

## Heavy-duty Limit Switch

D4A-□N

A New Version of the D4A-□ with Better Seal, Shock Resistance, and Strength

- A double seal on the head, a complete gasket cover, and other features ensure a better seal (meets UL NEMA 3, 4.4X, 6P, 13) (IEC 1P67).
- Block mounting method to reduce weight to 290 g.
- Block mounting method also reduces downtime for maintenance.
- Wide standard operating temperature range: -40°C to 100°C (standard type).
- Models with fluoro-rubber available for greater resistance to chemicals.
- Four-circuit, double-break models available for complex operations.
- 20 mm conduit entry (M20 x 1.5)



## Ordering Information

### ■ Side Rotary Switches (Without Actuators)

SPDT Double-break Switches	Without indicator	
	Type Name	
Roller lever: standard		D4A-5101N ★
Roller lever: high-sensitivity		D4A-5102N
Roller lever: low torque		D4A-5103N
Roller lever: high-sensitivity /low torque		D4A-5104N
Roller lever: maintained**		D4A-5105N

- Approved Standards  
UL (File No. E76675)  
CSA (File No. LR45746)

The above standards apply to all types except: DPDT neon indicator types.

DPDT Double-break Switches	Without indicator	
	Type Name	
Roller lever: standard		D4A-6501N ★
Roller lever: high-sensitivity		D4A-6502N
Roller lever: low torque		D4A-6503N
Roller lever: high-sensitivity /low torque		D4A-6504N
Roller lever: maintained**		D4A-6505N
Roller lever: sequential operating		D4A-6717N
Roller lever: center neutral operating		D4A-6918N ★












Switches with fluoro-rubber seals (with an operating temperature range of -10°C to 120°C) may be ordered by adding an "F" suffix to the model number. Contact your OMRON representative for details.












\*Levers for roller lever are optionally available. Select the lever from those listed in this data sheet and order.

\*\*The maintained roller lever can be locked.

★ Stars represent preferred stocked lines. Please contact your Omron representative for availability of other items.






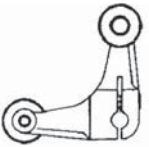

## ■ Switches With built-in Actuators

SPDT Double-break Switches		Without indicator
		Type Name
Side plunger		D4A-5106N
Side-roller plunger: vertical roller		D4A-5107-VN
Side-roller plunger: horizontal roller		D4A-5107-HN
Side plunger: adjustable		D4A-5108N
Top plunger		D4A-5109N
Top-roller plunger		D4A-5110N ★
Top plunger: adjustable		D4A-5111N
Spring wire		D4A-5112N
Plastic rod		D4A-5114N
Cat whisker		D4A-5115N
Coil spring		D4A-5116N ★

DPDT Double-break Switches		Without indicator
		Type Name
Side plunger		D4A-6506N
Side-roller plunger: vertical roller		D4A-6507-VN
Side-roller plunger: horizontal roller		D4A-6507-HN
Side plunger: adjustable		D4A-6508N
Top plunger		D4A-6509N
Top-roller plunger		D4A-6510N
Top plunger: adjustable		D4A-6511N
Spring wire		D4A-6512N
Plastic rod		D4A-6514N
Cat whisker		D4A-6515N
Coil spring		D4A-6516N

Switches with fluoro-rubber seals (with an operating temperature range of -10°C to 120°C) may be ordered by adding an "F" suffix to the model number. Contact your OMRON representative for details.

★ Stars represent preferred stocked lines. Please contact your Omron representative for availability of other items.

Actuator		Lever radius	Material	Diameter	Width	Part number	
Standard roller levers, front mount		38.1 mm	Stainless steel	19.1 mm	7.9 mm	D4A-A00 ★	
		33.7 mm	Stainless steel	17.5 mm	15 mm	D4A-B06	
Standard roller lever, back mount		38.1 mm	Stainless steel	19.1 mm	7.9 mm	D4A-A10	
Offset roller levers		Front mount	38.1 mm	Stainless steel	19.1 mm	7.9 mm	D4A-A20
		Back mount	38.1 mm	Stainless steel	19.1 mm	7.9 mm	D4A-A30
Adjustable roller lever, front mount		33 to 91 mm	Stainless steel	19.1 mm	7.9 mm	D4A-C00 ★	
Adjustable rod lever		150 mm	Stainless steel	3 mm	--	D4A-D00 ★	
Fork roller levers		L.H. front/ R.H. back	38.1 mm	Stainless steel	19.1 mm	7.9 mm	D4A-E00
		L.H. front/ R.H. back	38.1 mm	Stainless steel	19.1 mm	7.9 mm	D4A-E10
		Both front	38.1 mm	Stainless steel	19.1 mm	7.9 mm	D4A-E20
		Both back	38.1 mm	Stainless steel	19.1 mm	7.9 mm	D4A-E30
Looped rod		150 mm	Nylon	60 mm	--	D4A-F00	

# Specifications

## ■ Ratings

Type	Rated voltage	Non-inductive load				Non-inductive load			
		Resistive load		Lamp load		Inductive load		Motor load	
		NC	NO	NC	NO	NC	NO	NC	NO
SPDT double-break (with/without indicators)	125 VAC*	10 A	10 A	3 A	1.5 A	10 A		5 A	2.5 A
	250 VAC*	10 A	10 A	2 A	1 A	10 A		3 A	1.5 A
	480 VAC	10 A	10 A	1.5 A	0.8 A	3 A		1.5 A	0.8 A
	600 VAC	3 A	1 A	1 A	0.5 A	1.5 A		1 A	0.5 A
	8 VDC	10 A		6 A	3 A	10 A		6 A	
	14 VDC	10 A		6 A	3 A	10 A		6 A	
	30 VDC	6 A		4 A	3 A	6 A		4 A	
	125 VDC*	0.8 A		0.2 A	0.2 A	0.8 A		0.2 A	
	250 VDC*	0.4 A		0.1 A	0.1 A	0.4 A		0.1 A	
DPDT double-break (without indicators)	125 VAC	5 A		2 A		4 A		3 A	
	250 VAC	3 A		1 A		2 A		1.5 A	
	480 VAC	1.5 A		0.5 A		1 A		0.8 A	
	600 VAC	1 A		0.4 A		0.7 A		0.5 A	
	14 VDC	5 A		2 A		4 A		3 A	
	30 VDC	3 A		1 A		2 A		1.5 A	
	125 VDC	0.4 A		0.1 A		0.4 A		0.1 A	
	250 VDC	0.2 A		0.05 A		0.2 A		0.05 A	
DPDT double-break (with indicators)	125 VAC	5 A		2 A		4 A		3 A	
	250 VAC	3 A		1 A		2 A		1.5 A	
	12 VDC	5 A	---	---		---		---	
	24 VDC	3 A							
	48 VDC	1 A							

- Note:
1. The above current ratings are for steady-state current.
  2. Inductive loads have a power factor of 0.4 min. (AC) and a time constant of 7 ms max. (DC).
  3. Lamp loads have an inrush current of 10 times the steady-state current.
  4. Motor loads have an inrush current of 6 times the steady-state current.

