

# V15W2 SERIES

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Issue F

## Basic Switch for Hazardous Locations

### DESCRIPTION

MICRO SWITCH V15W2 Series basic switches are precision snap-action contact mechanisms enclosed in plastic cases. Switch actuation triggers the mechanical closure of the switch's contacts. The switches are approved for use in Zone 2 hazardous locations. While a small amount of arcing occurs between the switch contacts during contact closure, the switch is environmentally sealed so that flammable gases cannot enter into the switching cavity. This minimizes the chances of ignition of flammable gases in a hazardous atmosphere.

The ATEX and IEC Ex approvals are: Ex nC IIA T5 Gc for an ambient temperature range of -25 °C to +85 °C per EN/IEC 60079-0 and EN/IEC 60079-15 via certificates DEKRA 19ATEX0013U and IEC Ex DEK 17.0053U.

### DIFFERENTIATION

- ATEX and IEC Ex approvals
- Wide variety of actuators, connections, operating and electrical characteristics
- More durable performance within a range of conditions
- Operates under many difficult/harsh environmental conditions

### VALUE TO CUSTOMERS

- V-Basic switches for potential use in refrigeration units using alternatives for HFC and HCFCs, specifically targeting OEMs and Tier white goods manufacturers transitioning to lower GHA emission refrigerants (which tend to be more explosive) per EPA and other regulatory guidance
- Certified for use in ordinary locations via UL, cUL (North America), CQC (Asia-Pacific), and ENEC (Europe). Certified for use in hazardous locations via ATEX (Europe) and IEC Ex (International)

### POTENTIAL APPLICATIONS

- Appliances (especially with new refrigerants)
- Valve actuators
- Commercial refrigeration
- Ice makers
- HVAC/R (furnace, refrigeration, ventilation)



### FEATURES

- Approved for use in Zone 2 hazardous locations; ATEX and IEC Ex certifications
- IP67 equivalent
- UL, cUL, ENEC, and CQC certifications for ordinary (non-hazardous) locations
- 5 A electrical rating
- Longer service life: over one million mechanical operations
- Quick-connect terminals
- SPDT, SPNO, SPNC
- 100 gf, 200 gf operating forces
- Available with a variety of actuators
- Global package size acceptance
- Gold contacts are also available for controlling logic-level/low-energy circuits



### PORTFOLIO

The MICRO SWITCH V15W2 Series basic switch is part of a broad Honeywell switch portfolio. Globally compliant and known worldwide for their compact and lightweight design, MICRO SWITCH snap-action switches are designed for more accurate repeatability and extended life.

To view the entire product portfolio,

**Honeywell**

# BASIC SWITCH FOR HAZARDOUS LOCATIONS, V15W2 SERIES

**TABLE 1. SPECIFICATIONS**

CHARACTERISTIC	PARAMETER
Circuitry	SPDT, SPNO, SPNC
Operating force	100 gf, 200 gf
Termination	quick connect: 4,8 mm x 0,5 mm
Actuators	pin plunger, roller plunger other actuators/levers available for special order
Agency certification	UL, cUL, ENEC, CQC, ATEX, IEC Ex
Sealing	IP67 equivalent (terminals are sealed, but they are exposed so official rating is IP00)
Operating temperature	-25 °C to 85 °C [-13 °F to 185 °F]
Mechanical life (cycles)	1,000,000 cycles min. @ 60 cycles/minute max.
Dielectric strength	1000 Vac (RMS) for one minute between open contacts, leakage current <10 mA
Switch resistance (initial)	50 mOhm max.
Insulation resistance	100 mOhm min. (500 Vdc for one minute)
Contact material	Silver alloy
Housing material	PBT thermoplastic polyester
Sealing material	Silicone

