

# Power Clamp Cylinder

Conforming to the CNOMO Standard

Series *CLKZ1R*



Special  
CK□/M(D)UKA

For France  
CLKZ1R

For Europe  
CKZT

For North America  
CKZ2N

MK2T/MK2/MK

C(L)KQ□

CLK2

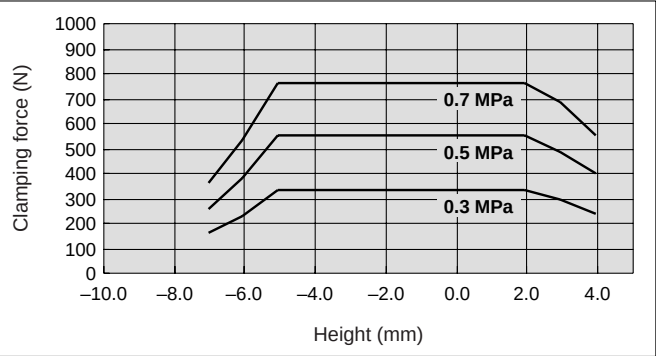
CK□1

For Asia

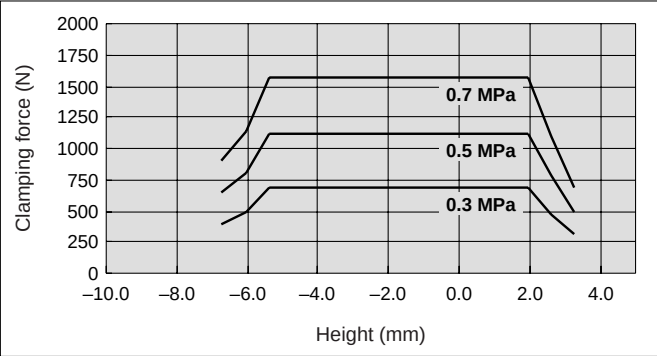
**Clamping Force** (measured at a position 100 mm from the fulcrum)

The work piece can be held with a constant clamping force regardless of its height. (–4 to +2 mm)

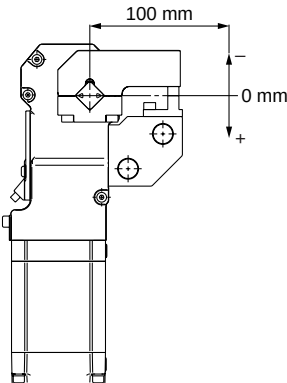
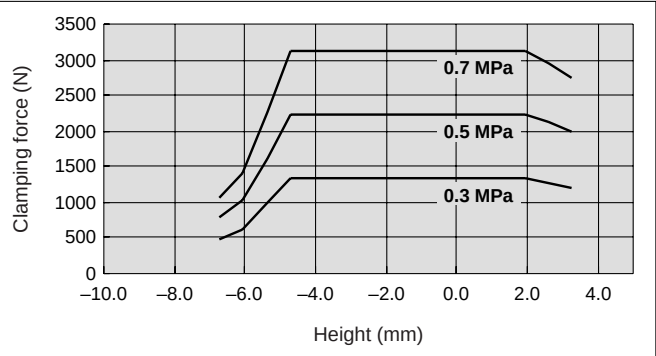
**CLKZ1R040**



**CLKZ1R110**



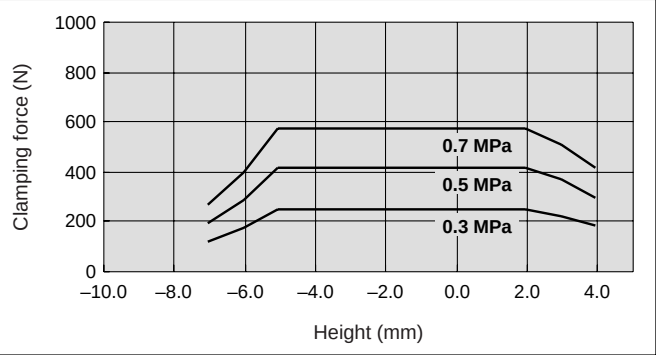
**CLKZ1R200**



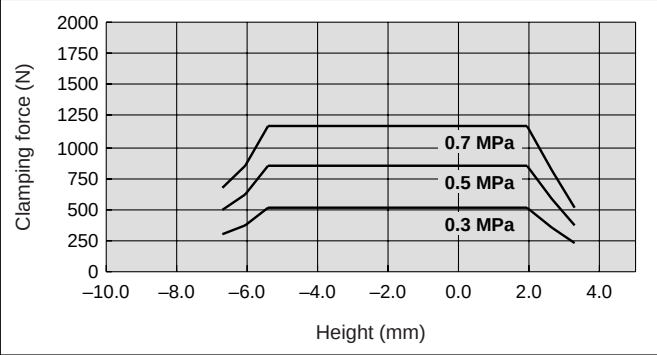
**Holding Force** (The clamping force that remains when the air supply is cut off after clamping at a given pressure. (measured at a position 100 mm from the fulcrum))

The work piece can be clamped at a constant holding force regardless of its height. (–4 to +2 mm)