## ■ Approved Standards

UL (File No. E76675)/CSA (File No. LR45746)

Model	Coil ratings	Contact ratings
D4A-□1□□N (SPDT double-break, without indicator)	A600 (carry current: 10 A) Make/break: 60/6 A at 120 VAC Make/break: 30/3 A at 240 VAC Make/break: 15/1.2 A at 480 VAC Make/break: 12/1.2 A at 600 VAC Make/break: 7,200/720 VA max.	10 A, 125 VAC 10 A, 250 VAC 10 A, 480 VAC
D4A-□3□□N (SPDT double-break, with neon lamp)	A300 (carry current: 10 A) Make/break: 60/6 A at 120 VAC Make/break: 30/3 A at 240 VAC Make/break: 7,200/720 VA max.	10 A, 125 VAC 10 A, 250 VAC
D4A-□5□□N (DPDT double-break, double-break operation) D4A-□7□□N (DPDT double-break, sequential operation) D4A-□9□□N (DPDT double-break, center neutral operation)	B600 (carry current: 5 A) Make/break: 30/3 A at 120 VAC Make/break: 15/1.5 A at 240 VAC Make/break: 7.5/0.75 A at 480 VAC Make/break: 6/0.6 A at 600 VAC Make/break: 3,600/360 VA max.	5 A, 125 VAC 3 A, 250 VAC

## ■ Characteristics

Operating speed	1 mm to 2 m/sec (for D4A-1101N)
Operating frequency	Mechanical: 300 operations/min Electrical: 30 operations/min
Insulation resistance	100 M $\bullet$ min. (at 500 VDC)
Contact resistance	25 m $\bullet$ max. (initial value)
Temperature rise	50°C max.
Dielectric strength	1,000 VAC between terminals of same polarity 2,200 VAC between current-carrying metal parts and ground, and between each terminal and non-current-carrying metal part (see note 1)
Inrush current	NC: 30 A max. NO: 20 A max.
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude (see note 2)
Shock resistance	Destruction: 1,000 m/s <sup>2</sup> min. (approx. 100G min.) Malfunction: SPDT double-break: 600 m/s <sup>2</sup> min. (approx. 60G min.) (see note 2) DPDT double-break: 300 m/s <sup>2</sup> min. (approx. 30G min.) (see note 2)
Life expectancy	Mechanical: SPDT double-break: 50 million min. (see note 3) DPDT double-break: 30 million min. (see note 3) Electrical: SPDT double-break: 1 million min. DPDT double-break: 750,000 min.
Ambient temperature	Roller lever: -40°C to 100°C (see note 4) Plunger/flexible rod: -20°C to 100°C (see note 5) With indicator: -10°C to 80°C Fluoro-rubber seals: -10°C to 120°C
Ambient humidity	95% max.
Enclosure rating	IEC: IP67; NEMA: 1, 2, 3, 4, 4X, 6P, 12, and 13; JIS Immersion-proof type
Weight	Approx. 290 g (for D4A-5101N)

Note: 1. 1,500 VAC is applied to the indicator lamp type.

2. Not including wobble levers (cat whisker, plastic rod, coil spring, and spring wire types).
3. Not including the maintained switch.
4. Not including the low torque and high-sensitivity/low torque type.
5. Including the low torque and high-sensitivity/low torque type of Roller lever

## ■ Operating Characteristics

Note: The figures in the parentheses are average values.

### Roller Lever Switches

#### SPDT Double-break

Model	D4A-5□01N	D4A-5□02N	D4A-5□03N	D4A-5□04N	D4A-5□05N
OF max.	4 kg-cm	4 kg-cm	2 kg-cm	2 kg-cm	4 kg-cm
RF min.	0.5 kg-cm	0.5 kg-cm	---	---	---
PT max.	15• (12•)	7• (6•)	15• (12•)	7• (6•)	65• (60•)
OT min.	70•	75•	70•	75•	20•
MD max.	5• (4•)	4• (3•)	5• (4•)	4• (3•)	35• (30•)

#### DPDT Double-break

Model	D4A-6□01N	D4A-6□02N	D4A-6□03N	D4A-6□04N	D4A-6□05N	D4A-6□017N	D4A-6□018N
OF max.	4 kg-cm	4 kg-cm	2 kg-cm	2 kg-cm	4 kg-cm	4 kg-cm	4 kg-cm
RF min.	0.5 kg-cm	0.5 kg-cm	---	---	---	0.5 kg-cm	0.2 kg-cm
PT max.	15• (12•)	7• (6•)	15• (12•)	7• (6•)	65• (60•)	1-stage: 12• (10•) 2-stage: 20• (17•)	19• (15•)
OT min.	70•	75•	70•	75•	20•	65•	65•
MD max.	7• (6•)	5• (4•)	7• (6•)	5• (4•)	35• (30•)	6• (5•)	5• (4•)

The figures in the parentheses are average values.

### Side Plunger Switches

Model	SPDT double-break				DPDT double-break			
	D4A-5□06N	D4A-5□07-HN	D4A-5□07-VN	D4A-5□08N	D4A-6□06N	D4A-6□07-HN	D4A-6□07-VN	D4A-6□08N
OF max.	2,000 g	2,000 g	2,000 g	2,000 g	2,000 g	2,000 g	2,000 g	2,000 g
RF min.	500 g	500 g	500 g	500 g	500 g	500 g	500 g	500 g
PT max.	2.4 mm	2.4 mm	2.4 mm	2.4 mm	2.4 mm	2.4 mm	2.4 mm	2.4 mm
OT min.	5.1 mm	5.1 mm	5.1 mm	5.1 mm	5.1 mm	5.1 mm	5.1 mm	5.1 mm
MD max.	0.6 mm	0.6 mm	0.6 mm	0.6 mm	1.0 mm	1.0 mm	1.0 mm	1.0 mm
OP	34•0.8 mm	44•0.8 mm	44•0.8 mm	41 to 47.5 mm	34•0.8 mm	44•0.8 mm	44•0.8 mm	41 to 47.5 mm

### Top Plunger Switches

Model	SPDT double-break			DPDT double-break		
	D4A-5□09N	D4A-5□10N	D4A-5□11N	D4A-6□09N	D4A-6□10N	D4A-6□11N
OF max.	1,800 g	1,800 g	1,800 g	1,800 g	1,800 g	1,800 g
RF min.	500 g	500 g	500 g	500 g	500 g	500 g
PT max.	1.6 mm	1.6 mm	1.6 mm	1.6 mm	1.6 mm	1.6 mm
OT min.	5.1 mm	5.1 mm	5.1 mm	5.1 mm	5.1 mm	5.1 mm
MD max.	0.4 mm	0.4 mm	0.4 mm	1.0 mm	1.0 mm	1.0 mm
OP	46•0.8 mm	56•0.8 mm	55.5 to 62 mm	46•0.8 mm	56•0.8 mm	55.5 to 62 mm

### Flexible Rod Switches

Model	SPDT double-break			DPDT double-break		
	D4A-5□12N	D4A-5□14N D4A-5□15N	D4A-5□16N	D4A-6□12N	D4A-6□14N D4A-6□15N	D4A-6□16N
OF max.	100 g	150 g		100 g	150 g	
PT max.	15• (5•)	15• (5•)		15• (5•)	15• (5•)	

## ■ Definitions of Operating Characteristics

### Operating Force (OF):

The force applied to the actuator required to operate the switch contacts.

### Releasing Force (RF):

The value to which the force on the actuator must be reduced to allow the contacts to return to the normal position.

### Total Force (TF):

The force applied to the actuator required to reach the stopper from the free position.

### Free Position (FP):

The initial position of the actuator when no external force is applied.

### Operating Position (OP):

The position of the actuator at which the contacts snap to the operated contact position.

### Releasing Position (RP):

The position of the actuator at which the contacts snap from the operated contact position to their normal position.

