

## MICRO SWITCH™ V-Basic Switch Standard V15 Series

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### Electromechanical Basic Switch



#### DESCRIPTION

Honeywell's MICRO SWITCH™ V-Basic Switch Standard, V15 Series, is an electromechanical switch designed for enhanced reliability at a great value. This switch is often ideal for “low-cost-of-failure” – where the cost to replace the switch or to service any failure related to the switch is minimal. The V15 is designed for applications requiring  $\geq 100$  g of operating force and electrical ratings ranging from 16A to 26A.

The V15 Series switch offers a wide range of standard offerings, including a choice of actuators, electrical ratings, operating forces, and circuitry, and holds global approvals (ENEC, CQC, UL, cUL).

#### FEATURES

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- Broad range of electrical loads
- Straight, roller, simulated roller, and special actuators
- Special terminations available upon request
- Precision operation and application versatility
- Wide temperature range
- Global approvals (ENEC, CQC, UL, cUL)

#### POTENTIAL APPLICATIONS

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- Appliance
- Gaming
- Vending machines
- Water heaters
- Industrial controls

#### BENEFITS

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- Compatible with many applications due to the switches design flexibility, broad range of electrical loads, and actuators
- Accepts insulated connections, most quick connect openings
- Reliability, repeatability within range of conditions

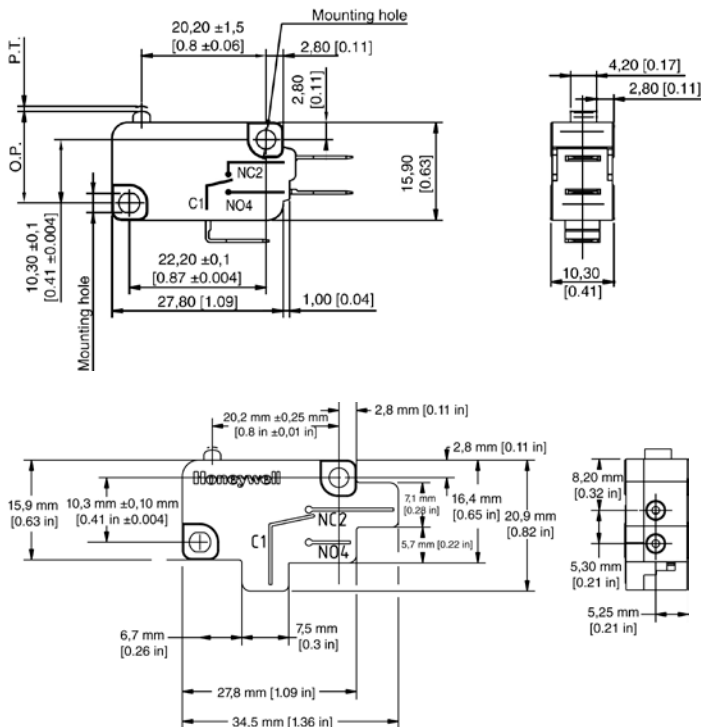
# MICRO SWITCH™ V-Basic Switch Standard V15 Series

| Specifications                   |  |
|----------------------------------|--|
| Insulation resistance            | ≥ 100 mOhm (500 Vdc)   |
| Dielectric strength              | 1000 Vac (50 Hz/60 Hz, 1 min.)   |
| Contact resistance               | 100 milliOhm max.  |
| Operating frequency - electrical | 10 to 30 operations per minute   |
| Operating frequency – mechanical | 300 operations per minute max.   |
| Operating speed                  | 0,1mm - 1m/sec.  |
| Service life mechanical          | 5 million cycles (operating force ≤ 200 g); 1 million cycles (operating force > 200 g) |
| Service life electrical          | 6000 or 50000 operations minimum   |
| Storage temperature              | -25 °C to 100 °C [-13 °F to 212 °F]  |
| Storage humidity                 | 85 % RH max.   |
| Micro disconnection (μ)          | < 3 mm contact gap   |
| Agency approvals                 | ENEC, CQC, UL, cUL   |

