



Length measuring sensor with hand

BHA/BHG/BHE-LN Series

- Operating stroke length
BHA-LN, BHG-LN: 5/9/11/15 mm
BHE-LN: 7/10/14/16 mm



* Excluding display



- LCM
- LCR
- LCC
- LCW
- LCX
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- UB
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCS2
- RCC2
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3*
- NHS
- HRL
- LN**
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending



BHA



BHG



BHE

Hand specifications

● BHA Series

Item	Cross roller parallel hand (double acting)			
	BHA-LN-01CS	BHA-LN-03CS	BHA-LN-04CS	BHA-LN-05CS
Cylinder bore size mm	ø12	ø16	ø20	ø25
Working fluid	Compressed air			
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)			
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)			
Ambient temperature °C	5 (41°F) to 60 (140°F)			
Double finger stroke mm	5	9	11	15
Port size	M3		M5	
Weight g	140	200	290	460
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)			

● BHG Series

Item	Cross roller parallel hand (double acting/with rubber cover)			
	BHG-LN-01CS	BHG-LN-03CS	BHG-LN-04CS	BHG-LN-05CS
Cylinder bore size mm	ø12	ø16	ø20	ø25
Working fluid	Compressed air			
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)			
Min. working pressure MPa	0.15 (≈22 psi, 1.5 bar)			
Ambient temperature °C	5 (41°F) to 60 (140°F)			
Double finger stroke mm	5	9	11	15
Port size	M3		M5	
Weight g	170	230	320	490
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)			

● BHE Series

Item	Centering hand (double acting)			
	BHE-LN-01CS	BHE-LN-03CS	BHE-LN-04CS	BHE-LN-05CS
Cylinder bore size mm	ø12	ø16	ø20	ø25
Working fluid	Compressed air			
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)			
Min. working pressure MPa	0.2 (≈29 psi, 2 bar)			
Ambient temperature °C	5 (41°F) to 60 (140°F)			
Double finger stroke mm	7	10	14	16
Port size	M3		M5	
Weight g	130	180	300	480
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)			

Note: Hand appearance is the same as the standard, but the internal structure differs. (This hand is for length measurement.)

Gripping power performance data is shown below.

- BHA : Page 1602
- BHG : Page 1608
- BHE : Page 1755

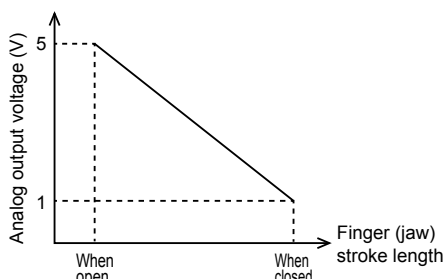
Sensor, amplifier (separated) specifications

Refer to page 1470.

Display section specifications

Refer to page 1471.

Length measuring sensor output characteristics



How to order

● Analog output

BHE - **LN** - **04CS** - **10** **H** **C** **LDS** **DN**

● Switch output

BHE - **LN** - **05CS** - **10** **H** **C** **S12S**

A Drive equipment specifications

B Cylinder bore size

C Compatible sensor (*1)

D Sensor lead wire outlet direction

E Sensor lead wire terminal specifications

F Amplifier unit output and shape

G Display (*2)

⚠ Precautions for model selection

*1 : Depending on the drive equipment on the length measurement sensor compatible sensors and amplifiers differ.

*2 : Two channels can be used for display. Ch1 is allocated by this model display. When using another channel, the display must be ordered separately.

(A)-LN-(B)-(C)(D)(E)LDS

*3 : When ordering a single model for maintenance:

- Hand: (A)-LN-(B)
- Sensor: LN-(C)(D)(E)
- Amplifier unit (amplifier separate): LN-(F)
- Amplifier unit with sensor (amplifier installed): LN-(C)(V)(F)
- Display: LN-DN

When placing a discrete order, refer to product specifications sheet or handling precautions attached with the unit for details on setting.

● Discrete cylinder switch model No.

SW - **T** **2** **H** **3**

A Output

B Lead wire outlet direction

C Lead wire length

⚠ Precautions for model selection

For the hand, 1 cylinder switch can be mounted in a separate groove to confirm whether the finger (jaw) is open or closed, regardless of whether analog or switch output is used. Order separately when required.

Code	Description
A Drive equipment specifications	
BHA	Cross roller parallel hand (double acting)
BHG	Cross roller parallel hand (double acting/with rubber cover)
BHE	Centering hand (double acting)
B Size (cylinder bore size)	
01CS	ø12
03CS	ø16
04CS	ø20
05CS	ø25
C Compatible sensor	
05	For 01CS, 03CS
10	For 04CS, 05CS
D Sensor lead wire outlet direction	
H	Axial lead wire
V	Radial lead wire (amplifier installed in V only)
E Sensor lead wire terminal specifications	
Blank	Without connector (for amplifier installed)
C	With M8 connector (for amplifier separated)
F Amplifier unit output and shape	
S1PAH	Amplifier installed/lead wire straight switch 1-point output
S1PAV	Amplifier installed/lead wire L type switch 1-point output
S2S	Amplifier separate/switch 2 point output (01CS, 03CS compatible)
S12S	Amplifier separate/switch 2 point output (04CS, 05CS compatible)
LS	Amplifier separate/analog output (04CS, 05CS compatible)
LDS	Amplifier separate/for display (LN-DN) (04CS, 05CS compatible)
G Display	
DN	Switch output section NPN display (04CS, 05CS compatible)

Code	Description
A Output	
2	Proximity 2-wire
3	Proximity 3-wire
B Lead wire outlet direction	
H	Axial lead wire
V	Radial lead wire
C Lead wire length	
Blank	1 m (standard)
3	3 m (option)
5	5 m (option)

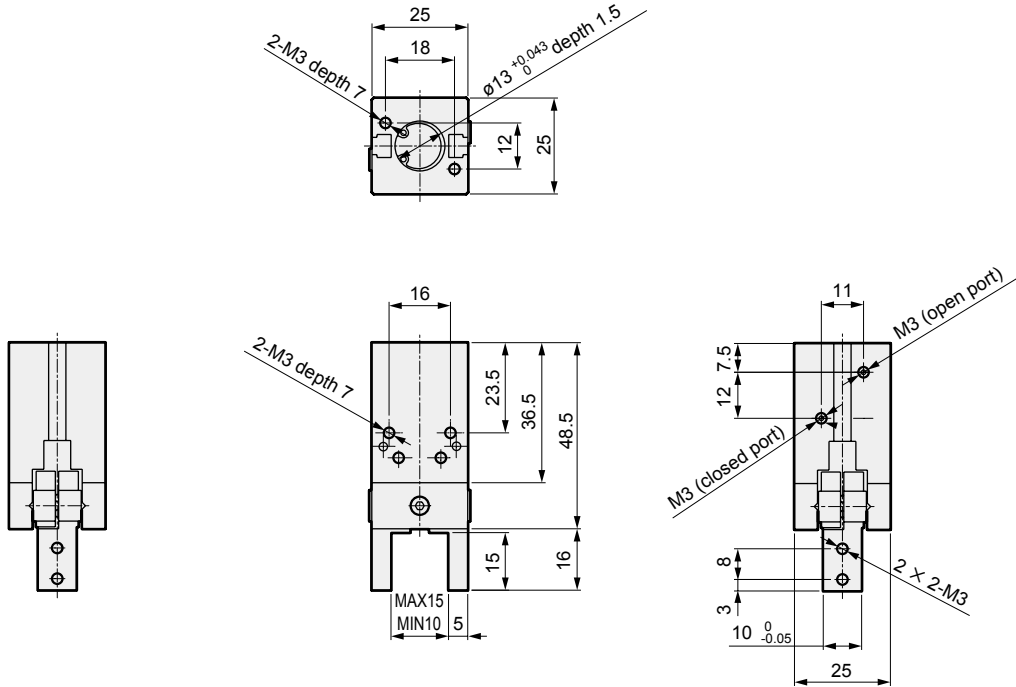
LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