### Total Travel Position (TTP):

The position of the actuator when it reaches the stopper.

### Pretravel (PT):

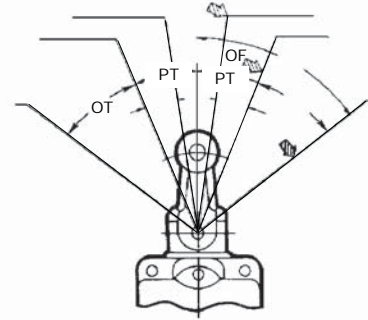
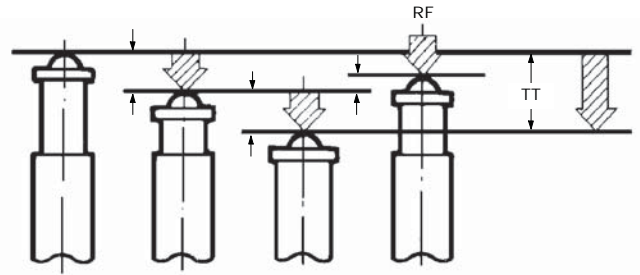
The distance or angle through which the actuator moves from the free position to the operating position.

### Overtravel (OT):

The distance or angle of the actuator movement beyond the operating position.

### Movement Differential (MD):

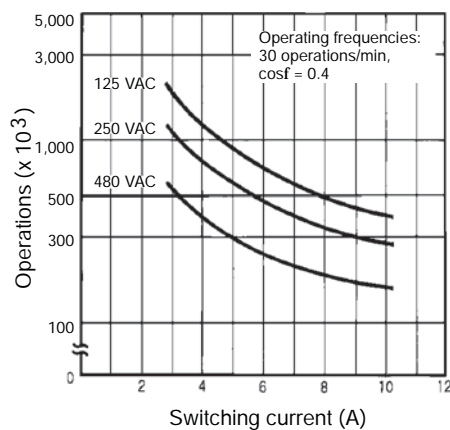
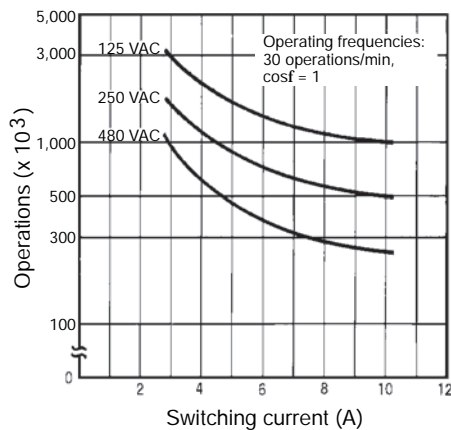
The distance or angle from the operating position to the releasing position.



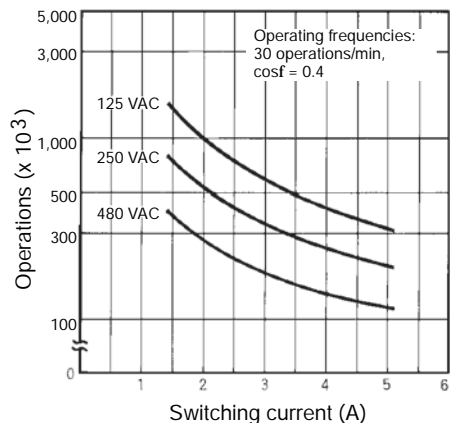
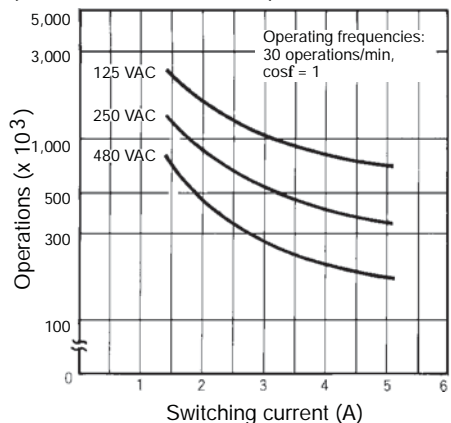
- OF: Operating Force
- RF: Releasing Force
- TF: Total Force
- FP: Free Position
- OP: Operating Position
- RP: Releasing Position
- TTP: Total Travel
- PT: Pretravel
- OT: Overtravel
- MD: Movement Differential
- TT: Total Travel

## Engineering Data

### Electrical Life Expectancy (SPDT Double-break)

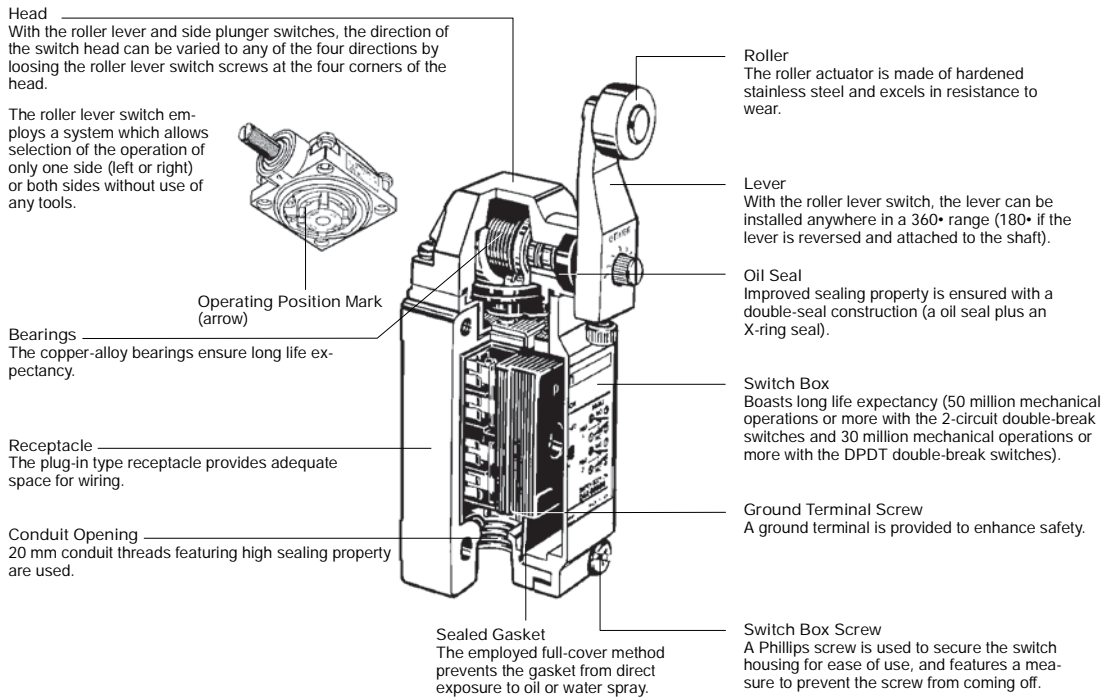


### (DPDT Double-break)



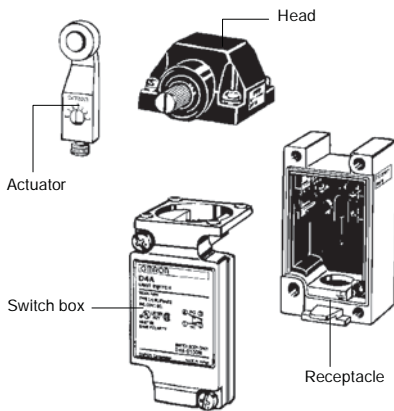
# Construction

## DPDT Double-break



## Easy-maintenance Block Mounting

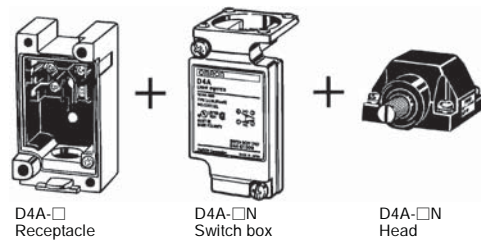
Block mounting makes it possible to easily assemble or disassemble the head, switch body, and receptacle of the D4A-□N by tightening or loosening the attached screws.



