetostrictive linear position sensor
Generation 7

a interface

S = SSI

b Operating voltage

5 = 10 ... 30 V

c Interface characteristic 1

0 = 24 bits, binary, rising
1 = 24 bits, gray, rising
2 = 24 bits, binary, falling
3 = 24 bits, gray, falling
6 = 25 bits, binary, rising
7 = 25 bits, gray, rising
8 = 25 bits, binary, falling
9 = 25 bits, gray, falling
A = 26 bits, binary, rising
B = 26 bits, gray, rising
C = 26 bits, binary, falling
D = 26 bits, gray, falling

d Interface characteristic 2

1 = 1 μm
2 = 5 μm
3 = 10 μm
4 = 20 μm
5 = 40 μm
6 = 100 μm
7 = 2 μm
8 = 50 μm
9 = 0.5 μm

e Interface characteristic 3

B = Synchronous mode
- = Asynchronous mode

Mnnnn Nominal length (4-position)

M0500 = metric in mm
(M0050...M7620)

f Style

P = Profile

l Connection type

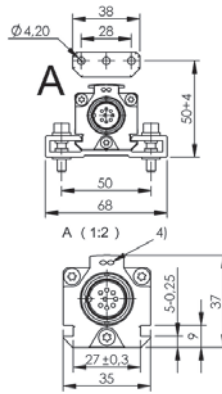
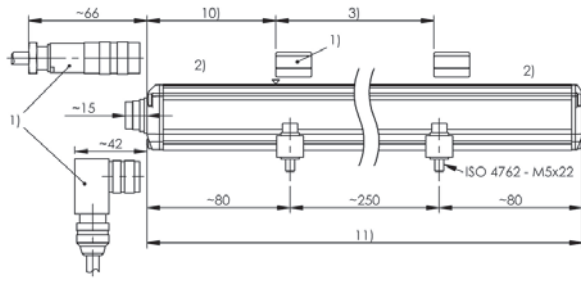
S = Connector
KA = Cable (PUR)

m Connection type characteristic 1

for connector:
32 = M16x0.75 connector with 8 pins
115 = M12x1 connector with 8 pins
147 = M16x0.75 connector with 7 pins

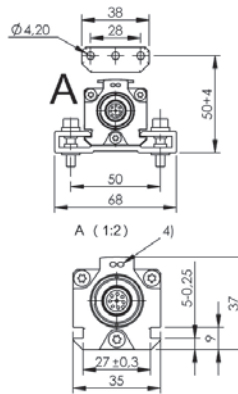
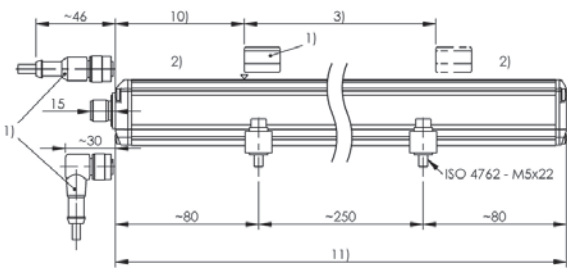
for cable (length in meters):
02, 05, 10, 15, 20, 30, 50, 100

BTL7-S510x-Mxxxx-P-S32



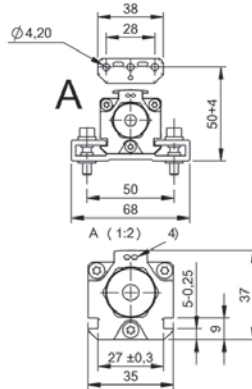
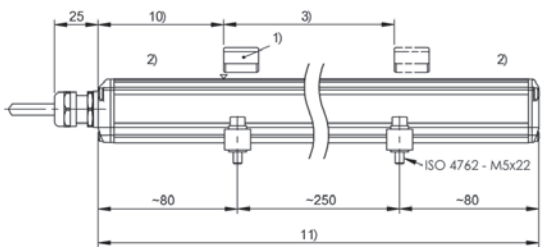
- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length

BTL7-S5xxx-Mxxxx-P-S115



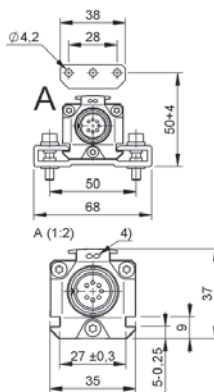
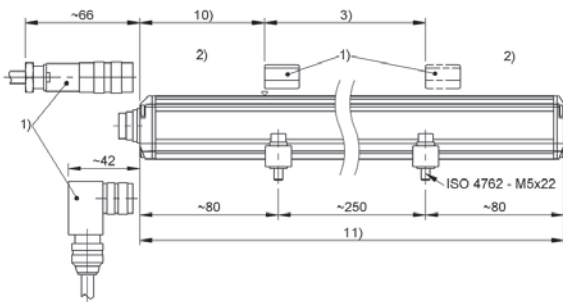
- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length

