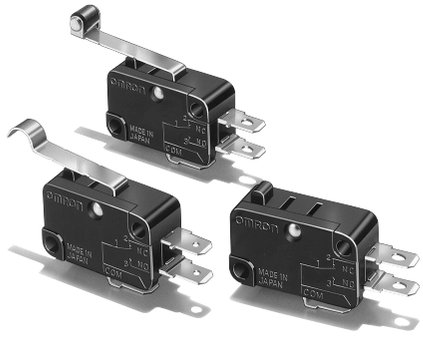
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V
Miniature Basic Switch

Miniature Basic Switch that Offers High Reliability and Security

- **Wide variation of best-selling microswitches with switching currents of 10 to 21 A.**
- **Can be used for interrupting current when doors are opened or closed.**
- **Available in two types of cases: thermoplastic resin and thermosetting resin.**
- **Indium contact models available for DC load**

RoHS Compliant



Model Number Legend

V-[1][2]-[3][4][5][6]

1. Ratings
21: 21 A at 250 VAC
16: 16 A at 250 VAC
15: 15 A at 250 VAC
10: 10 A at 250 VAC

2. Actuator
None : Pin plunger
1 : Short hinge lever
2 : Hinge lever
3 : Long hinge lever
4 : Simulated roller lever
5 : Short hinge roller lever
6 : Hinge roller lever

3. Contact Form
1: SPDT
2: SPST-NC
3: SPST-NO

4. Terminals
A : Solder terminals
C2 : Quick-connect terminals (#187)
C : Quick-connect terminals (#250)

5. Maximum Operating Force
6: 3.92 N {400 gf}
5: 1.96 N {200 gf}
4: 0.98 N {100 gf}
Note: These values are for the pin plunger models.

6. Heat Resistance
None : Standard (80°C)
-T : Heat-resistive (150°C)

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List of Models

Thermoplastic Case

Actuator	Terminals	Contact form	Ratings: Maximum operating force (OF)	21A	16A
Pin plunger	Solder terminals (A)	SPDT	3.92N	---	**V-16-1A6**
		SPST-NC		---	**V-16-2A6**
		SPST-NO		---	**V-16-3A6**
		SPDT	1.96N	---	**V-16-1A5**
		SPST-NC		---	**V-16-2A5**
		SPST-NO		---	**V-16-3A5**
		SPDT	0.98N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#187) (C2)	SPDT	3.92N	---	**V-16-1C26**
		SPST-NC		---	**V-16-2C26**
		SPST-NO		---	**V-16-3C26**
		SPDT	1.96N	---	**V-16-1C25**
		SPST-NC		---	**V-16-2C25**
		SPST-NO		---	**V-16-3C25**
		SPDT	0.98N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#250) (C)	SPDT	3.92N	**V-21-1C6**	**V-16-1C6**
		SPST-NC		**V-21-2C6**	**V-16-2C6**
		SPST-NO		**V-21-3C6**	**V-16-3C6**
		SPDT	1.96N	---	**V-16-1C5**
		SPST-NC		---	**V-16-2C5**
		SPST-NO		---	**V-16-3C5**
		SPDT	0.98N	---	---
		SPST-NC		---	---
		SPST-NO		---	---

Refer to **"Micro Switch Common Accessories"** for Separators (sold separately), Actuators (sold separately) and Terminal Connectors (sold separately).

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Actuator	Terminals	Contact form	Ratings: Maximum operating force (OF)	21A	16A
Short hinge lever 	Solder terminals (A)	SPDT	3.92N	---	**V-161-1A6**
		SPST-NC		---	**V-161-2A6**
		SPST-NO		---	**V-161-3A6**
		SPDT	1.96N	---	**V-161-1A5**
		SPST-NC		---	**V-161-2A5**
		SPST-NO		---	**V-161-3A5**
		SPDT	0.98N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#187) (C2)	SPDT	3.92N	---	**V-161-1C26**
		SPST-NC		---	**V-161-2C26**
		SPST-NO		---	**V-161-3C26**
		SPDT	1.96N	---	**V-161-1C25**
		SPST-NC		---	**V-161-2C25**
		SPST-NO		---	**V-161-3C25**
		SPDT	0.98N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#250) (C)	SPDT	3.92N	**V-211-1C6**	**V-161-1C6**
		SPST-NC		**V-211-2C6**	**V-161-2C6**
		SPST-NO		**V-211-3C6**	**V-161-3C6**
		SPDT	1.96N	---	**V-161-1C5**
		SPST-NC		---	**V-161-2C5**
		SPST-NO		---	**V-161-3C5**
		SPDT	0.98N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
Hinge lever 	Solder terminals (A)	SPDT	2.45N	---	**V-162-1A6**
		SPST-NC		---	**V-162-2A6**
		SPST-NO		---	**V-162-3A6**
		SPDT	1.23N	---	**V-162-1A5**
		SPST-NC		---	**V-162-2A5**
		SPST-NO		---	**V-162-3A5**
		SPDT	0.59N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#187) (C2)	SPDT	2.45N	---	**V-162-1C26**
		SPST-NC		---	**V-162-2C26**
		SPST-NO		---	**V-162-3C26**
		SPDT	1.23N	---	**V-162-1C25**
		SPST-NC		---	**V-162-2C25**
		SPST-NO		---	**V-162-3C25**
		SPDT	0.59N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#250) (C)	SPDT	2.45N	**V-212-1C6**	**V-162-1C6**
		SPST-NC		**V-212-2C6**	**V-162-2C6**
		SPST-NO		**V-212-3C6**	**V-162-3C6**
		SPDT	1.23N	---	**V-162-1C5**
		SPST-NC		---	**V-162-2C5**
		SPST-NO		---	**V-162-3C5**
		SPDT	0.59N	---	---
		SPST-NC		---	---
		SPST-NO		---	---