# Compatibility

## Compatibility with D4A-□

The D4A-□N is compatible with the D4A-□ when the following accessories are attached to the D4A-□N.



**Note:** The D4A-□N without the above accessories is not compatible with the D4A-□.



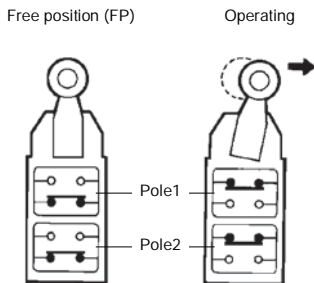
# Operation

## ■ Operating Principle

The D4A-□N saves installation space, simplifies wiring methods, and lowers operation costs because only a single D4A-□N is required for the control of the speeds of a factory machine or selection of CW or CCW rotation of a motor, for which two conventional limit switches are required.

### DPDT Double Break

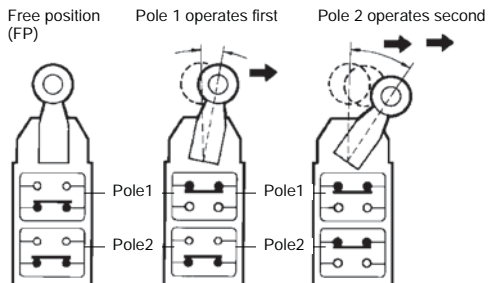
This head is compatible with a two-circuit type head.



Pole 1 and pole 2 are actuated simultaneously. Operates either CW, CCW, or both.

### Sequential Operating

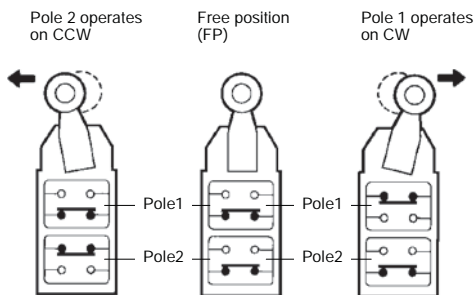
Use the D4A-0017N head.



Pole 1 operates first and pole 2 operates second.

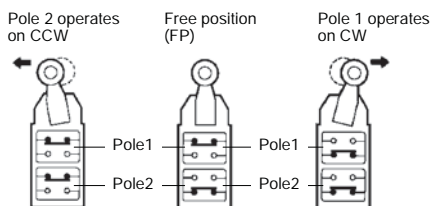
### Center Neutral Operating

Use the D4A-0018N head.



Pole 1 operates on CW and pole 2 operates CCW.

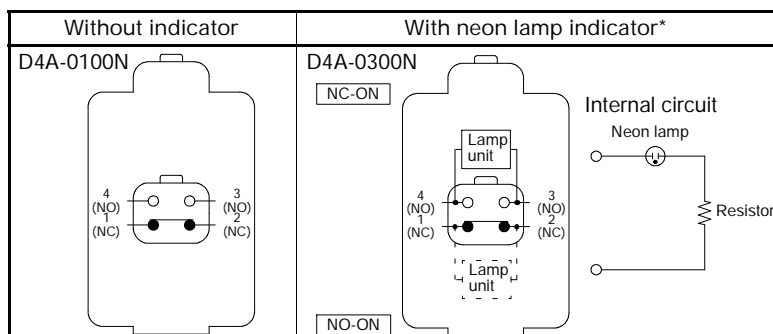
Note: The contact configuration of the center neutral operating model is different from that of any other D4A-□ switch.



D4A-□ center neutral type

## ■ Contact Types (Switch Body)

### SPDT Double-break Switches



\*Indicator setting is made before shipping so that it will light when the limit switch is not being operated.

DPDT Double-break Switches

Type	DPDT double-break	Sequential operation	Center neutral operation	Internal circuit of indicator
Without indicator	D4A-0500N 	D4A-0700N 	D4A-0900N 	---
With neon lamp indicator	D4A-0L00N 	D4A-0M00N 	D4A-0N00N 	

Indicator lamp setting is made before shipping so that it will light when the limit switch is not being operated.

■ Operation

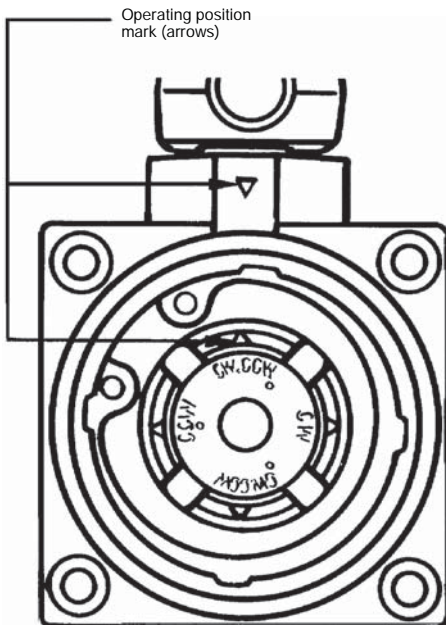
Operation CW, CCW, or Both

The head of the side rotary type can be converted in seconds to CW, CCW, or both-way operation. Follow the procedures on the right hand side for conversion (not applicable to the maintained, sequential operating, center neutral operating switches).

Procedures

1. Dismount the head by loosening the four screws that secure it.
2. Turn over the head to set the desired operation (CW, CCW, or both). The desired side can be selected by setting the mode selector knob shown in the figure. This knob is factory set to the "CW+CCW" (both-way operation) position.

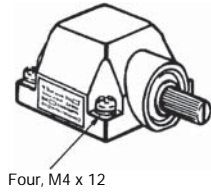
Operating Part (Rear of Head)



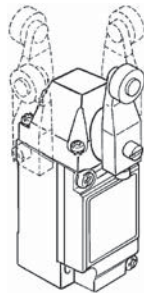
### Head and Lever Positions

The operating head can be positioned and locked in any of four 90° positions and a lever can lock in any position through 360° around the shaft of the limit switch. Furthermore, the lever can be reversed and attached to the shaft (refer to the figures below on the right hand side). Therefore the roller is compatible with a wide movement range of the shaft.

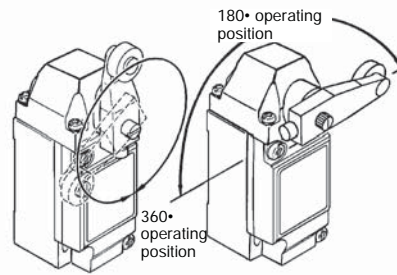
Remove the head from the switch by loosening the screws (the screws can be loosened but not removed from the head).



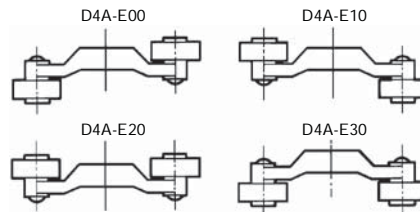
The operating head can be positioned and locked in any of four 90° positions.



