

## V9 Series

### Miniature Basic DC Switch



#### DESCRIPTION

The V9 Series dc switch is a cost-effective, reliable solution for position detection in applications that both control the primary circuit and require a contact air gap of greater than 3 mm [0.12 in].

The V9 Series dc switch offers a wide range of standard offerings, including a choice of seven actuators, global approvals (UL, cUL, ENEC/VDE), and two different quick-connect termination styles.

#### FEATURES

- > 3 mm [0.12 in] contact air gap
- High electrical rating up to 25.1 A
- Rock wipe contact action
- Seven (7) standard actuators
- Wide over-travel dimension
- Long-life coil spring
- Five (5) standard housing materials

#### BENEFITS

- Enables user to control a primary circuit
- Ability to directly control high electric loads
- Self-cleaning operation delivers high reliability
- Potential to solve a wide range of customer needs
- Improves life of the switch by reducing potential mechanical damage to switch
- Delivers enhanced reliability
- Housing material options meet T85 °C to T200 °C

#### POTENTIAL APPLICATIONS

- Power tools
- Home appliances
- Vending machines
- Gaming equipment
- Information technology equipment

# V9 Series

## SPECIFICATIONS

Insulation resistance (@ 500 Vdc)	100 mOhm min.
Dielectric strength	AC 1000 Vrms (50 Hz to 60 Hz)
Contact resistance (initial)	30 mOhm max.
Operating frequency – mechanical	300 operations per minute max.
Operating frequency – electrical	10 to 30 operations per minute max.
Operating speed	0,1 mm per 1 msec max.
Service life – mechanical	5 million operations minimum
Service life – electrical	6,000 to 100,000 operations minimum
Storage temperature	-25 °C to 100 °C [-13 °F to 212 °F]
Storage humidity	85 %RH max.
Approvals (apply to released options)	UL, cUL, ENEC/VDE

## ELECTRICAL RATINGS

10	cUL: 10 A 1/2 HP 125 Vac/250 Vac ENEC/VDE: 10(4) A 250 Vac T100 available
11	cUL: 10 A 1/2 HP 125 Vac/250 Vac ENEC/VDE: 4(3) A 250 Vac T125 available
16	cUL: 16 A 1/2 HP 125 Vac/250 Vac ENEC/VDE: 16(4) A 250 Vac T125 available
20	cUL: 20.1 A 1 HP 125 Vac/250 Vac ENEC/VDE: 20.1 A 250 Vac T125 available
25	cUL: 25 A 1 HP 125 Vac/250 Vac ENEC/VDE: 25.1 A, 10.1(8) A 250 Vac T125 available

## OPERATING CHARACTERISTICS

			OF (g) max.						
			Contact Gap > 3 mm*						
Part Number	Lever/Position		L	S	N	OP mm [in]	PT max. mm [in]	OT min. mm [in]	MD max. mm [in]
V9-*****D*00	Pin plunger	A	190	510	395	14,4 ± 0,5 [0.57 ± 0.02]	1,90 [0.07]	0,70 [0.03]	1,20 [0.05]
		B	—	—	—	—	—	—	—
V9-*****D*01	Short straight lever	A	190	510	—	15,0 ± 0,8 [0.59 ± 0.03]	2,40 [0.09]	0,50 [0.02]	1,40 [0.05]
		B	135	295	—	15,0 ± 1,2 [0.59 ± 0.05]	4,10 [0.16]	0,90 [0.04]	1,70 [0.07]
V9-*****D*02	Std straight lever	A	100	260	—	15,0 ± 1,52 [0.59 ± 0.06]	4,80 [0.19]	1,00 [0.04]	2,70 [0.11]
		B	80	150	—	15,0 ± 2,32 [0.59 ± 0.09]	8,00 [0.31]	1,70 [0.07]	3,30 [0.13]
V9-*****D*03	Long straight lever	A	52	140	—	15,0 ± 2,82 [0.59 ± 0.11]	9,00 [0.35]	1,87 [0.07]	5,07 [0.20]
		B	46	80	—	15,0 ± 4,32 [0.59 ± 0.17]	15,0 [0.59]	3,18 [0.13]	6,20 [0.24]
V9-*****D*04	Sim. roller lever	A	108	290	—	18,4 ± 1,3 [0.72 ± 0.05]	4,30 [0.17]	0,90 [0.04]	2,40 [0.09]
		B	88	170	—	18,4 ± 2,0 [0.72 ± 0.08]	7,20 [0.28]	1,50 [0.06]	2,90 [0.11]
V9-*****D*05	Roller lever	A	190	510	—	20,4 ± 0,7 [0.80 ± 0.03]	2,20 [0.09]	0,40 [0.02]	1,20 [0.05]
		B	145	330	—	20,4 ± 1,0 [0.80 ± 0.04]	3,70 [0.15]	0,80 [0.03]	1,50 [0.06]
V9-*****D*06	Long roller lever	A	102	275	—	20,4 ± 1,4 [0.80 ± 0.06]	4,50 [0.18]	0,90 [0.04]	2,60 [0.10]
		B	84	160	—	20,4 ± 2,2 [0.80 ± 0.09]	7,60 [0.30]	1,60 [0.06]	3,10 [0.12]