BTL7-S5xxx-Mxxxx-P-KAxx



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length

BTL7-S5xxx-Mxxxx-P-S147



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 4) LED function indicator
- 10) Null point
- 11) Installation length



	BTL5 -P- SERIES - CANOPEN
Interface	CANopen
Measuring length	25...4000 mm
Repeat accuracy	± 1 LSB
Linearity deviation	±30 µm
Operating voltage Ub	20...28 VDC
Ambient temperature	-40...85 °C
Mechanical configuration	Block-style profile - 37 x 35 mm
Housing material	Aluminum
Protection degree	IP67 with connector
Approval/Conformity	CE cULus EAC

BTL5-abcd-Mnnnn-f-lm

BTL5

Magnetostrictive linear position sensor
Generation 5

a interface

H = CANopen

b Operating voltage

1 = 20 ... 28 V

c Interface characteristic 1

1 = 1 magnet
2 = 2 magnets
3 = 4 magnets

d Interface characteristic 2

Data transmission rate:

0 = 1 MBaud
1 = 800 MBaud
2 = 500 kBaud
3 = 250 kBaud
4 = 125 kBaud
5 = 100 kBaud
6 = 50 kBaud
7 = 25 kBaud
8 = 10 kBaud

Mnnnn Nominal length (4-position)

M0500 = metric in mm
(M0050...M4000)

f Style

P = Profile

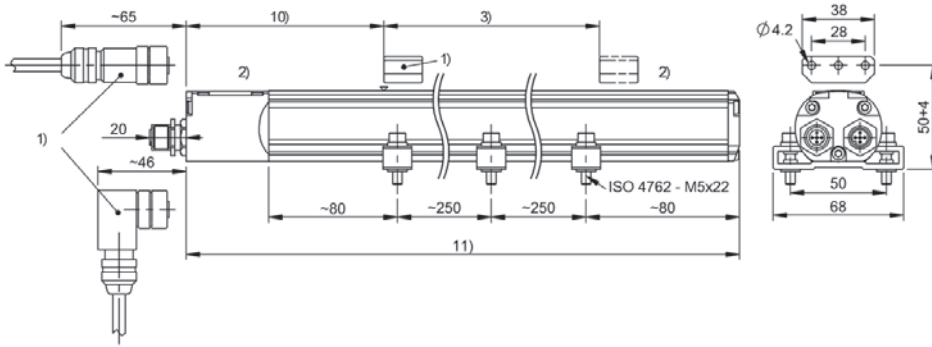
l Connection type

S = Connector

m Connection type characteristic

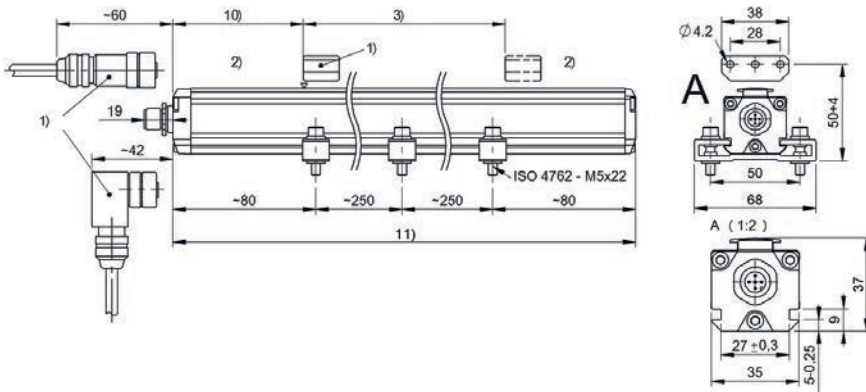
92 = 1 x M12x1 connector with 5 pins
94 = 1 x M12x1 connector with 5 pins
+ 1 x M12x1 female with 5 pins

BTL5-Hxxx-Mxxxx-P-S94



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 10) Null point
- 11) Installation length

BTL5-Hxxx-Mxxxx-P-S92



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 10) Null point
- 11) Installation length