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Actuator	Terminals	Contact form	Ratings: Maximum operating force (OF)	21A	16A
Long hinge lever 	Solder terminals (A)	SPDT	1.27N	---	**V-163-1A6**
		SPST-NC		---	**V-163-2A6**
		SPST-NO		---	**V-163-3A6**
		SPDT	0.69N	---	**V-163-1A5**
		SPST-NC		---	**V-163-2A5**
		SPST-NO		---	**V-163-3A5**
		SPDT	0.34N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#187) (C2)	SPDT	1.27N	---	**V-163-1C26**
		SPST-NC		---	**V-163-2C26**
		SPST-NO		---	**V-163-3C26**
		SPDT	0.69N	---	**V-163-1C25**
		SPST-NC		---	**V-163-2C25**
		SPST-NO		---	**V-163-3C25**
		SPDT	0.34N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#250) (C)	SPDT	1.27N	**V-213-1C6**	**V-163-1C6**
		SPST-NC		**V-213-2C6**	**V-163-2C6**
		SPST-NO		**V-213-3C6**	**V-163-3C6**
		SPDT	0.69N	---	**V-163-1C5**
		SPST-NC		---	**V-163-2C5**
		SPST-NO		---	**V-163-3C5**
		SPDT	0.34N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
Simulated roller lever 	Solder terminals (A)	SPDT	2.45N	---	**V-164-1A6**
		SPST-NC		---	**V-164-2A6**
		SPST-NO		---	**V-164-3A6**
		SPDT	1.23N	---	**V-164-1A5**
		SPST-NC		---	**V-164-2A5**
		SPST-NO		---	**V-164-3A5**
		SPDT	0.59N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#187) (C2)	SPDT	2.45N	---	**V-164-1C26**
		SPST-NC		---	**V-164-2C26**
		SPST-NO		---	**V-164-3C26**
		SPDT	1.23N	---	**V-164-1C25**
		SPST-NC		---	**V-164-2C25**
		SPST-NO		---	**V-164-3C25**
		SPDT	0.59N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#250) (C)	SPDT	2.45N	**V-214-1C6**	**V-164-1C6**
		SPST-NC		**V-214-2C6**	**V-164-2C6**
		SPST-NO		**V-214-3C6**	**V-164-3C6**
		SPDT	1.23N	---	**V-164-1C5**
		SPST-NC		---	**V-164-2C5**
		SPST-NO		---	**V-164-3C5**
		SPDT	0.59N	---	---
		SPST-NC		---	---
		SPST-NO		---	---

Refer to **"Micro Switch Common Accessories"** for Separators (sold separately), Actuators (sold separately) and Terminal Connectors (sold separately).

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Actuator	Terminals	Contact form	Ratings: Maximum operating force (OF)	21A	16A
Short hinge roller lever 	Solder terminals (A)	SPDT	4.71N	---	**V-165-1A6**
		SPST-NC		---	**V-165-2A6**
		SPST-NO		---	**V-165-3A6**
		SPDT	2.35N	---	**V-165-1A5**
		SPST-NC		---	**V-165-2A5**
		SPST-NO		---	**V-165-3A5**
		SPDT	1.18N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#187) (C2)	SPDT	4.71N	---	**V-165-1C26**
		SPST-NC		---	**V-165-2C26**
		SPST-NO		---	**V-165-3C26**
		SPDT	2.35N	---	**V-165-1C25**
		SPST-NC		---	**V-165-2C25**
		SPST-NO		---	**V-165-3C25**
		SPDT	1.18N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#250) (C)	SPDT	4.71N	**V-215-1C6**	**V-165-1C6**
		SPST-NC		**V-215-2C6**	**V-165-2C6**
		SPST-NO		**V-215-3C6**	**V-165-3C6**
		SPDT	2.35N	---	**V-165-1C5**
		SPST-NC		---	**V-165-2C5**
		SPST-NO		---	**V-165-3C5**
		SPDT	1.18N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
Hinge roller lever 	Solder terminals (A)	SPDT	2.45N	---	**V-166-1A6**
		SPST-NC		---	**V-166-2A6**
		SPST-NO		---	**V-166-3A6**
		SPDT	1.23N	---	**V-166-1A5**
		SPST-NC		---	**V-166-2A5**
		SPST-NO		---	**V-166-3A5**
		SPDT	0.59N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#187) (C2)	SPDT	2.45N	---	**V-166-1C26**
		SPST-NC		---	**V-166-2C26**
		SPST-NO		---	**V-166-3C26**
		SPDT	1.23N	---	**V-166-1C25**
		SPST-NC		---	**V-166-2C25**
		SPST-NO		---	**V-166-3C25**
		SPDT	0.59N	---	---
		SPST-NC		---	---
		SPST-NO		---	---
	Quick-connect terminals (#250) (C)	SPDT	2.45N	**V-216-1C6**	**V-166-1C6**
		SPST-NC		**V-216-2C6**	**V-166-2C6**
		SPST-NO		**V-216-3C6**	**V-166-3C6**
		SPDT	1.23N	---	**V-166-1C5**
		SPST-NC		---	**V-166-2C5**
		SPST-NO		---	**V-166-3C5**
		SPDT	0.59N	---	
		SPST-NC		---	
		SPST-NO		---	

Refer to **"Micro Switch Common Accessories"** for Separators (sold separately), Actuators (sold separately) and Terminal Connectors (sold separately).