BHA-LN Series

Dimensions

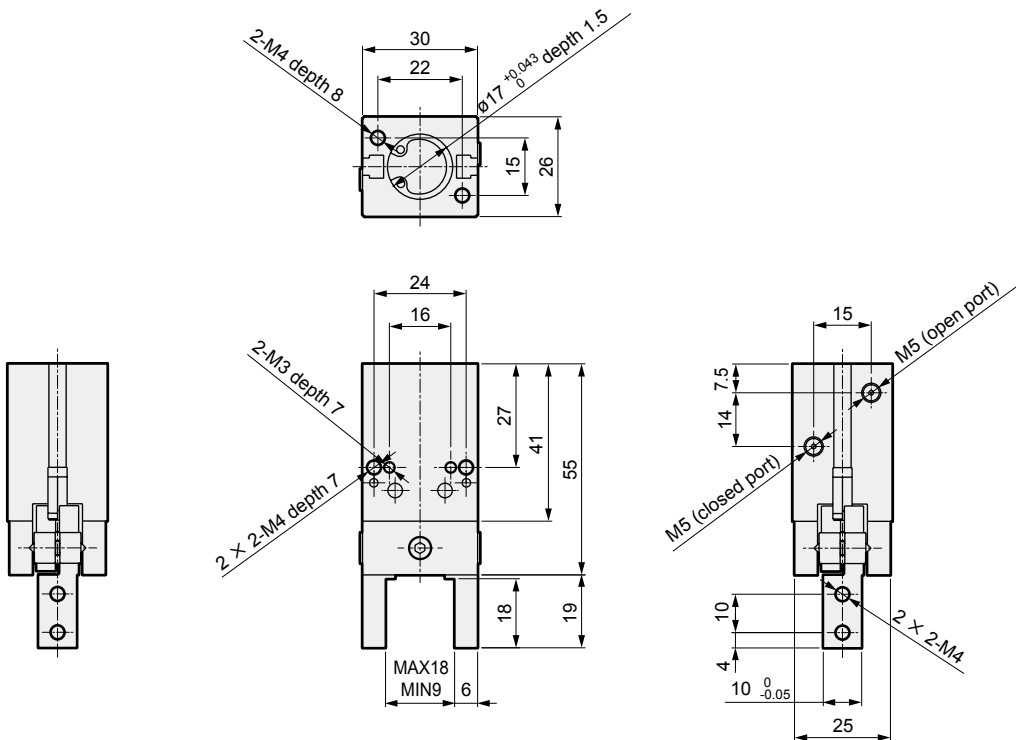
BHA-LN (amplifier separated)

● BHA-LN-01CS



- *1 : Longitudinal direction is 3 mm longer than standard products. Other dimensions are the same as standard products.
- *2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.
- *3 : Only the cylinder bore size code 04CS/05CS can be mounted on display or analog output models.

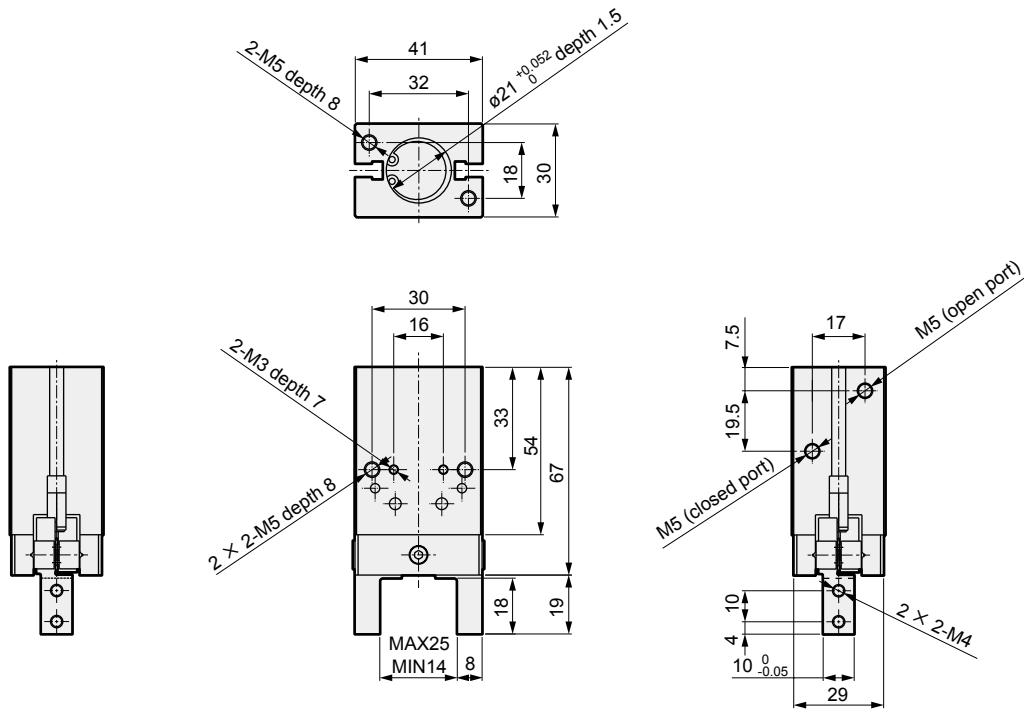
● BHA-LN-03CS



- *1 : Longitudinal direction is 2 mm longer than standard products. Other dimensions are the same as standard products.
- *2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.
- *3 : Only the cylinder bore size code 04CS/05CS can be mounted on display or analog output models.

Dimensions

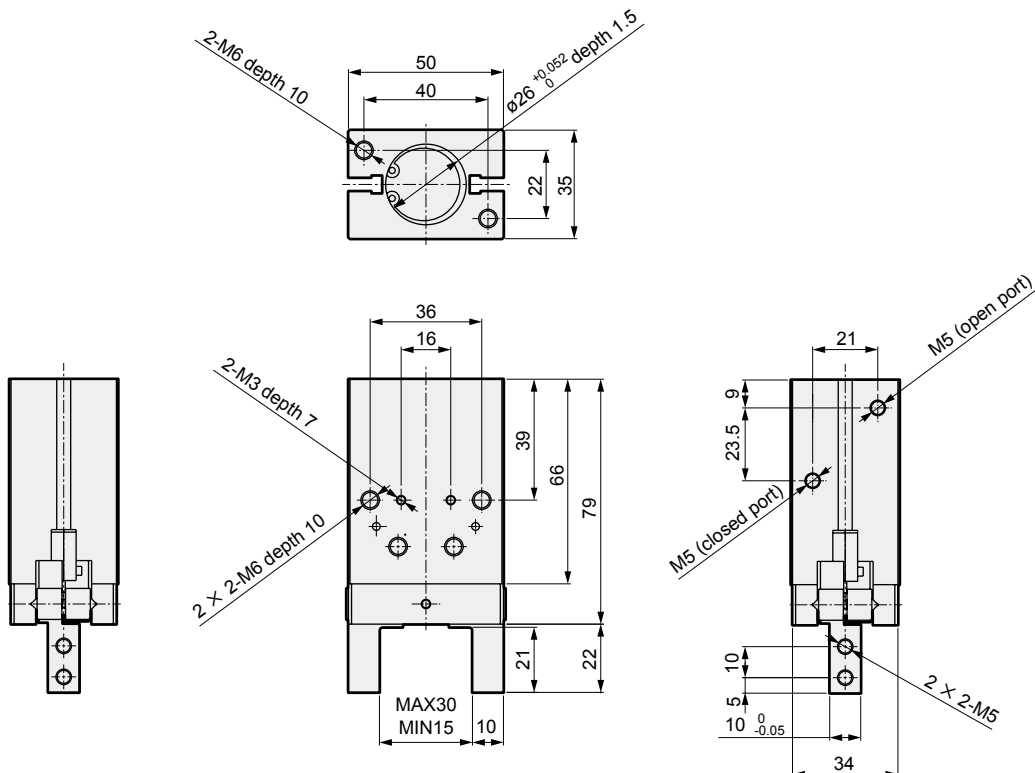
● BHA-LN-04CS



*1 : Longitudinal direction is 5 mm longer than standard products. Other dimensions are the same as standard products.

