



Sensor/amplifier/display



* Excluding display



Sensor/amplifier section specifications

°F = 9/5°C + 32

Item		Amplifier installed/ switch output LN-□ VS1PAH/V	Amplifier separate/ switch output LN-□H/ VCS□S	Amplifier separate/ analog output LN-10□ CLS	Amplifier separate/ display (LN-DN) dedicated LN-10□CLDS
Applications		PLC/relay		PLC	_____
Power supply voltage		24 VDC ±10%			
Current consumption		20 mA or less		30 mA or less	
Indicator lamp		Switch output indicator lamp: yellow LED lit when ON		Green LED lit when power applied Sensor mounting position display yellow LED lit	
Switch output point		1	2	_____	
Switch output		NPN open collector output, 30 VDC or less 50 mA or less, internal voltage drop 1.2 V or less		_____	
Analog output		_____		1 to 5V connected load 50 kΩ or more	1 to 4.5V (Input to display)
Analog output linearity		_____		±5% F.S. or less	_____
Valid measured range length		_____		Hand: Double finger full stroke Cylinder: At any 8 mm area over piston stroke	Hand: Double finger full stroke Cylinder: At any 10 mm area over piston stroke
Lead wire	Sensor section	35 mm (oil resistant vinyl cabtyre cable 3-conductor 0.2 mm ²)	2 m (oil resistant vinyl cabtyre cable 3-conductor, 0.2 mm ² shielded bend resistant wire)		
	Amplifier section	3 m (oil resistant vinyl cabtyre cable 3-conductor, 0.2 mm ² , bend resistant wire)	3 m (oil resistant vinyl cabtyre cable 4-conductor 0.2 mm ²)	3 m (oil resistant vinyl cabtyre cable 4-conductor, 0.2 mm ² , shielded wire)	3 m (oil resistant vinyl cabtyre cable 7-conductor, 0.2 mm ² , shielded wire)
Insulation resistance		20 MΩ and over with 500 VDC megger			
Withstand voltage		No failure after 1 minute of 1,000 VAC application.			
Shock resistance	Sensor section	294 m/s ²	980 m/s ²		
	Amplifier section		294 m/s ²		
Degree of protection	Sensor section	IEC standard IP65	IEC standards IP67, oil resistance		
	Amplifier section		IEC standard IP65		
Ambient temperature/humidity		-10 (14°F) to 60°C (140°F), 85% RH or less			
Switch operating range adjusting range (*3)		0 to 80% and over of full stroke (Applies to one stroke of the two hand fingers)		_____	
Switch operating points temperature drift		0.1 mm/10°C (50°F) or less		_____	
Analog output temperature drift		_____		50 mV/10°C (50°F) or less	_____
Repeatability (*1)		±0.1 mm or less (at 25°C, magnetic field disturbance, no deformation or wear of actuator/jig)			_____
Mounting method		Dedicated bracket mounting	DIN rail or direct mount		
Weight (g)		54	172	175	199

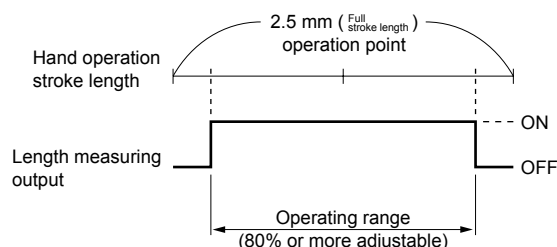
*1 : This value includes actuator repeatability. This applies to one stroke of two hand finger strokes.

*2 : Refer to page 1497 for a guide on selecting models for mixed workpiece sorting applications.

*3 : Switch operating range adjusting range

Example) BHA-LN-01CS operational stroke length - 5 mm

5 mm for two fingers → 2.5 mm for one finger.



If the operation point is set to the center of the stroke, adjustments exceeding 80% and over of the full stroke are possible.

Display section specifications

Item	LN-DN
Power supply voltage	24 VDC ±10%
Current consumption	150 mA or less
Sensor input	2CH (1 to 4.5V voltage input)
Output	- Analog output (1 point) x 2CH (1 to 5 V voltage output) - Switch output (4 points) x 2CH: ON-OFF output based on arbitrary set position (1), or window output based on same set position (2)
Display	7-segment display (max. display ± 1999.9 mm, min. unit 0.1 mm) - Absolute value/incremental value identification display, CH identification display, switch output display, switch output short-circuit display
Switch output	NPN open collector output (*4), 30 VDC/50 mA or less, internal voltage drop 1.2 V or less, PLC, relay
Analog output	1 to 5 V output, connecting load 500 KΩ and over
Analog output linear accuracy (*1)	±1% F.S. or less (at 25°C (77°F): CKD regulated measuring method)
7-segment display linear accuracy (*2)	7-segment display is reference value
Repeatability (*3)	±0.1 mm or less (at 25°C, magnetic field disturbance, no deformation or wear of actuator/jig)
Analog output temperature drift	50 mV/10°C (50°F) or less (fluctuation of approx. ±0.1 mm or equivalent with displayed value conversion)
Insulation resistance	20 MΩ and over with 500 VDC megger
Withstand voltage	No failure after 1 minute of 1,000 VAC application.
Shock resistance	294 m/s ²
Degree of protection	IEC standard IP40
Ambient temperature/humidity	-10 (14°F) to 60°C (140°F)/85% RH or less
Mounting method	DIN rail or direct mount
Weight (g)	93