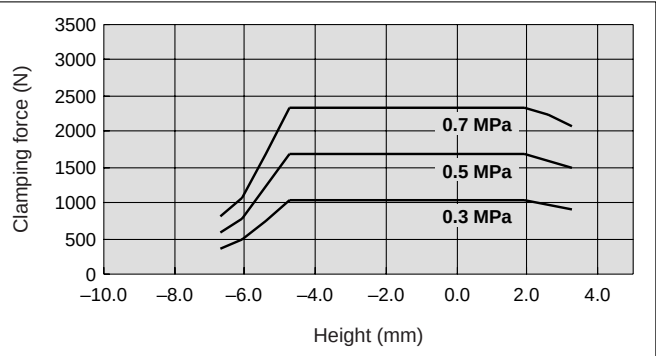
**040**



**CLKZ1R110**



**CLKZ1R200**



# Power Clamp Cylinder Conforming to the CNOMO Standard Series **CLKZ1R**

## How to Order

Cylinder Part No. **CLKZ1R** **040** - **N** - **X1121A** - **R1**

Power clamp cylinder  
conforming to the  
CNOMO standard

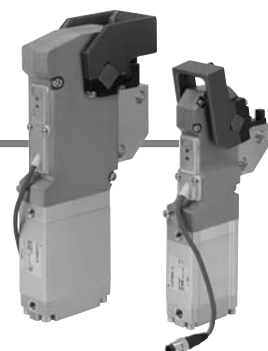
Category

|            |             |
|------------|-------------|
| <b>040</b> | 40daN type  |
| <b>110</b> | 110daN type |
| <b>200</b> | 200daN type |

Without  
arm

Option

| Symbol        | Arm angle |
|---------------|-----------|
| Nil           | 105°      |
| <b>X1121A</b> | 15°       |
| <b>X1121B</b> | 30°       |
| <b>X1121C</b> | 45°       |
| <b>X1121D</b> | 60°       |
| <b>X1121E</b> | 75°       |
| <b>X1121F</b> | 90°       |



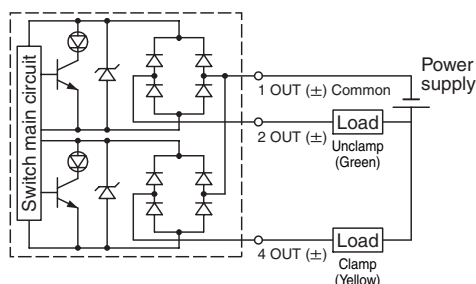
## Cylinder Specifications

| Category                                                         | 040                                                     | 110                    | 200                    |
|------------------------------------------------------------------|---------------------------------------------------------|------------------------|------------------------|
| Fluid                                                            | Air (Non-lube)                                          |                        |                        |
| Operating pressure range                                         | 0.3 to 0.7 MPa                                          |                        |                        |
| Proof pressure                                                   | 1.05 MPa                                                |                        |                        |
| Operating temperature range                                      | -10°C to +70°C                                          |                        |                        |
| Port size                                                        | G1/8                                                    |                        |                        |
| Cushion                                                          | Unclamp side rubber bumper                              |                        |                        |
| Arm angle                                                        | 105° (Standard) / 15°, 30°, 45°, 60°, 75°, 90° (Option) |                        |                        |
| Operating time (at supply pressure of 0.5 MPa)                   | Clamp: 0.5 s Unclamp: 0.5 s                             |                        |                        |
| Clamping force (at supply pressure of 0.5 MPa)                   | 40 N·m or more                                          | 110 N·m or more        | 200 N·m or more        |
| Holding force (at supply pressure of 0.5 MPa)                    | 30 N·m or more                                          | 82.5 N·m or more       | 150 N·m or more        |
| Max. allowable load (at supply pressure of 0.5 MPa)              | 0.9 N·m                                                 | 1.3 N·m                | 1.9 N·m                |
| Max. allowable moment of inertia (at supply pressure of 0.5 MPa) | 0.01 kg·m <sup>2</sup>                                  | 0.02 kg·m <sup>2</sup> | 0.03 kg·m <sup>2</sup> |
| Unclamp side locking force                                       | 2 N·m or more                                           | 5.5 N·m or more        | 10 N·m or more         |
| Weight (including short arm)                                     | 1.7 kg                                                  | 3.6 kg                 | 5.9 kg                 |

## Proximity Switch

| Category       | Proximity switch part no. |
|----------------|---------------------------|
| <b>040</b>     | D-NF001                   |
| <b>110/200</b> | D-NF002                   |