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Thermosetting case

Actuator	Terminals	Contact form	Ratings Maximum operating force (OF)	15A	10A	Heat-resistive 15A	Heat-resistive 10A
Pin plunger	Solder terminals (A)	SPDT	3.92N	V-15-1A6	---	V-15-1A6-T	---
		SPST-NC		V-15-2A6	---	---	---
		SPST-NO		V-15-3A6	---	---	---
		SPDT	1.96N	V-15-1A5	V-10-1A5	V-15-1A5-T	V-10-1A5-T
		SPST-NC		V-15-2A5	V-10-2A5	---	---
		SPST-NO		V-15-3A5	V-10-3A5	---	---
		SPDT	0.98N	---	V-10-1A4	---	V-10-1A4-T
		SPST-NC		---	V-10-2A4	---	V-10-2A4-T
		SPST-NO		---	V-10-3A4	---	V-10-3A4-T
	Quick-connect terminals (#187) (C2)	SPDT	3.92N	V-15-1C26	---	V-15-1C26-T	---
		SPST-NC		V-15-2C26	---	---	---
		SPST-NO		V-15-3C26	---	---	---
		SPDT	1.96N	V-15-1C25	V-10-1C25	V-15-1C25-T	V-10-1C25-T
		SPST-NC		V-15-2C25	V-10-2C25	---	---
		SPST-NO		V-15-3C25	V-10-3C25	---	---
		SPDT	0.98N	---	V-10-1C24	---	V-10-1C24-T
		SPST-NC		---	V-10-2C24	---	---
		SPST-NO		---	V-10-3C24	---	---
	Quick-connect terminals (#250) (C)	SPDT	3.92N	V-15-1C6	---	V-15-1C6-T	---
		SPST-NC		V-15-2C6	---	---	---
		SPST-NO		V-15-3C6	---	---	---
		SPDT	1.96N	V-15-1C5	V-10-1C5	V-15-1C5-T	V-10-1C5-T
		SPST-NC		V-15-2C5	V-10-2C5	---	---
		SPST-NO		V-15-3C5	V-10-3C5	---	---
		SPDT	0.98N	---	V-10-1C4	---	V-10-1C4-T
		SPST-NC		---	V-10-2C4	---	---
		SPST-NO		---	V-10-3C4	---	---
Short hinge lever 	Solder terminals (A)	SPDT	3.92N	V-151-1A6	---	V-151-1A6-T	---
		SPST-NC		V-151-2A6	---	---	---
		SPST-NO		V-151-3A6	---	---	---
		SPDT	1.96N	V-151-1A5	V-101-1A5	V-151-1A5-T	V-101-1A5-T
		SPST-NC		V-151-2A5	V-101-2A5	---	---
		SPST-NO		V-151-3A5	V-101-3A5	---	---
		SPDT	0.98N	---	V-101-1A4	---	V-101-1A4-T
		SPST-NC		---	V-101-2A4	---	---
		SPST-NO		---	V-101-3A4	---	---
	Quick-connect terminals (#187) (C2)	SPDT	3.92N	V-151-1C26	---	V-151-1C26-T	---
		SPST-NC		V-151-2C26	---	---	---
		SPST-NO		V-151-3C26	---	---	---
		SPDT	1.96N	V-151-1C25	V-101-1C25	V-151-1C25-T	V-101-1C25-T
		SPST-NC		V-151-2C25	V-101-2C25	---	---
		SPST-NO		V-151-3C25	V-101-3C25	---	---
		SPDT	0.98N	---	V-101-1C24	---	V-101-1C24-T
		SPST-NC		---	V-101-2C24	---	---
		SPST-NO		---	V-101-3C24	---	---
	Quick-connect terminals (#250) (C)	SPDT	3.92N	V-151-1C6	---	V-151-1C6-T	---
		SPST-NC		V-151-2C6	---	---	---
		SPST-NO		V-151-3C6	---	---	---
		SPDT	1.96N	V-151-1C5	V-101-1C5	V-151-1C5-T	V-101-1C5-T
		SPST-NC		V-151-2C5	V-101-2C5	---	---
		SPST-NO		V-151-3C5	V-101-3C5	---	---
		SPDT	0.98N	---	V-101-1C4	---	V-101-1C4-T
		SPST-NC		---	V-101-2C4	---	---
		SPST-NO		---	V-101-3C4	---	---

Refer to **"Micro Switch Common Accessories"** for Separators (sold separately), Actuators (sold separately) and Terminal Connectors (sold separately).

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Actuator	Terminals	Contact form	Ratings: Maximum operating force (OF)	15A	10A	Heat-resistive: 15A	Heat-resistive: 10A
Hinge lever 	Solder terminals (A)	SPDT	2.45N	**V-152-1A6**	---	**V-152-1A6-T**	---
		SPST-NC		**V-152-2A6**	---	---	---
		SPST-NO		**V-152-3A6**	---	---	---
		SPDT	1.23N	**V-152-1A5**	**V-102-1A5**	**V-152-1A5-T**	**V-102-1A5-T**
		SPST-NC		**V-152-2A5**	**V-102-2A5**	---	---
		SPST-NO		**V-152-3A5**	**V-102-3A5**	---	---
		SPDT	0.59N	---	**V-102-1A4**	---	**V-102-1A4-T**
		SPST-NC		---	**V-102-2A4**	---	---
		SPST-NO		---	**V-102-3A4**	---	---
	Quick-connect terminals (#187) (C2)	SPDT	2.45N	**V-152-1C26**	---	**V-152-1C26-T**	---
		SPST-NC		**V-152-2C26**	---	---	---
		SPST-NO		**V-152-3C26**	---	---	---
		SPDT	1.23N	**V-152-1C25**	**V-102-1C25**	**V-152-1C25-T**	**V-102-1C25-T**
		SPST-NC		**V-152-2C25**	**V-102-2C25**	---	---
		SPST-NO		**V-152-3C25**	**V-102-3C25**	---	---
		SPDT	0.59N	---	**V-102-1C24**	---	**V-102-1C24-T**
		SPST-NC		---	**V-102-2C24**	---	---
		SPST-NO		---	**V-102-3C24**	---	---
	Quick-connect terminals (#250) (C)	SPDT	2.45N	**V-152-1C6**	---	**V-152-1C6-T**	---
		SPST-NC		**V-152-2C6**	---	---	---
		SPST-NO		**V-152-3C6**	---	---	---
		SPDT	1.23N	**V-152-1C5**	**V-102-1C5**	**V-152-1C5-T**	**V-102-1C5-T**
		SPST-NC		**V-152-2C5**	**V-102-2C5**	---	---
		SPST-NO		**V-152-3C5**	**V-102-3C5**	---	---
		SPDT	0.59N	---	**V-102-1C4**	---	**V-102-1C4-T**
		SPST-NC		---	**V-102-2C4**	---	---
		SPST-NO		---	**V-102-3C4**	---	---
Long hinge lever 	Solder terminals (A)	SPDT	1.27N	**V-153-1A6**	---	**V-153-1A6-T**	---
		SPST-NC		**V-153-2A6**	---	---	---
		SPST-NO		**V-153-3A6**	---	---	---
		SPDT	0.69N	**V-153-1A5**	**V-103-1A5**	**V-153-1A5-T**	**V-103-1A5-T**
		SPST-NC		**V-153-2A5**	**V-103-2A5**	---	---
		SPST-NO		**V-153-3A5**	**V-103-3A5**	---	---
		SPDT	0.34N	---	**V-103-1A4**	---	**V-103-1A4-T**
		SPST-NC		---	**V-103-2A4**	---	---
		SPST-NO		---	**V-103-3A4**	---	---
	Quick-connect terminals (#187) (C2)	SPDT	1.27N	**V-153-1C26**	---	**V-153-1C26-T**	---
		SPST-NC		**V-153-2C26**	---	---	---
		SPST-NO		**V-153-3C26**	---	---	---
		SPDT	0.69N	**V-153-1C25**	**V-103-1C25**	**V-153-1C25-T**	**V-103-1C25-T**
		SPST-NC		**V-153-2C25**	**V-103-2C25**	---	---
		SPST-NO		**V-153-3C25**	**V-103-3C25**	---	---
		SPDT	0.34N	---	**V-103-1C24**	---	**V-103-1C24-T**
		SPST-NC		---	**V-103-2C24**	---	---
		SPST-NO		---	**V-103-3C24**	---	---
	Quick-connect terminals (#250) (C)	SPDT	1.27N	**V-153-1C6**	---	**V-153-1C6-T**	---
		SPST-NC		**V-153-2C6**	---	---	---
		SPST-NO		**V-153-3C6**	---	---	---
		SPDT	0.69N	**V-153-1C5**	**V-103-1C5**	**V-153-1C5-T**	**V-103-1C5-T**
		SPST-NC		**V-153-2C5**	**V-103-2C5**	---	---
		SPST-NO		**V-153-3C5**	**V-103-3C5**	---	---
		SPDT	0.34N	---	**V-103-1C4**	---	**V-103-1C4-T**
		SPST-NC		---	**V-103-2C4**	---	---
		SPST-NO		---	**V-103-3C4**	---	---