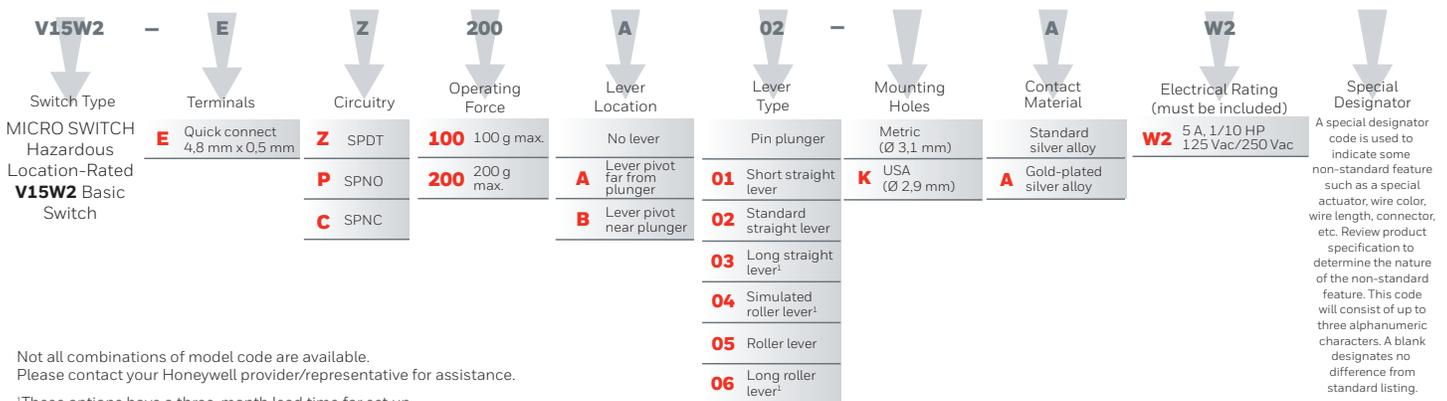
**TABLE 2. ELECTRICAL RATINGS**

CHARACTERISTIC	PARAMETER
UL/cUL electrical rating per UL 61058-1	5 A, 1/10 HP @ 125 Vac/250 Vac, 10,000 cycles
ENEC/CQC electrical rating per IEC 61058-1 and GB15091.1	5 A, 125 Vac/250 Vac, 50,000 cycles

**TABLE 3. HAZARDOUS AREA CERTIFICATION**

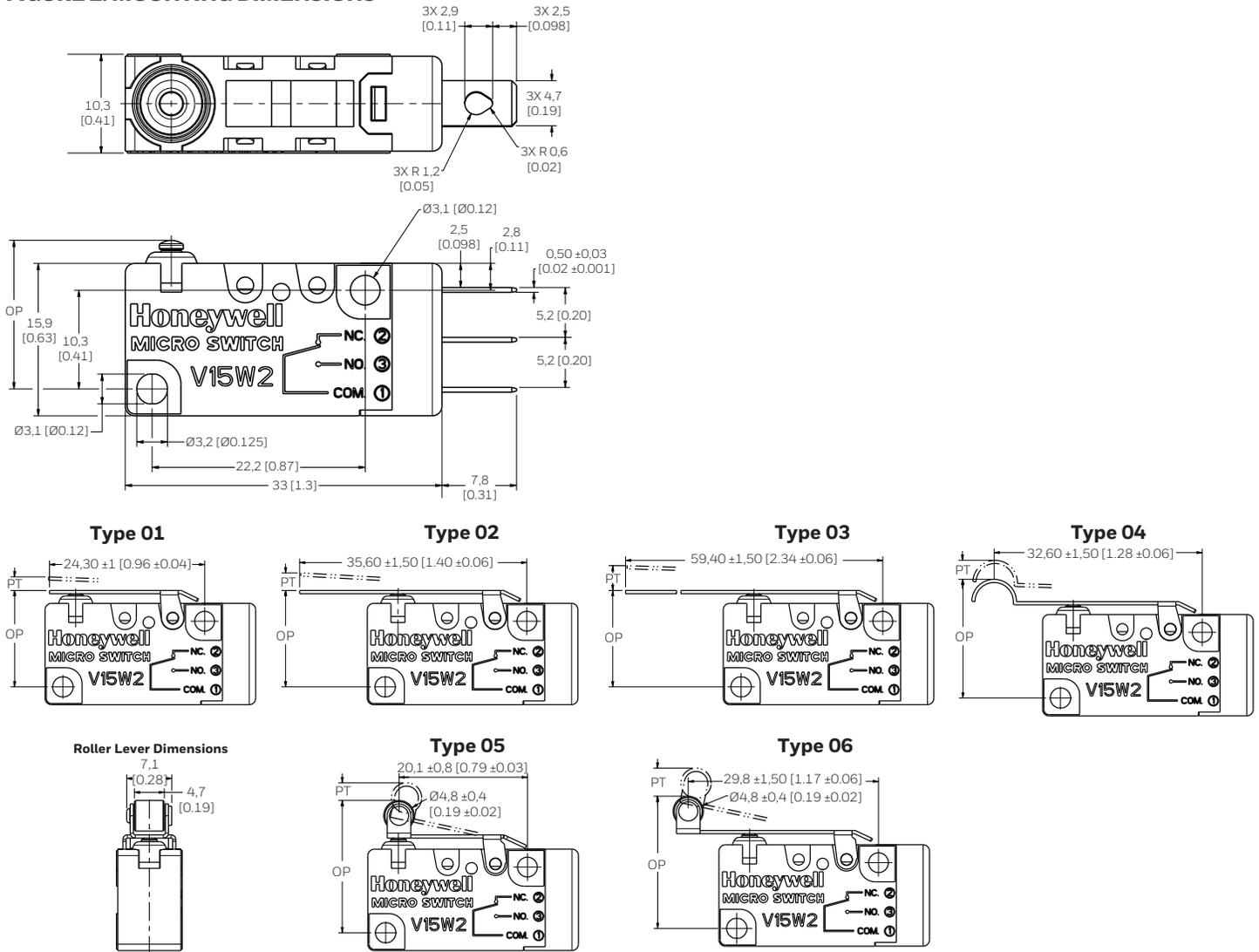
ATEX and IEC Ex per EN/IEC 60079-0 and EN/IEC 60079-15  
 Ex nC IIA T5 Gc  
 -25°C < Tamb < +85°C