*2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.

● BHA-LN-05CS



*1 : Longitudinal direction is 5 mm longer than standard products. Other dimensions are the same as standard products.

*2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.

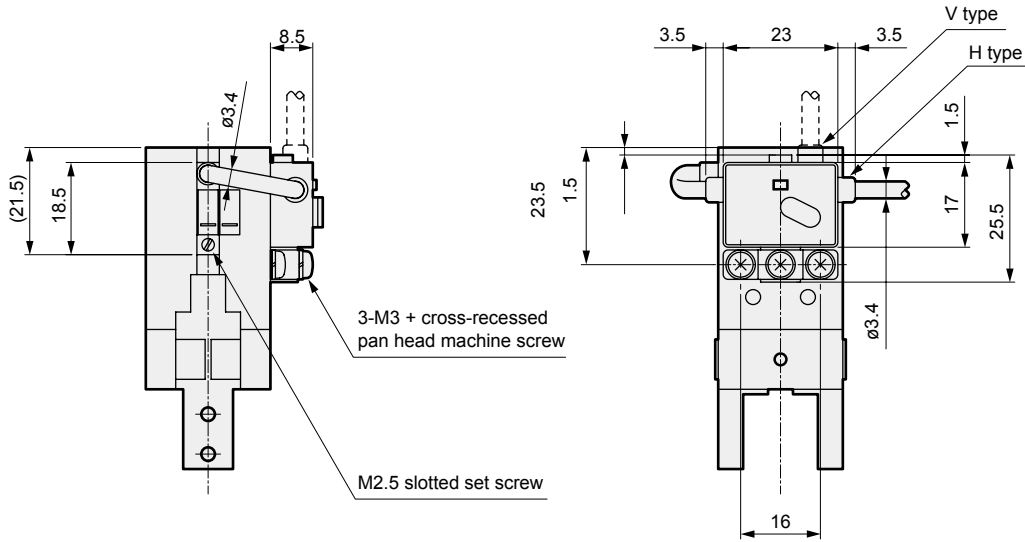
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LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
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USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

BHA-LN Series

Dimensions

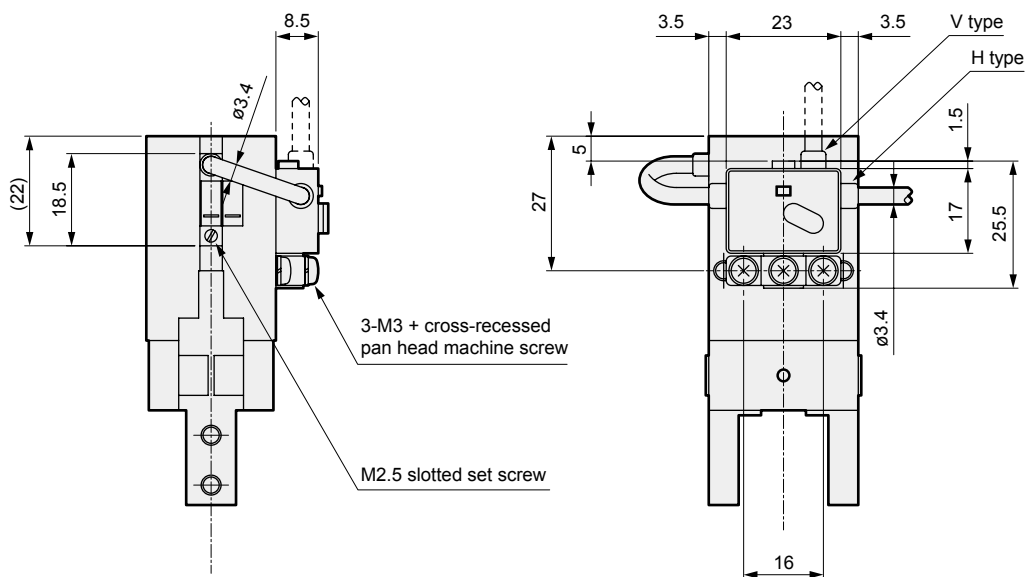
BHA-LN (amplifier with amplifier installed sensor)

● BHA-LN-01CS diagram



- *1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
- *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

● BHA-LN-03CS diagram

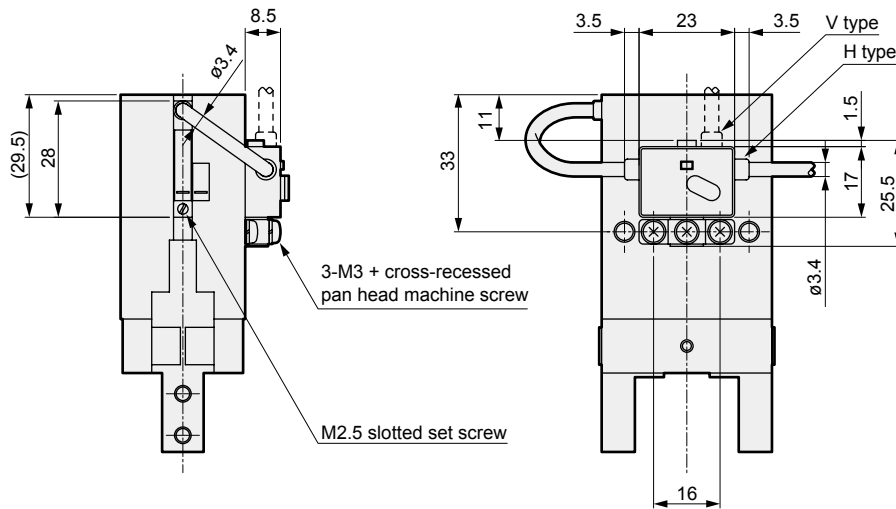


- *1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
- *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

LCM
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LCG
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STS/STL
STR2
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UFCD
USC
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JSB3
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HCA
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CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
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ShkAbs
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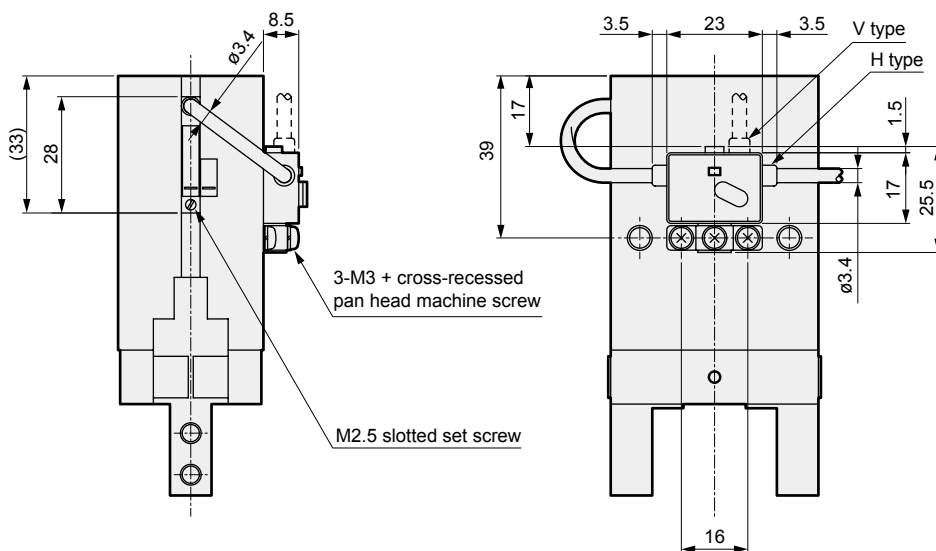
Dimensions