\* With 2 mounting screws



## Switch Specifications

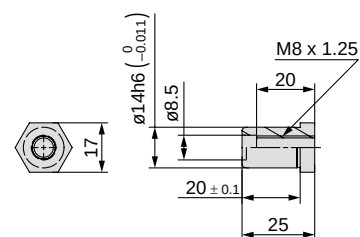
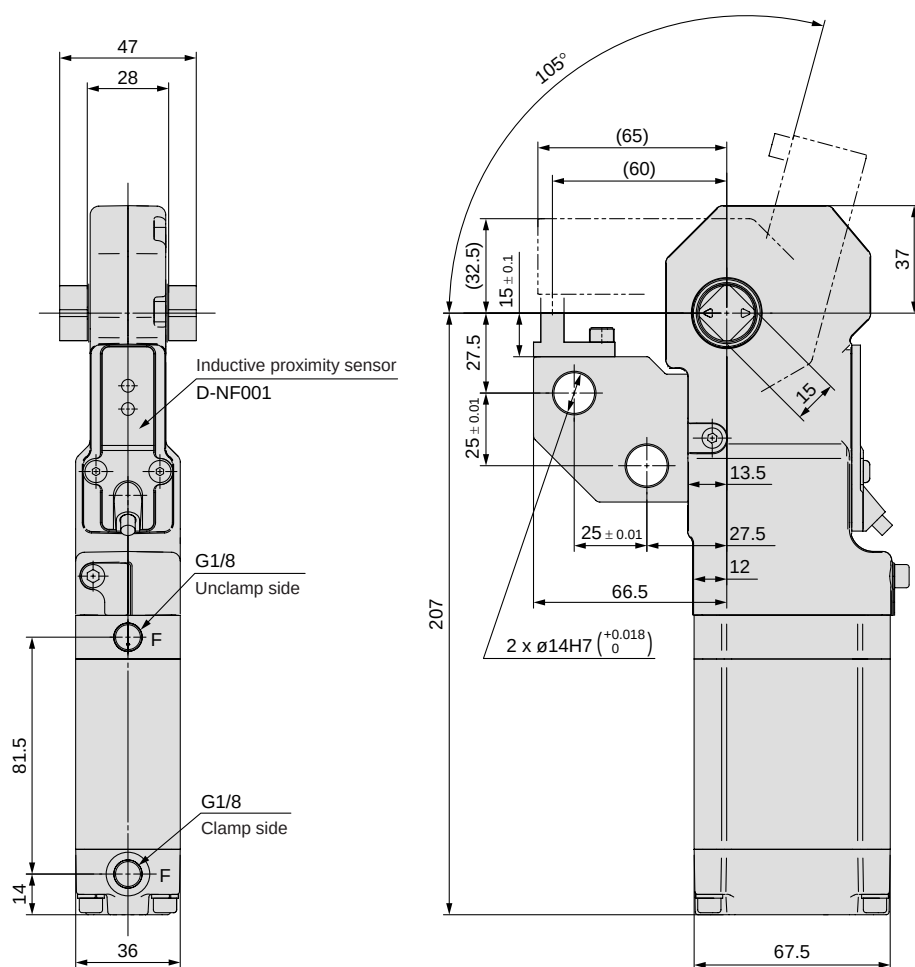
|                                                                |                                                                                                                                                 |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated operating distance SN                                    | 1.5 (mm) ± 10%                                                                                                                                  |
| Reproducibility                                                | ≤ 0.1 (mm)                                                                                                                                      |
| Hysteresis                                                     | 0.1 (mm) ≤ H ≤ 1 (mm)                                                                                                                           |
| Applicable applied voltage                                     | DC24 (V)                                                                                                                                        |
| Supply voltage                                                 | DC10 to 30 (V)                                                                                                                                  |
| Voltage drop                                                   | ≤ 5 (V)                                                                                                                                         |
| Output function                                                | Normally Open                                                                                                                                   |
| Minimum operating current                                      | 2.5 (mA)                                                                                                                                        |
| Maximum operating current                                      | 100 (mA)                                                                                                                                        |
| Residual current                                               | ≤ 0.6 (mA)                                                                                                                                      |
| Nominal temperature of application                             | 25 (°C)                                                                                                                                         |
| Ambient temperature                                            | -10 (°C) ≤ Ta ≤ 70 (°C)                                                                                                                         |
| Degree of protection                                           | IP67                                                                                                                                            |
| Protection against excess current (short circuit) or overloads | The detector is equipped with a protection system guaranteeing its correct operation in spite of an excess current of 2xle (200 mA) for 100 μs. |
| Protection against polarity inversions                         | Non polarized                                                                                                                                   |

# Series CLKZ1R

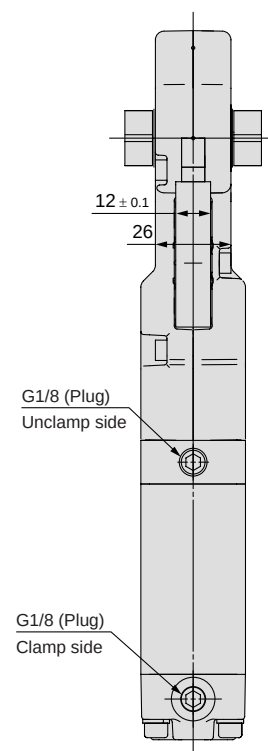
## Dimensions

CLKZ1R040-N

1 dimension projection



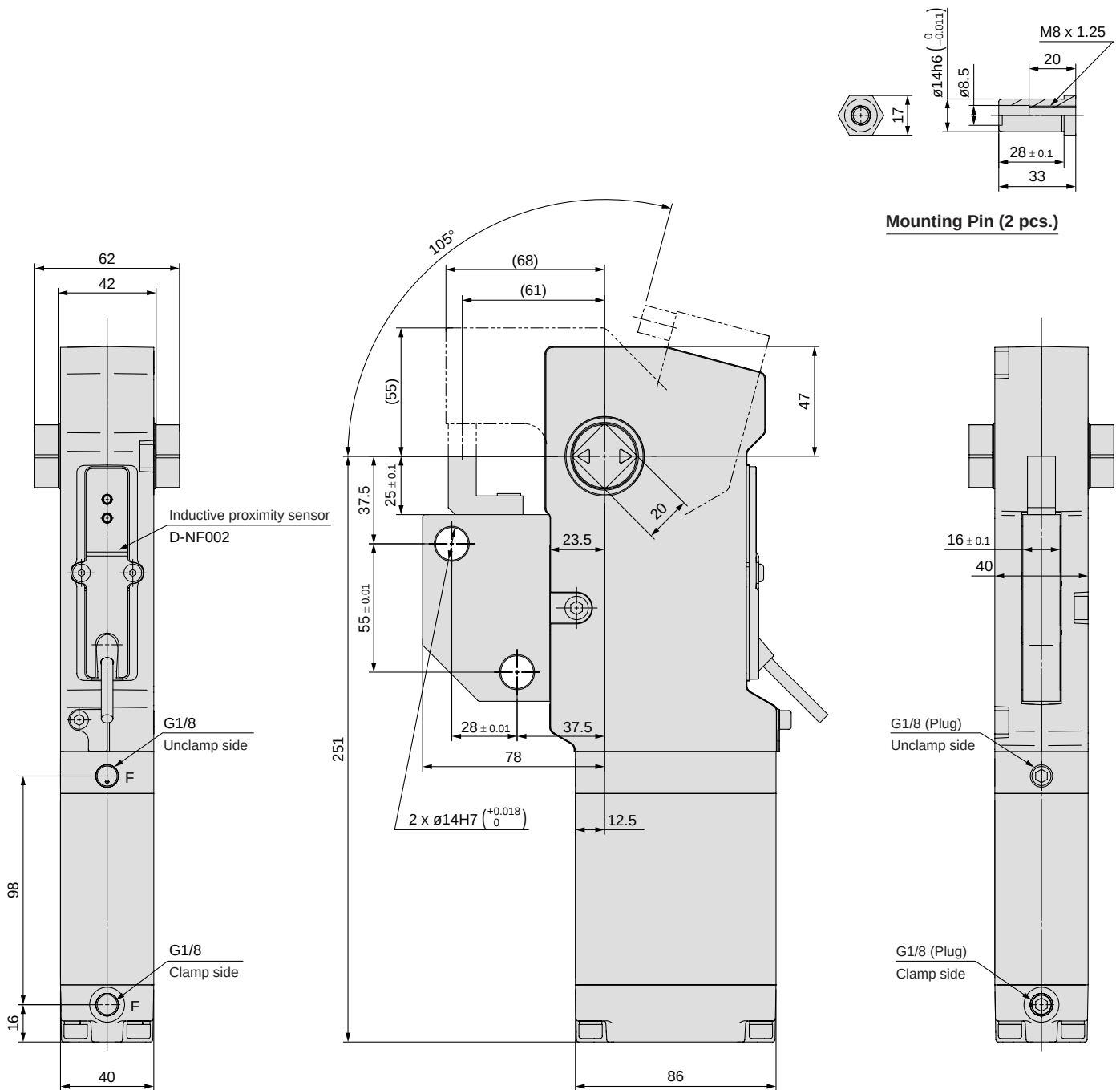
Mounting Pin (2 pcs.)