	BTL7 -P- SERIES - PROFINET
Interface	Profinet
Measuring length	50...7620 mm
Repeat accuracy	$\leq \pm 5 \mu\text{m}$
Linearity deviation	nmm = 0050...5500: $\pm 30 \mu\text{m}$ nmm > 5500: $\pm 0.02\%$ FS
Operating voltage U_b	10...30 VDC
Ambient temperature	-40...85 °C
Mechanical configuration	Block-style profile - 37 x 35 mm
Housing material	Aluminum
Protection degree	IP67 with connector
Approval/Conformity	CE cULus EAC

BTL7-abcd-Mnnnn-f-lm

BTL7

Magnetostrictive linear position sensor
Generation 7

a interface

V = EtherNet

b Operating voltage

5 = 10 ... 30 V

c Interface characteristic 1

0 = Flexible Magnet Mode (1 - 16 magnets)

d Interface characteristic 2

T = Profinet

Mnnnn Nominal length (4-position)

M0500 = metric in mm
(M0050...M7620)

f Style

P = Profile

l Connection type

C = Connector

m Connection type characteristic

003 = 1 x M8x1 with 4 pins + 2 x
M12x1 with 4 pins



	BTL7 -P- SERIES - ETHERNET/IP
Interface	Ethernet/IP
Measuring length	50...7620 mm
Repeat accuracy	$\leq \pm 5 \mu\text{m}$
Linearity deviation	nnnn = 0050...5500: $\pm 30 \mu\text{m}$ nnnn > 5500: $\pm 0.02\%$ FS
Operating voltage U_b	10...30 VDC
Ambient temperature	-40...85 °C
Mechanical configuration	Block-style profile - 37 x 35 mm
Housing material	Aluminum
Protection degree	IP67 with connector
Approval/Conformity	CE cULus EAC

BTL7-abcd-Mnnnn-f-lm

BTL7

Magnetostrictive linear position sensor
Generation 7

a interface

V = EtherNet

b Operating voltage

5 = 10 ... 30 V

c Interface characteristic 1

0 = Flexible Magnet Mode (1 - 16 magnets)

d Interface characteristic 2

D = EtherNet IP

Mnnnn Nominal length (4-position)

M0500 = metric in mm
(M0050...M7620)

f Style

P = Profile

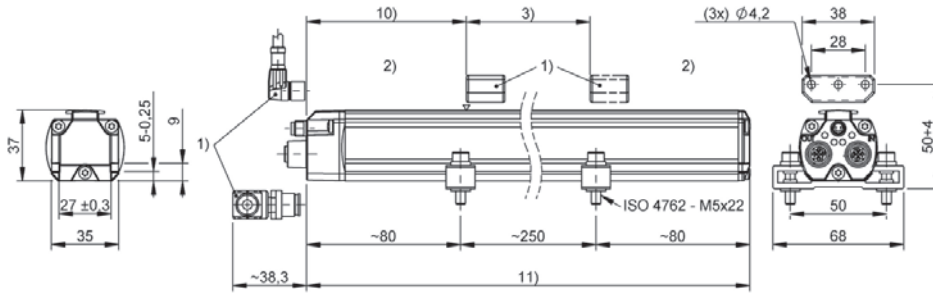
l Connection type

C = Connector

m Connection type characteristic

003 = 1 x M8x1 with 4 pins + 2 x
M12x1 with 4 pins

BTL7-V50D-Mxxxx-P-C003



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 10) Null point
- 11) Installation length



	BTL7 -P- SERIES - ETHERCAT
Interface	EtherCAT
Measuring length	50...7620 mm
Repeat accuracy	$\leq \pm 5 \mu\text{m}$
Linearity deviation	nmm = 0050...5500: $\pm 30 \mu\text{m}$ nmm > 5500: $\pm 0.02\%$ FS
Operating voltage U_b	10...30 VDC
Ambient temperature	-40...85 °C
Mechanical configuration	Block-style profile - 37 x 35 mm
Housing material	Aluminum
Protection degree	IP67 with connector
Approval/Conformity	CE cULus EAC

BTL7-abcd-Mnnnn-f-lm

BTL7

Magnetostrictive linear position sensor
Generation 7

a interface

V = EtherNet

b Operating voltage

5 = 10 ... 30 V

c Interface characteristic 1

0 = Flexible Magnet Mode (1 - 16 magnets)

d Interface characteristic 2

E = EtherCAT

Mnnnn Nominal length (4-position)