● BHA-LN-04CS diagram



*1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
 *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

● BHA-LN-05CS diagram



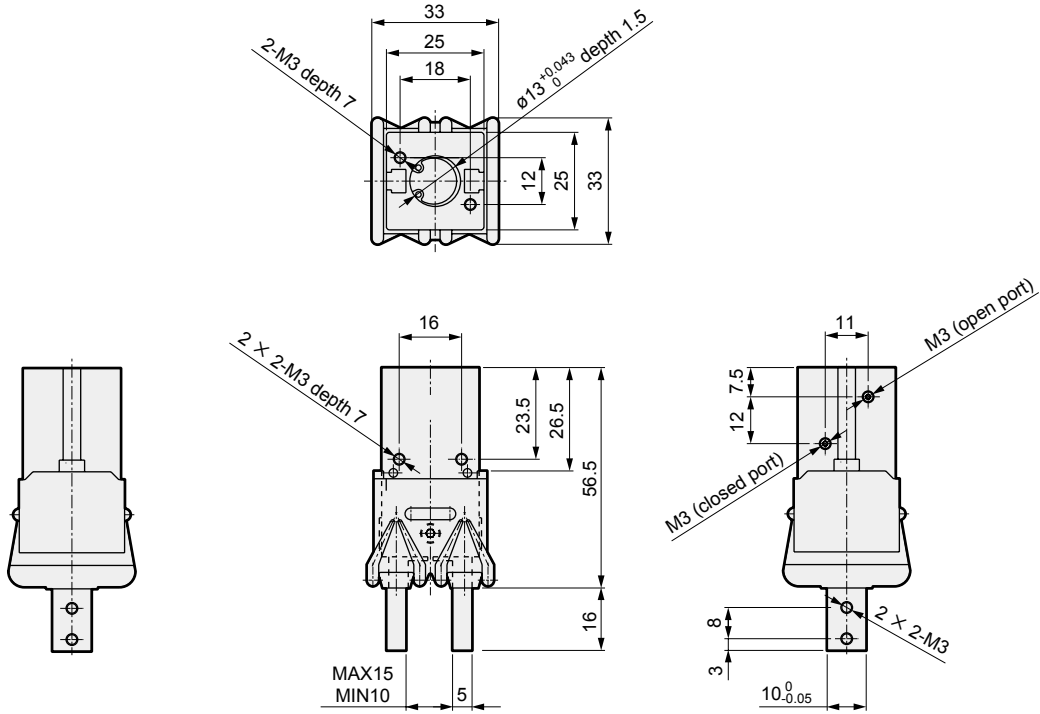
*1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
 *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

LCM
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STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
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HCA
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CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
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MechHnd/Chuk
ShkAbs
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SpdContr
Ending

Dimensions

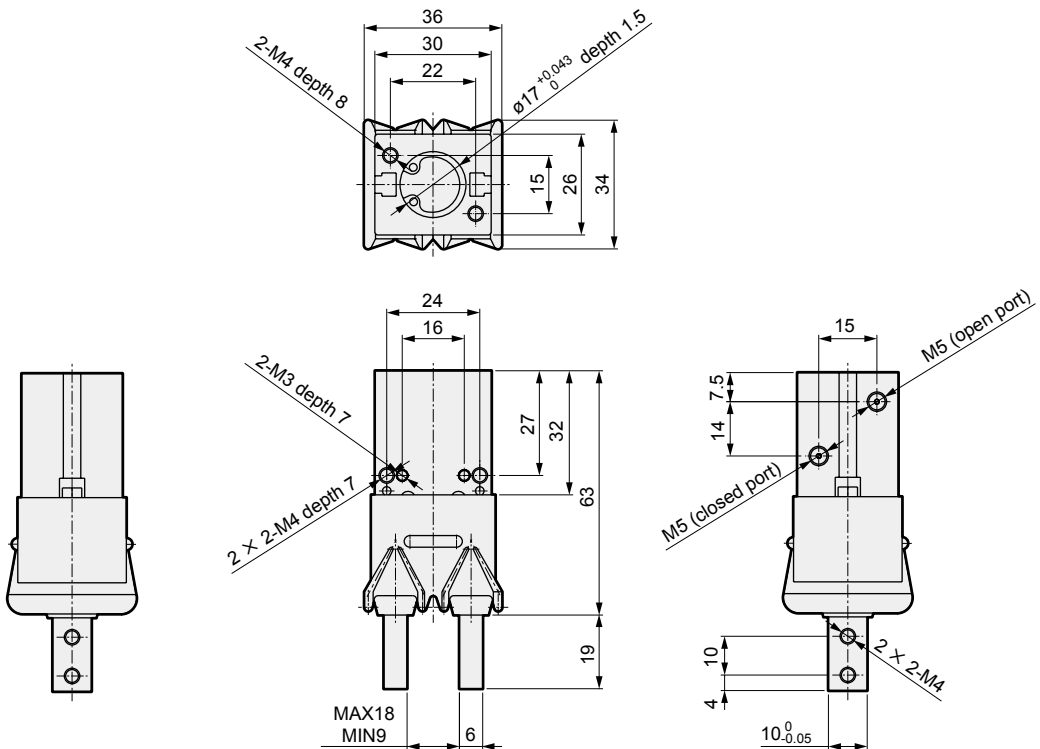
BHG-LN (amplifier separated)

● BHG-LN-01CS



- *1 : Longitudinal direction is 3 mm longer than standard products. Other dimensions are the same as standard products.
- *2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.
- *3 : Only the cylinder bore size code 04CS/05CS can be mounted on display or analog output models.

