



MICRO SWITCH™ Premium  
Miniature Basic Switches  
**V7 Series**



Honeywell V7-1C13D8-201

# MICRO SWITCH™ V7 Series

## Premium Miniature Basic Switches

Honeywell's MICRO SWITCH™ V7 miniature switches are designed for long term-reliability in a rugged switch packaged with a thermoplastic housing. These switches may be installed in a wide range of applications from simple or precision on/off limits, presence/absence sensing, or embedded in pressure or temperature assemblies.

The V7 switch is available as a pin plunger style or with optional integral or auxiliary levers to actuate the switch and offer versatility in the application. The switch requires as little as 0,15 Newtons [approximately ½ ounce] to operate for extremely sensitive applications or an operating force of almost 4 Newtons [14 ounces] where higher forces are required. The V7 switch can reliably control logic level electrical loads from less than 0.1 A to power duty switching up to 25 A. Agency certifications for the MICRO SWITCH™ V7 switches are provided through CSA, ENEC, and UL for global use around the world.

### *What makes our switches better?*

- Certified with CSA, ENEC, and UL for global acceptability
- Reliable snap-spring mechanism with more than 60 years of proven service
- Available with pin plungers, integral levers (fitted two positions), or auxiliary levers to meet equipment requirements
- Electrical ratings from 0.1 A up to 25 A for design flexibility in one package size



***Big performance in a small package.***

COST OPTIMIZATION • RELIABILITY  
PERFORMANCE • GLOBAL ACCEPTANCE

# Features and Benefits

## ACTUATION ON TIME

MICRO SWITCH™ V7 Series basic switches **operate with forces as low as 15 g** and carry options to increase to 397 g, and can thereby easily accommodate different actuator mechanisms.

*Global acceptance: UL, CSA, ENEC*

## RELIABLE PERFORMANCE IN HARSH CONDITIONS

Switches feature **industry-leading temperature ranges** of -40 °C to 175 °C [-40 °F to 347 °F] to allow for years of reliable performance in harsh conditions.

## LONG LIFE CYCLE RATING

The long life cycle rating (up to **10,000,000 cycles**) reduces the need to replace switches over the life of OEM platform applications, therefore reducing total system cost.

## DESIGN FLEXIBILITY

Available with pin plungers, integral levers (fitted 2 positions), and auxiliary levers to meet a variety of equipment requirements, MICRO SWITCH™ V7 Series switches also boast electrical ratings from 0.1 A up to 25 A for design flexibility in one package size.

## Potential Applications



### VENDING MACHINE MOTORS

Switch controls motors or solenoids in vending machines for dispensing of product.

### MICROWAVE DOOR INTERLOCK

Switch in door interlock of microwave that disconnects power if door opened.

### OVEN CLEANING LATCH

Switch in door latch for oven clean operation.



### PRESSURE SWITCH ASSEMBLY

Pressure switch senses incoming water pressure for power washer.