## Dimensions

CLKZ1R110-N

1 dimension projection



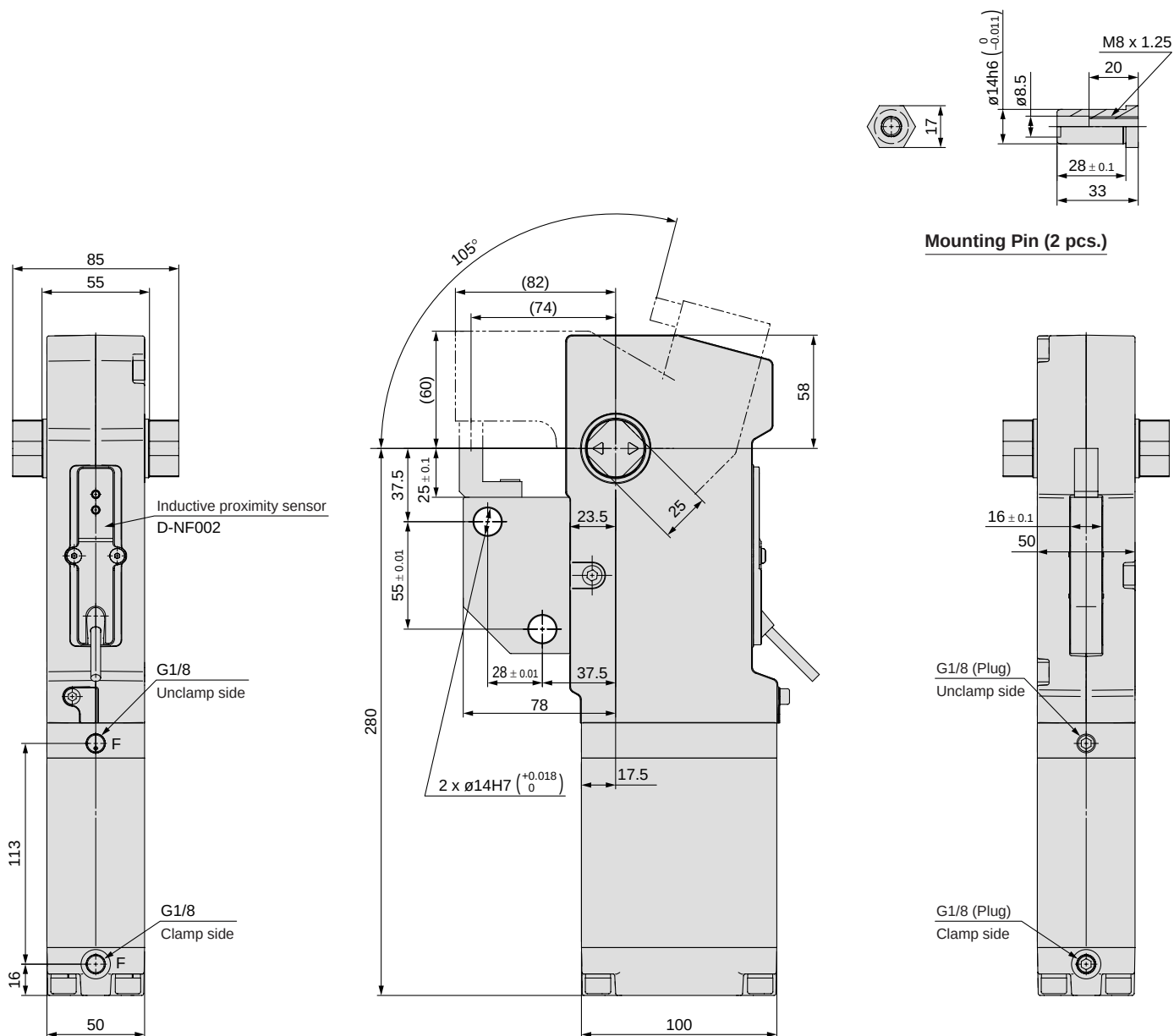
|                   |
|-------------------|
| CK□1              |
| CLK2              |
| For Asia          |
| C(L)KQ□           |
| MK2T/MK2/MK       |
| For North America |
| CKZ2N             |
| For Europe        |
| CKZT              |
| For France        |
| CLKZ1R            |
| Special           |
| CK□/M(D)UKA       |

# Series CLKZ1R

## Dimensions

### CLKZ1R200-N

1 dimension projection



## Adapter

For mounting example, refer to page 217.