Refer to "**Micro Switch Common Accessories**" for Separators (sold separately), Actuators (sold separately) and Terminal Connectors (sold separately).

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Actuator	Terminals	Contact form	Ratings: Maximum operating force (OF)	15A	10A	Heat-resistive 15A	Heat-resistive 10A
Simulated roller lever 	Solder terminals (A)	SPDT	2.45N	**V-154-1A6**	---	**V-154-1A6-T**	---
		SPST-NC		**V-154-2A6**	---	---	---
		SPST-NO		**V-154-3A6**	---	---	---
		SPDT	1.23N	**V-154-1A5**	**V-104-1A5**	**V-154-1A5-T**	**V-104-1A5-T**
		SPST-NC		**V-154-2A5**	**V-104-2A5**	---	---
		SPST-NO		**V-154-3A5**	**V-104-3A5**	---	---
		SPDT	0.59N	---	**V-104-1A4**	---	**V-104-1A4-T**
		SPST-NC		---	**V-104-2A4**	---	---
		SPST-NO		---	**V-104-3A4**	---	---
	Quick-connect terminals (#187) (C2)	SPDT	2.45N	**V-154-1C26**	---	**V-154-1C26-T**	---
		SPST-NC		**V-154-2C26**	---	---	---
		SPST-NO		**V-154-3C26**	---	---	---
		SPDT	1.23N	**V-154-1C25**	**V-104-1C25**	**V-154-1C25-T**	**V-104-1C25-T**
		SPST-NC		**V-154-2C25**	**V-104-2C25**	---	---
		SPST-NO		**V-154-3C25**	**V-104-3C25**	---	---
		SPDT	0.59N	---	**V-104-1C24**	---	**V-104-1C24-T**
		SPST-NC		---	**V-104-2C24**	---	---
		SPST-NO		---	**V-104-3C24**	---	---
	Quick-connect terminals (#250) (C)	SPDT	2.45N	**V-154-1C6**	---	**V-154-1C6-T**	---
		SPST-NC		**V-154-2C6**	---	---	---
		SPST-NO		**V-154-3C6**	---	---	---
		SPDT	1.23N	**V-154-1C5**	**V-104-1C5**	**V-154-1C5-T**	**V-104-1C5-T**
		SPST-NC		**V-154-2C5**	**V-104-2C5**	---	---
		SPST-NO		**V-154-3C5**	**V-104-3C5**	---	---
		SPDT	0.59N	---	**V-104-1C4**	---	**V-104-1C4-T**
		SPST-NC		---	**V-104-2C4**	---	---
		SPST-NO		---	**V-104-3C4**	---	---
Short hinge roller lever 	Solder terminals (A)	SPDT	4.71N	**V-155-1A6**	---	**V-155-1A6-T**	---
		SPST-NC		**V-155-2A6**	---	---	---
		SPST-NO		**V-155-3A6**	---	---	---
		SPDT	2.35N	**V-155-1A5**	**V-105-1A5**	**V-155-1A5-T**	**V-105-1A5-T**
		SPST-NC		**V-155-2A5**	**V-105-2A5**	---	---
		SPST-NO		**V-155-3A5**	**V-105-3A5**	---	---
		SPDT	1.18N	---	**V-105-1A4**	---	**V-105-1A4-T**
		SPST-NC		---	**V-105-2A4**	---	---
		SPST-NO		---	**V-105-3A4**	---	---
	Quick-connect terminals (#187) (C2)	SPDT	4.71N	**V-155-1C26**	---	**V-155-1C26-T**	---
		SPST-NC		**V-155-2C26**	---	---	---
		SPST-NO		**V-155-3C26**	---	---	---
		SPDT	2.35N	**V-155-1C25**	**V-105-1C25**	**V-155-1C25-T**	**V-105-1C25-T**
		SPST-NC		**V-155-2C25**	**V-105-2C25**	---	---
		SPST-NO		**V-155-3C25**	**V-105-3C25**	---	---
		SPDT	1.18N	---	**V-105-1C24**	---	**V-105-1C24-T**
		SPST-NC		---	**V-105-2C24**	---	---
		SPST-NO		---	**V-105-3C24**	---	---
	Quick-connect terminals (#250) (C)	SPDT	4.71N	**V-155-1C6**	---	**V-155-1C6-T**	---
		SPST-NC		**V-155-2C6**	---	---	---
		SPST-NO		**V-155-3C6**	---	---	---
		SPDT	2.35N	**V-155-1C5**	**V-105-1C5**	**V-155-1C5-T**	**V-105-1C5-T**
		SPST-NC		**V-155-2C5**	**V-105-2C5**	---	---
		SPST-NO		**V-155-3C5**	**V-105-3C5**	---	---
		SPDT	1.18N	---	**V-105-1C4**	---	**V-105-1C4-T**
		SPST-NC		---	**V-105-2C4**	---	---
		SPST-NO		---	**V-105-3C4**	---	---

Refer to **"Micro Switch Common Accessories"** for Separators (sold separately), Actuators (sold separately) and Terminal Connectors (sold separately).