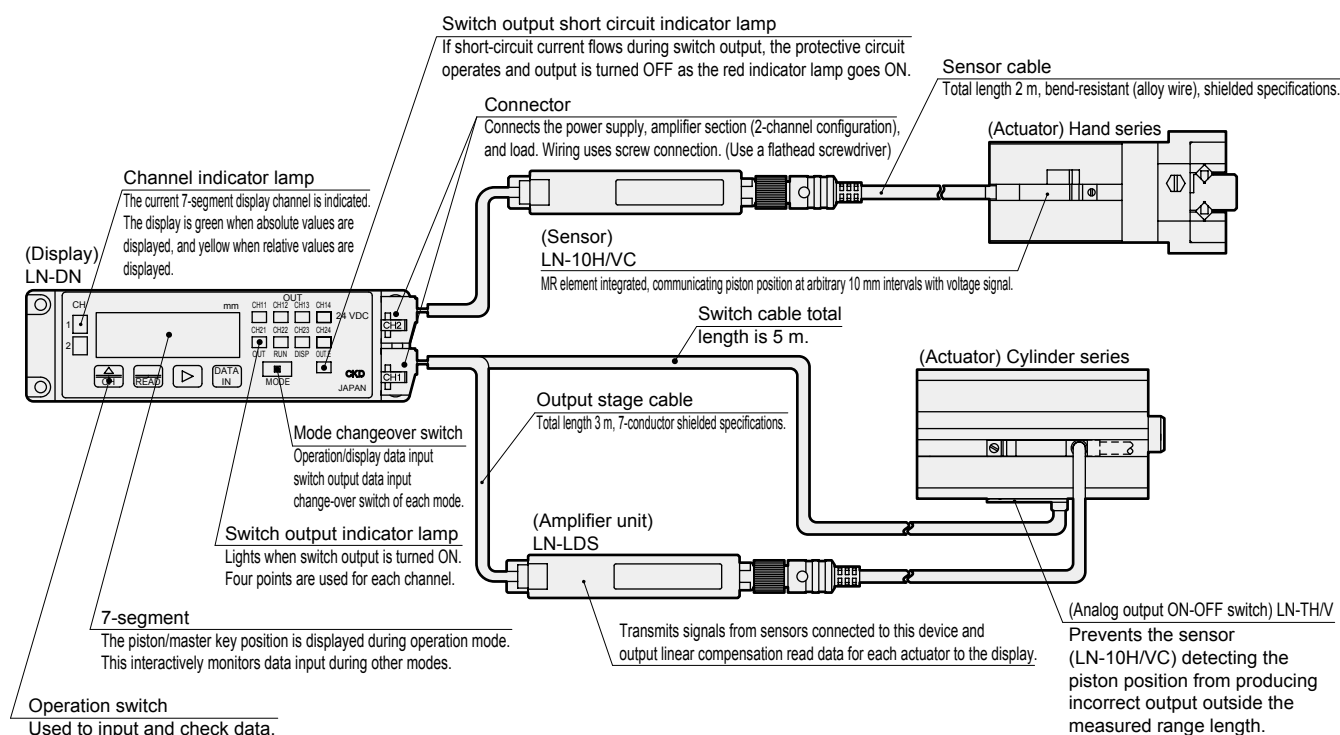
*1 : Because an analog sensor for converting the piston magnetic flux density to a voltage value is used, accuracy may decrease in actual use if magnetic contact occurs from either end of the piston stroke or a disturbing magnetic field enters the vicinity.

*2 : Display accuracy varies with the span setting for the two piston stop points.

*3 : This value includes actuator repeatability. This applies to one stroke of two hand finger strokes.

*4 : Contact CKD for the PNP open collector output.