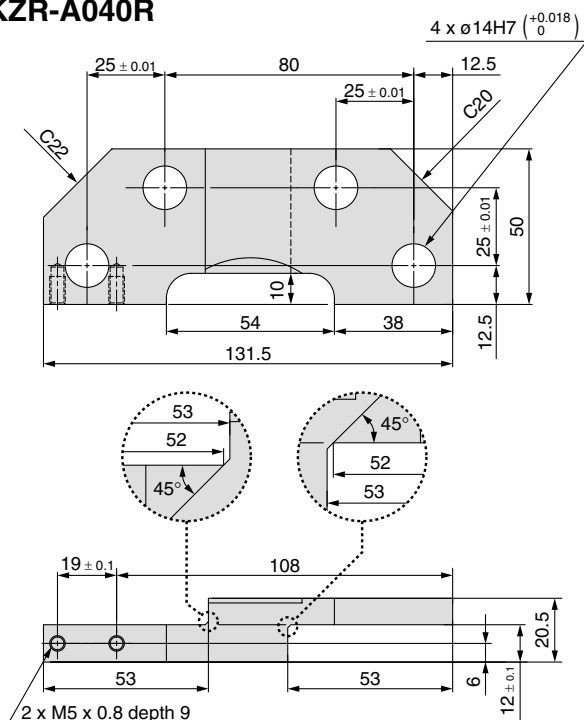
| Category       | Right-handed type | Left-handed type |
|----------------|-------------------|------------------|
| <b>040</b>     | CKZR-A040R        | CKZR-A040L       |
| <b>110/200</b> | CKZR-A110R        | CKZR-A110L       |

1 dimension projection

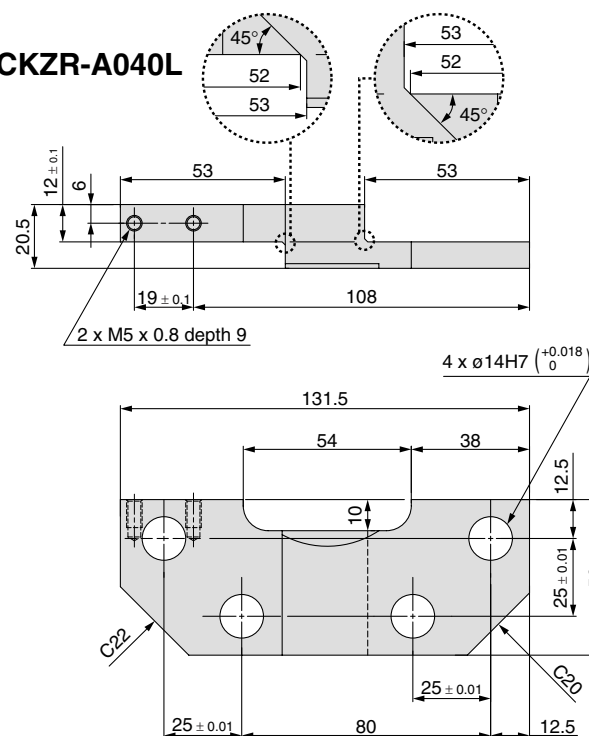
\* 2 mounting pins

\*\* Select long arm when using an adapter.