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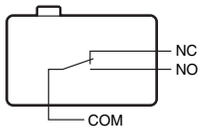
Actuator	Terminals	Contact form	Ratings Maximum operating force (OF)	15A	10A	Heat-resistive 15A	Heat-resistive 10A
Hinge roller lever 	Solder terminals (A)	SPDT	2.45N	**V-156-1A6**	---	**V-156-1A6-T**	---
		SPST-NC		**V-156-2A6**	---	---	---
		SPST-NO		**V-156-3A6**	---	---	---
		SPDT	1.23N	**V-156-1A5**	**V-106-1A5**	**V-156-1A5-T**	**V-106-1A5-T**
		SPST-NC		**V-156-2A5**	**V-106-2A5**	---	---
		SPST-NO		**V-156-3A5**	**V-106-3A5**	---	---
		SPDT	0.59N	---	**V-106-1A4**	---	**V-106-1A4-T**
		SPST-NC		---	**V-106-2A4**	---	---
		SPST-NO		---	**V-106-3A4**	---	---
	Quick-connect terminals (#187) (C2)	SPDT	2.45N	**V-156-1C26**	---	**V-156-1C26-T**	---
		SPST-NC		**V-156-2C26**	---	---	---
		SPST-NO		**V-156-3C26**	---	---	---
		SPDT	1.23N	**V-156-1C25**	**V-106-1C25**	**V-156-1C25-T**	**V-106-1C25-T**
		SPST-NC		**V-156-2C25**	**V-106-2C25**	---	---
		SPST-NO		**V-156-3C25**	**V-106-3C25**	---	---
		SPDT	0.59N	---	**V-106-1C24**	---	**V-106-1C24-T**
		SPST-NC		---	**V-106-2C24**	---	---
		SPST-NO		---	**V-106-3C24**	---	---
	Quick-connect terminals (#250) (C)	SPDT	2.45N	**V-156-1C6**	---	**V-156-1C6-T**	---
		SPST-NC		**V-156-2C6**	---	---	---
		SPST-NO		**V-156-3C6**	---	---	---
		SPDT	1.23N	**V-156-1C5**	**V-106-1C5**	**V-156-1C5-T**	**V-106-1C5-T**
		SPST-NC		**V-156-2C5**	**V-106-2C5**	---	---
		SPST-NO		**V-156-3C5**	**V-106-3C5**	---	---
		SPDT	0.59N	---	**V-106-1C4**	---	**V-106-1C4-T**
		SPST-NC		---	**V-106-2C4**	---	---
		SPST-NO		---	**V-106-3C4**	---	---

For DC load (V-21(IN) models)

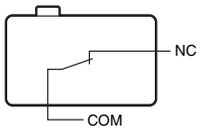
Actuator	Terminals	Contact form	Ratings Maximum operating force (OF)	30VDC 12A
Pin plunger	Quick-connect terminals (#250) (C)	SPDT	3.92N	**V-21-1C6(IN)**

Contact form

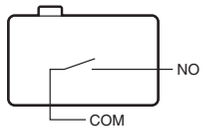
SPDT



SPST-NC



SPST-NO



Refer to **"Micro Switch Common Accessories"** for Separators (sold separately), Actuators (sold separately) and Terminal Connectors (sold separately).

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Contact Specifications

Item	Model	V-21	V-16	V-15	V-10	V-21(IN)
Contact	Specification	Rivet				
	Material	Silver alloy			Silver	Indium alloy
	Gap (standard value)	1 mm				
Inrush current	NC	50 A max.	40 A max.	30 A max.	24 A max.	50 A max.
	NO					
Minimum applicable load (reference value)		DC5V 160mA				

Ratings

Model	Item: Rated voltage	Resistive load
V-21	AC250V	21 A
	DC125V DC250V	0.6 A 0.3 A
V-16	AC250V	16 A
	DC125V DC250V	0.6 A 0.3 A
V-15	AC250V	15 A
	DC125V DC250V	0.6 A 0.3 A
V-10	AC250V	10 A
	DC125V DC250V	0.6 A 0.3 A
V-21(IN)	DC30V	12 A

Note. The above rating values apply under the following test conditions.
(1) Ambient temperature: 20±2°C
(2) Ambient humidity: 65±5% RH
(3) Operating frequency: 30 operations/min

Approved Standards

UL (UL1054)/CSA (CSA C22.2 No.55)

Rated voltage Model	V-21	V-16	V-15	V-10
125 VAC 250 VAC	21A 1/2HP	16A 1/2HP	15A 1/2HP	10A 1/2HP
125 VDC 250 VDC	0.6A 0.3A			

VDE (EN61058-1)

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

Rated voltage Model	V-21	V-16
AC250V	20(4)A	16(4)A

Testing conditions: 5E4 (50,000 operations), for models of V-21: T80 (0 to 80°C), for models of V-16: T105 (0 to 105°C)

Note. V-21(IN) models are not Safety standard approved.

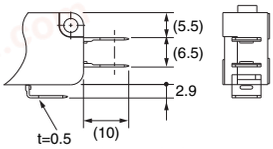
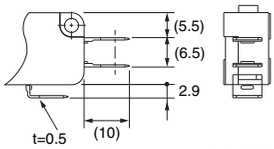
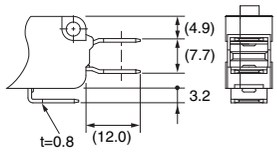
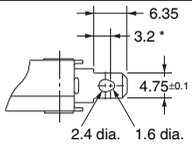
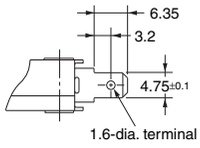
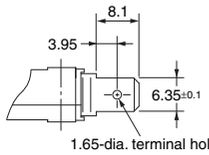
Characteristics

Item	Model	V-10	V-15	V-16	V-21	V-21(IN)
Permissible operating speed		0.1mm to 1 m/s max. (pin plunger models)				
Permissible operating frequency	Mechanical	600 operations/min max. (pin plunger models)				
	Electrical	60 operations/min				
Insulation resistance		100MΩ min. (at 500 VDC with insulation tester)				
Contact resistance (initial value)		15mΩ max.				
Dielectric strength *1	Between terminals of the same polarity	AC1,000V 50/60Hz 1min				
	Between current-carrying metal parts and ground	AC1,500V 50/60Hz 1min	AC1,500V 50/60Hz 1min	AC2,000V 50/60Hz 1min		
	Between each terminals and non-current-carrying metal parts	AC1,500V 50/60Hz 1min	AC1,500V 50/60Hz 1min	AC2,000V 50/60Hz 1min		
Vibration resistance *2	Malfunction	10 to 55 Hz, 1.5-mm double amplitude				
Shock resistance *2	Durability	1,000 m/s² {approx. 100 G} max.				
	Malfunction	200 m/s² {approx. 20G} max.	300 m/s² {approx. 30 G} max.			
Durability *3	Mechanical	50,000,000 operations min. (60 operations/min)				
	Electrical	300,000 operations min. (30 operations/min) Heat resistive: 50,000 operations min (30 operations/min)	100,000 operations min. (30 operations/min) Heat resistive: 20,000 operations min (30 operations/min)	100,000 operations min. (30 operations/min)		
Degree of protection		IEC IP40				
Degree of protection against electric shock		Class I				
Proof tracking index (PTI)		175				
Ambient operating temperature		-25 to 105°C (Heat resistive: -25 to 150°C)		-25 to 105°C	-25 to 80°C	
		-25 to 105°C (V-21 series: -25 to 80°C) (Heat resistive: -25 to 150°C) at ambient humidity of 60% max. (with no icing or condensation)				
Ambient operating humidity		85% max. (for 5 to 35°C)				
Weight		Approx. 6.2g (pin plunger models)				