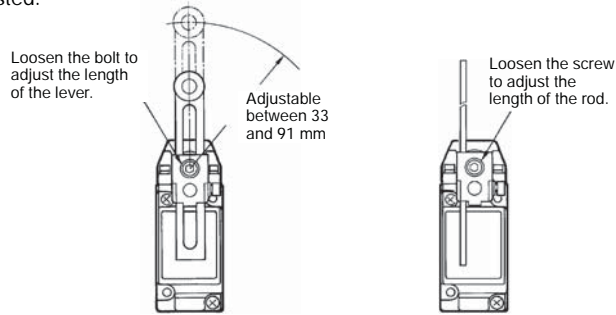
The lever can lock in any position through 360° around the shaft. The lever can be reversed and attached to the shaft, in which case the switching operation should complete in a range of 0° to 180°.



There are four kinds of fork lever locks. The position of each roller is different. It is possible to use D4A-E00 through D4A-E30 levers instead, if they are reversed before attaching.



By loosening the hexagonal bolt on an adjustable roller lever or rod lever, the length of the lever can be adjusted.

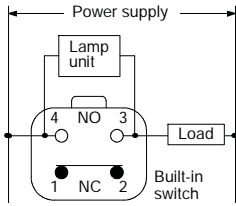
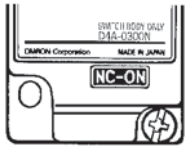


### Lighting Mode Selection of Indicators

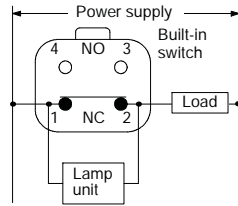
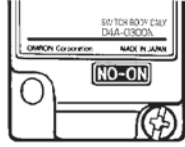
The lighting mode of the operation indicator can be changed easily between two modes: lighting when the switch is operating and lighting when the switch is not operating.

Classification	Indicator	Type Name	Rated voltage	Carry current	Internal resistance
SPDT Double-break	Neon lamp	D4A-0300N	125 VAC	Approx. 0.47 mA	150 k•
DPDT Double-break	Neon lamp	D4A-0L00N D4A-0M00N D4A-0N00N	125 VAC	Approx. 0.28 mA	240 k•

Lights When Not Operating  
(see Note 1)

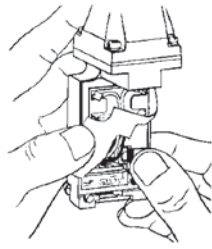


Lights When Operating  
(see Note 2)

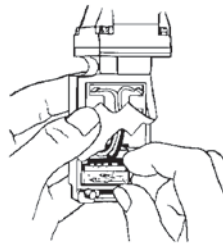


- Note:
1. The lamp is lit when the actuator is at the free position. The lamp will be off when the contacts of the limit switch have been actuated and snapped to each other at the operating position.
  2. The lamp is lit when the contacts have been released and snapped only from the operating position.

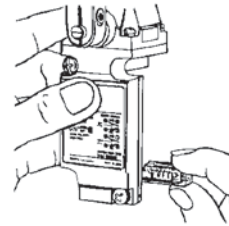
Change the lighting mode as follows:



Push the claw securing the lamp section to the right (do not push strongly).



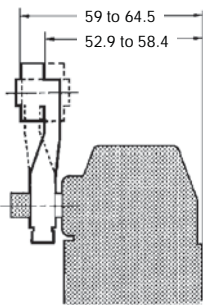
Remove the lamp section.



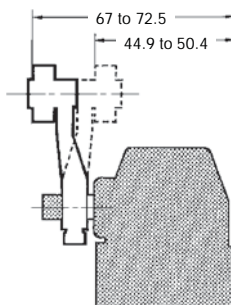
Mount the lamp section so that legend "NC-ON" or "NO-ON" will appear in the display window.

Lever Position

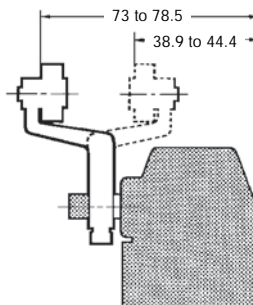
D4A-A00



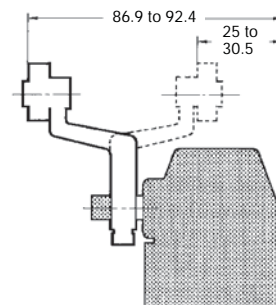
D4A-A10



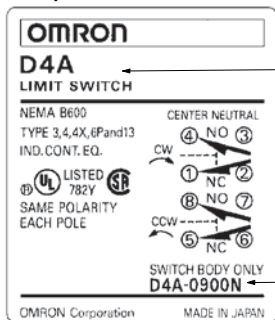
D4A-A20



D4A-A30



■ Nameplate



The whole switch mode without lever is printed.

The type of switch box is printed.

# Dimensions

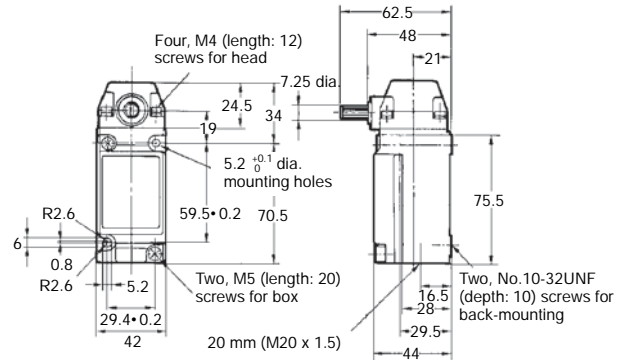
- Note: 1. All units are in millimeters unless otherwise indicated.  
 2. Insert the model number code in □ for the switch body.  
 3. Unless otherwise specified, a tolerance of  $\pm 0.4$  mm applies to all dimensions.

## Roller Lever Switches

Note: Levers of the side rotary type are optionally available.

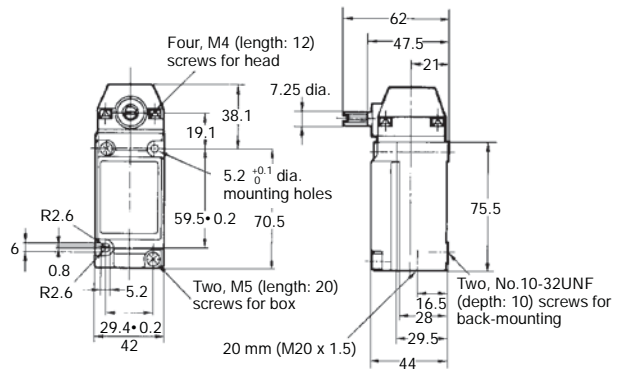
SPDT and DPDT Switches

Standard  
 High Sensitivity  
 Low Torque  
 High Sensitivity/Low Torque  
 Sequential Operation  
 Centre Neutral Operation



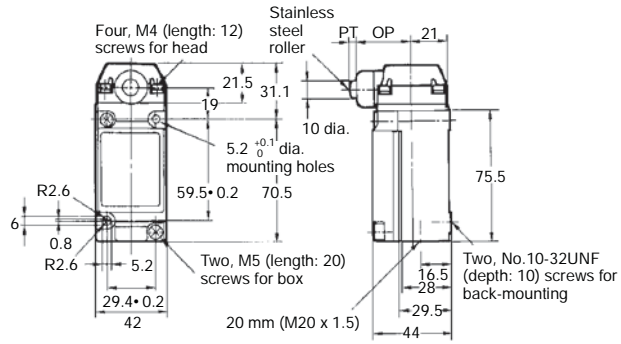
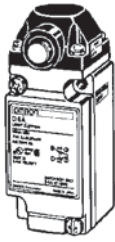
SPDT and DPDT Switches