**FIGURE 1. PRODUCT NOMENCLATURE**



# BASIC SWITCH FOR HAZARDOUS LOCATIONS, V15W2 SERIES

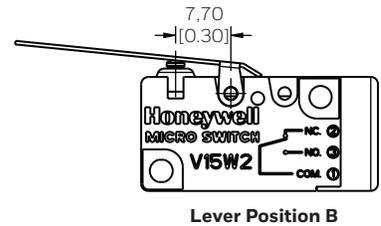
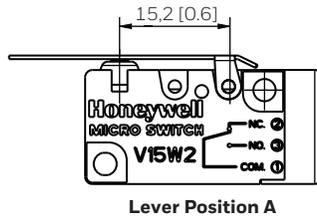
**FIGURE 2. MOUNTING DIMENSIONS**



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**TABLE 4. OPERATING CHARACTERISTICS**

Actuator Type	Maximum Operate Force (g)		Minimum Release Force (g)		Maximum Pretravel mm	Minimum Overtravel mm	Maximum Differential Travel mm	Operate Point mm
	Operate Force Code		Operate Force Code					
	100	200	100	200				
<b>LEVER POSITION A</b>								
Pin Plunger	100	200	15	40	1,2	1,0	0,4	14,8±0,4
01 Short Straight Lever	90	180	11	29	2,0	1,1	0,6	15,5±0,6
02 Standard Straight Lever	60	110	7	19	3,0	1,5	0,9	15,6±1,0
03 Long Straight Lever	40	70	4	11	5,0	2,6	2,0	15,9±2,0
04 Simulated Roller Lever	65	125	8	21	2,8	1,5	1,0	19,1±1,0
05 Roller Lever	100	200	15	40	1,2	1,0	0,5	20,6±0,5
06 Long Roller Lever	70	130	9	23	2,5	1,3	0,7	20,8±1,0
<b>LEVER POSITION B</b>								
Pin Plunger	100	200	15	40	1,2	1,0	0,4	14,8±0,4
01 Short Straight Lever	45	90	6	15	3,5	1,2	1,1	15,7±1,1
02 Standard Straight Lever	28	55	4	10	5,2	2,4	1,8	16,0±1,6
03 Long Straight Lever	18	35	2	6	9,0	4,5	3,0	16,5±3,3
04 Simulated Roller Lever	32	65	4	11	5,0	2,1	1,7	19,4±1,5
05 Roller Lever	58	115	7	19	3,0	1,2	0,9	21,0±0,9
06 Long Roller Lever	35	70	4	12	4,5	1,5	1,4	21,2±1,5



## ADDITIONAL MATERIALS

The following associated literature is available at [sensing.honeywell.com](http://sensing.honeywell.com):

- Product range guide
- Product installation instructions
- Application notes
- CAD drawings
- Product images

## WARRANTY/REMEDY

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International +815 618 3231  
USA/Canada +302 613 4491

**Honeywell**  
**Sensing and Internet of Things**

9680 Old Bailes Road  
Fort Mill, SC 29707  
[honeywell.com](http://honeywell.com)

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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.**

## 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.**

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