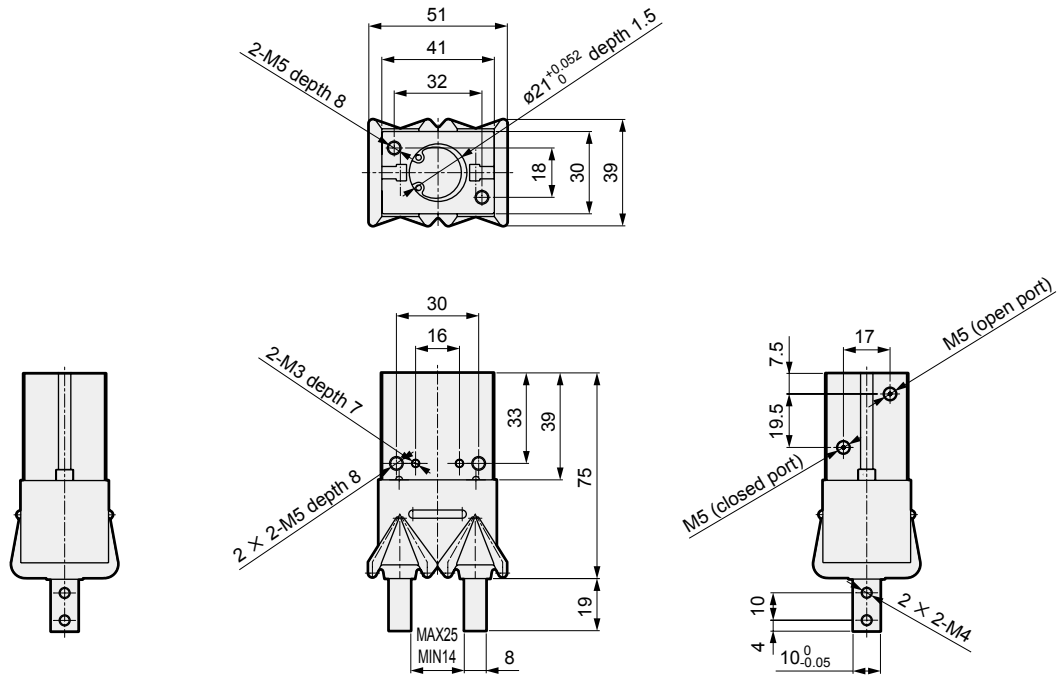
● BHG-LN-03CS



- *1 : Longitudinal direction is 2 mm longer than standard products. Other dimensions are the same as standard products.
- *2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.
- *3 : Only the cylinder bore size code 04CS/05CS can be mounted on display or analog output models.

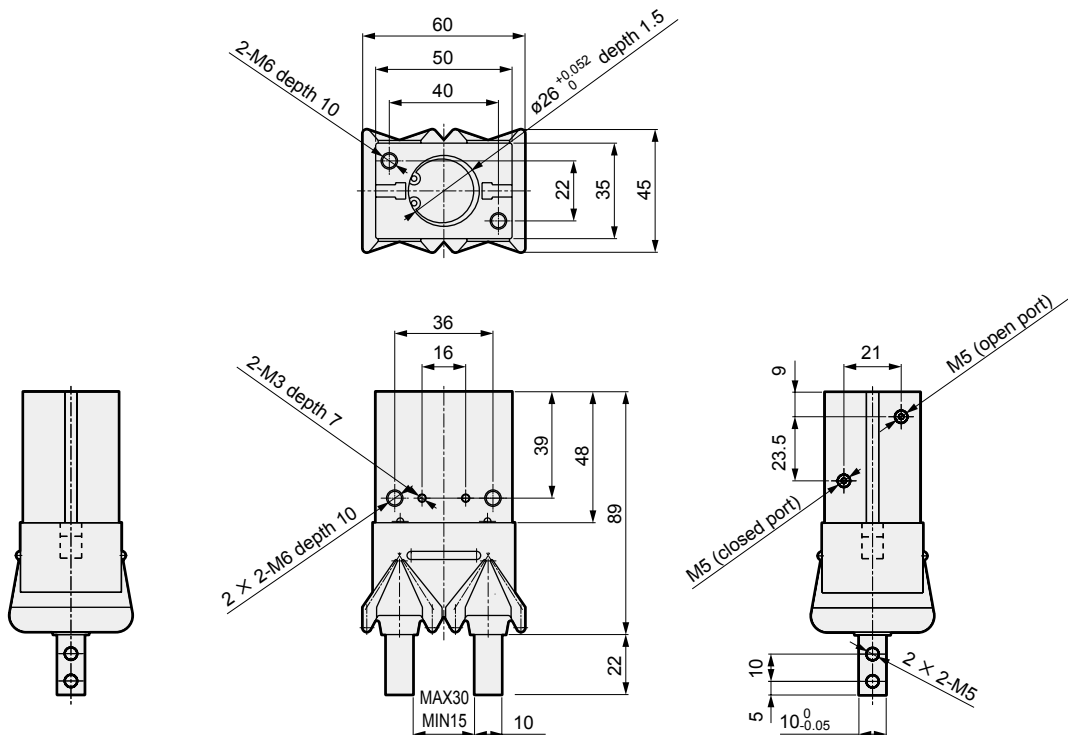
Dimensions

● BHG-LN-04CS



*1 : Longitudinal direction is 5 mm longer than standard products. Other dimensions are the same as standard products.
 *2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.

● BHG-LN-05CS



*1 : Longitudinal direction is 5 mm longer than standard products. Other dimensions are the same as standard products.
 *2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.

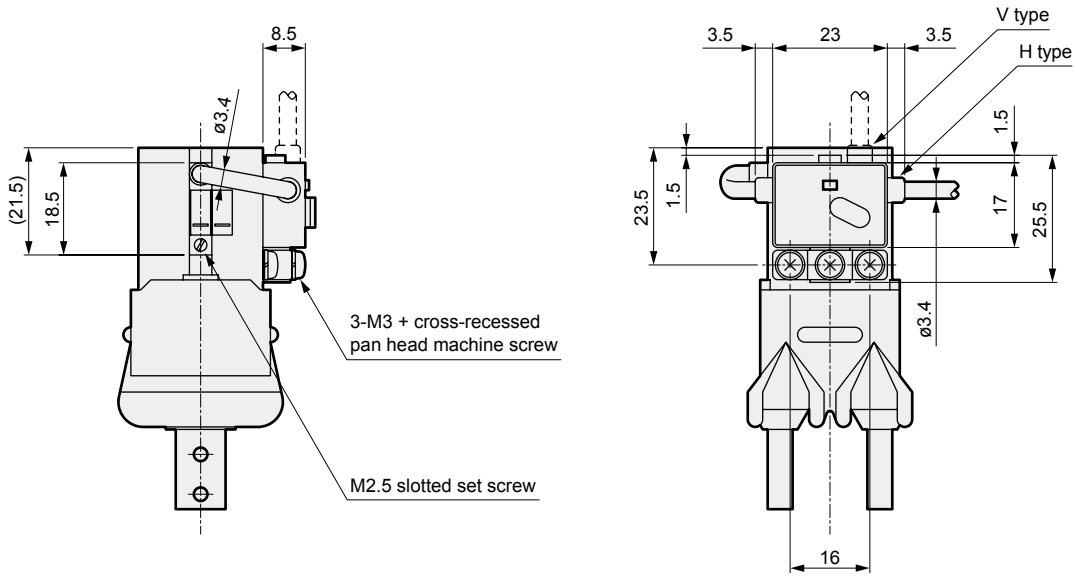
LCM
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LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

BHG-LN Series

Dimensions

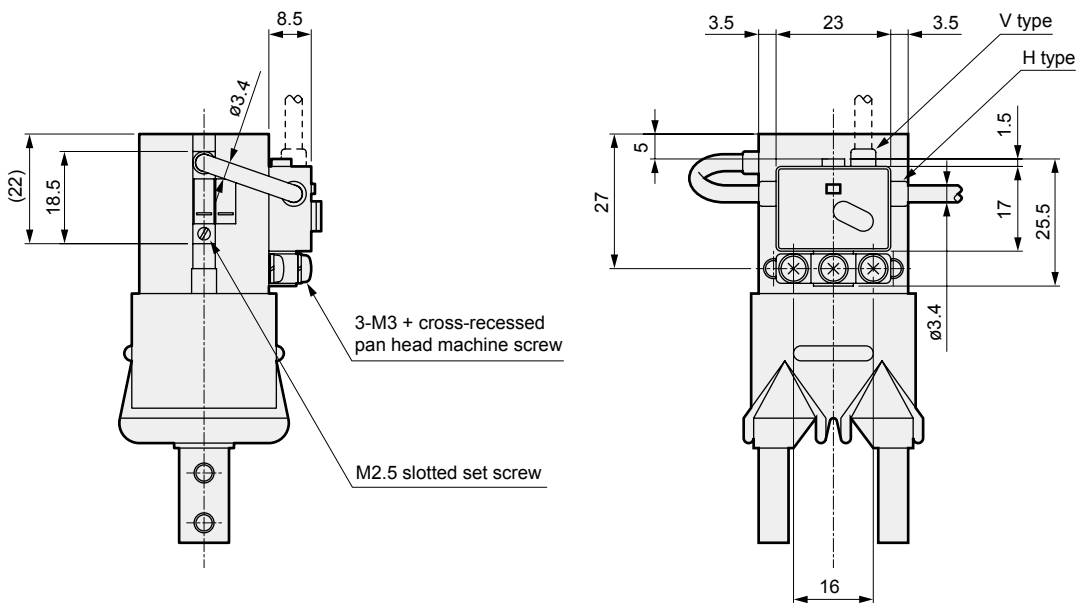
BHG-LN (amplifier with amplifier installed sensor)