Maintained

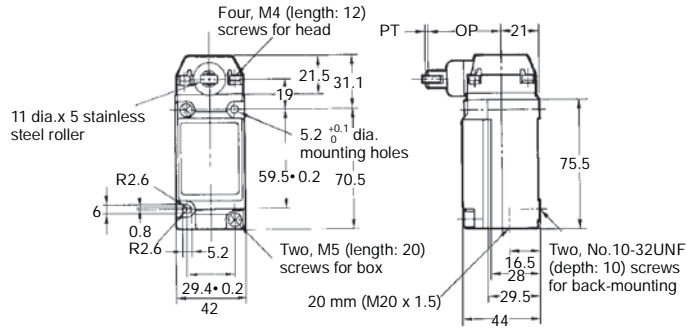
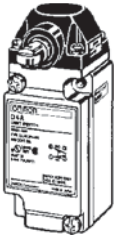


■ Side Plunger Switches

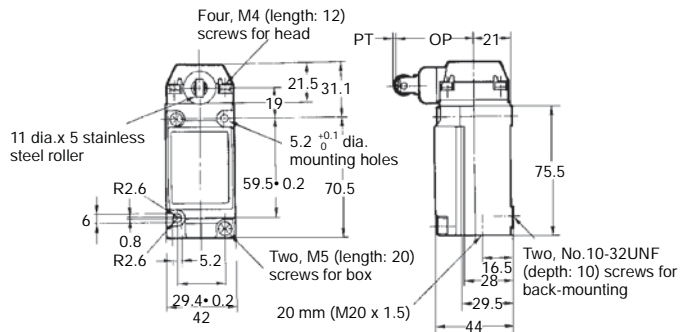
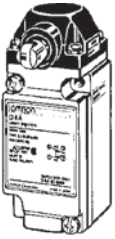
Standard Switches  
 D4A-5□06N  
 D4A-6□06N



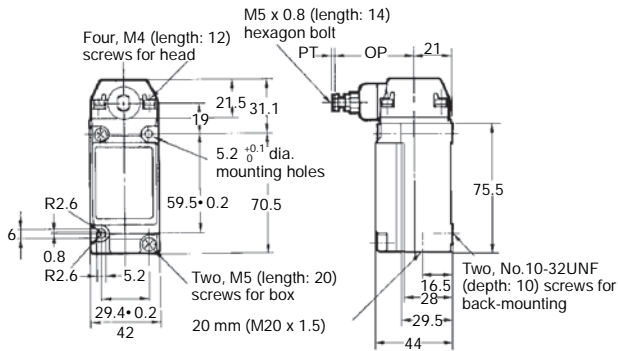
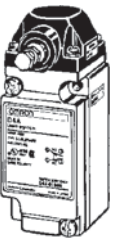
Horizontal Roller Switches  
 D4A-5□07-HN  
 D4A-6□07-HN



Vertical Roller Switches  
 D4A-5□07-VN  
 D4A-6□07-VN

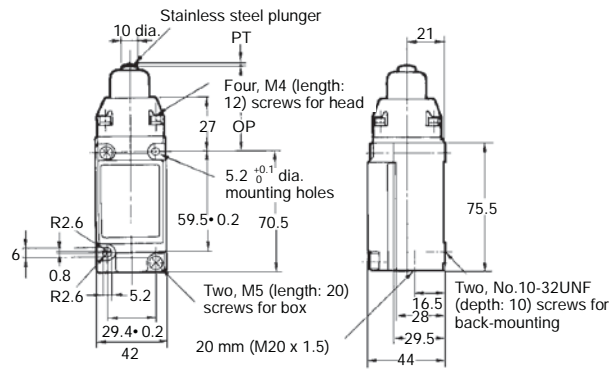


Adjustable Switches  
 D4A-5□08N  
 D4A-6□08N

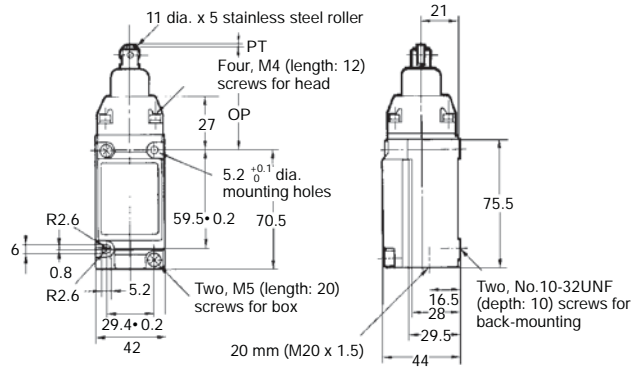


■ Top Plunger Switches

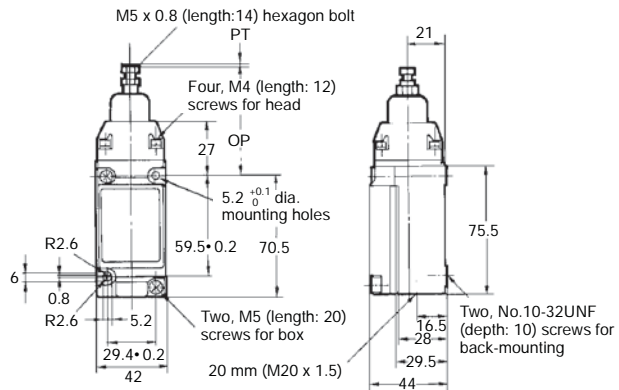
Standard Switches  
 D4A-5□09N  
 D4A-6□09N



