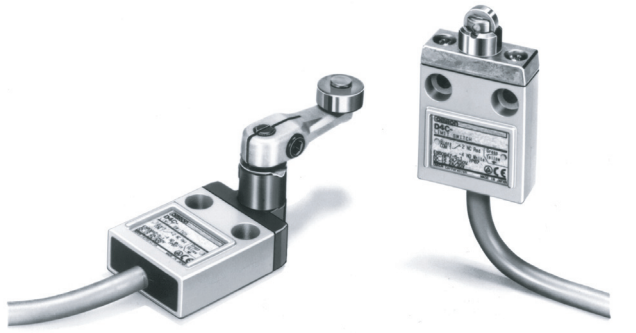
Enclosed Switch
D4C

Sealed, Compact, and Slim-bodied Switch Offers Choice of Many Actuators

- Liquid- and dust-resistance conforms to IEC IP67 standard.
- Triple-sealed construction:
  Plunger section sealed via nitrile rubber packing seal and diaphragm; switch section sealed via nitrile rubber cap; cable entrance sealed via encapsulating material.
- Standard cable (S-FLEX VCTF) in 2-, 3-, or 5-meter lengths offers high flexibility with outstanding oil and extreme temperature resistance.
- Low temperature models are available.



Model Number Structure

■ Model Number Legend

Standard Models

D4C-□□□
1 2 3

1. Rated Current
- 1: 5 A at 250 VAC, 4 A at 30 VDC
- 2: 5 A at 125 VAC (with LED indicator)
- 3: 4 A 30 VDC (with LED indicator)
- 4: 0.1 A at 125 VAC, 0.1 A at 30 VDC
- 5: 0.1 A at 125 VAC (with LED indicator)
- 6: 0.1 A at 30 VDC (with LED indicator)

2. Cable Specifications
- 2: VCTF oil-resistant cable (3 m)
- 3: VCTF oil-resistant cable (5 m)
- 4: VCTF (3 m)
- 5: VCTF (5 m)
- 6: SJT(O) (3 m)
- 7: SJT(O) (5 m)
- 8: VCTF oil-resistant cable (2 m)
- 9: VCTF (2 m)

3. Actuator
- 01: Pin plunger
- 02: Roller plunger
- 03: Crossroller plunger
- 10: Bevel plunger
- 20: Roller lever
- 24: Roller lever (high-sensitivity model)
- 31: Sealed pin plunger
- 32: Sealed roller plunger
- 33: Sealed crossroller
- 41: Panel mount pin plunger
- 42: Panel mount roller plunger
- 43: Panel mount crossroller plunger
- 50: Plastic rod
- 60: Center roller lever plunger

Note 1: Some combinations of the above may not be supported.
2: With standard models, the operation indicator turns OFF when the switch operates. If models with operation indicators that turn ON when the switch operates are required, add "-B" to the end of the model number.

Pre-wired Models (Use VCTF Oil-resistant Cable)

D4C-□0□□-□□□□□□
1 2 3 4

1. Operation Indicator Lamp
- 1: Without operation indicator
- 2: 1 A at 125 VAC (with operation indicator)
- 3: 1 A at 30 VDC (with operation indicator)

2. Actuator
- 01: Pin plunger
- 02: Roller plunger
- 31: Sealed plunger
- 32: Sealed roller plunger
- 24: Roller lever (high-sensitivity model)

3. Wiring Specifications
- DK1EJ: Pre-wired models (3 conductors: DC specification, NC wiring)
- AK1EJ: Pre-wired models (3 conductors: AC specification, NC wiring)
- M1J: Connector models for ASI devices (2 conductors: NO wiring)

4. Cable length
- 03: 0.3 m
- 05: 0.5 m
- 10: 1 m

Wiring Specifications

Internal switch	Connector
COM	3
NC	2
NO	4

Note: Since the above wiring specifications are different from those for the D4CC, be careful not to mistake them.

Weather-resistant Models

D4C-□□□-P
1 2 3

1. Rated Current
- 1: 5 A at 250 VAC, 4 A at 30 VDC
- 2: 5 A at 125 VAC (with LED indicator)
- 3: 4 A at 30 VDC (with LED indicator)
- 4: 0.1 A at 125 VAC, 0.1 A at 30 VDC
- 5: 0.1 A at 125 VAC (with LED indicator)
- 6: 0.1 A at 30 VDC (with LED indicator)

2. Cable Specifications
- 2: VCTF oil-resistant cable (3 m)
- 3: VCTF oil-resistant cable (5 m)

3. Actuator
- 20: Roller lever
- 24: Roller lever (high-sensitivity model)
- 27: Variable roller lever
- 29: Variable rod lever

Ordering Information

■ List of Models

Standard Models

Actuator	Standard cable models						UL/CSA-approved cable models			
	S-FLEX VCTF Cable*			VCTF Cable**			5 A at 250 VAC without LED indicator		5 A at 125 VAC with LED indicator (100 VAC)	
							SJT(O) Cable***			
	EN60947-5-1 approved						UL/CSA approved			
	2 m	3 m	5 m	2 m	3 m	5 m	3 m	5 m	3 m	5 m
Pin plunger	D4C-□801	D4C-□201	D4C-□301	D4C-□901	D4C-□401	D4C-□501	D4C-1601	D4C-1701	D4C-2601	D4C-2701
Sealed plunger	D4C-□831	D4C-□231	D4C-□331	D4C-□931	D4C-□431	D4C-□531	D4C-1631	D4C-1731	D4C-2631	D4C-2731
Roller plunger	D4C-□802	D4C-□202	D4C-□302	D4C-□902	D4C-□402	D4C-□502	D4C-1602	D4C-1702	D4C-2602	D4C-2702
Sealed roller plunger	D4C-□832	D4C-□232	D4C-□332	D4C-□932	D4C-□432	D4C-□532	D4C-1632	D4C-1732	D4C-2632	D4C-2732
Crossroller plunger	D4C-□803	D4C-□203	D4C-□303	D4C-□903	D4C-□403	D4C-□503	D4C-1603	D4C-1703	D4C-2603	D4C-2703
Sealed crossroller plunger	D4C-□833	D4C-□233	D4C-□333	D4C-□933	D4C-□433	D4C-□533	D4C-1633	D4C-1733	D4C-2633	D4C-2733
Bevel plunger	D4C-□810	D4C-□210	D4C-□310	D4C-□910	D4C-□410	D4C-□510	D4C-1610	D4C-1710	D4C-2610	D4C-2710
Coil spring	D4C-□850	D4C-□250	D4C-□350	D4C-□950	D4C-□450	D4C-□550	D4C-1650	D4C-1750	D4C-2650	D4C-2750
Roller lever	D4C-□820	D4C-□220	D4C-□320	D4C-□920	D4C-□420	D4C-□520	D4C-1620	D4C-1720	D4C-2620	D4C-2720
Roller lever (high-sensitivity model)	D4C-□824	D4C-□224	D4C-□324	D4C-□924	D4C-□424	D4C-□524	D4C-1624	D4C-1724	D4C-2624	D4C-2724
Panel mount pin plunger	D4C-□841	D4C-□241	D4C-□341	D4C-□941	D4C-□441	D4C-□541	D4C-1641	D4C-1741	D4C-2641	D4C-2741
Panel mount roller plunger	D4C-□842	D4C-□242	D4C-□342	D4C-□942	D4C-□442	D4C-□542	D4C-1642	D4C-1742	D4C-2642	D4C-2742
Panel mount crossroller plunger	D4C-□843	D4C-□243	D4C-□343	D4C-□943	D4C-□443	D4C-□543	D4C-1643	D4C-1743	D4C-2643	D4C-2743
Center roller lever plunger	D4C-□860	D4C-□260	D4C-□360	D4C-□960	D4C-□460	D4C-□560	D4C-1660	D4C-1760	D4C-2660	D4C-2760

Note 1. Cold-resistant models are also available. Order these models with reference to the following example.
D4C-1201 → D4C-1201-C

2. Models with viscosity-resistant oil specification (with an oil drain hole) are also available. Order these models with reference to the following example. Applicable only to the plunger models.
D4C-1202 → D4C-1202-M

3. Variable roller lever models are also available.

* Oil-resistant vinyl cabtire cables.

** Ordinary vinyl cabtire cables.

*** Models with SJT(O) Cables (approved by UL and CSA standards) conform to UL and CSA standards.

Standard Models (Continued)

Actuator	CENELEC cable models EN60947-5-1 approved			
	1 m	2 m	3 m	5 m
Pin plunger 	D4C-1G01 1 M	D4C-1G01 2 M	D4C-1G01 3 M	D4C-1G01 5 M
Sealed plunger 	D4C-1G31 1 M	D4C-1G31 2 M	D4C-1G31 3 M	D4C-1G31 5 M
Roller plunger 	D4C-1G02 1 M	D4C-1G02 2 M	D4C-1G02 3 M	D4C-1G02 5 M
Sealed roller plunger 	D4C-1G32 1 M	D4C-1G32 2 M	D4C-1G32 3 M	D4C-1G32 5 M
Crossroller plunger 	D4C-1G03 1 M	D4C-1G03 2 M	D4C-1G03 3 M	D4C-1G03 5 M
Sealed crossroller plunger 	D4C-1G33 1 M	D4C-1G33 2 M	D4C-1G33 3 M	D4C-1G33 5 M
Bevel plunger 	D4C-1G10 1 M	D4C-1G10 2 M	D4C-1G10 3 M	D4C-1G10 5 M
Coil spring 	D4C-1G50 1 M	D4C-1G50 2 M	D4C-1G50 3 M	D4C-1G50 5 M
Roller lever 	D4C-1G20 1M	D4C-1G20 2 M	D4C-1G20 3 M	D4C-1G20 5 M
Roller lever (high-sensitivity model) 	D4C-1G24 1 M	D4C-1G24 2 M	D4C-1G24 3 M	D4C-1G24 5 M
Panel mount pin plunger 	D4C-1G41 1 M	D4C-1G41 2 M	D4C-1G41 3 M	D4C-1G41 5 M
Panel mount roller plunger 	D4C-1G42 1 M	D4C-1G42 2 M	D4C-1G42 3 M	D4C-1G42 5 M
Panel mount crossroller plunger 	D4C-1G43 1 M	D4C-1G43 2 M	D4C-1G43 3 M	D4C-1G43 5 M