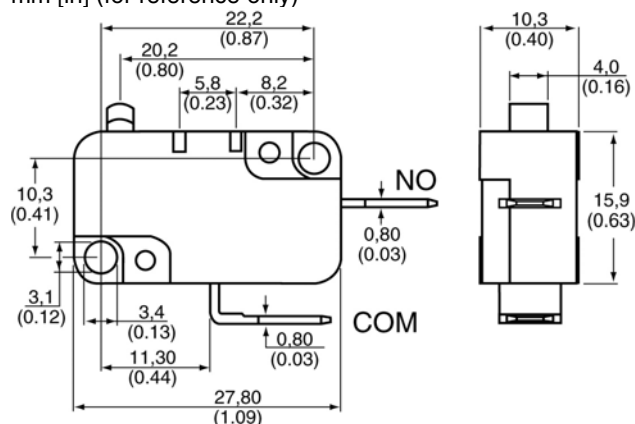
## PART NUMBER TREE

V9	16	S	2	2	D8	00	A
Switch type	Electrical rating	Operating force	Circuitry code	Case/cover mat'l.	Termination style (in)	Lever type	Lever mounting position
V9 Series Full disconnection Gap > 3 mm	<div>North America</div> <div>Europe (ENEC)</div> <div>10 10 A @ 125/250 Vac</div> <div>11 10 A @ 125/250 Vac</div> <div>16 16 A @ 125/250 Vac</div> <div>20 20.1 A @ 125/250 Vac</div> <div>25 25 A @ 125/250 Vac</div> <div>10(4) A 250 Vac</div> <div>4(3) A 250 Vac</div> <div>16(4) A 250 Vac</div> <div>20.1 A 250 Vac</div> <div>10.1(8) A 250 Vac</div>	<div>L See op. char. chart</div> <div>S See op. char. chart</div> <div>N See op. char. chart</div>	<div>1 SPDT</div> <div>2 SPST-NO</div> <div>3 SPST-NC</div>	<div>2 T100 °C</div> <div>3 T125 °C</div>	<div>D8 0.187 x 0.032 quick connect</div> <div>D9 0.250 x 0.032 quick connect</div>	<div>00 Pin plunger</div> <div>01 Short straight lever (14 mm)</div> <div>02 Standard straight lever (27,5 mm)</div> <div>03 Long straight lever (51,3 mm)</div> <div>04 Simulated roller lever (24,5 mm)</div> <div>05 Roller lever (12,5 mm)</div> <div>06 Roller lever (25,9 mm)</div>	<div>No lever. Pin plunger</div> <div>A Slot 1 - Far from pin plunger</div> <div>B Slot 2 - Near pin plunger</div>
		Not all permutations are possible or available. Contact Honeywell for more information.  Minimum order quantities apply to establish new catalog listings.					

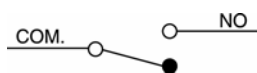
# Miniature Basic DC Switch

## MOUNTING DIMENSIONS

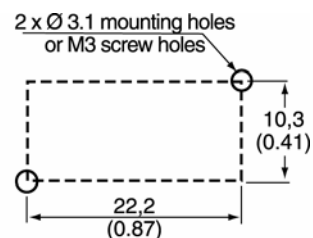
mm [in] (for reference only)



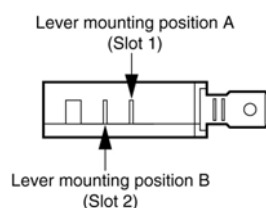
## CIRCUITRY



## MOUNTING HOLES

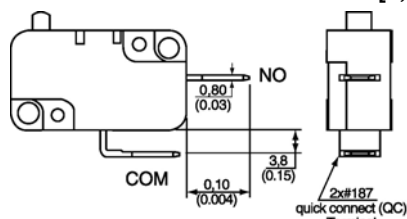


## LEVER (ACTUATOR) MOUNTING POSITION

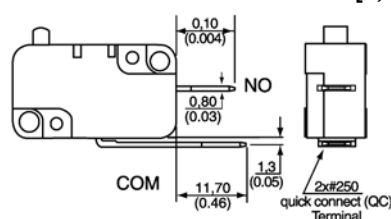


## TERMINAL TYPES

Quick connect terminal 0.187 in [4,75 mm] (D8)

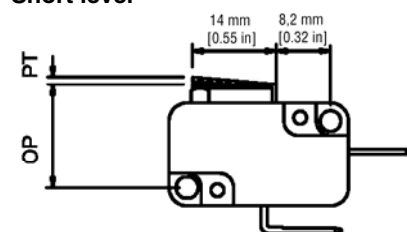


Quick connect terminal 0.250 in [6,35 mm] (D9)

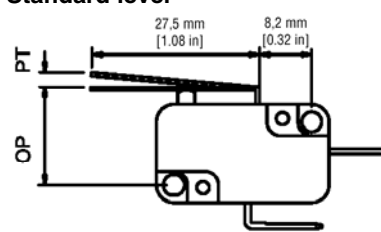


## LEVER TYPES

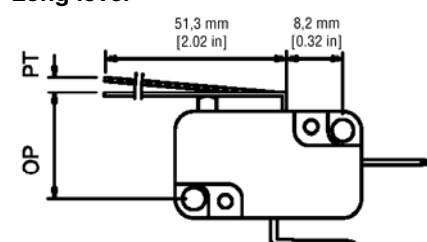
Short lever



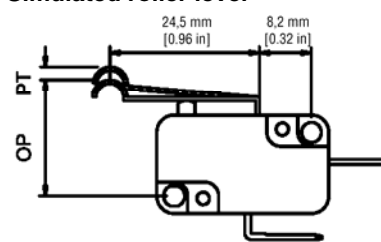
Standard lever



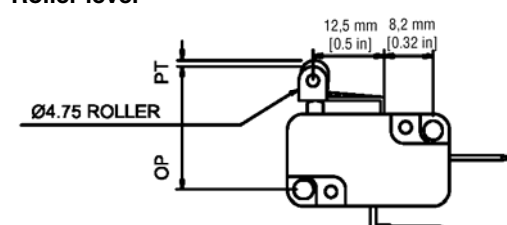
Long lever



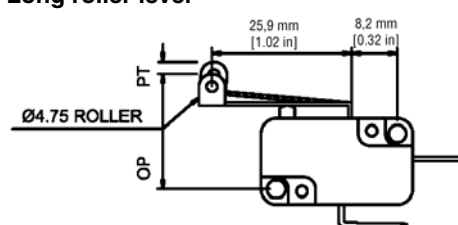
Simulated roller lever



Roller lever



Long roller lever



## ORDER GUIDE (ACTIVE LISTINGS)

Catalog Listing	Description
V9-11S43D800	V9 miniature basic switch – pin plunger, 10 A 125/250 Vac, 0.187 x 0.032 QC terminals
V9-16S23D800	V9 miniature basic switch – pin plunger, 10 A 125/250 Vac, 0.187 x 0.032 QC terminals
V9-16S43D905A	V9 miniature basic switch – roller lever (slot far from pin plunger), 10 A 125/250 Vac, 0.250 x 0.032 QC terminals
V9-20S23D900	V9 miniature basic switch – pin plunger, 20.1 A 125/250 Vac, 0.250 x 0.032 QC terminals
V9-20S43D900	V9 miniature basic switch – pin plunger, 20.1 A 125/250 Vac, 0.250 x 0.032 QC terminals
V9-25N23D900	V9 miniature basic switch – pin plunger, 25 A 125/250 Vac, 0.250 x 0.032 QC terminals
V9-25S43D800	V9 miniature basic switch – pin plunger, 25 A 125/250 Vac, 0.187 x 0.032 QC terminals
V9-25S43D906A	V9 miniature basic switch – roller lever (slot far from pin plunger), 25 A 125/250 Vac, 0.250 x 0.032 QC terminals

### WARNING

#### PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

#### WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

### WARNING

#### MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

#### SALES AND SERVICE

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

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