Top Roller Plunger Switches  
 D4A-5□10N  
 D4A-6□10N

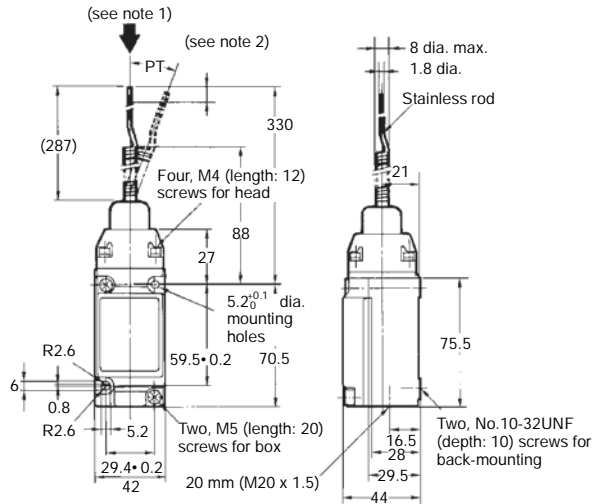


Adjustable Switches  
 D4A-5□11N  
 D4A-6□11N

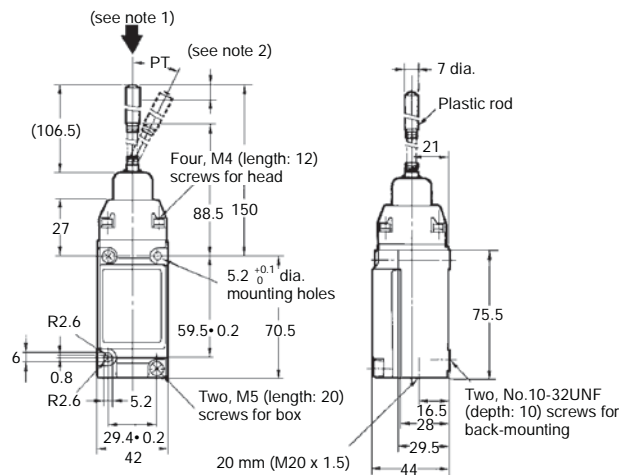


Flexible Rod Switches

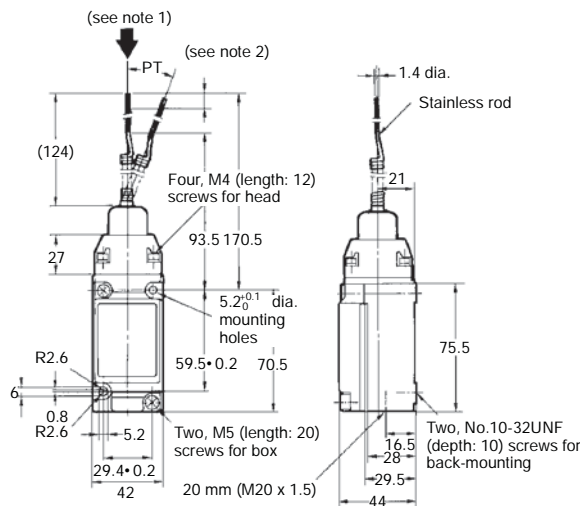
Spring Wire Switches  
 D4A-5□12N  
 D4A-6□12N



Plastic Rod Switches  
 D4A-5□14N  
 D4A-6□14N



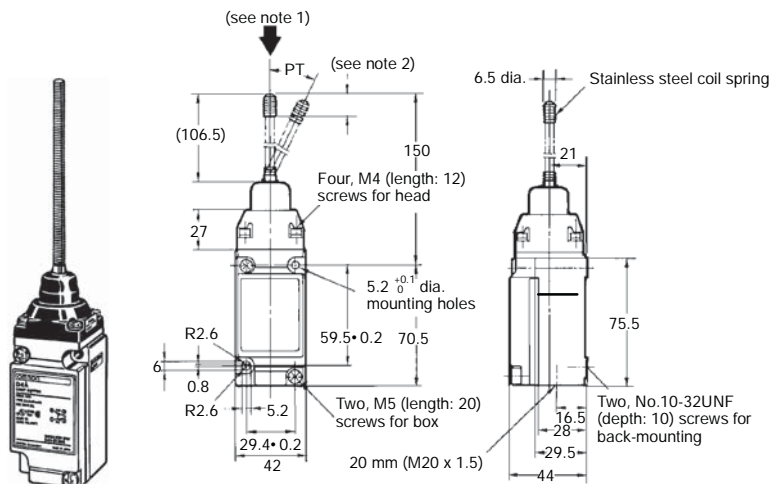
Cat Whisker Switches  
 D4A-5□15N  
 D4A-6□15N



Note: 1. The stainless rod can be operated from any direction except the axial direction (i.e., from the top).  
 2. The optimum operating range of the stainless rod is within 1/3 of the entire length from the top end.



Coil Spring Switches  
D4A-5□16N  
D4A-6□16N

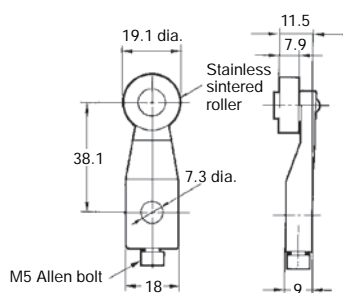


- Note: 1. The stainless rod can be operated from any direction except the axial direction.  
2. The optimum operating range of the stainless rod is within 1/3 of the entire length from the top end.

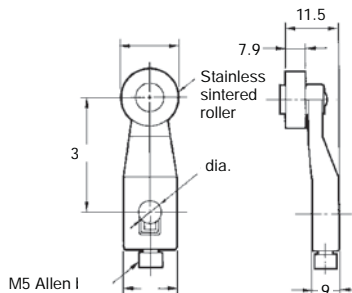
Levers (for Roller Lever Switches)

Note: No D4A-0003N or D4A-0004N head should be used with the adjustable roller lever or mechanical malfunctioning could result because the total weight of the adjustable roller lever is comparatively large. Use a standard-load head (D4A-0001N or D4A-0002N) instead.