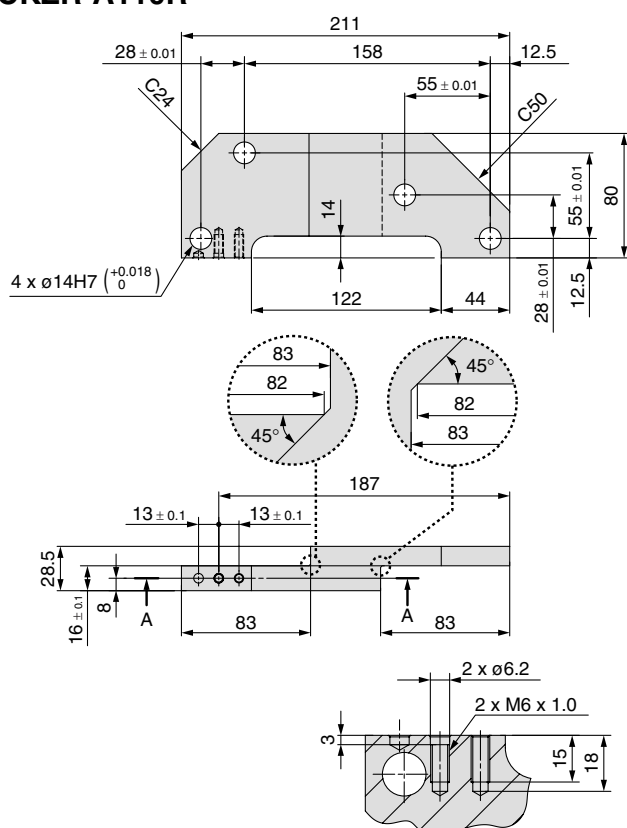
### CKZR-A040R



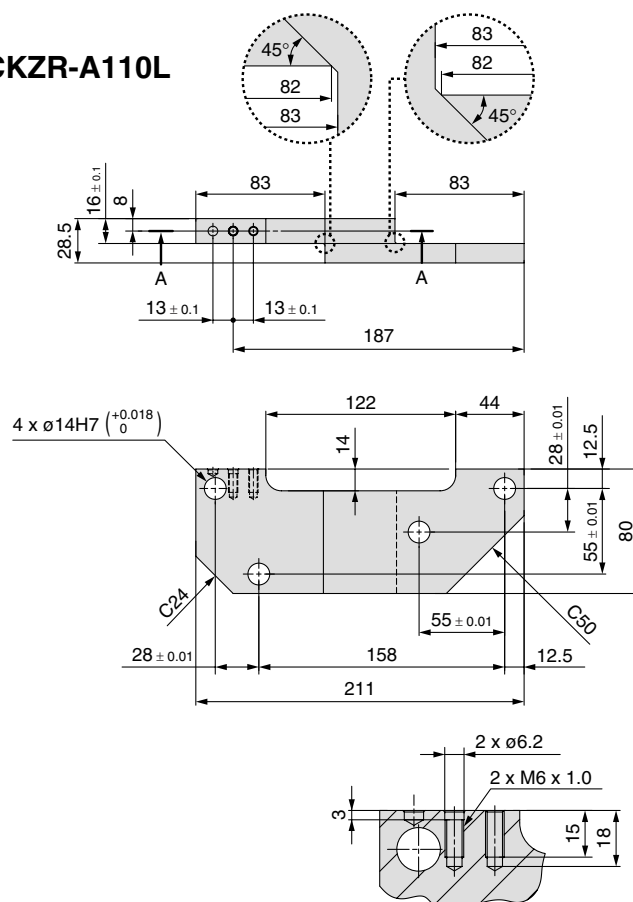
### CKZR-A040L



### CKZR-A110R



### CKZR-A110L



Section A-A

Section A-A

CK□1  
CLK2  
For Asia  
C(L)K□□  
MK2T/MK2/MK  
For North America  
CKZ2N  
For Europe  
CKZT  
For France  
CLKZ1R  
Special  
CK□M(D)UKA

# Series CLKZ1R

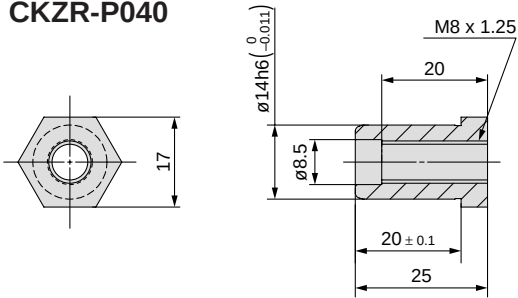
## Mounting Pin

| Category       | Mounting pin part no. |
|----------------|-----------------------|
| <b>040</b>     | CKZR-P040             |
| <b>110/200</b> | CKZR-P110             |

1 dimension projection

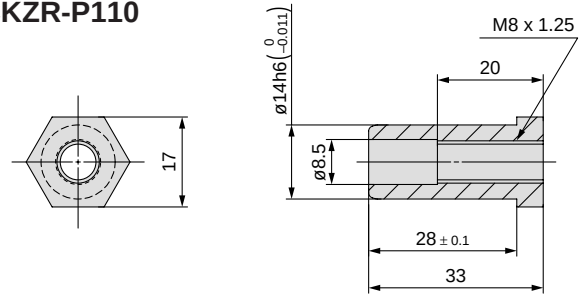
\* Quantity: 2 pcs. for each

### CKZR-P040



Mounting Pin (2 pcs.)

### CKZR-P110



Mounting Pin (2 pcs.)

## Arm

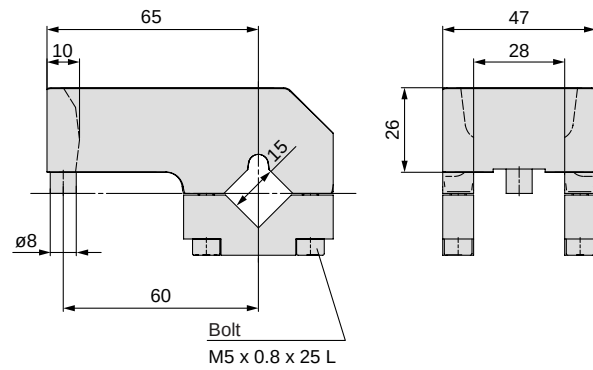
For mounting example, refer to page 217.

| Category   | Short arm    | Long arm     |
|------------|--------------|--------------|
| <b>040</b> | CKZR-Y040    |              |
| <b>110</b> | CKZR-Y110S   | CKZR-Y110N   |
| <b>200</b> | CKZR-Y200S-A | CKZR-Y200N-A |

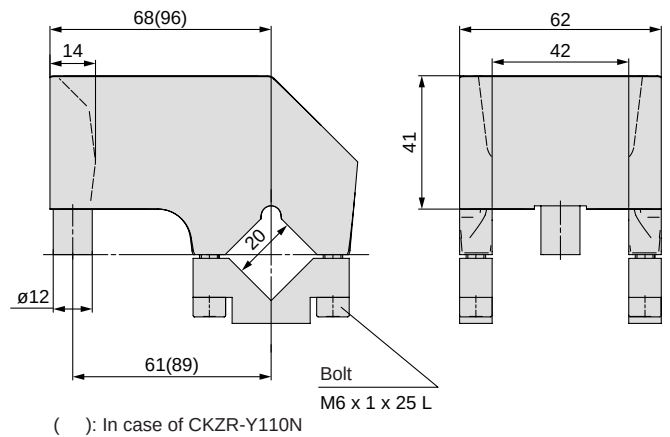
1 dimension projection

\* Select long arm when using an adapter.