Note. The data given above are initial values.
*1. The dielectric strength shown in the table indicates a value for models with a Separator.
*2. For the pin plunger models, the above values apply for use at the free position and total travel position. For the lever models, they apply at the total travel position. Close or open circuit of the contact is shorter than 1 ms.
*3. For testing conditions, consult your OMRON sales representative.

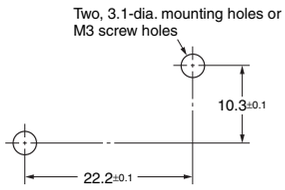
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Terminals and Apperance (Unit: mm)

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

Note. The above is for the SPDT contact specifications. Two terminals will be available for SPST-NO or SPST-NC contact specifications. For terminal positions, refer to Contact form on page 9.

Mounting Holes (Unit: mm)



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Dimensions and Operating Characteristics

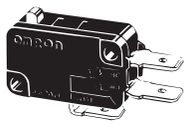
Thermoplastic Case V-21/-16/-21(IN) Models

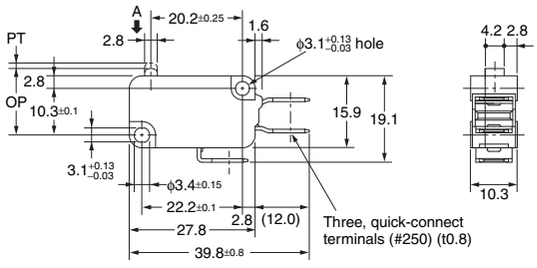
The following illustrations and drawings are for quick-connect terminals #250 (terminals C). V models with a switching current of 16 A and 11 A incorporate solder terminals (A) and quick-connect terminals #187 (C2). These models are different from #250 models in terminal size only. Dimensions of solder terminals (A) and quick-connect terminal #187 (C2) are omitted. Please refer to the **"Terminals and Shapes"** on previous page.

The □ is replaced with the code for the terminals. See the "List of Models" for available combinations of shapes.

●Pin plunger

V-21-1□6
V-16-1□6
V-16-1□5

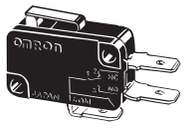


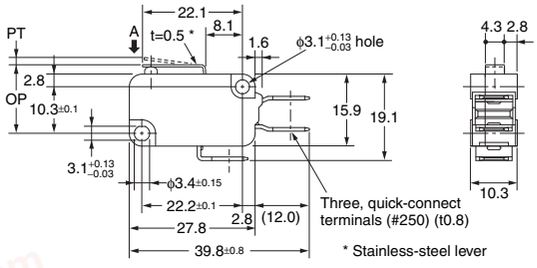


Operating characteristics	Model	V-21-1□6 V-16-1□6	V-16-1□5
OF max.		3.92N	1.96N
RF min.		0.78N	0.49N
PT max.		1.2mm	
OT min.		1.0mm	
MD max.		0.4mm	
OP		14.7±0.4mm	

●Short hinge lever

V-211-1□6
V-161-1□6
V-161-1□5

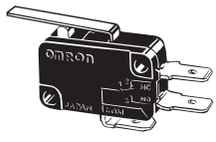


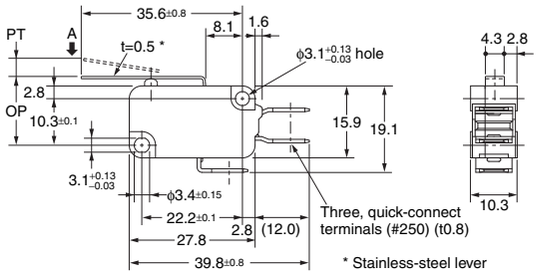


Operating characteristics	Model	V-211-1□6 V-161-1□6	V-161-1□5
OF max.		3.92N	1.96N
RF min.		0.49N	0.49N
PT max.		1.6mm	
OT min.		0.8mm	
MD max.		0.6mm	
OP		15.2±0.5mm	

●Hinge lever

V-212-1□6
V-162-1□6
V-162-1□5

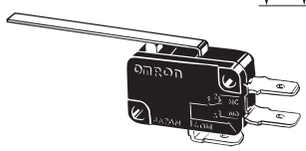


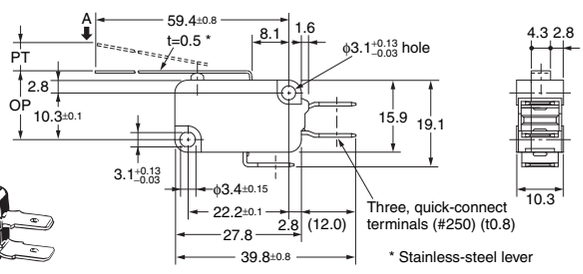


Operating characteristics	Model	V-212-1□6 V-162-1□6	V-162-1□5
OF max.		2.45N	1.23N
RF min.		0.25N	0.14N
PT max.		4.0mm	
OT min.		1.6mm	
MD max.		1.5mm	
OP		15.2±1.2mm	

●Long Hinge Lever Models

V-213-1□6
V-163-1□6
V-163-1□5





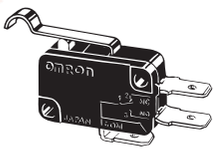
Operating characteristics	Model	V-213-1□6 V-163-1□6	V-163-1□5
OF max.		1.27N	0.69N
RF min.		0.12N	0.06N
PT max.		9.0mm	
OT min.		2.0mm	
MD max.		2.8mm	
OP		$15.2^{+2.6}_{-3.2}$ mm	

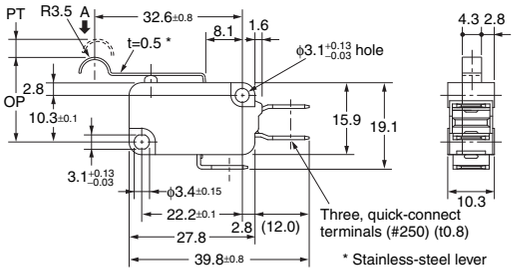
Note 1. Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.
Note 2. The operating characteristics are for operation in the A direction (⬇).