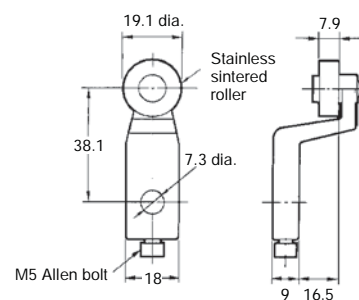
Roller Lever  
D4A-A00



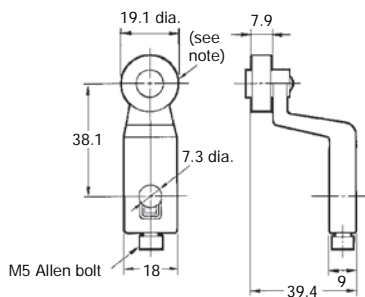
Roller Lever  
D4A-A10



Roller Lever  
D4A-A20

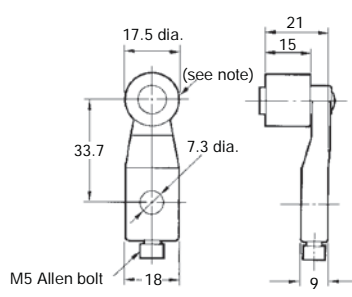


Roller Lever  
D4A-A30



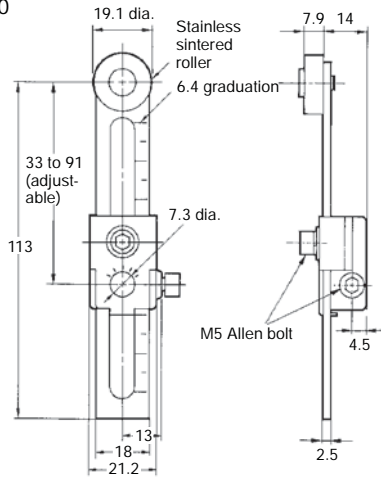
Note: Stainless sintered roller

Roller Lever  
D4A-B06

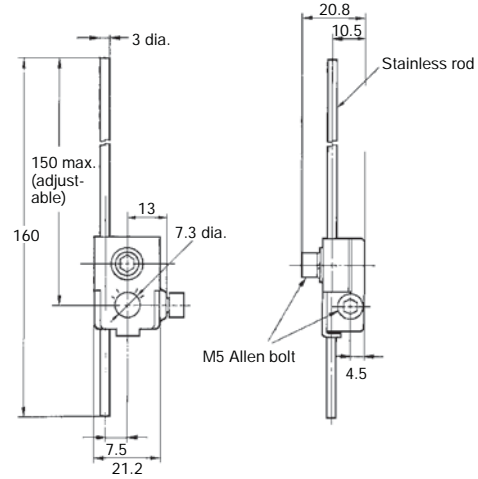


Note: Stainless sintered roller

Adjustable Roller Lever  
D4A-C00

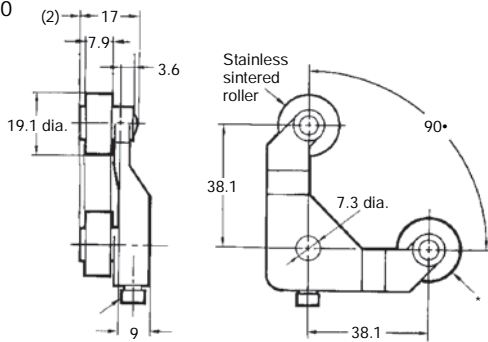


Adjustable Roller Lever  
D4A-D00

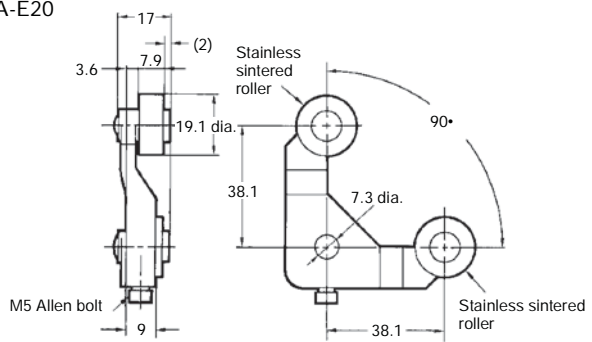


\*Stainless rod

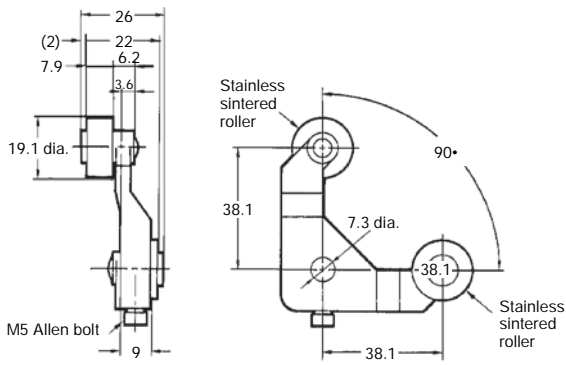
Fork Lever Lock  
D4A-E30



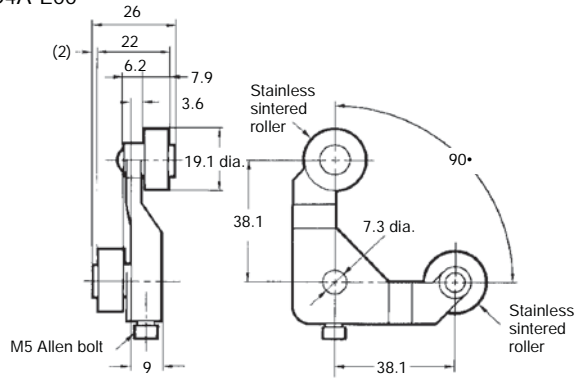
Fork Lever Lock  
D4A-E20



Fork Lever Lock  
D4A-E10



Fork Lever Lock  
D4A-E00



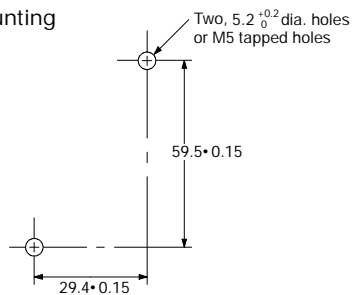
D4A-F00 Nylon Loop Lever

# Precautions

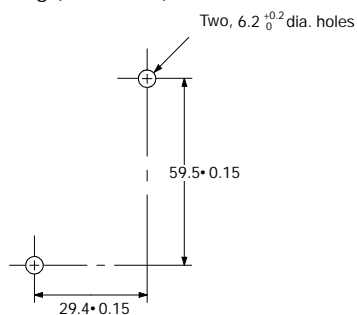
## Mounting

1/2-14NPT Conduit  
D4A-1□□□N, D4A-2□□□N

Front Mounting



Rear Mounting (Rear View)



## Tightening Torque Applied to Head and Switch Body

To maintain the high sealing capability of the limit switch, tighten the screws for the head and switch body with the following torques:  
Head (four 12-mm M4 screws): 12 to 14 kg • cm  
Switch body (two 20-mm M5 screws): 24 to 28 kg • cm

## Solderless Terminals

The D4A-□N with DPDT double-break incorporates solderless terminals.

## Operating

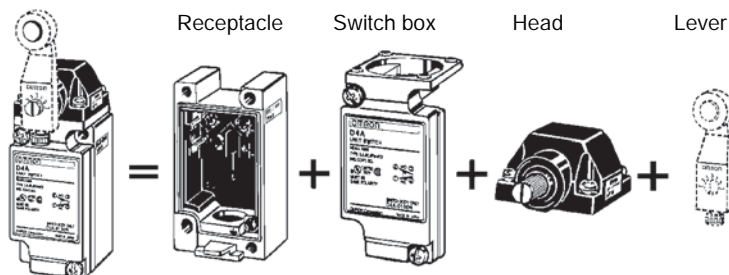
The operating methods, cam and dog's shapes, operating frequency, and overtravel (OT) have a big influence on the life and accuracy of the limit switch. The shape of the cam should be as smooth as possible.

A marginal overtravel (OT) value should be set. The ideal value is the rated OT value x 0.7.

The actuator should not be remodeled to change the operating position.

## Replacement of Parts

Because the D4A-□N employs block mounting construction, the switch body, receptacle, and operating head may be ordered as a complete assembly or individually as replacement parts.



Levers for roller lever switches are optionally available. Select the lever from those listed in this datasheet and order



## Part Numbers

### Receptacles














Type	Appearance	M20 x 1.5 (see note)	
		Type Name	Approved standards
SPDT double-break		D4A-5000N	UL, CSA
DPDT double-break		D4A-6000N	UL, CSA

Note: M6-screw mounting (standard mounting)

## Switch Bodies

Type	Appearance		Without indicator	With neon lamp indicator (AC)
			Type Name	Type Name
SPDT double-break	 (Without indicator lamp)		D4A-0100N	D4A-0300N
DPDT double-break	 (Without indicator lamp)	Double-break operation	D4A-0500N	D4A-0L00N
		Sequential operation	D4A-0700N	D4A-0M00N
		Center neutral operation	D4A-0900N	D4A-0N00N

## Operating Heads

Type	Appearance			
Roller lever (see note 1)			Standard: D4A-0001N High-sensitivity: D4A-0002N Low torque: D4A-0003N (see note 2) High-sensitivity/low torque: D4A-0004N (see note 2) Sequential operation: D4A-0017N (see note 3) Center neutral operation: D4A-0018N (see note 3)	
			Maintained: D4A-0005N	
Side plunger	 Standard: D4A-0006N	 Horizontal roller: D4A-0007-HN	 Vertical roller: D4A-0007-VN	 Side adjustable: D4A-0008N
Top plunger	 Standard: D4A-0009N	 Roller plunger: D4A-0010N	 Plunger adjustable: D4A-0011N	
Flexible rod	 Spring wire D4A-0012N	 Plastic rod D4A-0014N	 Cat whisker D4A-0015N	 Coil spring D4A-0016N

- Note:
1. Levers for roller lever switches are optionally available. Select the lever from those listed in this data sheet and order.
  2. The D4A-C00 adjustable roller lever is too heavy and long for these heads and it should not be used or mechanical malfunction will result.
  3. These heads cannot be used for double break operations.