Pre-wired Models (Use VCTF Oil-resistant Cable)

Actuator	1 A at 125 VAC without operation indicator	1 A at 125 VAC with operation indicator	1 A at 30 VDC without operation indicator	1 A at 30 VDC with operation indicator
Pin plunger 	D4C-1001-AK1EJ□	D4C-2001-AK1EJ□	D4C-1001-DK1EJ□	D4C-3001-DK1EJ□
Roller plunger 	D4C-1002-AK1EJ□	D4C-2002-AK1EJ□	D4C-1002-DK1EJ□	D4C-3002-DK1EJ□
Sealed plunger 	D4C-1031-AK1EJ□	D4C-2031-AK1EJ□	D4C-1031-DK1EJ□	D4C-3031-DK1EJ□
Sealed roller plunger 	D4C-1032-AK1EJ□	D4C-2032-AK1EJ□	D4C-1032-DK1EJ□	D4C-3032-DK1EJ□
Roller lever (high-sensitivity model) 	D4C-1024-AK1EJ□	D4C-2024-AK1EJ□	D4C-1024-DK1EJ□	D4C-3024-DK1EJ□

Note 1. The □ contains the length of the cable.
For example: 30 cm → D4C-1001-AK1EJ03

2. M1 models are also available. Contact your OMRON sales representative for further information.

Weather-resistant Models

Actuator		5 A at 250 VAC 4 A at 30 VDC without operation indicator	0.1 A at 125 VAC 0.1 A at 30 VDC without operation indicator	5 A at 125 VAC with operation indicator	4 A at 30 VDC with operation indicator	0.1 A at 125 VAC with operation indicator	0.1 A at 30 VDC with operation indicator
Roller lever	3 m	D4C-1220-P	D4C-4220-P	D4C-2220-P	D4C-3220-P	D4C-5220-P	D4C-6220-P
	5 m	D4C-1320-P	D4C-4320-P	D4C-2320-P	D4C-3320-P	D4C-5320-P	D4C-6320-P
Roller lever (high-sensitivity model)	3 m	D4C-1224-P	D4C-4224-P	D4C-2224-P	D4C-3224-P	D4C-5224-P	D4C-6224-P
	5 m	D4C-1324-P	D4C-4324-P	D4C-2324-P	D4C-3324-P	D4C-5324-P	D4C-6324-P
Variable roller lever	3 m	D4C-1227-P	D4C-4227-P	D4C-2227-P	D4C-3227-P	D4C-5227-P	D4C-6227-P
	5 m	D4C-1327-P	D4C-4327-P	D4C-2327-P	D4C-3327-P	D4C-5327-P	D4C-6327-P
Variable rod lever	3 m	D4C-1229-P	D4C-4229-P	D4C-2229-P	D4C-3229-P	D4C-5229-P	D4C-6229-P
	5 m	D4C-1329-P	D4C-4329-P	D4C-2329-P	D4C-3329-P	D4C-5329-P	D4C-6329-P

Individual Parts (Head/Actuator)

Actuator type	Head (with actuator)	Actuator
Pin plunger	D4C-0001	-
Roller plunger	D4C-0002	-
Crossroller plunger	D4C-0003	-
Bevel plunger	D4C-0010	-
Roller lever	D4C-0020	WL-1A100
Roller lever	D4C-0024	WL-1A100
Variable roller lever	D4C-0027	HL-1HPA320
Variable rod lever	D4C-0029	HL-1HPA500
Sealed pin plunger	D4C-0031	-
Sealed roller plunger	D4C-0032	-
Sealed crossroller plunger	D4C-0033	-
Panel mount pin plunger	D4C-0041	-
Panel mount roller plunger	D4C-0042	-
Panel mount crossroller plunger	D4C-0043	-
Plastic rod	D4C-0050	-
Center roller lever	D4C-0060	-

Note 1: The model numbers for heads are of the form D4C-00□□, with the numbers in the squares indicating the type of actuator.

2: Actuators for plunger models, plastic rod models, and center roller lever models cannot be ordered individually. They must be ordered together with the head.

3: Consult your OMRON representative for details on cold-resistant specifications.

Mounting Plates

The WL model incorporated by equipment can be replaced with the D4C together with the Mounting Plate without changing the position of the dog or cam.

List of Replaceable Models

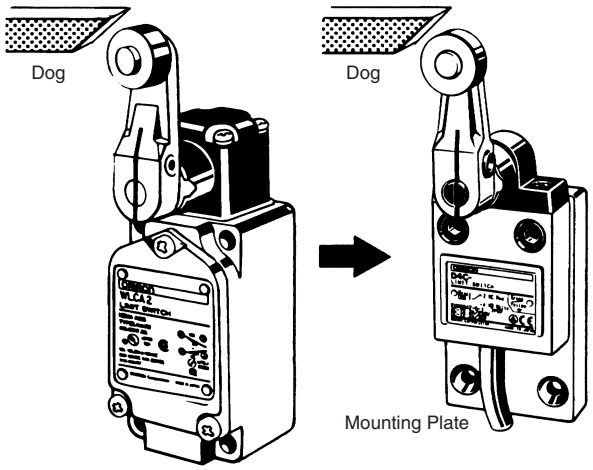
Contact your OMRON representative for the period required for delivery.

WL model (Actuator)	D4C model (Actuator)	Plate
WLD/WL01D (Top plunger)	→D4C-□□01 (Plunger)	D4C-P001
WLD2/WL01D2 (Top-roller plunger)	→D4C-□□02 (Roller plunger)	D4C-P002
WLCA2/WL01CA2 (Roller lever)	→D4C-□□20 (Roller lever)	D4C-P020

Note: The WL01□ is for micro loads.

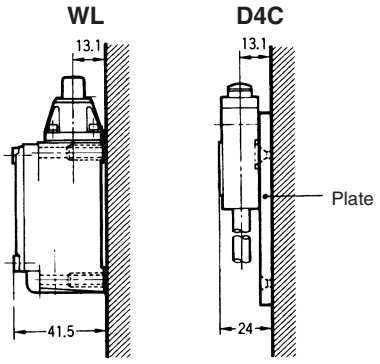
Application Example

Note: The position of the dog remains unchanged.



Remarks

There is no difference in mounting pitch between the Mounting Plate and the WL. The mounting depth of the D4C with the Mounting Plate attached is, however, shorter than that of the panel-mounted WL.



Specifications

■ Approved Standards

Agency	Standard	File No.
TÜV Rheinland	EN60947-5-1	R9451333 (see note 1) J9950970 (see note 2)
UL	UL508	E76675 (see note 3)
CSA	CSA C22.2 No. 14	LR45746 (see note 3)

Note 1: Models with VCTF oil-resistant cables only.
2: Pre-wired models only.
3: SJT(0)-cable models only.

■ Approved Standard Ratings

General Ratings

Model	Rated voltage	Non-inductive load				Inductive load				Inrush current	
		Resistive load		Lamp load		Inductive load		Motor load			
		NC	NO	NC	NO	NC	NO	NC	NO	NC	NO
D4C-1□□□	125 VAC	5 A	5 A	1.5 A	0.7 A	3 A	3 A	2.5 A	1.3 A	20 A max.	10 A max.
	250 VAC	5 A	5 A	1 A	0.5 A	2 A	2 A	1.5 A	0.8 A		
	8 VDC	5 A	5 A	2 A	2 A	5 A	4 A	3 A	3 A		
	14 VDC	5 A	5 A	2 A	2 A	4 A	4 A	3 A	3 A		
	30 VDC	4 A	4 A	2 A	2 A	3 A	3 A	3 A	3 A		
	125 VDC	0.4 A	0.4 A	0.05 A	0.05 A	0.4 A	0.4 A	0.05 A	0.05 A		
	250 VDC	0.2 A	0.2 A	0.03 A	0.03 A	0.2 A	0.2 A	0.03 A	0.03 A		
D4C-2□□□	125 VAC	5 A	5 A	1.5 A	0.7 A	3 A	3 A	2.5 A	1.3 A		
	125 VDC	0.4 A	0.4 A	0.05 A	0.05 A	0.4 A	0.4 A	0.05 A	0.05 A		
D4C-3□□□	30 VDC	4 A	4 A	2 A	2 A	3 A	3 A	3 A	3 A		
D4C-4□□□	125 VAC	0.1 A	0.1 A	---		---					
	8 VDC	0.1 A	0.1 A								
	14 VDC	0.1 A	0.1 A								
	30 VDC	0.1 A	0.1 A								
D4C-5□□□	125 VAC	0.1 A	0.1 A	---		---					
D4C-6□□□	30 VDC	0.1 A	0.1 A	---		---					

Ratings for Pre-wired Models

Rated voltage	Non-inductive load				Inductive load				Inrush current	
	Resistive load		Lamp load		Inductive load		Motor load			
	NC	NO	NC	NO	NC	NO	NC	NO	NC	NO
125 VAC	1	1	1	0.7	1	1	1	1	20 A max.	10 A max.
30 VDC	1	1	1	1	1	1	1	1		

Note 1. Inductive loads have a power factor of 0.4 min. (AC) and a time constant of 7 ms max. (DC).

2. Lamp loads have an inrush current of 10 times the steady-state current.

3. Motor loads have an inrush current of 6 times the steady-state current.

UL/CSA Approved Ratings

B300 (D4C-16□□, -17□□), B150 (D4C-26□□, -27□□)

NEMA B300 (D4C-16□□, -17□□)

Rated voltage	Carry current	Current		Volt-amperes	
		Make	Break	Make	Break
120 VAC	5 A	30 A	3 A	3,600 VA	360 VA
240 VAC		15 A	1.5 A		

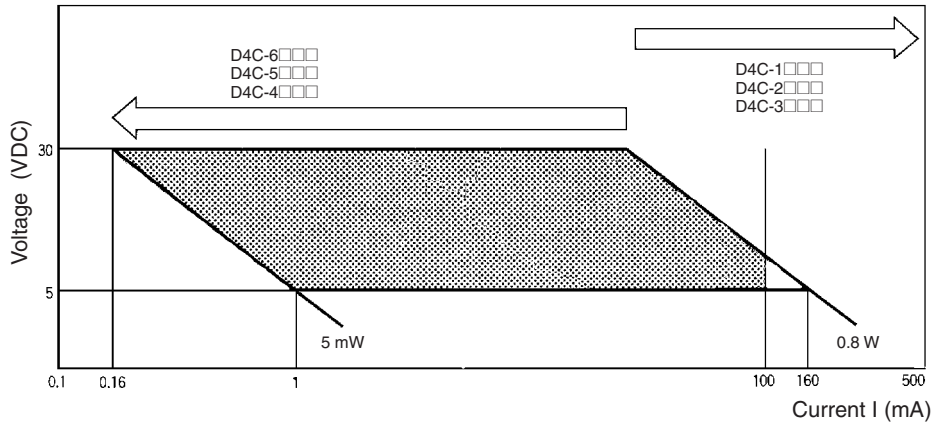
NEMA B150 (D4C-26□□, -27□□)

Rated voltage	Carry current	Current		Volt-amperes	
		Make	Break	Make	Break
120 VAC	5 A	30 A	3 A	3,600 VA	360 VA

TÜV Rheinland Approved Ratings (EN60947-5-1)

Model	Category and rating	I the
D4C-1□□□	AC-15 2 A/250 VAC DC-12 2 A/30 VDC	5 A 4 A
D4C-2□□□	AC-15 2 A/125 VAC	5 A
D4C-3□□□	DC-12 2 A/30 VDC	4 A
D4C-4□□□	AC-14 0.1 A/125 VAC DC-12 0.1 A/30 VDC	0.5 A 0.5 A
D4C-5□□□	AC-14 0.1 A/125 VAC	0.5 A
D4C-6□□□	DC-12 0.1 A/30 VDC	0.5 A

Applicable Load Range



■ Characteristics

Degree of protection	IP67
Durability (see note 2)	Mechanical: 10,000,000 operations min. Electrical: 200,000 operations min. (5A at 250 VAC, resistive load)
Operating speed	0.1 mm to 0.5 m/s (in case of plunger) 1 mm to 1 m/s (in case of roller lever)
Operating frequency	Mechanical: 120 operations/min Electrical: 30 operations/min
Rated frequency	50/60 Hz
Insulation resistance	100 MΩ min. (at 500 VDC)
Contact resistance (initial)	250 mΩ max. (initial value with 2-m VCTF cable) 300 mΩ max. (initial value with 3-m VCTF cable) 400 mΩ max. (initial value with 5-m VCTF cable)
Dielectric strength	1,000 VAC, 50/60 Hz for 1 min between terminals of the same polarity 1,500 VAC, 50/60 Hz for 1 min between current-carrying metal part and ground, and between each terminal and non-current-carrying metal part, Uimp: 2.5 kV (EN60947-5-1)
Rated insulation voltage (U_i)	300 V (EN60947-5-1)
Switching overvoltage	1,000 VAC, 300 VDC max. (EN60947-5-1)
Pollution degree (operating environment)	3 (IEC60947-5-1)
Short-circuit protective device (SCPD)	10 A fuse type gG (IEC269)
Conditional short-circuit current	100 A (EN60947-5-1)
Conventional enclosed thermal current (I_{the})	5 A, 4 A, 0.5 A (EN60947-5-1)
Protection against electric shock	Class I (with grounding wire)
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Destruction: Approx. 1,000 m/s^2 min. Malfunction: Approx. 500 m/s^2 min.
Ambient temperature (see note)	Operating: –10°C to 70°C (with no icing)
Ambient humidity	Operating: 95% max.
Weight	With 3-m VCTF cable: 360 g; With 5-m VCTF cable: 540 g

Note 1. The above figures are initial values.

2. The values are calculated at an operating temperature of 5°C to 35°C, and an operating humidity of 40% to 70%. Contact your OMRON sales representative for more detailed information on other operating environments.

■ Operating Characteristics

Model	D4C-□□01 D4C-□001-□K1EJ□	D4C-□□31 D4C-□031-□K1EJ□	D4C-□□02 D4C-□002-□K1EJ□	D4C-□□32 D4C-□032-□K1EJ□	D4C-□□03
OF max.	11.77 N	17.65 N	11.77 N	17.65 N	11.77 N
RF min.	4.41 N	4.41 N	4.41 N	4.41 N	4.41 N
PT max.	1.8 mm	1.8 mm	1.8 mm	1.8 mm	1.8 mm
OT min.	3 mm	3 mm	3 mm	3 mm	3 mm
MD max.	0.2 mm	0.2 mm	0.2 mm	0.2 mm	0.2 mm
OP	15.7±1 mm	24.9±1 mm	28.5±1 mm	34.3±1 mm	28.5±1 mm
TT	(5) mm	(5) mm	(5) mm	(5) mm	(5) mm

Model	D4C-□□33	D4C-□□10	D4C-□□50	D4C-□□20 D4C-□□27-P (see note 1) D4C-□□29-P (see note 1)	D4C-□□24 D4C-□□24-P D4C-□024-□K1EJ□
OF max.	17.65 N	11.77 N	1.47 N	5.69 N	5.69 N
RF min.	4.41 N	4.41 N	---	1.47 N	1.47 N
PT max.	1.8 mm	1.8 mm	15°	25°	10±3°
OT min.	3 mm	3 mm	---	40°	50°
MD max.	0.2 mm	0.2 mm	---	3°	3°
OP	34.3±1 mm	28.5±1 mm	---	---	---
TT	(5) mm	(5) mm	---	(70°)	(70°)

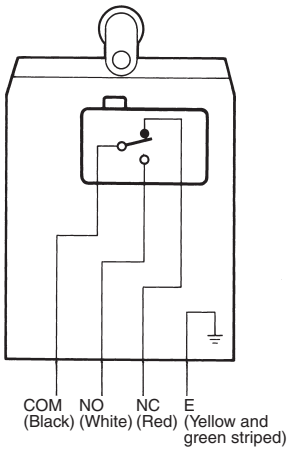
Model	D4C-□□41	D4C-□□42	D4C-□□43	D4C-□□60
OF max.	11.77 N	11.77 N	11.77 N	6.67 N
RF min.	4.41 N	4.41 N	4.41 N	1.47 N
PT max.	1.8 mm	1.8 mm	1.8 mm	10±3°
OT min.	3 mm	3 mm	3 mm	50°
MD max.	0.2 mm	0.2 mm	0.2 mm	3°
OP	31.2±1 mm	36.8±1 mm	36.8 mm	---
TT	(5) mm	(5) mm	(5) mm	---

Note 1. The values given for D4C-□□27-P and D4C-□□29-P are for when the length of the lever is 38 mm.
2. The operating characteristics for M1J□ models are the same as those for □K1EJ□ models.

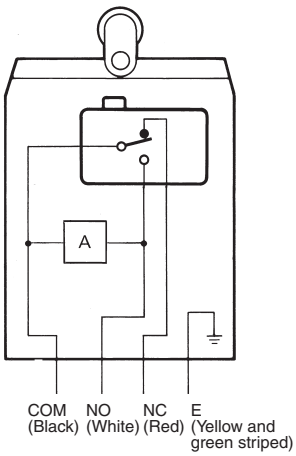
■ Contact Form

Standard Models / Weather-resistant Models

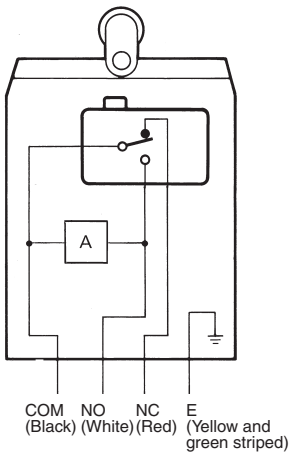
Without LED Indicator (S-FLEX VCTF Cable)



With LED Indicator (S-FLEX VCTF Cable)

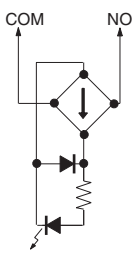


With LED Indicator (lights when operated)

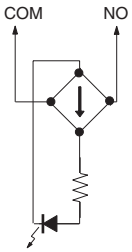


LED Indicator Circuits

100 VAC



24 VDC



Yellow/green: VCTF resin cable
Green: VCTF
UL/CSA-approved cable SJT(0)

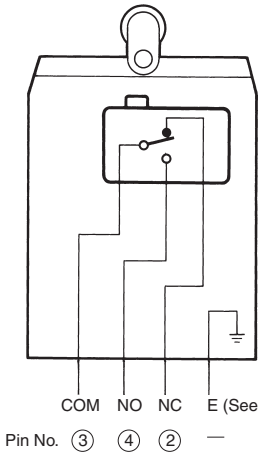
Note 1. "Lights when operated" means that when the actuator is turned or pushed and the Limit Switch contact leaves the NC side, the indicator lights.
2. "Lights when not in operation" means that when the actuator is in the free position, the indicator is lit, and when the actuator is turned or pushed and the contact comes into contact with the NO side, the indicator turns OFF.

Wire Color

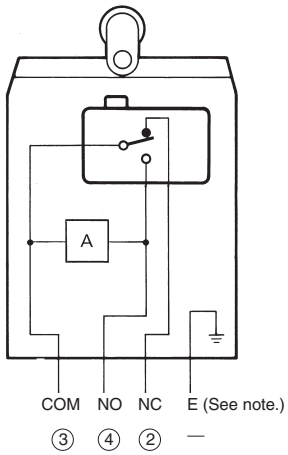
Cable	Without LED				With LED			
	COM	NO	NC	E	COM	NO	NC	E
VCTF	Black	White	Red	Green	Black	White	Red	Green
S-FLEX VCTF	Black	White	Red	Yellow/ Green	Black	White	Red	Yellow/ Green
SJT (O)	Black	Blue	Red	Green	Black	Blue	Red	Green
CENELEC CABLE	Blue	Black	Brown	Yellow/ Green	Blue	Black	Brown	Yellow/ Green

Pre-wired Models

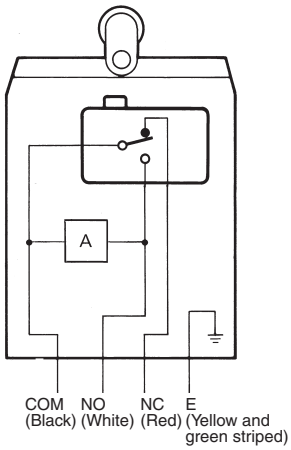
Without LED Indicator



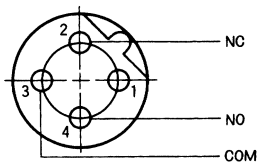
With LED Indicator (lights when not in operation)



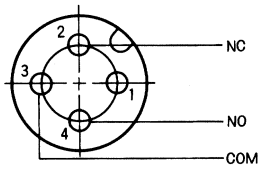
With LED Indicator (lights when operated)



AC



DC



Note: Not connected to the ground.

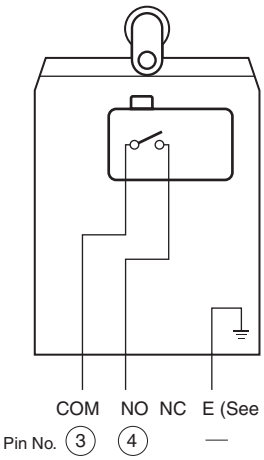
Yellow/green: VCTF resin cable
Green: VCTF
UL/CSA-approved cable SJT(0)

Note 1. "Lights when operated" means that when the actuator is turned or pushed and the Limit Switch contact leaves the NC side, the indicator lights.

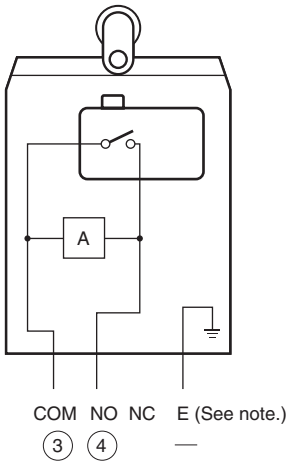
2. "Lights when not in operation" means that when the actuator is in the free position, the indicator is lit, and when the actuator is turned or pushed and the contact comes into contact with the NO side, the indicator turns OFF.

Connector Models for ASI Devices

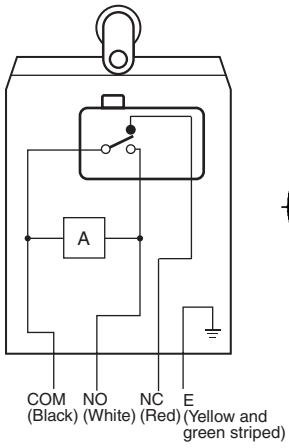
Without LED Indicator



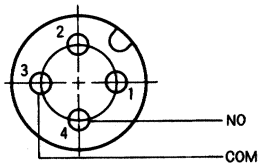
With LED Indicator (lights when not in operation)



With LED Indicator (lights when operated)



DC



Note: Not connected to the ground.

Yellow/green: VCTF resin cable
Green: VCTF
UL/CSA-approved cable SJT(0)

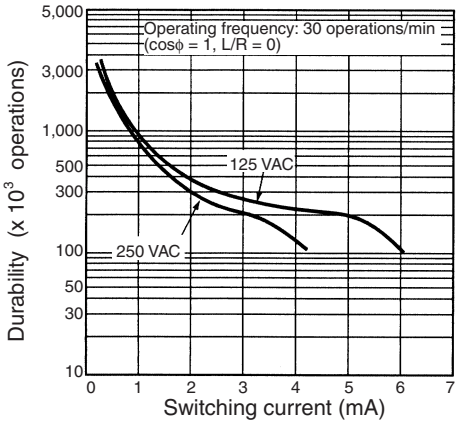
Note 1. "Lights when operated" means that when the actuator is turned or pushed and the Limit Switch contact leaves the NC side, the indicator lights.

2. "Lights when not in operation" means that when the actuator is in the free position, the indicator is lit, and when the actuator is turned or pushed and the contact comes into contact with the NO side, the indicator turns OFF.

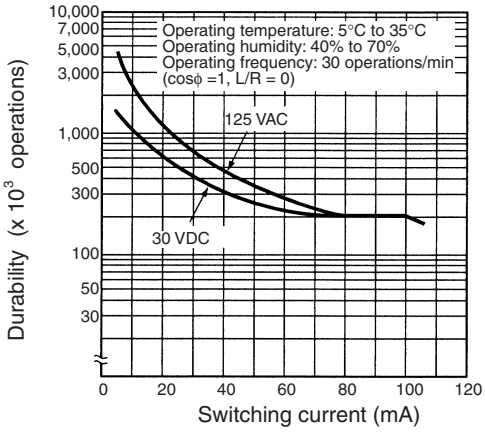
Engineering Data

■ Electrical Durability

D4C-1□□□, -2□□□, -3□□□



D4C-4□□□, -5□□□, -6□□□



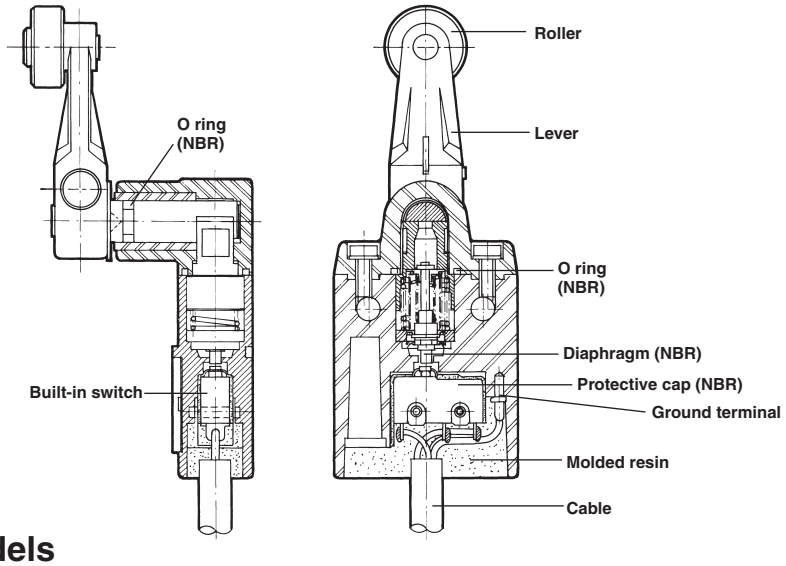
■ Leakage Current for LED-indicator Models

Model	Voltage	Leakage current	Resistance
D4C-2□□□	125 VAC	1.7 mA	68 kΩ
D4C-3□□□	30 VDC	1.7 mA	15 kΩ
D4C-5□□□	125 VAC	1.7 mA	68 kΩ
D4C-6□□□	30 VDC	1.7 mA	15 kΩ

Nomenclature

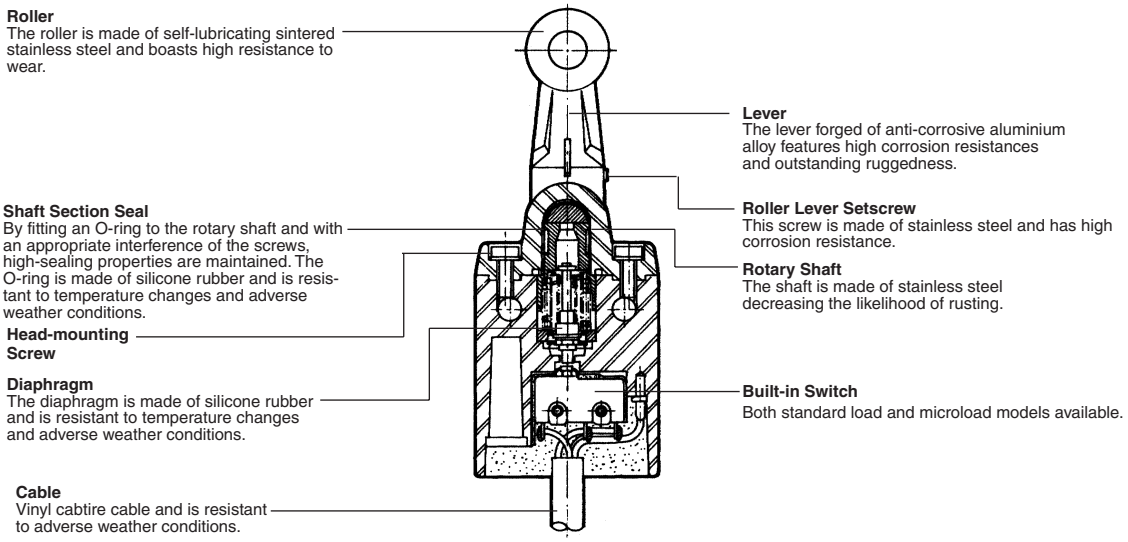
Standard Models

Roller Lever Models Without Indicator



Weather-resistant Models

Roller Lever Models Without Indicator

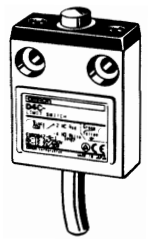


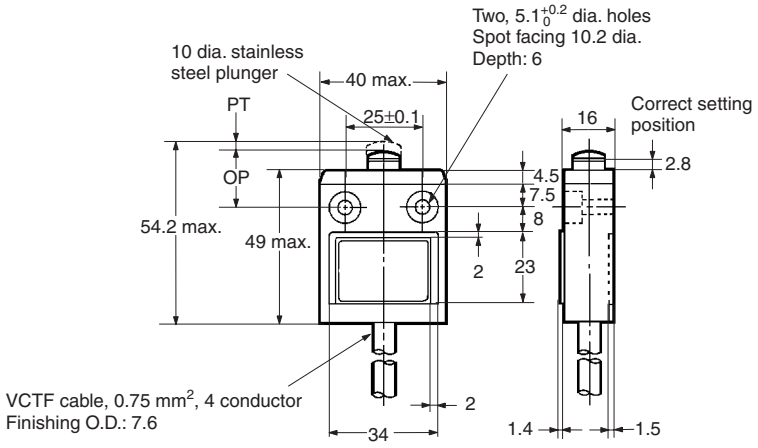
Dimensions

Note 1. All units are in millimeters unless otherwise indicated.
2. Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.

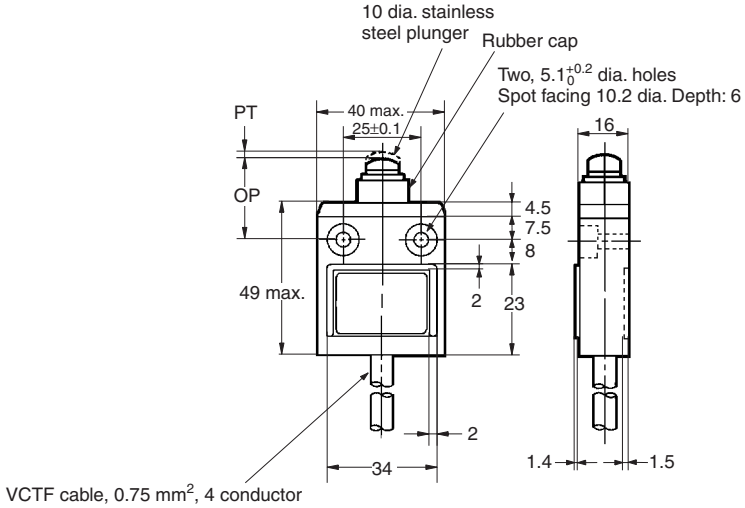
Standard Models

Pin Plunger
D4C-□□01

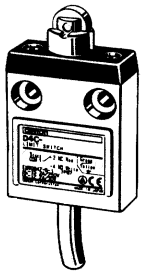


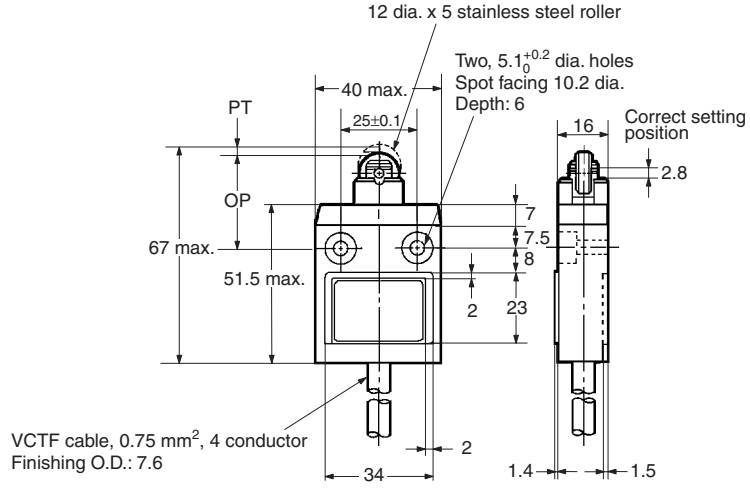


Sealed Plunger
D4C-□□31

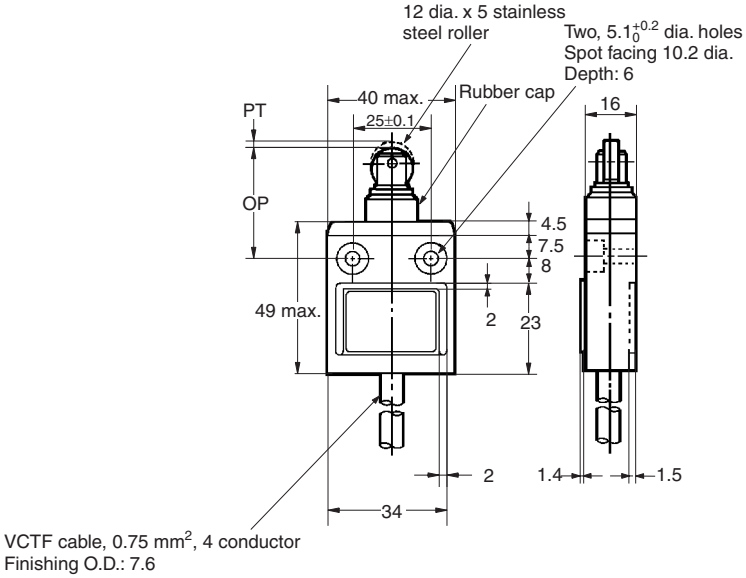


Roller Plunger
D4C-□□02

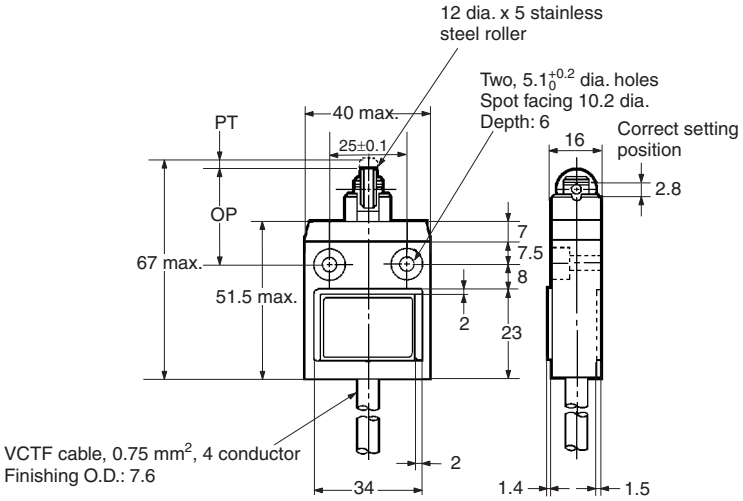




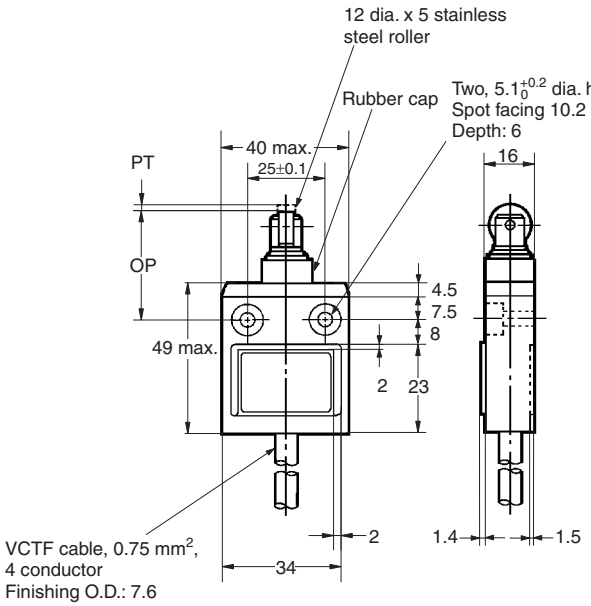
Sealed Roller Plunger
D4C-□□32



Crossroller Plunger
D4C-□□03

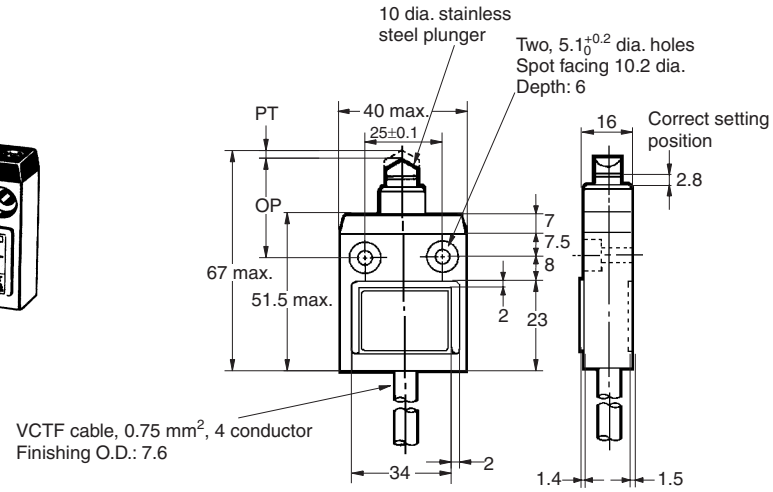


Sealed Crossroller Plunger
D4C-□□33



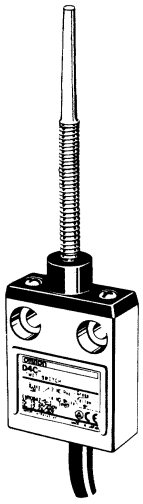
Bevel Plunger

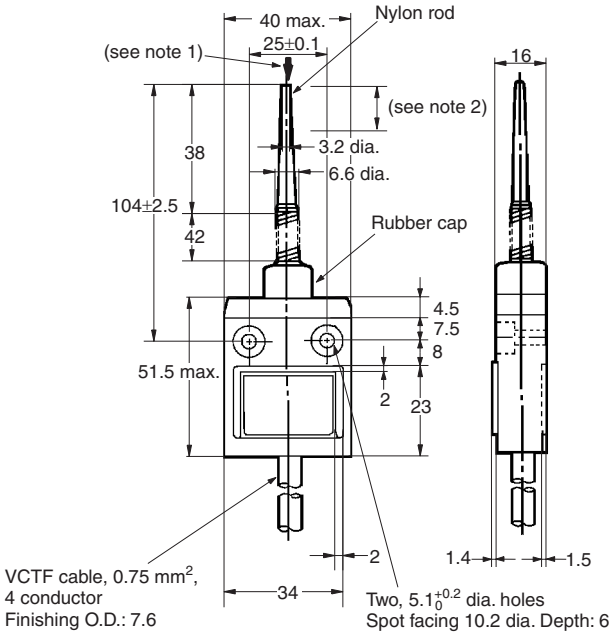
D4C-□□10



Coil Spring

D4C-□□50



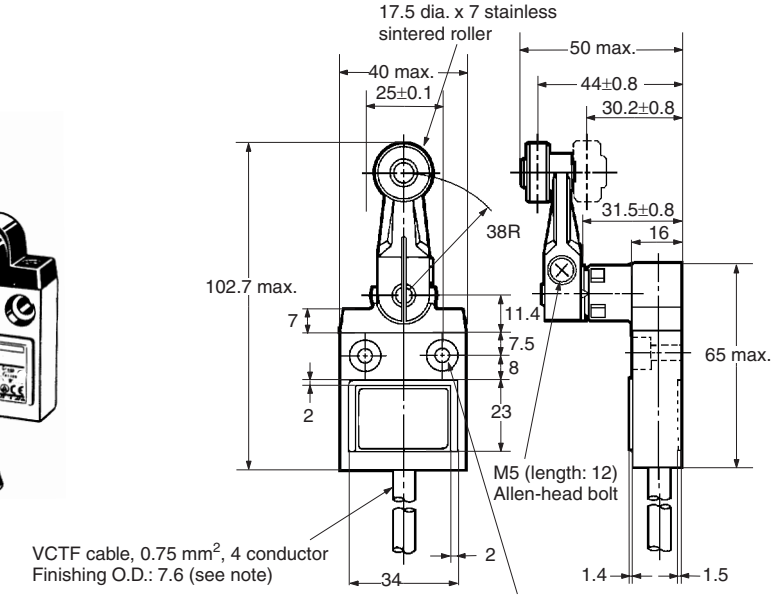


Note: **1.** Operation is possible in any direction except in parallel to the axis ↓.

2. The ideal range for operation is between the tip of the rod and 1/3 of the length of the actuator.

Roller Lever

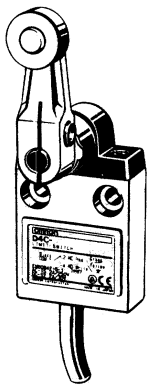
D4C-□□20
D4C-□□20-P

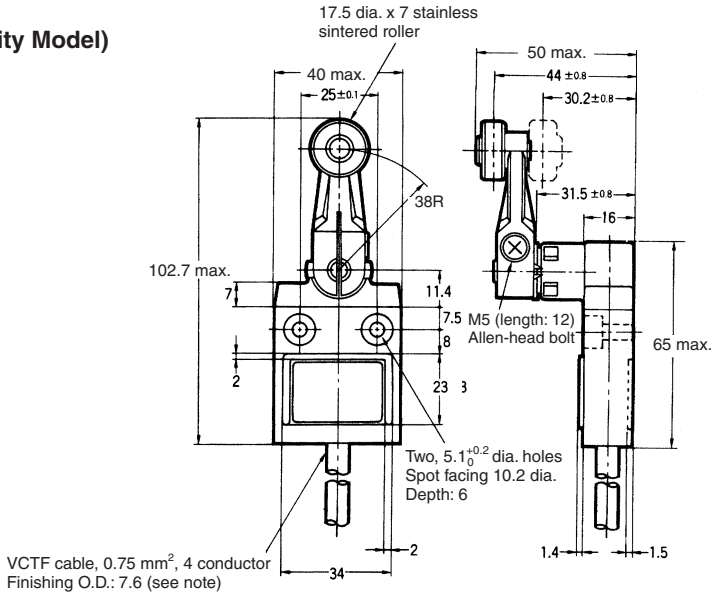


Note: S-FLEX VCTF Cables are used for weather-resistant models (D4C-P).

Roller Lever (High-Sensitivity Model)

D4C-□□24
D4C-□□24-P

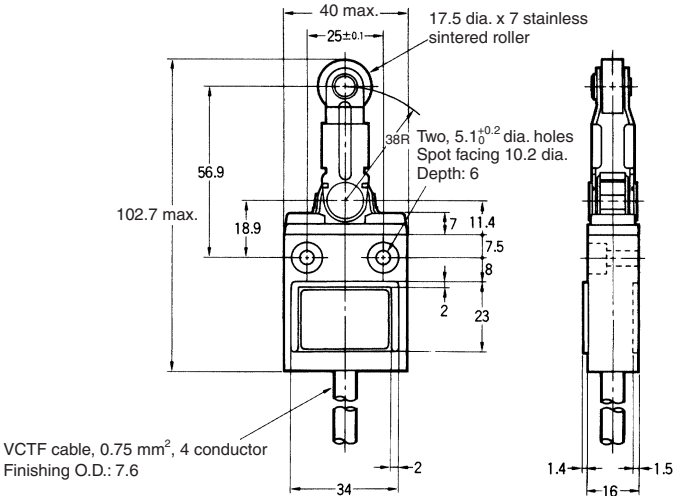




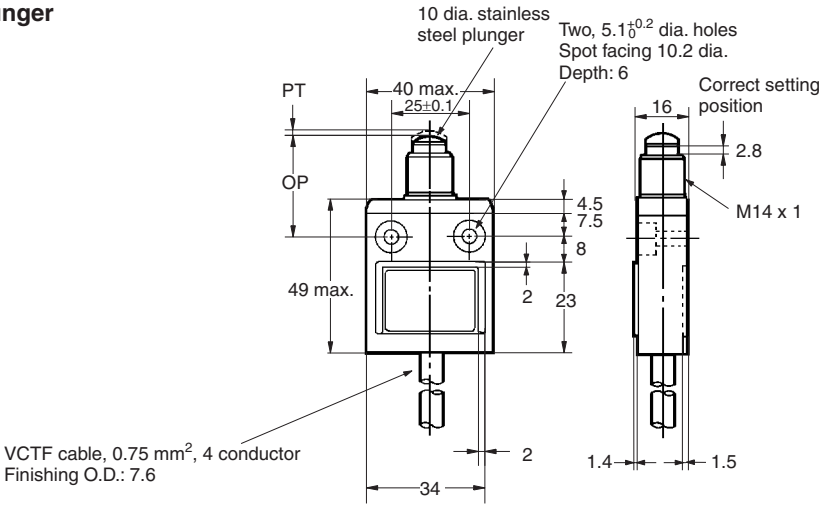
Note: S-FLEX VCTF Cables are used for weather-resistant models (D4C-P).

Center Roller Lever Plunger

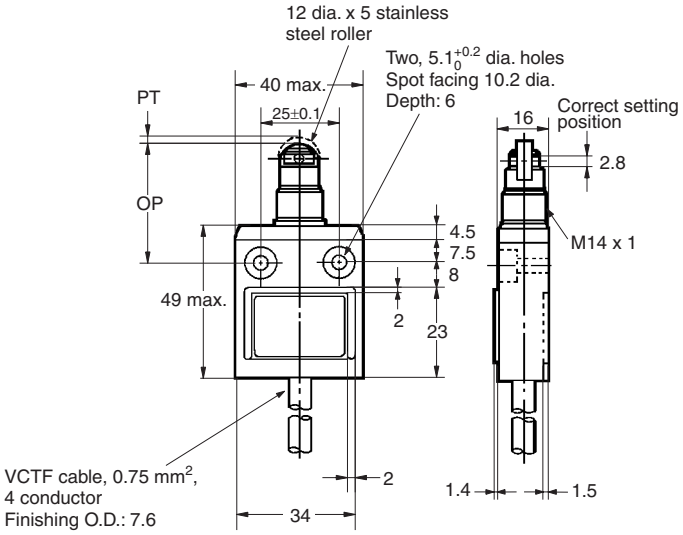
D4C-□□60



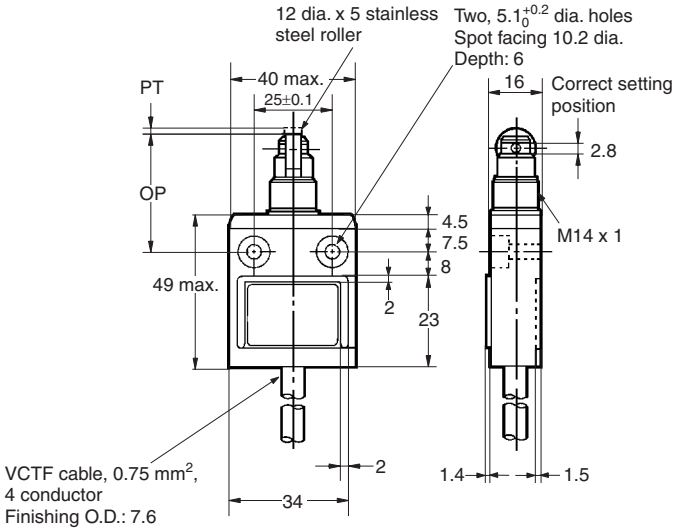
Panel Mount Pin Plunger
D4C-□□41



Panel Mount Roller Plunger
D4C-□□42



Panel Mount Crossroller Plunger
D4C-□□43

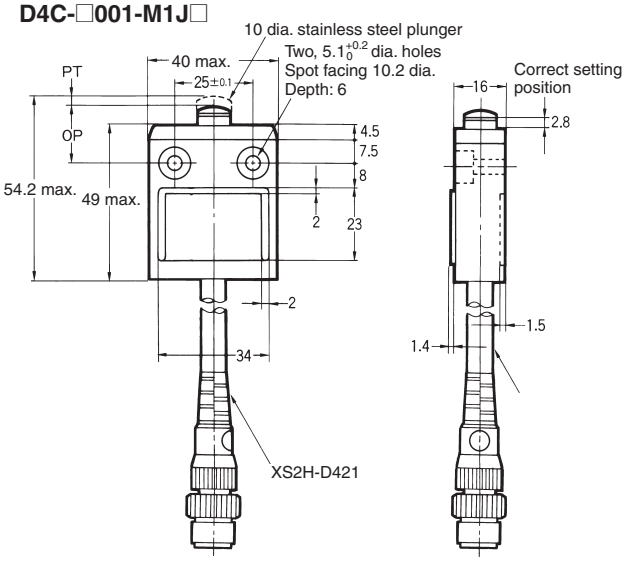


Note: Two nuts (thickness: 2.5; distance across: 17) are included with the D4C-□□41, D4C-□□42 and D4C-□□43.

Pre-wired Models

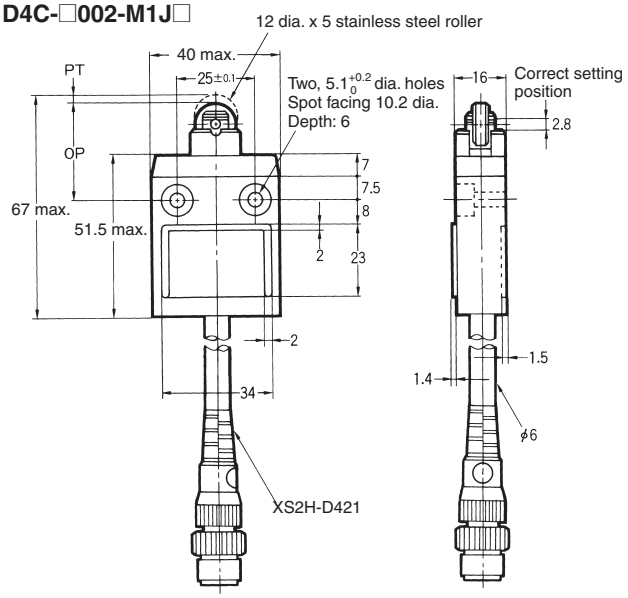
Pin Plunger

D4C-□001-□K1EJ□
D4C-□001-M1J□



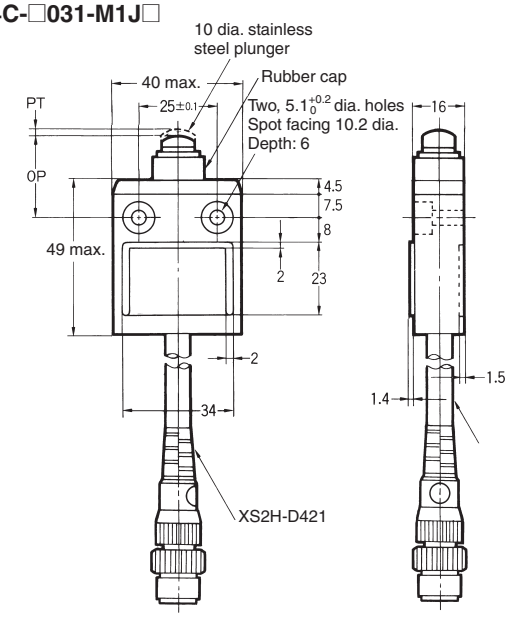
Roller Plunger

D4C-□002-□K1EJ□
D4C-□002-M1J□



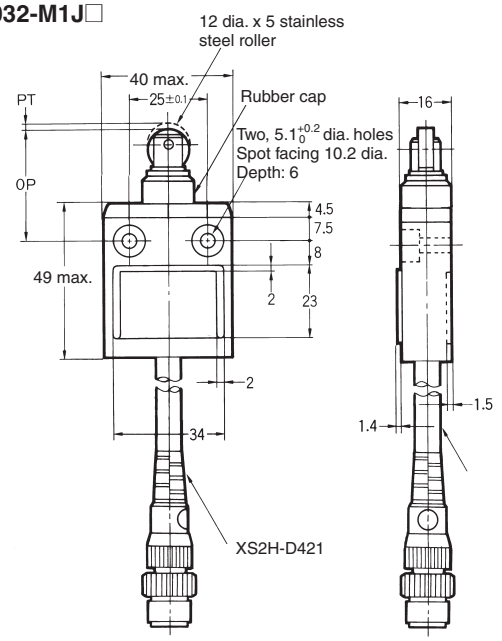
Sealed Pin Plunger

D4C-□031-□K1EJ□
D4C-□031-M1J□



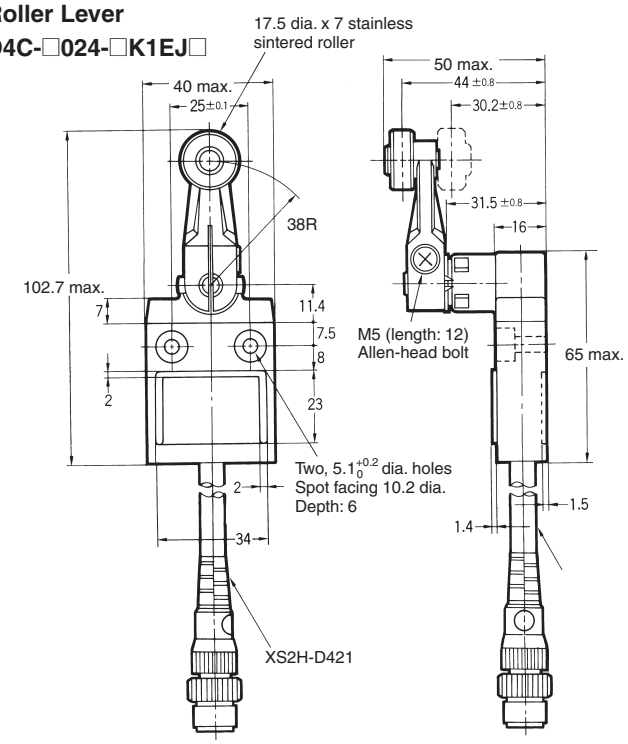
Sealed Roller Plunger

D4C-□032-□K1EJ□
D4C-□032-M1J□



Roller Lever

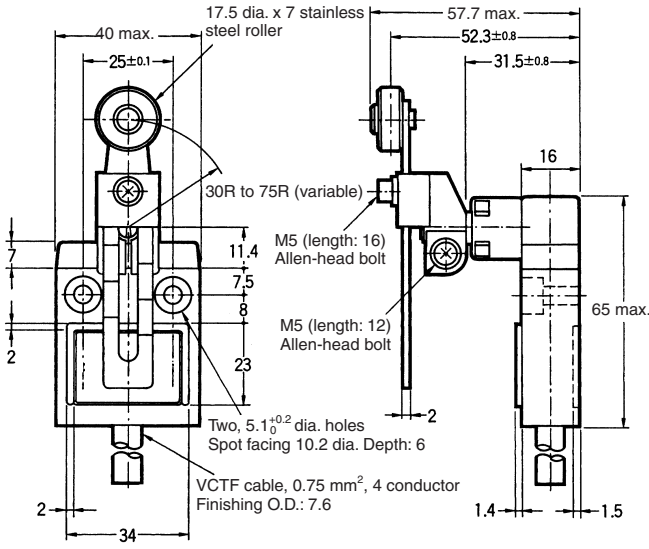
D4C-□024-□K1EJ□



Weather-resistant Models

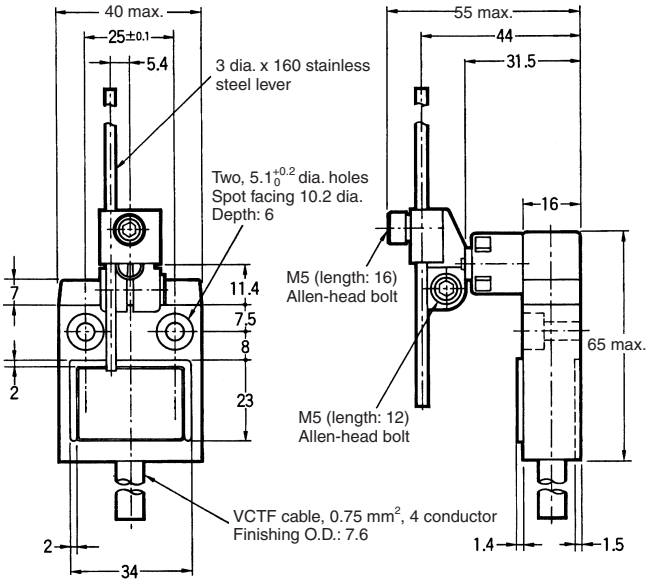
Adjustable Roller Lever

D4C-□□27-P



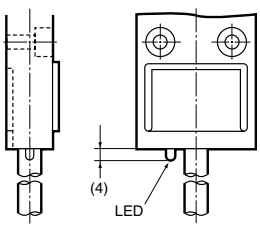
Adjustable Rod Lever

D4C-□□29-P



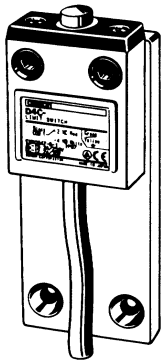
Models with LED Indicator

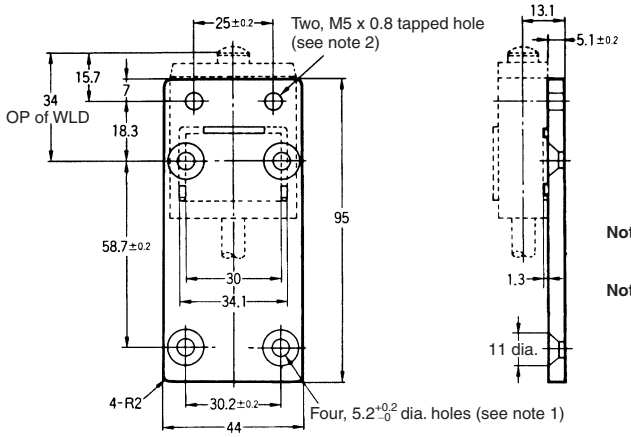
The dimensions of the LED indicator for models equipped with one are shown below.



Special Mounting Plates (Plates are not provided with Limit Switches.)

D4C-P001



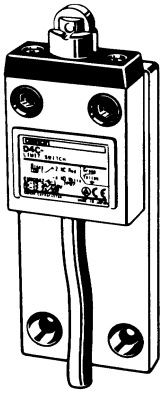


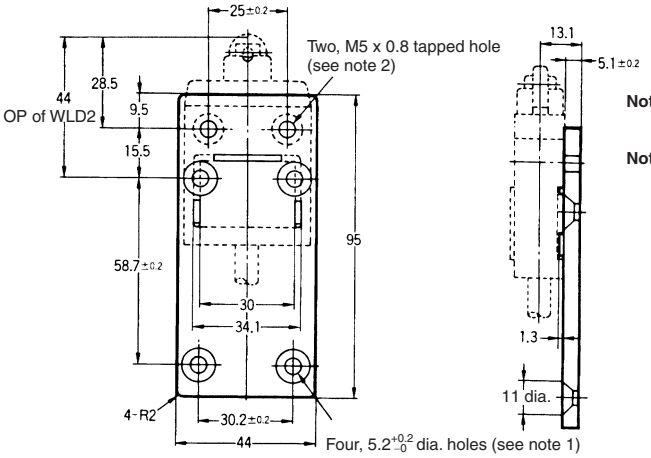
Note: Four, M5 x 0.8 hexagon pan-head bolts and two M5 x 0.8 Allen-head bolts are provided.

Note: **1.** Tighten the 5.2 +0.2 0 dia. holes with the M5 x 10 hexagon pan-head screws.

2. Insert the M5 Allen-head bolts into the M5 tapping holes to tighten the Mounting Plate securely.

D4C-P002



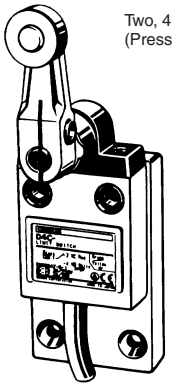


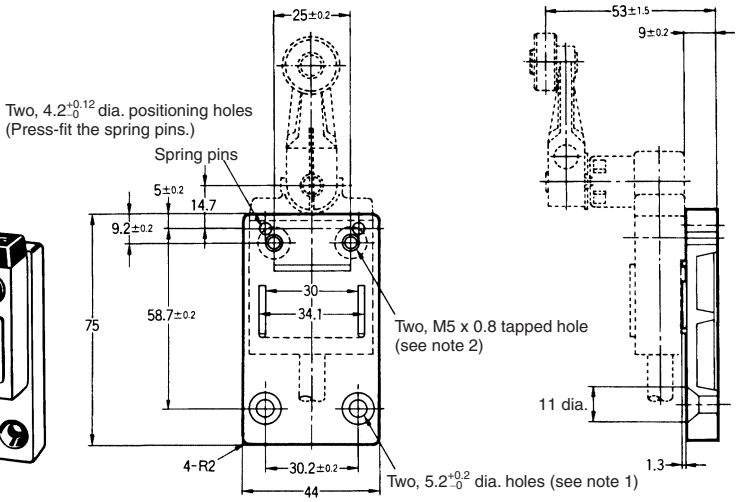
Note: Four, M5 x 0.8 hexagon pan-head bolts and two M5 x 0.8 Allen-head bolts are provided.

Note: **1.** Tighten the 5.2 +0.2 0 dia. holes with the M5 x 10 hexagon pan-head screws.

2. Insert the M5 Allen-head bolts into the M5 tapping holes to tighten the Mounting Plate securely.

D4C-P020





Note: Four, M5 x 0.8 hexagon pan-head bolts and two M5 x 0.8 Allen-head bolts are provided.

Note: **1.** Tighten the 5.2 +0.2 0 dia. holes with the M5 x 10 hexagon pan-head screws. Four, M5 x 0.8 hexagon pan-head bolts, two M5 x 0.8 Allen-head bolts are provided, and two 4 x 14 spring pins are provided.

2. Insert the M5 Allen-head bolts into the M5 tapping holes to tighten the Mounting Plate securely.

Note: Each dimension has a tolerance of ±0.4 mm unless otherwise specified.

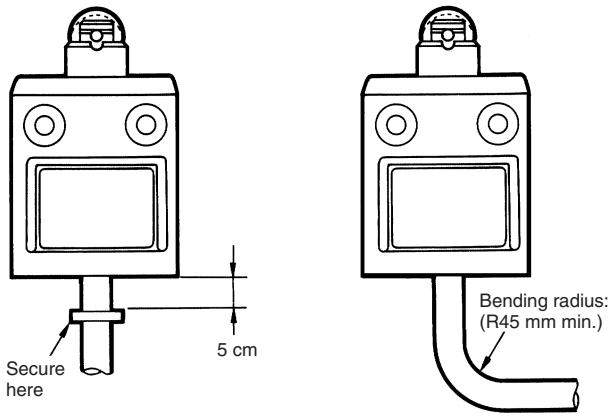
Precautions

■ Correct Use

Handling

The bottom of the Switch at the cable outlet is resin-molded. Secure the cable at a point 5 cm from the Switch bottom to prevent exertion of excess force on the cable.

When bending the cable, provide a bending radius of 45 mm min. so as not to damage the cable insulation or sheath. Excessive bending may cause fire or leakage current.



Connections

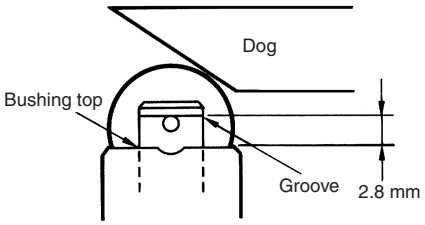
Be sure to connect a fuse with a breaking current 1.5 to 2 times larger than the rated current to the Limit Switch in series in order to protect the Limit Switch from damage due to short-circuiting.

When using the Limit Switch for the EN ratings, use the gI or gG 10-A fuse.

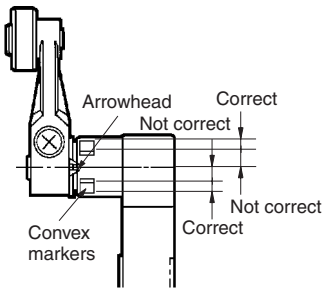
Operation

Operation method, shapes of cam and dog, operating frequency, and overtravel have a significant effect on the service life and precision of a Limit Switch. For this reason, the dog angle must be 30° max., the surface roughness of the dog must be 6.3S min. and hardness must be Hv400 to 500.

To allow the plunger-type actuator to travel properly, adjust the dog and cam to the proper setting positions. The proper position is where the plunger groove fits the bushing top.



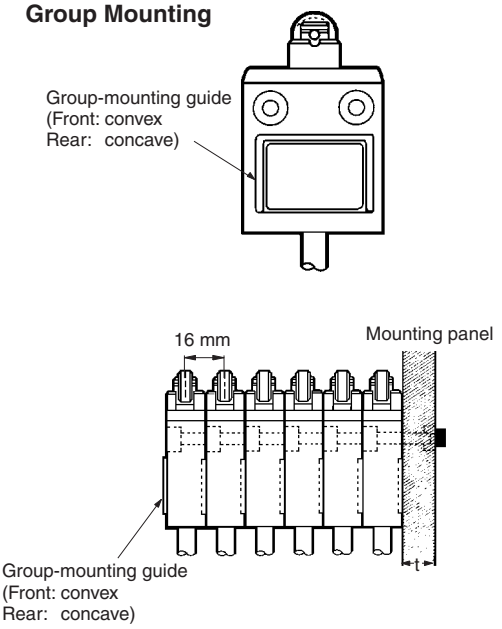
To allow the roller lever-type actuator to travel properly, adjust the dog and cam so that the arrow head is positioned between the two convex markers as shown below.



Mounting

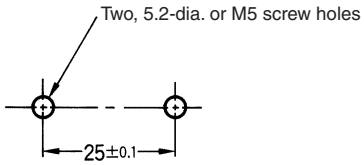
A maximum of 6 Switches may be group-mounted. In this case, pay attention to the mounting direction so that the convex part of the group-mounting guide on one Switch fits into the concave part of the guide on the other Switch as shown in the figure below. For group mounting, the mounting panel must have a thickness (t) of 6 mm min.

Group Mounting



If the mounting panel is warped or has protruding parts, a malfunction may result. Make sure that the mounting panel is not warped and has even surfaces.

Mounting Holes



Use a Switch with a rubber cap when using the plunger type in an environment where malfunction is possible due to environmental conditions such as dust or cutting chips which may not allow resetting.

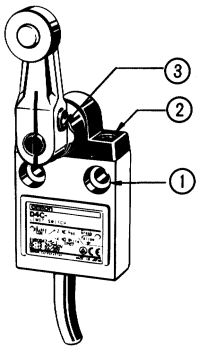
Do not expose the Switch to water exceeding 70°C or use it in steam.

When the D4C is used in a circuit of a device to be exported to Europe, classified as Overvoltage Class III as specified in IEC664, provide a contact protection circuit.

Tighten each screw to a torque according to the following table.

No.	Type	Torque
1	M5 Allen-head bolt	4.90 to 5.88 N·m
2	M3.5 head mounting screw	0.78 to 0.88 N·m
3	M5 Allen-head bolt	4.90 to 5.88 N·m

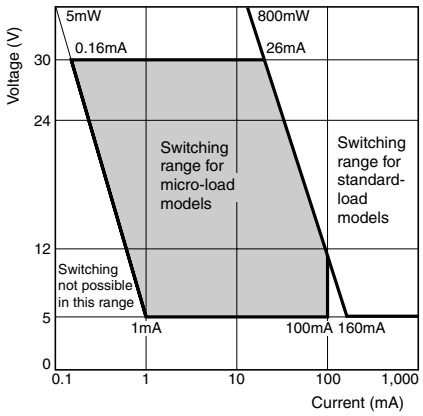
Note: By removing the two screws from the head, the head direction can be rotated 180°. After changing the head direction, re-tighten to the torque specified above. Be careful not to allow any foreign substance to enter the Switch.



Micro-load Models (D4C-4, -5, -6)

Switching Range

Micro-load models can be used for switching in the range shown below.



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. C032-E2-08 In the interest of product improvement, specifications are subject to change without notice.