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●Simulated roller lever

V-214-1□6
V-164-1□6
V-164-1□5

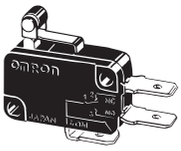


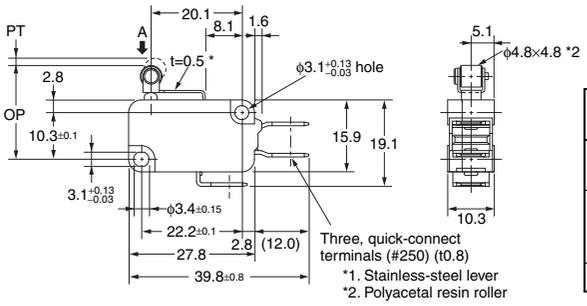


Operating characteristics	Model	V-214-1□6 V-164-1□6	V-164-1□5
OF max. RF min.		2.45N 0.25N	1.23N 0.14N
PT max. OT min. MD max.		4.0mm 1.6mm 1.5mm	
OP		18.7±1.2mm	

●Short hinge roller lever

V-215-1□6
V-165-1□6
V-165-1□5

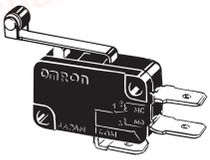


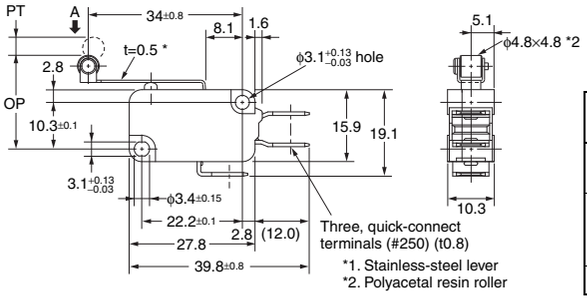


Operating characteristics	Model	V-215-1□6 V-165-1□6	V-165-1□5
OF max. RF min.		4.71N 0.49N	2.35N 0.49N
PT max. OT min. MD max.		1.6mm 0.8mm 0.6mm	
OP		20.7±0.6mm	

●Hinge roller lever

V-216-1□6
V-166-1□6
V-166-1□5





Operating characteristics	Model	V-216-1□6 V-166-1□6	V-166-1□5
OF max. RF min.		2.45N 0.25N	1.23N 0.14N
PT max. OT min. MD max.		4.0mm 1.6mm 1.5mm	
OP		20.7±1.2mm	

Note 1. Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.
Note 2. The operating characteristics are for operation in the A direction (⬇).

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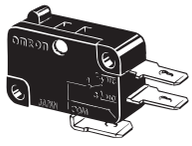
Thermosetting Case (V-15/V-10 Models) Applicable to both Standard (105°C) and Heat-resistive (150°C) models

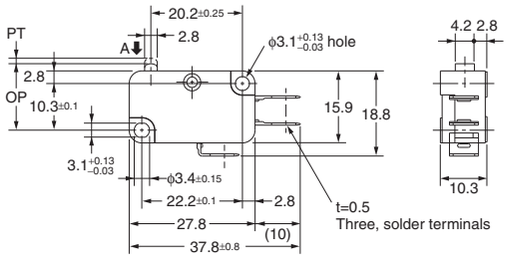
The following dimensions and Operating Characteristics are for both "Not specified: Standard (105°C)" and "-T: Heat-resistive (150°C)" models.
The following illustrations and drawings are for solder terminals (Terminal A). V models with a switching current of 15A and 10A have quick-connect terminals #187 (C2). These models are different from solder terminal models in terminal size only. Illustrations for quick-connect terminals #187 (C2) are omitted. Please refer to **"Terminals and Shapes"** on page 8.

The □ is replaced with the code for the terminals.See the "List of Models" for available combinations of shapes.

●Pin plunger

V-15-1□6
V-15-1□5
V-10-1□5
V-10-1□4

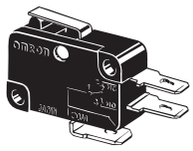


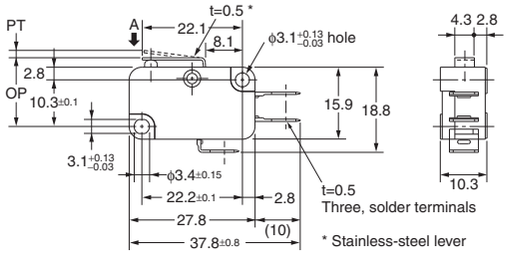


Operating characteristics / Model	V-15-1□6	V-15-1□5 V-10-1□5	V-10-1□4
OF max.	3.92N	1.96N	0.98N
RF min.	078N	0.49N	0.20N
PT max.	1.2mm		
OT min.	1.0mm		
MD max.	0.4mm		
OP	14.7±0.4mm		

●Short hinge lever

V-151-1□6
V-151-1□5
V-101-1□5
V-101-1□4

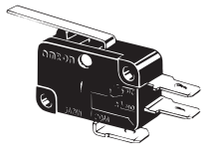


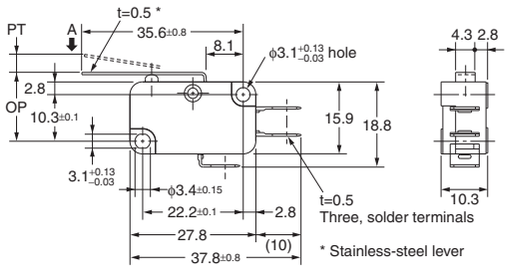


Operating characteristics / Model	V-151-1□6	V-151-1□5 V-101-1□5	V-101-1□4
OF max.	3.92N	1.96N	0.98N
RF min.	0.49N	0.49N	0.15N
PT max.	1.6mm		
OT min.	0.8mm		
MD max.	0.6mm		
OP	15.2±0.5mm		