M0500 = metric in mm
(M0050...M7620)

f Style

P = Profile

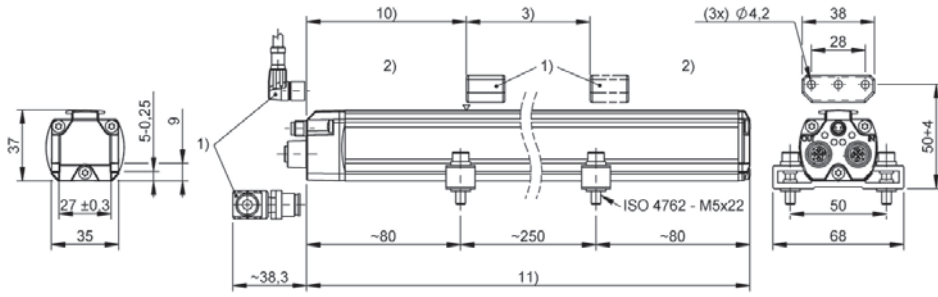
l Connection type

C = Connector

m Connection type characteristic

003 = 1 x M8x1 with 4 pins + 2 x
M12x1 with 4 pins

BTL7-V50E-Mxxxx-P-C003



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 10) Null point
- 11) Installation length



	BTL5 -P- SERIES - PROFIBUS
Interface	Profibus
Measuring length	25...4000 mm
Repeat accuracy	± 1 LSB
Linearity deviation	±30 µm
Operating voltage Ub	20...28 VDC
Ambient temperature	-40...85 °C
Mechanical configuration	Block-style profile - 37 x 35 mm
Housing material	Aluminum
Protection degree	IP67 with connector
Approval/Conformity	CE cULus EAC

BTL5-abcd-Mnnnn-f-lm

BTL5

Magnetostrictive linear position sensor
Generation 5

a interface

T = Profibus

b Operating voltage

1 = 20 ... 28 V

c + d Interface characteristic 1 + 2

10 = 1 magnet
(1 - 4 magnets can be set)

Mnnnn Nominal length (4-position)

M0500 = metric in mm
(M0050...M4000)

f Style

P = Profile

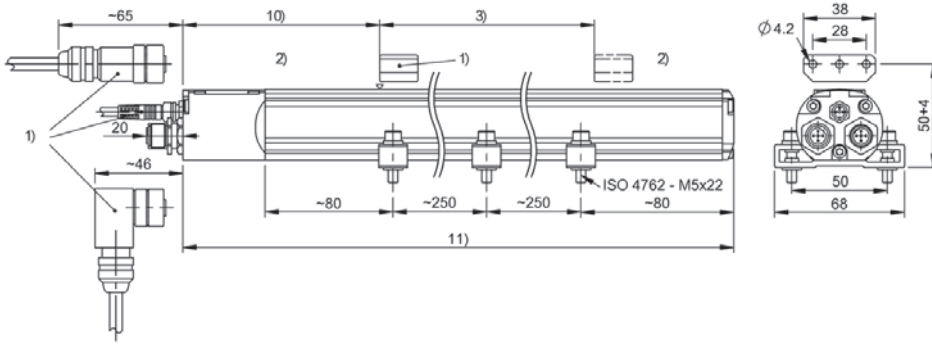
l Connection type

S = Connector

m Connection type characteristic

103 = 1 x M8x1 connector with 3 pins
+ 1 x M12x1 connector with 5 pins + 1
x M12x1 female with 5 pins

BTL5-Txxx-Mxxxx-P-S103



- 1) not included in scope of delivery
- 2) Non-usable area
- 3) Nominal length = Measuring length
- 10) Null point
- 11) Installation length



	BTL5 -P- SERIES - DEVICENET
Interface	DeviceNet
Measuring length	25...4000 mm
Repeat accuracy	± 1 LSB
Linearity deviation	±30 µm
Operating voltage Ub	20...28 VDC
Ambient temperature	-40...85 °C
Mechanical configuration	Block-style profile - 37 x 35 mm
Housing material	Aluminum
Protection degree	IP67 with connector
Approval/Conformity	CE cULus EAC

BTL5-abcd-Mnnnn-f-lm

BTL5

Magnetostrictive linear position sensor
Generation 5

a interface

H = CANopen

b Operating voltage

1 = 20 ... 28 V

c Interface characteristic 1

1 = 1 magnet

d Interface characteristic 2

Data transmission rate:

2 = 500 kBaud

3 = 250 kBaud

4 = 125 kBaud

Mnnnn Nominal length (4-position)

M0500 = metric in mm
(M0050...M4000)

f Style

P = Profile

l Connection type

S = Connector

m Connection type characteristic

93 = 1 x M8x1 connector with 3 pins +
1 x M12x1 connector with 5 pins +
1 x M12x1 female with 5 pins