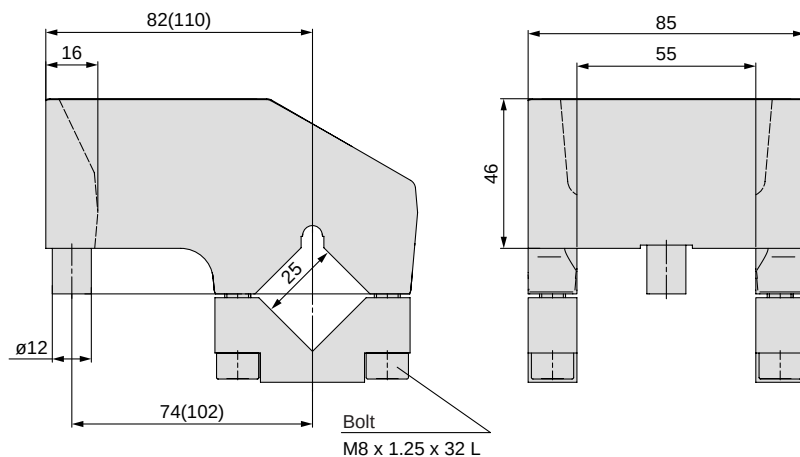
### CKZR-Y040



### CKZR-Y110<sup>S</sup><sub>N</sub>



### CKZR-Y200<sup>S</sup><sub>N</sub>-A

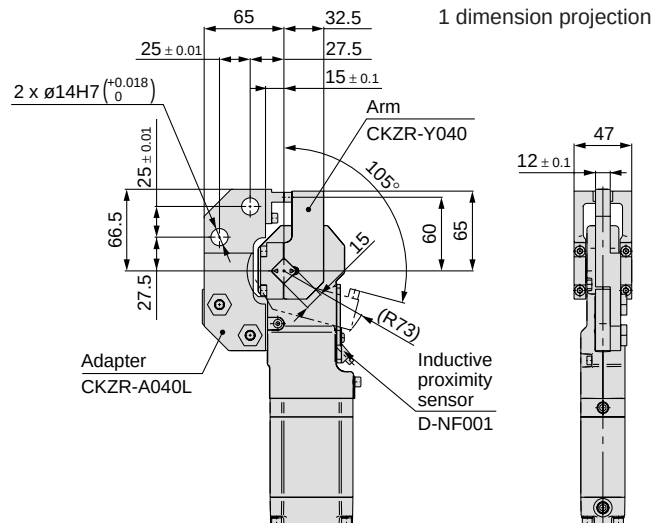
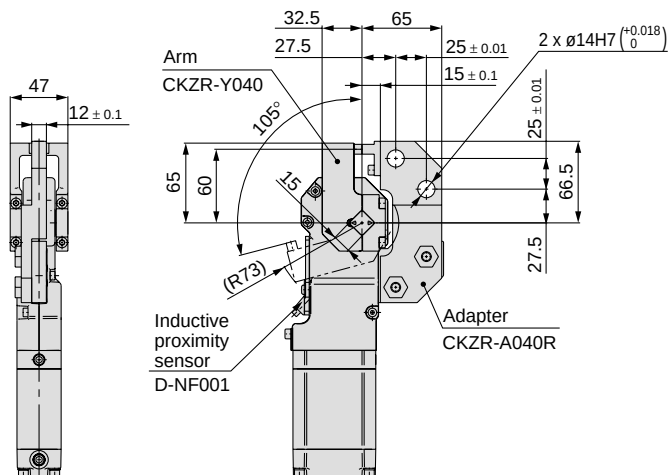


( ) : In case of CKZR-Y200N-A

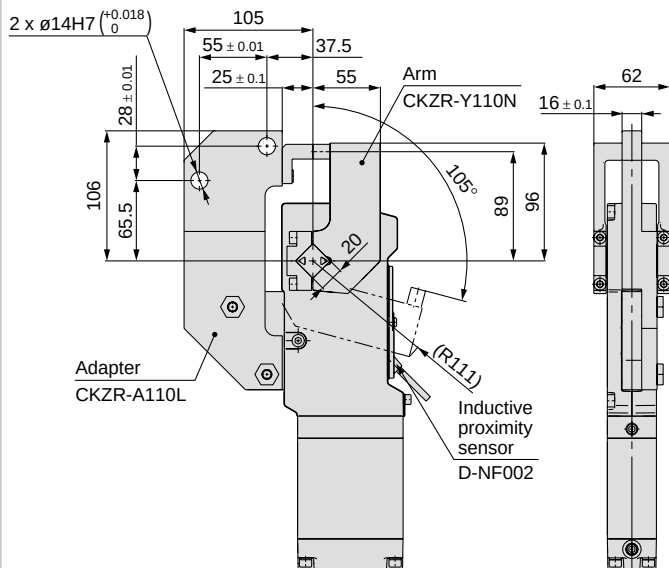
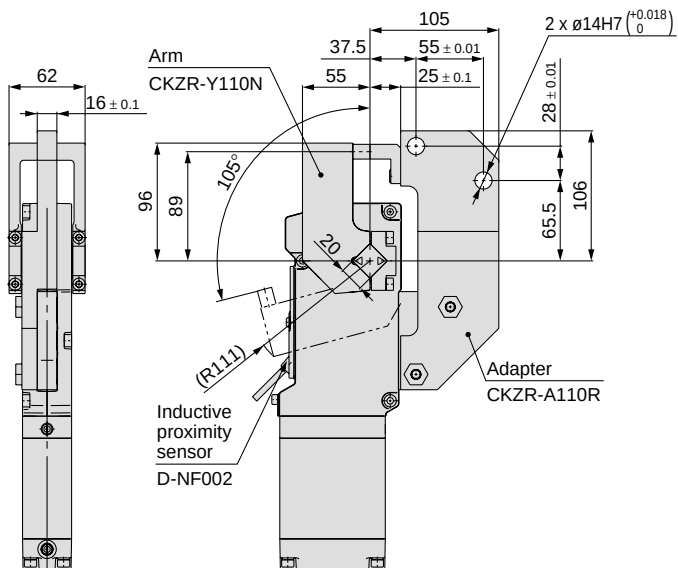