●Hinge lever

V-152-1□6
V-152-1□5
V-102-1□5
V-102-1□4

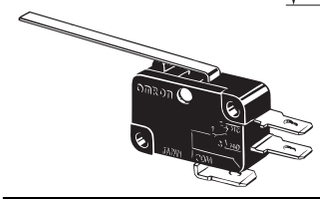


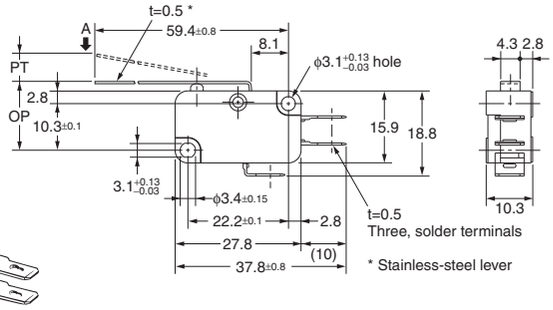


Operating characteristics / Model	V-152-1□6	V-152-1□5 V-102-1□5	V-102-1□4
OF max.	2.45N	1.23N	0.59N
RF min.	0.25N	0.14N	0.06N
PT max.	4.0mm		
OT min.	1.6mm		
MD max.	1.5mm		
OP	15.2±1.2mm		

●Long Hinge Lever Models

V-153-1□6
V-153-1□5
V-103-1□5
V-103-1□4





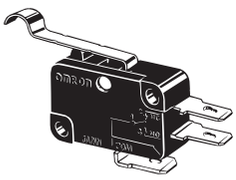
Operating characteristics / Model	V-153-1□6	V-153-1□5 V-103-1□5	V-103-1□4
OF max.	1.27N	0.69N	0.34N
RF min.	0.12N	0.06N	-
PT max.	9.0mm		9.0mm
OT min.	2.0mm		3.2mm
MD max.	2.8mm		2.8mm
OP	15.2 +2.6 −3.2 mm		15.2±2.6 mm

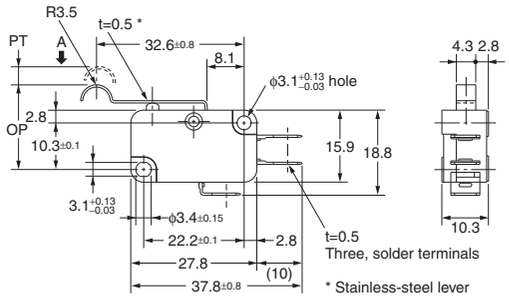
Note 1. Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.
Note 2. The operating characteristics are for operation in the A direction (⬇).

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●Simulated roller lever

V-154-1□6
V-154-1□5
V-104-1□5
V-104-1□4

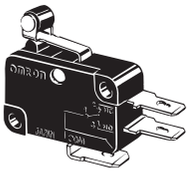


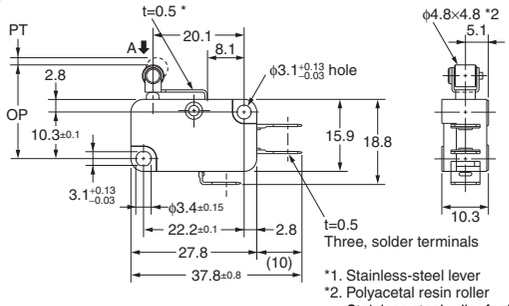


Operating characteristics	Model	V-154-1□6	V-154-1□5 V-104-1□5	V-104-1□4
OF max. RF min.		2.45N 0.25N	1.23N 0.14N	0.59N 0.06N
PT max. OT min. MD max.		4.0mm 1.6mm 1.5mm		
OP		18.7±1.2mm		

●Short hinge roller lever

V-155-1□6
V-155-1□5
V-105-1□5
V-105-1□4

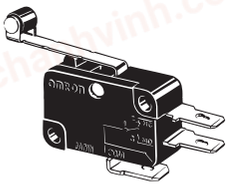


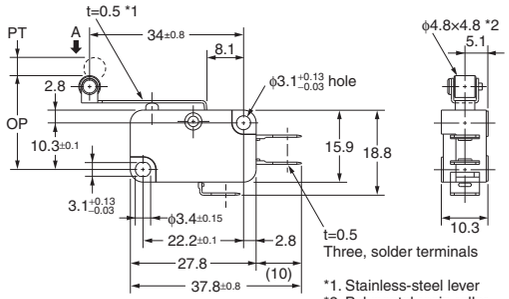


Operating characteristics	Model	V-155-1□6	V-155-1□5 V-105-1□5	V-105-1□4
OF max. RF min.		4.71N 0.49N	2.35N 0.49N	1.18N 0.15N
PT max. OT min. MD max.		1.6mm 0.8mm 0.6mm		
OP		20.7±0.6mm		

●Hinge roller lever

V-156-1□6
V-156-1□5
V-106-1□5
V-106-1□4





Operating characteristics	Model	V-156-1□6	V-156-1□5 V-106-1□5	V-106-1□4
OF max. RF min.		2.45N 0.25N	1.23N 0.14N	0.59N 0.06N
PT max. OT min. MD max.		4.0mm 1.6mm 1.5mm		
OP		20.7±1.2mm		

Note 1. Unless otherwise specified, a tolerance of ±0.4 mm applies to all dimensions.
Note 2. The operating characteristics are for operation in the A direction (⬇).

Precautions

★Please read "Common Precautions" for correct use.

Precautions for Safe Use

●Soldering

- Connecting to Solder Terminals
  Complete the soldering at the iron tip temperature of 250 to 350°C (60W) within 5 seconds, and do not apply any external force for 1 minute after soldering.
  Be sure to apply only the minimum required amount of flux.It may result in contact failure once the flux penetrates into the internal part of the Switch.
- Connecting to Quick-connect Terminals #187
  Insert the receptacle of quick-connect terminal #187 straight toward the terminal.
  Applying excessive external force horizontally or vertically may cause deformation of terminals and may damage the housings.
- Connecting to Quick-connect Terminals #250
  Insert the receptacle of quick-connect terminal #250 straight toward the terminal.
  Applying excessive external force horizontally or vertically may cause deformation of terminals and may damage the housings.

Precautions for Correct Use

●Mounting

Use M3 mounting screw with plane washers or spring washers to securely mount the Switch.Tighten the screws to a torque of 0.39 to 0.59N·m {4 to 6 kgf·cm}.

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