● BHG-LN-01CS diagram



*1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
 *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

● BHG-LN-03CS diagram

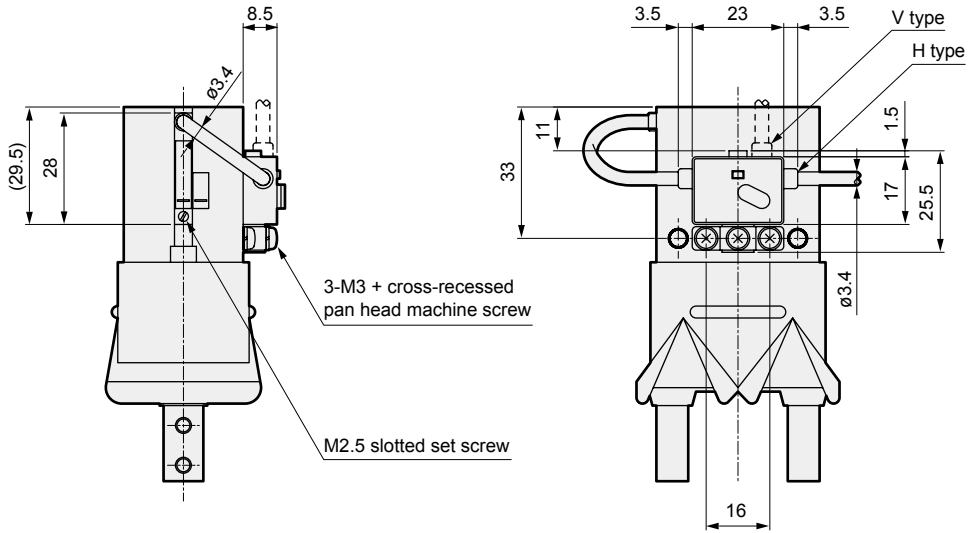


*1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
 *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

LCM
LCR
LCG
LCW
LX
STM
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STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/USC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

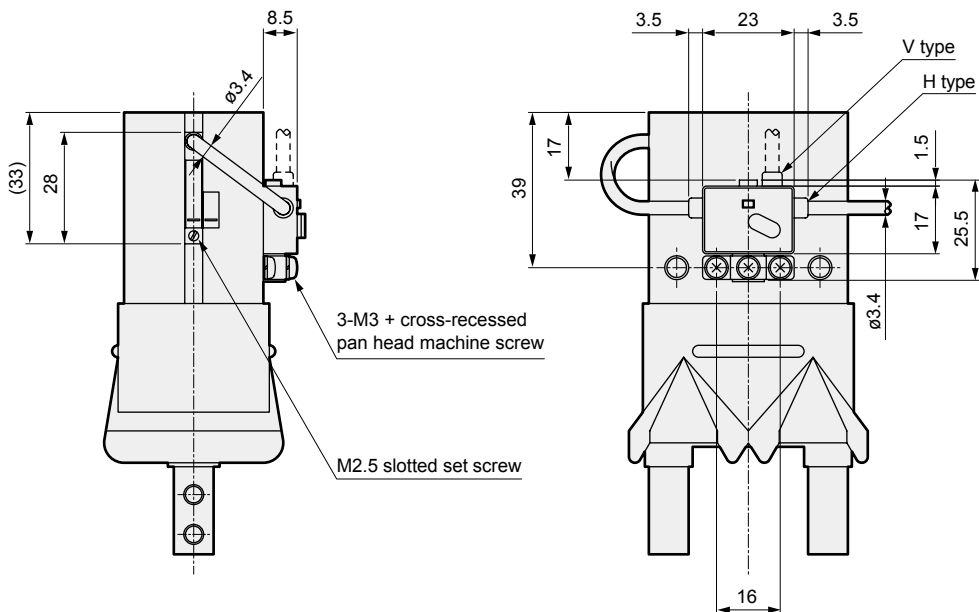
Dimensions

● BHG-LN-04CS diagram



*1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
 *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

● BHG-LN-05CS diagram



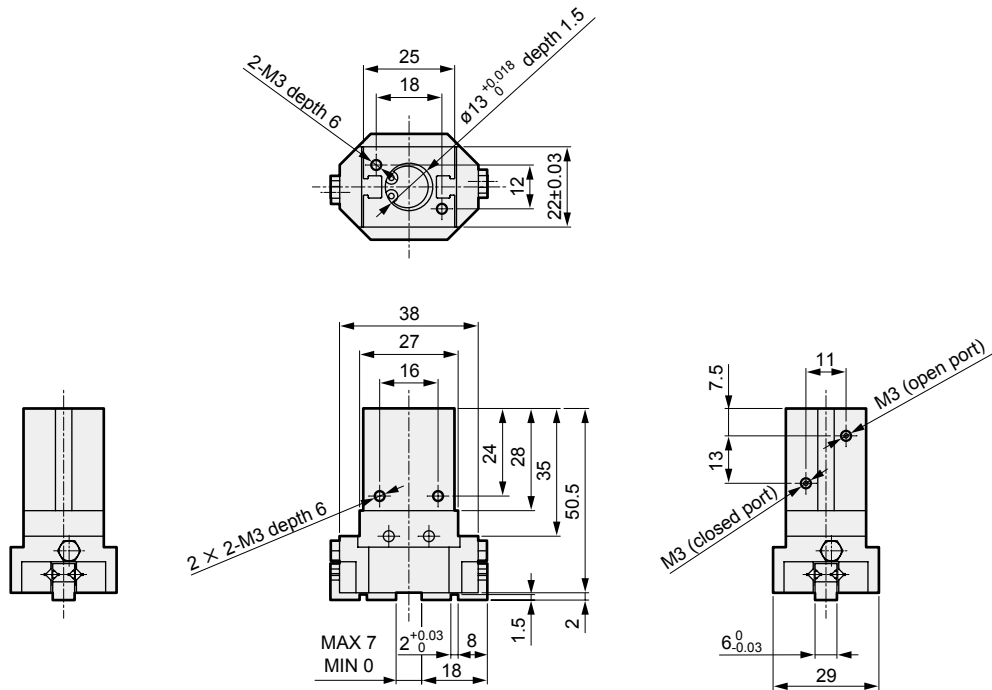
*1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
 *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
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MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions

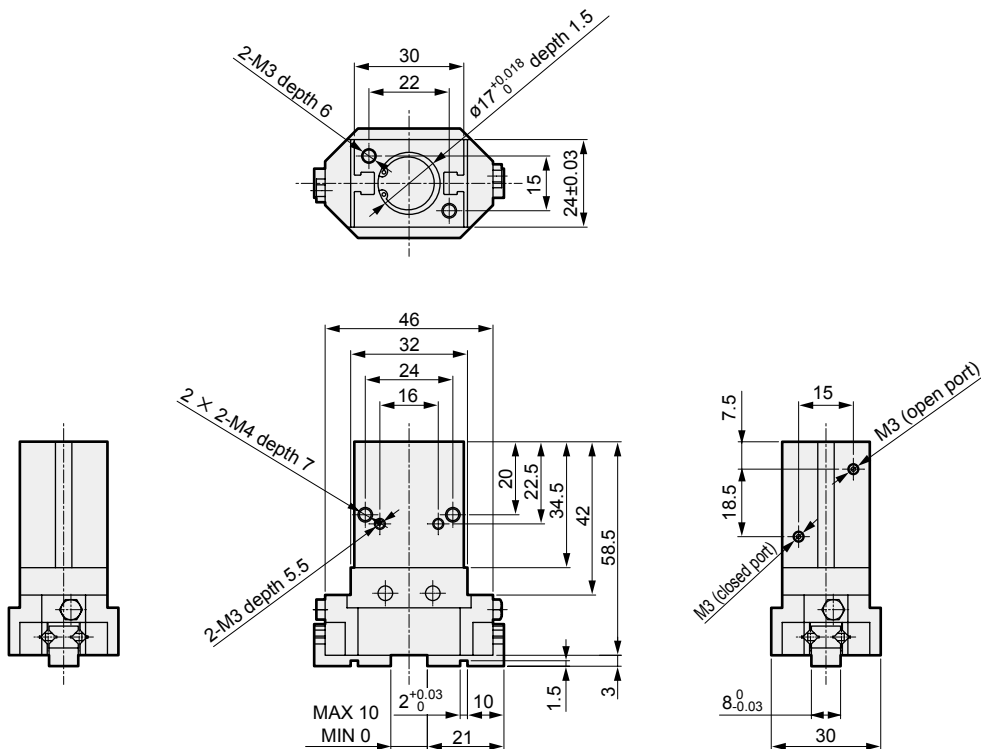
BHE-LN (amplifier separated)

● BHE-LN-01CS



- *1 : Longitudinal direction is 3 mm longer than standard products. Other dimensions are the same as standard products.
- *2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.
- *3 : Only the cylinder bore size code 04CS/05CS can be mounted on display or analog output models.

● BHE-LN-03CS

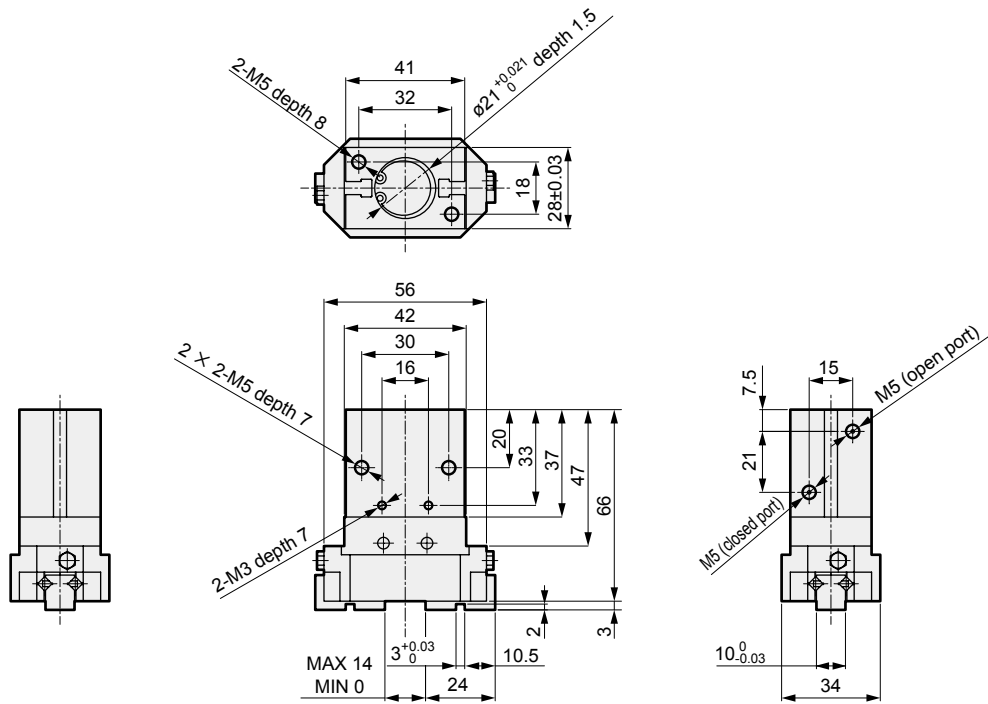


- *1 : Longitudinal direction is 6.5 mm longer than standard products. Other dimensions are the same as standard products.
- *2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.
- *3 : Only the cylinder bore size code 04CS/05CS can be mounted on display or analog output models.

LCM
LCR
LCC
LCW
LCC
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

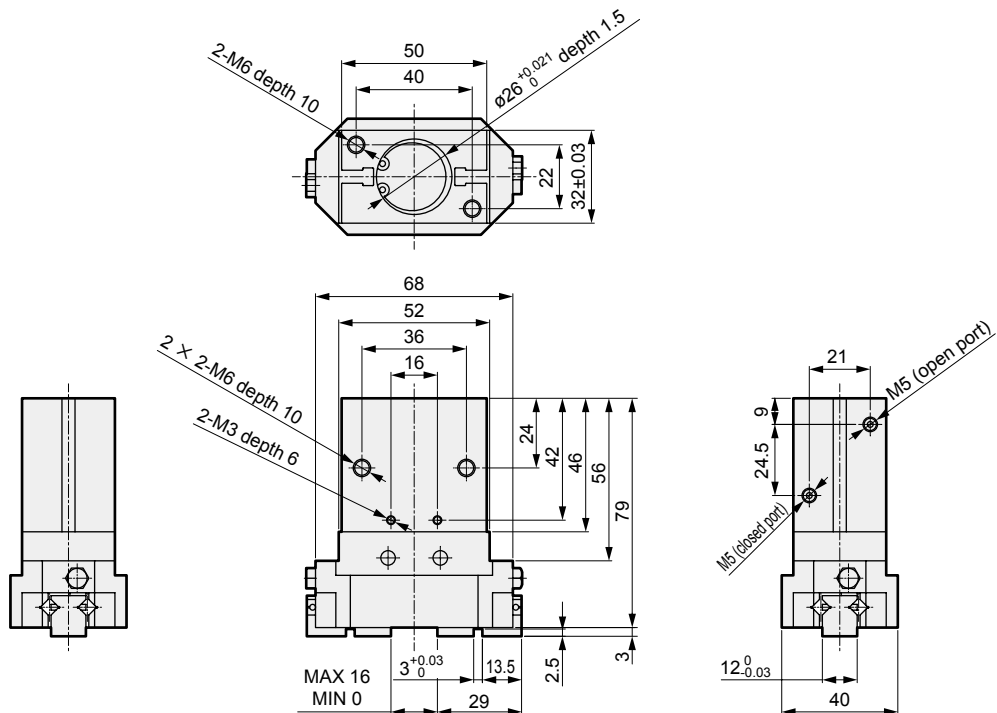
Dimensions

● BHE-LN-04CS



*1 : Longitudinal direction is 5 mm longer than standard products. Other dimensions are the same as standard products.
 *2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.

● BHE-LN-05CS



*1 : Longitudinal direction is 5 mm longer than standard products. Other dimensions are the same as standard products.
 *2 : Refer to pages 1472 and 1473 for outline dimensions of the sensor, amplifier (separated), and display.