## Adapter/Arm Mounting Example

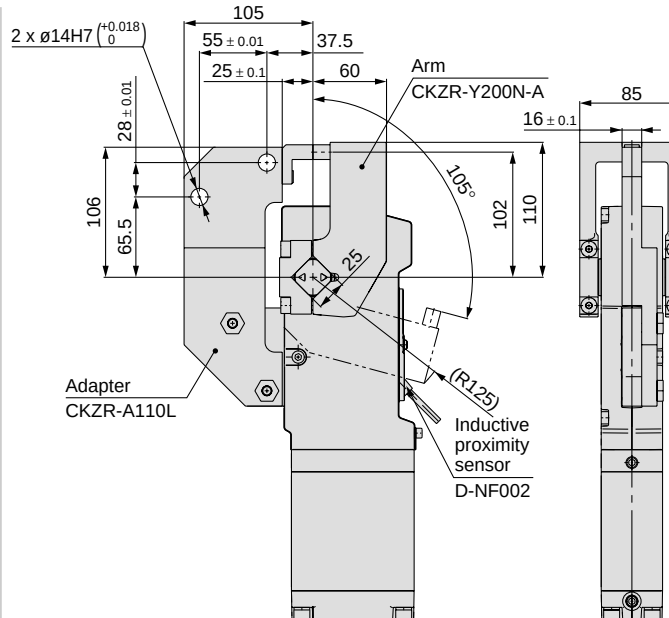
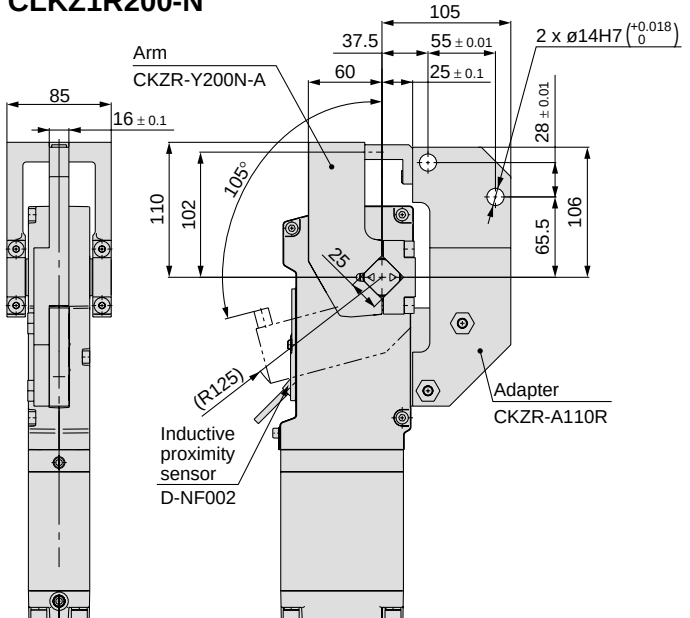
# CLKZ1R040-N



# CLKZ1R110-N



# CLKZ1R200-N





## Series CLKZ1R Specific Product Precautions

Be sure to read this before handling. Refer to pages 222 and 223 for Safety Instructions and "Precautions for Handling Pneumatic Devices" (M-03-E3A) for Actuator Precautions.

### How to Release the Lock Manually

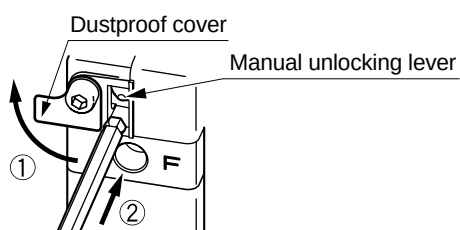
#### ⚠ Warning

When equipment is removed, confirm the safety process. Cut the supply pressure for this equipment and exhaust all residual compressed air in the system.

Do not release the lock manually by using an external force such as a load and spring force. The cylinder could move suddenly, which could be very dangerous.

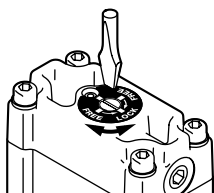
#### How to release the lock on the clamp side

- ① Open the dustproof cover at the upper part of the port on the clamping side.
- ② Insert a hexagon wrench and flip up the manual unlocking lever.



#### How to release the lock on the unclamp side

Move the dial of the head cover to the FREE position with a flat-head screwdriver.

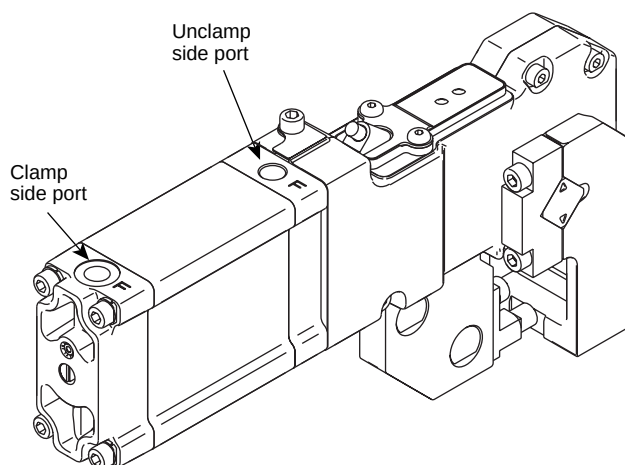


Note) At the time of shipment from the factory, the locking mechanism on the unclamp side is not engaged. When that mechanism is used, change the dial to the LOCK position.

### Preparation for Operation

#### ⚠ Warning

- 1) Be sure to supply air pressure to the clamp side port before re-starting the cylinder from the clamping position. Pressurizing to the unclamp side port without applying air pressure to the clamp side port will release the lock and cause the cylinder to move suddenly, which could be very dangerous.



### Pneumatic Circuit

#### ⚠ Caution

- 1) Do not use a 3-position valve. This valve could unexpectedly supply air pressure, which would release the lock.
- 2) Mount the speed controller so as to provide meter-out control. Using the speed controller as a meter-in could cause operating failure.
- 3) Be careful not to allow a reverse flow of exhaust pressure from a common exhaust-type valve manifold. A reverse flow of exhaust pressure could release the lock. Use an independent exhaust-type valve manifold or independent valve.