# V7 Series

## PRODUCT NOMENCLATURE

<b>V7</b>	<b>1</b>	<b>C</b>	<b>1</b>	<b>7</b>	<b>D8</b>			
Switch Type <sup>A</sup>	Operating Force	Electrical Rating <sup>C,F</sup>	Circuitry Code	Mounting/ Construction <sup>D,F</sup>	Termination Style (Inches)	Lever Style <sup>B</sup>	Special Designator	
<b>V7 Series Miniature</b>		North America	Europe (ENEC)					Use only if this switch has a special feature. Could be any number.
<b>1</b>	150 g max.	<b>A</b> 5 A @ 125 Vac	3 A	<b>1</b> SPDT	<b>3</b> 150 °C 2,9 mm [0.11 in] mtg. holes	<b>D8</b> 0.187 x 0.02 quick connect	<b>002</b> Straight 22,1 mm [0.87 in]	
<b>1<sup>N</sup></b>	175 g max.	<b>B</b> 11 A @ 125 Vac	10 A	<b>2</b> SPNO	<b>4</b> 150 °C 3,1 mm [0.12 in] mtg. holes	<b>E8</b> 0.187 x 0.02 quick connect spread	<b>022</b> Straight 35,6 mm [1.4 in]	
<b>1<sup>P</sup></b>	225 g max.	<b>C<sup>K</sup></b> 15 A @ 125 Vac	—	<b>3</b> SPNC	<b>7</b> 85 °C 2,9 mm [0.11 in] mtg. holes	<b>D9</b> 0.250 x 0.032 quick connect	<b>201</b> Roller 20,6 mm [0.81 in]	
<b>2<sup>G</sup></b>	75 g max.	<b>D</b> 1 A @ 125 Vac	1 A		<b>8</b> 85 °C 3,1 mm [0.12 in] mtg. holes	<b>E9</b> 0.250 x 0.032 quick connect spread	<b>207</b> Roller 34,0 mm [1.34 in]	
<b>3<sup>H</sup></b>	50 g max.	<b>E</b> 10 A @ 125 Vac	5 A		<b>9<sup>F</sup></b> 85 °C 2,9 mm [0.11 in] mtg. holes	<b>P02</b> Left angle PCB	<b>263</b> Sim. roller 32,8 mm [1.29 in]	
<b>4<sup>I</sup></b>	25 g max.	<b>F</b> 3 A @ 125 Vac	—		<b>0<sup>F</sup></b> 85 °C 3,1 mm [0.12 in] mtg. holes	<b>P07</b> SPNO on edge PCB	<b>266</b> Tall sim. roller 34,0 mm [1.34 in]	
<b>5<sup>J</sup></b>	15 g max.	<b>H</b> No rating	—		<b>A<sup>E</sup></b> 177 °C with 2,9 mm [0.11 in] mtg. holes	Formed quick-connect terminals available	<b>048</b> Straight 59,4 mm [2.34 in]	
<b>6</b>	6 oz to 14 oz max.	<b>K</b> 22 A @ 125 Vac	20 A				<b>636</b> Paddle 139,5 mm [5.5 in]	Formed levers available
<b>7</b>	8 oz max.	<b>S<sup>L</sup></b> 0.1 A @ 125 Vac	1 A					
<b>9</b>	300 g max.	<b>V</b> 21 A @ 125 Vac	16 A					
		<b>W<sup>E,M</sup></b> 15.1 A @ 125 Vac	—					
		<b>X<sup>E,K</sup></b> 6 A @ 125 Vac	—					
		<b>Z</b> 25 A @ 125 Vac	20 A					

ONLY

**NOTES:**

- <sup>A</sup> Not all possible combinations are available, these are only guidelines
- <sup>B</sup> Lever length measured from center of back mounting hole to end of straight lever or center of roller
- <sup>C</sup> All ratings are UL/CSA, and where noted are also European-rated ENEC
- <sup>D</sup> Consider the temperature required and the mounting hole size when making this selection
- <sup>E</sup> Electric ratings "W" and "X" only used with "A" Mounting Construction and vice versa
- <sup>F</sup> European ENEC rating requires Mounting Construction code "9" or "0", and Electrical Ratings A,B,D,E,K,S,V,Z
- <sup>G</sup> Not applicable for Electrical Ratings C,K,V,W,X,Z
- <sup>H</sup> Not applicable for Electrical Ratings B,C,K,V,W,X,Z
- <sup>I</sup> Applies to Electrical Ratings A,D,F,S only
- <sup>J</sup> Applies to Electrical Ratings D,F,S only
- <sup>K</sup> Applies to 150 g Operate Force and higher
- <sup>L</sup> Applies to 15 g to 150 g Operate Force
- <sup>M</sup> Applies to only 300 g Operate Force
- <sup>N</sup> Applies to only Electrical Rating V
- <sup>P</sup> Applies to only Electrical Ratings K,Z

# MICRO SWITCH™ Premium Miniature Basic Switches

**Table 1. Specifications**

Characteristic	Parameter
Circuitry	SPDT, SPNC, SPNO
Operating force	0,25 N to 3,9 N [15 g to 397 g]
Termination	quick connect; 4,75 mm x 0,51 mm [0.187 in x 0.02 in] quick connect; 6,35 mm x 0,81 mm [0.25 in x 0.032 in] PCB (printed circuit board)
Actuators	pin plunger, integral lever options, auxiliary lever options
Agency certification	CSA, ENEC, UL; RoHS compliant
Operating temperature	-40 °C to 85 °C [-40 °F to 185 °F], options for 175 °C [347 °F]
Mechanical life	up to 10 million cycles
Contact material	silver, gold plated, gold alloy
Housing material	high strength thermoplastic

**Table 2. Electrical Ratings**

Rating code	UL, CSA	ENEC <sup>3</sup>
A	5 A 125 Vac, 250 Vac, 277 Vac 1/10 HP 250 Vac	3 (1) A, 250 Vac <sup>2</sup>
B	11 A 1/3 HP 125 Vac, 250 Vac or 277 Vac 1/2 A 125 Vdc; 1/4 A 250 Vdc 4 A 125 Vac "L" <sup>1</sup>	10 (3) A, 250 Vac <sup>2</sup>
C	15.1 A 1/2 HP 125 Vac, 250 Vac or 277 Vac 1 /2A 125 Vdc 1/4 A 250 Vdc; 5 A 125 Vac "L" <sup>1</sup>	-
E	10 A 1/3 HP 125 Vac, 250 Vac or 277 Vac 1/2 A 125 Vdc 1/4 A 250 Vdc, 4 A 125 Vac "L" <sup>1</sup>	5 (2) A, 250 Vac <sup>2</sup>
F	3 A 125 Vac, 250 Vac, 277 Vac 1/10 HP 250 Vac	-
S	0.1 A, 125 Vac	1 (0.05) A, 250 Vac <sup>2</sup>
V	21 A 1 HP 125 Vac, 250 Vac, 277 Vac 2 HP 250 Vac, 277 Vac	16 (4) A, 250 Vac <sup>2</sup>
W	15.1 A 125 Vac, 250 Vac, 277 Vac	-
Z	25 A, 277 Vac 1 HP, 125 Vac; 2 HP, 250 Vac	20 (5) A, 250 Vac <sup>2</sup>

<sup>1</sup>Incandescent lamp rating

<sup>2</sup>XX(Y) - XX = max. rated resistive value in amps, and (Y) = max. rated inductive value in amps


<sup>3</sup>European ENEC rating requires Mounting Construction code "9" or "0". See page four, Mounting Construction column

# V7 Series

- O.F. • Operating force
- R.F. • Release force
- P.T. • Pretravel
- O.T. • Overtravel
- D.T. • Differential travel
- O.P. • Operating position

## PRODUCT SPECIFICATIONS AND LISTINGS

Contact your Honeywell rep or distributor for additional listings

	Catalog Listing	Elect. Rating UL/CSA (CE)	Elect. Rating Spec. (page 4)	Contacts	O.F. max. newtons [grams]	O.P. nominal mm [inches]	P.T. max. mm [inches]	O.T. min. mm [inches]	D.T. mm [inches]
	<b>V7-2S17DB</b>	0.1 A (---)	S	SPDT	0,79 [75]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1S17D8</b>	0.1 A (---)	S	SPDT	1,47 [150]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-5F17D8</b>	3 A (---)	F	SPDT	0,15 [15]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-4A17D8</b>	5 A (---)	A	SPDT	0,25 [25]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-3E17D8</b>	10 A (---)	E	SPDT	0,49 [50]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1B37D8</b>	11 A (---)	B	SPNC	1,47 [150]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-2B17D8</b>	11 A (---)	B	SPDT	0,74 [75]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-2B17E9</b>	11 A (---)	B	SPDT	0,74 [75]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-7B17D8</b>	11 A (---)	B	SPDT	2,22 [227]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1C17D8</b>	15 A (---)	C	SPDT	1,47 [150]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1C17E9</b>	15 A (---)	C	SPDT	1,47 [150]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1C37B8</b>	15 A (---)	C	SPNC	1,47 [150]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1V19E9</b>	21 A (16 A)	V	SPDT	1,72 [175]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1V29E9</b>	21 A (16 A)	V	SPNO	1,72 [175]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1V39E9</b>	21 A (16 A)	V	SPNC	1,72 [175]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1Z19E9</b>	25 A (20 A)	Z	SPDT	2,21 [225]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1Z29E9</b>	25 A (20 A)	Z	SPNO	2,21 [225]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
	<b>V7-1Z20E9*</b>	25 A (20 A)	Z	SPNO	2,21 [225]	14,7 [0.578]	1,19 [0.047]	1,27 [0.050]	0,05 - 0,25 [0.002-0.010]
		<b>V7-1C17D8-002</b>	15 A (---)	C	SPDT	1,57 [160]	15,2 [0.600]	1,52 [0.060]	0,89 [0.035]
<b>V7-1C17E9-002</b>		15 A (---)	C	SPDT	1,57 [160]	15,2 [0.600]	1,52 [0.060]	0,89 [0.035]	0,36 [0.015] max.
<b>V7-6C18D8-002*</b>		15 A (---)	C	SPDT	4,05 [413]	15,2 [0.600]	1,52 [0.060]	0,89 [0.035]	0,36 [0.015] max.

\*3,1 mm mtg holes

# MICRO SWITCH™ Premium Miniature Basic Switches

- O.F. • Operating force
- R.F. • Release force
- P.T. • Pretravel
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- D.T. • Differential travel
- O.P. • Operating position

## PRODUCT SPECIFICATIONS AND LISTINGS

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	Catalog Listing	Elect. Rating UL/CSA (CE)	Elect. Rating Spec. (page 4)	Contacts	O.F. max. newtons [grams]	O.P. nominal mm [inches]	P.T. max. mm [inches]	O.T. min. mm [inches]	D.T. mm [inches]
<b>Lever 35,6 mm [1.40 in]</b> 	V7-1S17D8-022	0.1 A (---)	S	SPDT	0,83 [85]	15,2 [0.60]	3,04 [0.120]	2,16 [0.085]	0,76 [0.030] max.
	V7-3S17D8-022	0.1 A (---)	S	SPDT	0,29 [30]	15,2 [0.60]	3,04 [0.120]	2,16 [0.085]	0,76 [0.030] max.
	V7-3S17E9-022	0.1 A (---)	S	SPDT	0,29 [30]	15,2 [0.60]	3,04 [0.120]	2,16 [0.085]	0,76 [0.030] max.
	V7-1B17D8-022	11 A (---)	B	SPDT	0,80 [82]	15,3 [0.603]	3,04 [0.120]	1,70 [0.067]	0,69 [0.027] max.
	V7-1B19D8-022	11 A (10 A)	B	SPDT	0,80 [82]	15,3 [0.603]	3,25 [0.128]	1,78 [0.070]	0,71 [0.028] max.
	V7-2B17D8-022	11 A (---)	B	SPDT	0,40 [41]	15,3 [0.603]	3,04 [0.120]	1,70 [0.067]	0,71 [0.027] max.
	V7-6B19E9-022	11 A (10 A)	B	SPDT	2,11 [215]	15,2 [0.60]	3,25 [0.128]	1,35 [0.053]	0,76 [0.030] max.
<b>Lever 59,4 mm [2.34 in]</b> 	V7-3S17D8-048	0.1 A (---)	S	SPDT	0,16 [16]	15,3 [0.603]	5,97 [0.235]	3,00 [0.118]	1,27 [0.050] max.
	V7-2B17D8-048	11 A (---)	B	SPDT	0,20 [20]	15,3 [0.603]	5,97 [0.235]	2,92 [0.115]	1,27 [0.050] max.
	V7-1C17D8-048	15 A (---)	C	SPDT	0,44 [45]	15,2 [0.603]	5,94 [0.234]	4,19 [0.165]	1,52 [0.060] max.
	V7-1V19E9-048	21 A (16 A)	V	SPDT	0,54 [55]	15,4 [0.605]	6,35 [0.250]	3,05 [0.120]	1,40 [0.055] max.
	V7-9W1AE9-048**	15 A (---)	W	SPDT	0,88 [90]	15,2 [0.603]	6,35 [0.250]	3,15 [0.124]	1,37 [0.054] max.
<b>Lever Sim. Roll 32,8 mm [1.29 in]</b> 	V7-1S17D8-263	0.1 A (---)	S	SPDT	0,88 [90]	18,54 [0.730]	2,79 [0.110]	1,90 [0.075]	0,76 [0.030] max.
	V7-3E19E9-263	10 A (5 A)	E	SPDT	0,32 [33]	18,54 [0.730]	2,54 [0.100]	1,90 [0.075]	0,76 [0.030] max.
	V7-1B17D8-263	11 A (---)	B	SPDT	0,88 [90]	18,54 [0.730]	2,79 [0.110]	1,52 [0.060]	0,76 [0.030] max.
	V7-1C17D8-263	15 A (---)	C	SPDT	0,89 [91]	18,54 [0.730]	2,79 [0.110]	1,55 [0.061]	0,61 [0.024] max.
	V7-1V29E9-263	21 A (16 A)	V	SPNO	1,08 [110]	18,49 [0.728]	2,90 [0.114]	1,62 [0.064]	0,64 [0.025] max.
	V7-1Z10E9-263*	25 A (20 A)	Z	SPDT	1,33 [136]	18,49 [0.728]	2,90 [0.114]	1,62 [0.064]	0,64 [0.025] max.
<b>Lever, Roller 20,57 mm [0.81 in]</b> 	V7-2S17D8-201	0.1 A (---)	S	SPDT	0,88 [90]	20,57 [0.810]	1,19 [0.047]	1,02 [0.040]	0,38 [0.015] max.
	V7-6B19E9-201	11 A (10 A)	B	SPDT	4,50 [459]	20,52 [0.808]	1,42 [0.056]	0,86 [0.034]	0,33 [0.013] max.
	V7-7B17D8-201	11 A (---)	B	SPDT	2,78 [283]	20,52 [0.808]	1,42 [0.056]	0,86 [0.034]	0,33 [0.013] max.
	V7-1C17D8-201	15 A (---)	C	SPDT	1,72 [175]	20,57 [0.810]	1,19 [0.047]	0,81 [0.032]	0,30 [0.012] max.
<b>Lever, Roller 34,04 mm [1.34 in]</b> 	V7-1S17D8-207	0.1 A (---)	S	SPDT	0,83 [85]	20,57 [0.810]	2,84 [0.112]	2,03 [0.080]	0,76 [0.030] max.
	V7-2A17D8-207	5 A (---)	A	SPDT	0,42 [43]	20,57 [0.810]	2,92 [0.115]	1,52 [0.060]	0,64 [0.025] max.
	V7-1B17D8-207	11 A (---)	B	SPDT	0,83 [85]	20,57 [0.810]	2,92 [0.115]	1,52 [0.060]	0,76 [0.030] max.
	V7-1C17D8-207	15 A (---)	C	SPDT	0,88 [90]	20,57 [0.810]	2,92 [0.115]	1,52 [0.060]	0,64 [0.025] max.
	V7-1V19E9-207	21 A (16 A)	V	SPDT	0,98 [100]	20,52 [0.808]	3,07 [0.121]	1,65 [0.065]	0,76 [0.030] max.

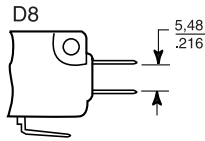
\*3,1 mm mtg holes

\*\* 177 °C [350 °F]

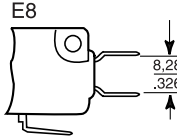
# V7 Series

## AVAILABLE TERMINALS

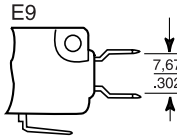
### Quick Connect (QC)



**D8 Terminals:** 0.187 in wide x 0.020 in thick.

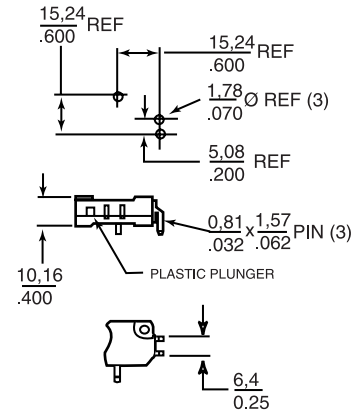


**E8 Terminals:** 0.187 in wide x 0.020 in thick.



**E9 Terminals:** 0.250 in wide x 0.032 in thick.

### Printed Circuit Board (PO2)



These terminals interface with snap-on receptacles and other components from AMPMODU interconnection system.

## STANDARD ACTUATOR OPTIONS

	<b>Straight Lever (-002)</b> 	<b>Roller Lever (-201)</b> 
	<b>Straight Lever (-022)</b> 	<b>Roller Lever (-207)</b> 
	<b>Straight Lever (-048)</b> 	<b>Simulated Roller Lever (-263)</b> 

## ACCESSORIES

	Part Number	Description
	15PA177-V7	Insulator packet: 500 pieces of 0,46 mm [0.018 in] thick varnished fiberglass
	15PA260	Plunger boot seal: Elastomer, dust and splash resistant (Switch not included)