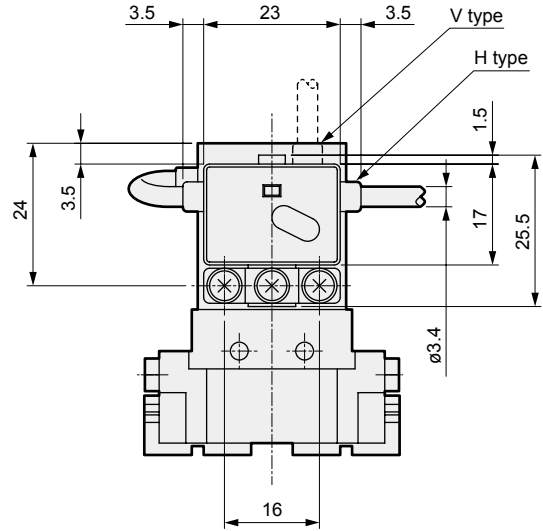
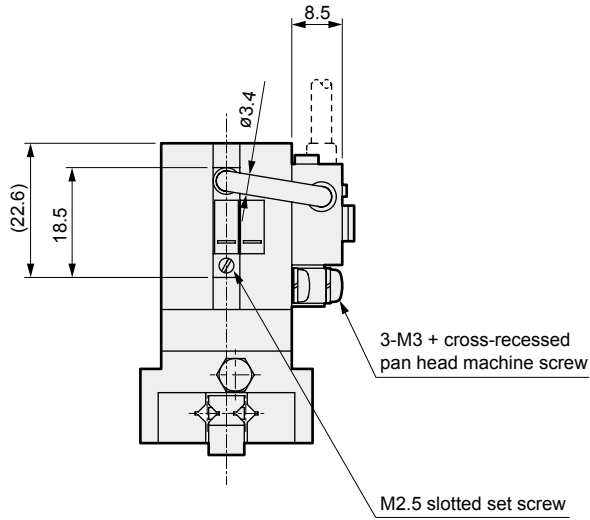
LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechMtd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

BHE-LN Series

Dimensions

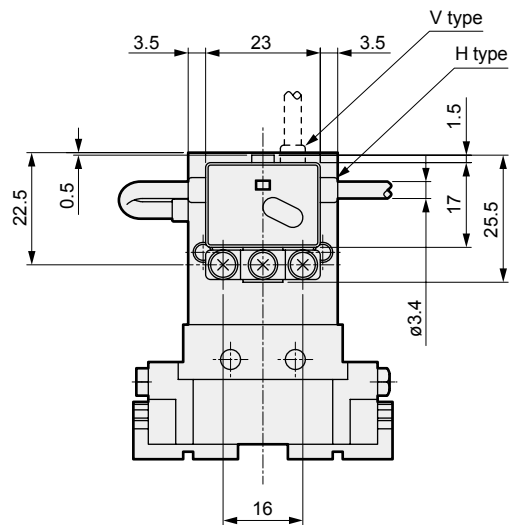
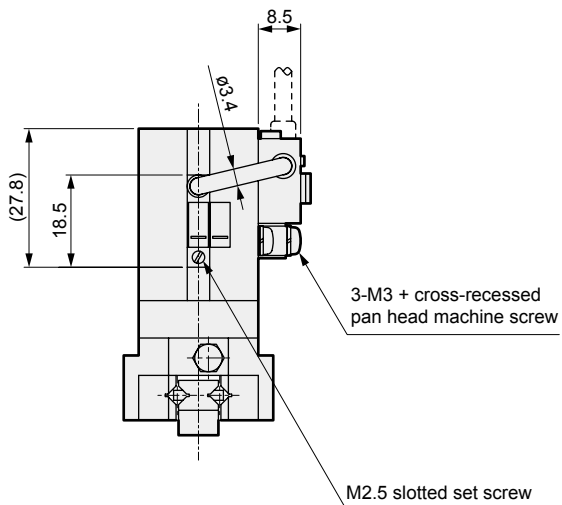
BHE-LN (amplifier with amplifier installed sensor)

● BHE-LN-01CS diagram



*1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
 *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

● BHE-LN-03CS diagram

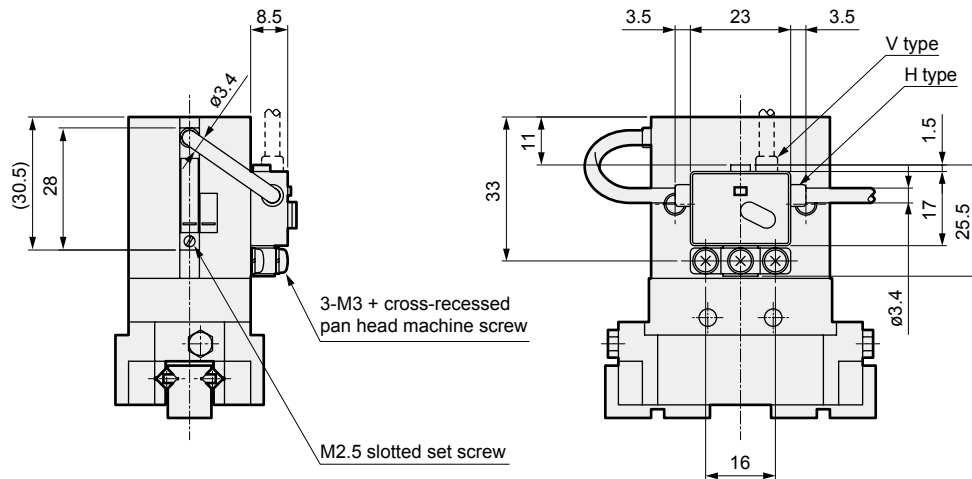


*1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
 *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

LCM
LCR
LCG
LCW
L CX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

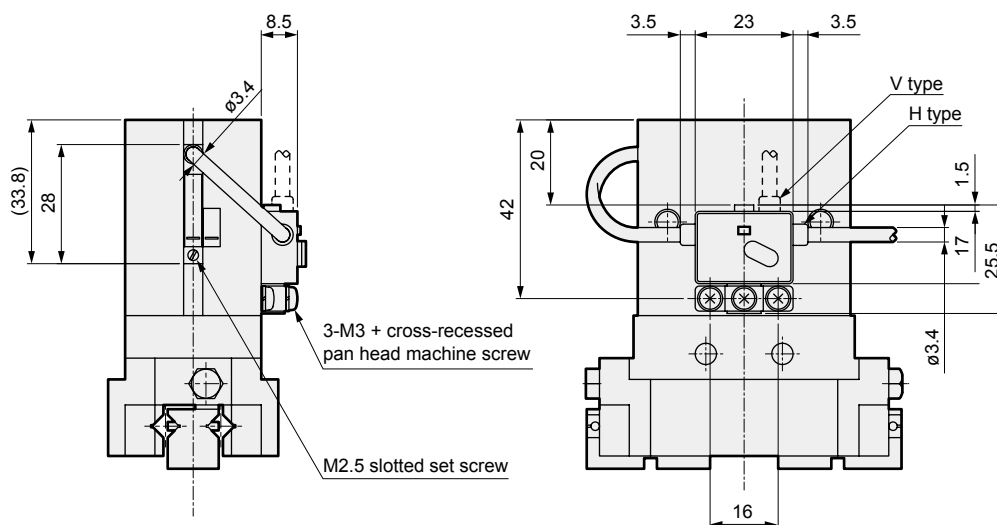
Dimensions

● BHE-LN-04CS diagram



*1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
 *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

● BHE-LN-05CS diagram



*1 : Refer to the amplifier separated dimensions for details on the hand's outline dimensions.
 *2 : The V sensor lead wire direction is used. H or V can be selected for the output stage lead.

LCM
LCR
LCG
LCW
LCX
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending