OMRON

Miniature Basic Switch

D3VJ

Small size basic detection switch.

- Same dimensions as D3V series.
- Suitable to emerging market demand.
- Available by 16A, 11A and 6A.

Ordering Information

Model Number Legend

D3VJ-□□-□□□
1 2 3 4 5

1. Ratings
- 16: AC250V 16A
- 11: AC250V 11A
- 6: AC250V 6A

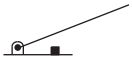
2. Actuator
- None: pin type
- 1: Hinge short lever
- 2: Hinge lever
- 3: Hinge long lever
- 4: Hinge R lever
- 5: Hinge roller short lever
- 6: Hinge roller lever

3. Contact
- 1: 1c (SPDT)
- 3: 1a (SPST NC)

4. Terminal
- A: Soldering
- C2: #187 tab
- C: #250 tab

5. Operation force
- 5: 1.96N
- 4: 0.98N

■ Variations

	Terminal	Contact Form	OF	16A	11A	6A
Pin plunger 	Solder	1c	1.96N	D3VJ-16-1A5	D3VJ-11-1A5	D3VJ-6-1A5
		1a		D3VJ-16-3A5	D3VJ-11-3A5	D3VJ-6-3A5
		1c	0.98N		D3VJ-11-1A4	D3VJ-6-1A4
		1a			D3VJ-11-3A4	D3VJ-6-3A4
	Quick connect (#187)	1c	1.96N	D3VJ-16-1C25	D3VJ-11-1C25	D3VJ-6-1C25
		1a		D3VJ-16-3C25	D3VJ-11-3C25	D3VJ-6-3C25
		1c	0.98N		D3VJ-11-1C24	D3VJ-6-1C24
		1a			D3VJ-11-3C24	D3VJ-6-3C24
	Quick connect (#250)	1c	1.96N	D3VJ-16-1C5	D3VJ-11-1C5	D3VJ-6-1C5
		1a		D3VJ-16-3C5	D3VJ-11-3C5	D3VJ-6-3C5
		1c	0.98N		D3VJ-11-1C4	D3VJ-6-1C4
		1a			D3VJ-11-3C4	D3VJ-6-3C4
Short hinge lever 	Solder	1c	1.96N	D3VJ-161-1A5	D3VJ-111-1A5	D3VJ-61-1A5
		1a		D3VJ-161-3A5	D3VJ-111-3A5	D3VJ-61-3A5
		1c	0.98N		D3VJ-111-1A4	D3VJ-61-1A4
		1a			D3VJ-111-3A4	D3VJ-61-3A4
	Quick connect (#187)	1c	1.96N	D3VJ-161-1C25	D3VJ-111-1C25	D3VJ-61-1C25
		1a		D3VJ-161-3C25	D3VJ-111-3C25	D3VJ-61-3C25
		1c	0.98N		D3VJ-111-1C24	D3VJ-61-1C24
		1a			D3VJ-111-3C24	D3VJ-61-3C24
	Quick connect (#250)	1c	1.96N	D3VJ-161-1C5	D3VJ-111-1C5	D3VJ-61-1C5
		1a		D3VJ-161-3C5	D3VJ-111-3C5	D3VJ-61-3C5
		1c	0.98N		D3VJ-111-1C4	D3VJ-61-1C4
		1a			D3VJ-111-3C4	D3VJ-61-3C4
Hinge lever 	Solder	1c	1.23N	D3VJ-162-1A5	D3VJ-112-1A5	D3VJ-62-1A5
		1a		D3VJ-162-3A5	D3VJ-112-3A5	D3VJ-62-3A5
		1c	0.59N		D3VJ-112-1A4	D3VJ-62-1A4
		1a			D3VJ-112-3A4	D3VJ-62-3A4
	Quick connect (#187)	1c	1.23N	D3VJ-162-1C25	D3VJ-112-1C25	D3VJ-62-1C25
		1a		D3VJ-162-3C25	D3VJ-112-3C25	D3VJ-62-3C25
		1c	0.59N		D3VJ-112-1C24	D3VJ-62-1C24
		1a			D3VJ-112-3C24	D3VJ-62-3C24
	Quick connect (#250)	1c	1.23N	D3VJ-162-1C5	D3VJ-112-1C5	D3VJ-62-1C5
		1a		D3VJ-162-3C5	D3VJ-112-3C5	D3VJ-62-3C5
		1c	0.59N		D3VJ-112-1C4	D3VJ-62-1C4
		1a			D3VJ-112-3C4	D3VJ-62-3C4
Long hinge lever 	Solder	1c	0.69N	D3VJ-163-1A5	D3VJ-113-1A5	D3VJ-63-1A5
		1a		D3VJ-163-3A5	D3VJ-113-3A5	D3VJ-63-3A5
		1c	0.34N		D3VJ-113-1A4	D3VJ-63-1A4
		1a			D3VJ-113-3A4	D3VJ-63-3A4
	Quick connect (#187)	1c	0.69N	D3VJ-163-1C25	D3VJ-113-1C25	D3VJ-63-1C25
		1a		D3VJ-163-3C25	D3VJ-113-3C25	D3VJ-63-3C25
		1c	0.34N		D3VJ-113-1C24	D3VJ-63-1C24
		1a			D3VJ-113-3C24	D3VJ-63-3C24
	Quick connect (#250)	1c	0.69N	D3VJ-163-1C5	D3VJ-113-1C5	D3VJ-63-1C5
		1a		D3VJ-163-3C5	D3VJ-113-3C5	D3VJ-63-3C5
		1c	0.34N		D3VJ-113-1C4	D3VJ-63-1C4
		1a			D3VJ-113-3C4	D3VJ-63-3C4

	Terminal	Contact Form	OF	16A	11A	6A
Hinge R lever	Solder	1c	1.23N	D3VJ-164-1A5	D3VJ-114-1A5	D3VJ-64-1A5
		1a		D3VJ-164-3A5	D3VJ-114-3A5	D3VJ-64-3A5
		1c	0.59N		D3VJ-114-1A4	D3VJ-64-1A4
		1a			D3VJ-114-3A4	D3VJ-64-3A4
	Quick connect (#187)	1c	1.23N	D3VJ-164-1C25	D3VJ-114-1C25	D3VJ-64-1C25
		1a		D3VJ-164-3C25	D3VJ-114-3C25	D3VJ-64-3C25
		1c	0.59N		D3VJ-114-1C24	D3VJ-64-1C24
		1a			D3VJ-114-3C24	D3VJ-64-3C24
	Quick connect (#250)	1c	1.23N	D3VJ-164-1C5	D3VJ-114-1C5	D3VJ-64-1C5
		1a		D3VJ-164-3C5	D3VJ-114-3C5	D3VJ-64-3C5
		1c	0.59N		D3VJ-114-1C4	D3VJ-64-1C4
		1a			D3VJ-114-3C4	D3VJ-64-3C4
Short hinge roller lever	Solder	1c	2.35N	D3VJ-165-1A5	D3VJ-115-1A5	D3VJ-65-1A5
		1a		D3VJ-165-3A5	D3VJ-115-3A5	D3VJ-65-3A5
		1c	1.18N		D3VJ-115-1A4	D3VJ-65-1A4
		1a			D3VJ-115-3A4	D3VJ-65-3A4
	Quick connect (#187)	1c	2.35N	D3VJ-165-1C25	D3VJ-115-1C25	D3VJ-65-1C25
		1a		D3VJ-165-3C25	D3VJ-115-3C25	D3VJ-65-3C25
		1c	1.18N		D3VJ-115-1C24	D3VJ-65-1C24
		1a			D3VJ-115-3C24	D3VJ-65-3C24
	Quick connect (#250)	1c	2.35N	D3VJ-165-1C5	D3VJ-115-1C5	D3VJ-65-1C5
		1a		D3VJ-165-3C5	D3VJ-115-3C5	D3VJ-65-3C5
		1c	1.18N		D3VJ-115-1C4	D3VJ-65-1C4
		1a			D3VJ-115-3C4	D3VJ-65-3C4
Hinge roller leverr	Solder	1c	1.23N	D3VJ-166-1A5	D3VJ-116-1A5	D3VJ-66-1A5
		1a		D3VJ-166-3A5	D3VJ-116-3A5	D3VJ-66-3A5
		1c	0.59N		D3VJ-116-1A4	D3VJ-66-1A4
		1a			D3VJ-116-3A4	D3VJ-66-3A4
	Quick connect (#187)	1c	1.23N	D3VJ-16-1C25	D3VJ-116-1C25	D3VJ-66-1C25
		1a		D3VJ-16-3C25	D3VJ-116-3C25	D3VJ-66-3C25
		1c	0.59N		D3VJ-116-1C24	D3VJ-66-1C24
		1a			D3VJ-116-3C24	D3VJ-66-3C24
	Quick connect (#250)	1c	1.23N	D3VJ-166-1C5	D3VJ-116-1C5	D3VJ-66-1C5
		1a		D3VJ-166-3C5	D3VJ-116-3C5	D3VJ-66-3C5
		1c	0.59N		D3VJ-116-1C4	D3VJ-66-1C4
		1a			D3VJ-116-3C4	D3VJ-66-3C4

Specifications

Ratings

Model	Rated voltage	Resistive load
D3VJ-16	250 VAC	16 A
	125 VDC	0.6 A
	250 VDC	0.3 A
D3VJ-11	250 VAC	11 A
	125 VDC	0.6 A
	250 VDC	0.3 A
D3VJ-6	250 VAC	6 A
	125 VDC	0.4 A
	250 VDC	0.3 A

Note: **1.** The above current values are the normal current values of models with a contact gap of 1 mm (gap F), which vary with the normal current values of models with a contact gap of 0.5 mm (gap G).

2. The ratings values apply under the following test conditions:
Ambient temperature: 20± 2° C
Ambient humidity: 65± 5%
Operating frequency: 30 operations/min

Characteristics

Permissible operating speed	0.1 mm to 1 m/s (pin plunger models)
Permissible operating frequency	Mechanical: 600 operations/min max. Electrical: 30 operations/min max.
Insulation resistance	100 MΩ min. (at 500 VDC)
Contact resistance (initial values)	30 mΩ max.
Dielectric strength (see note 2)	1,000 VAC, 50/60 Hz for 1 min between terminals of the same polarity
	2,000 VAC, 50/60 Hz for 1 min between current-carrying metal parts and ground, and between each terminal and non-current-carrying metal parts
Vibration resistance (see note 3)	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude
Shock resistance (see note 3)	Destruction:400 m/s^2 {approx. 40G} max. Malfunction:100 m/s^2 {approx. 10G} max.
Durability (see note 4)	Mechanical: 1,000,000 operations min. Electrical: D3VJ-16: 50,000 operations min. D3VJ-11: 100,000 operations min. D3VJ-6: 200,000 operations min.
Degree of protection	IEC IP40
Degree of protection against electric shock	Class I
Proof tracking index (PTI)	250
Ambient operating temperature	–25°C to +105°C (at ambient humidity of 60% max.) (with no icing or condensation)
Ambient operating humidity	85% max. (for 5°C to 35°C)
Weight	Approx. 6.2 g (pin plunger models)

Note: **1.** The data given above are initial values.

2. The dielectric strength values shown in the table are for models with a Separator.

3. For the pin plunger models, the above values apply for use at both the free position and total travel position. For the lever models, they apply at the total travel position.

4. For testing conditions, contact your OMRON sales representative.

Approved Standards

Consult your OMRON sales representative for specific models with standard approvals.

UL 61058

EN 61058-1: 1992+A1: 1993 (License No. 40024894)

Rated voltage	D3VJ-16	D3VJ-11	D3VJ-6
125 VAC	---	---	---
250 VAC	16 (3) A	11 (3) A	6 (2) A

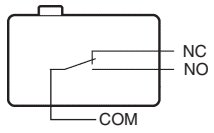
Testing conditions: 5E4 (50,000 operations), T85 (0°C to 85°C) for D3VJ-21/D3VJ-01, T105 (0°C to 105°C)

Contact Specifications

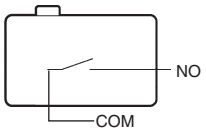
Item		D3VJ-16	D3VJ-11	D3VJ-6
Contact	Specification	Rivet		
	Material	Silver alloy		
	Gap (standard value)	1 mm		
Inrush current	NC	40 A max.	24 A max.	15 A max.
	NO			
Minimum applicable load (see note)		160 mA at 5 VDC		

Contact Form

SPDT



SPST-NO

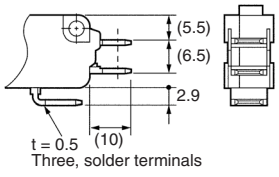
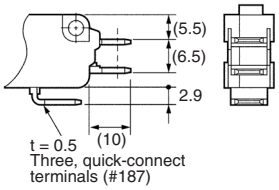
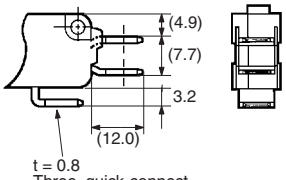
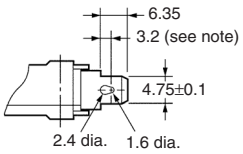
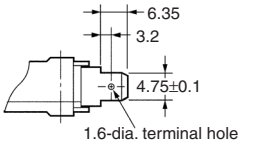
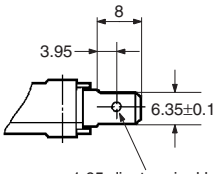


Dimensions

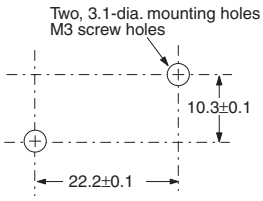
Terminals

Note: **1.** All units are in millimeters unless otherwise indicated.

2. The table below is for the SPDT contact specifications. Two terminals will be available for SPST-NO contact specifications. For terminal positions, refer to the above *Contact Form*.

Solder Terminals(A)	Quick-connect Terminals (#187) (C2)	Quick-connect Terminals (#250) (C)
 Three, solder terminals	 Three, quick-connect terminals (#187)	 t = 0.8 Three, quick-connect terminals (#250)
 **Note:** Indicates the length to the center of the 1.6-dia. holes	 1.6-dia. terminal hole	 1.65-dia. terminal hole

Mounting Holes



Dimensions and Operating Characteristics

Note: **1.** All units are in millimeters unless otherwise indicated.

2. Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.

3. The following illustrations and drawings are for quick-connect terminals (#187) (terminals C2). D3VJ models incorporate terminals A and C. These models are different from #187 models in terminal size only. Terminals A and C are omitted from the following drawings. Refer to *Terminals* on D3VJ for these terminals.

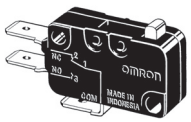
4. The □ in the model number is for the terminal code.

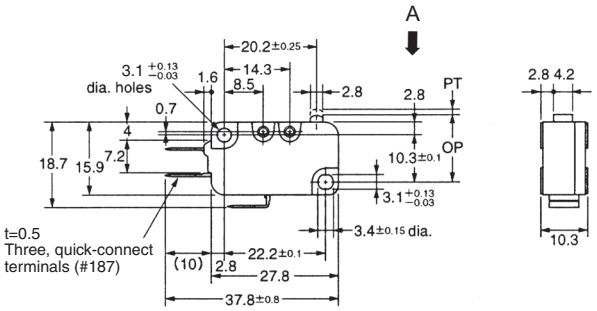
5. The operating characteristics are for operation in the A direction (⬇).

6. Refer to *Dimensions and Operating Characteristics* on D3V for more models.

Pin Plunger Models

D3VJ-16-1□5
D3VJ-11-1□5
D3VJ-11-1□4
D3VJ-6-1□4





Model	D3VJ-16-1□5 D3VJ-11-1□5	D3VJ-11-1□4 D3VJ-6-1□4
OF max. RF min.	1.96 N {200 gf} 0.49 N {50 gf}	0.98 N {100 gf} 0.15 N {15 gf}
PT max. OT min. MD max.	1.2 mm 1.0 mm 0.4 mm (F gap type) or 0.3 mm (G gap type)	
OP	14.7±0.4 mm	