Configuration of 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
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

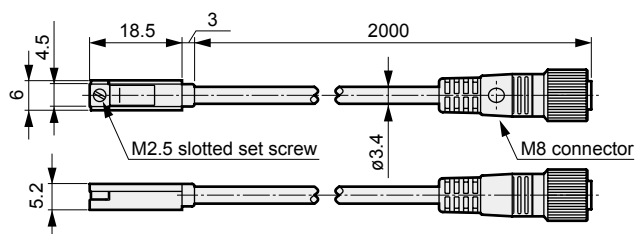
Dimensions



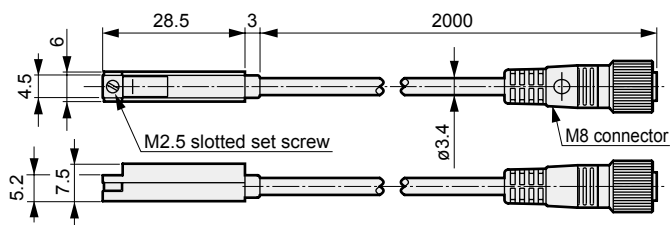
Sensor section

● Amplifier separated

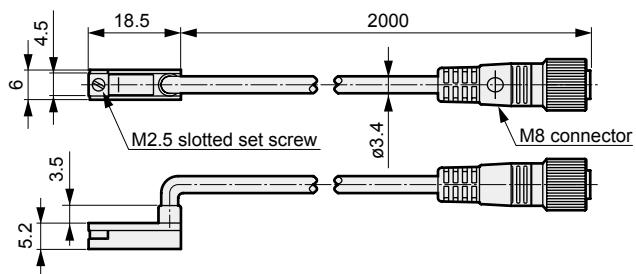
● LN-05HC



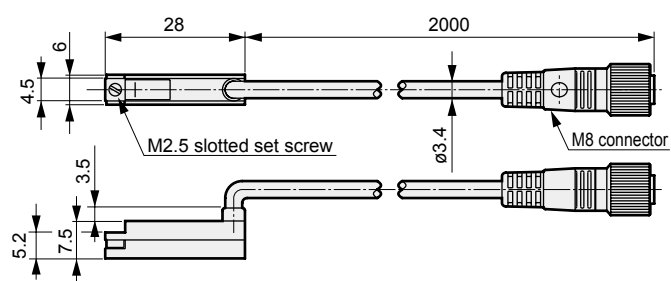
● LN-10HC



● LN-05VC



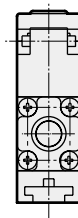
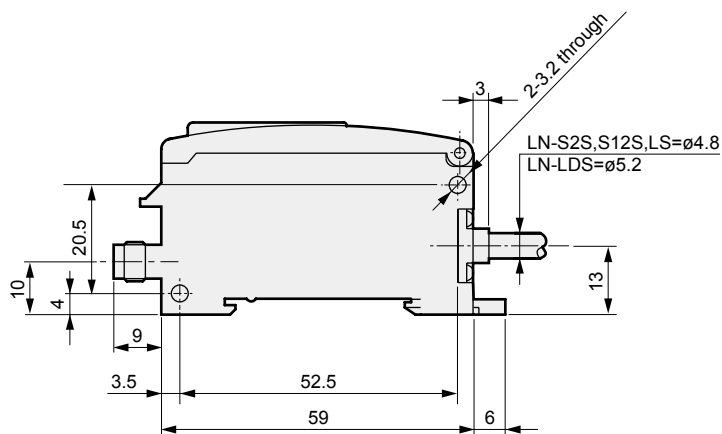
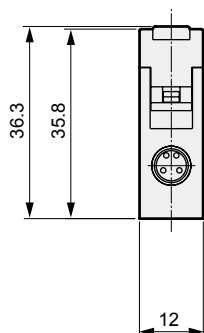
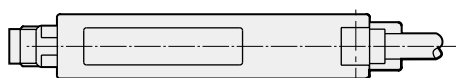
● LN-10VC



Amplifier section

● Amplifier separated

● LN-□S

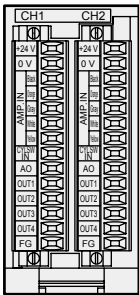
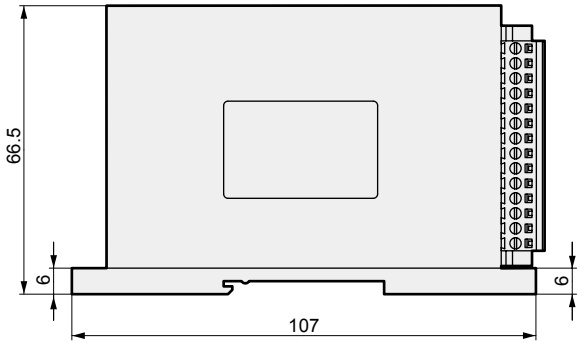
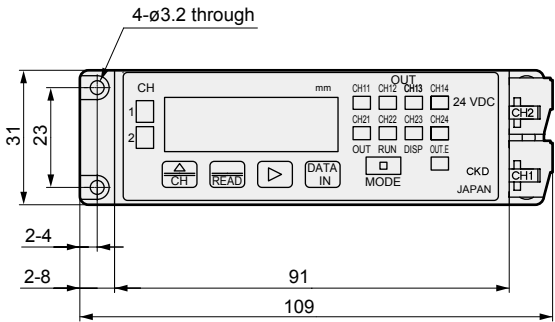


Dimensions



Display section

● LN-DN



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
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NHS
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Ending