## ELECTRICAL CHARACTERISTICS

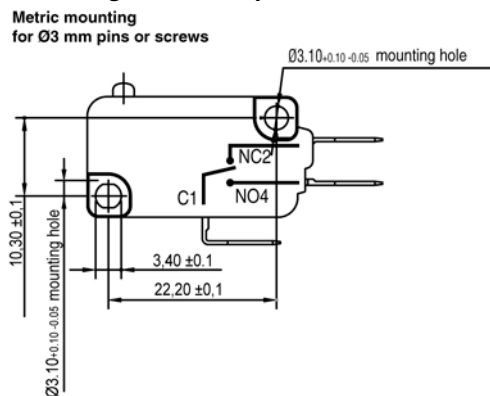
| Electrical rating |  |
|-------------------|--|
| 11                | ENEC/CQC ; 11(3) A, 125/150 Vac<br>UL/cUL ; 11(3) A, 125/150 Vac                             |
| 16                | ENEC/CQC ; 16(4) A, 250 Vac (50000 cycles)<br>UL/cUL ; 16½ HP, 125 Vac/250 Vac (6000 cycles) |
| 22                | ENEC/CQC: 22(8) A, 250 Vac (10000 cycles)<br>UL/cUL: 22 A 1HP, 125 Vac/250Vac (6000 cycles)  |
| 26                | ENEC: 26(10) A, 250 Vac (25000 cycles)   |

## DIMENSIONS

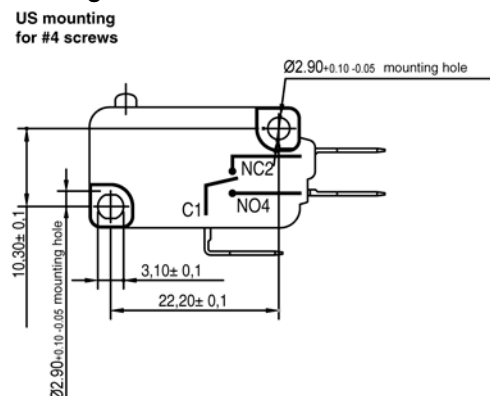


## MOUNTING HOLE DIMENSIONS

### Metric mounting for Ø3 mm pins or screws



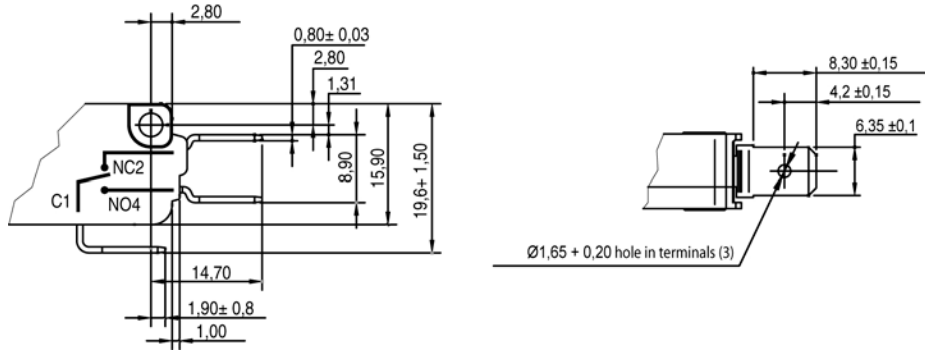
### USA mounting for #4 screws



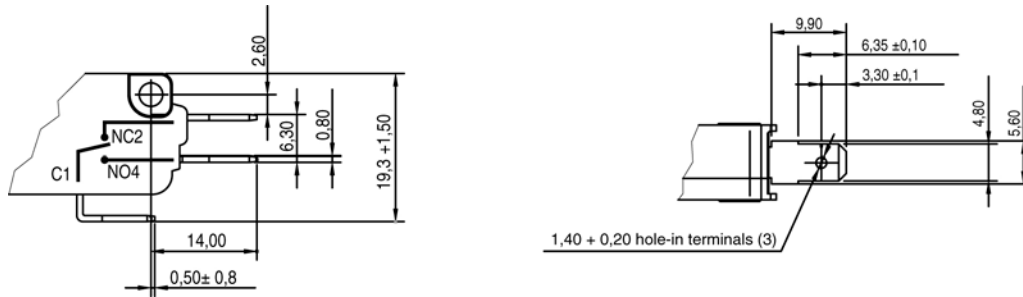
# Electromechanical Basic Switches

## CONNECTION DIMENSIONS

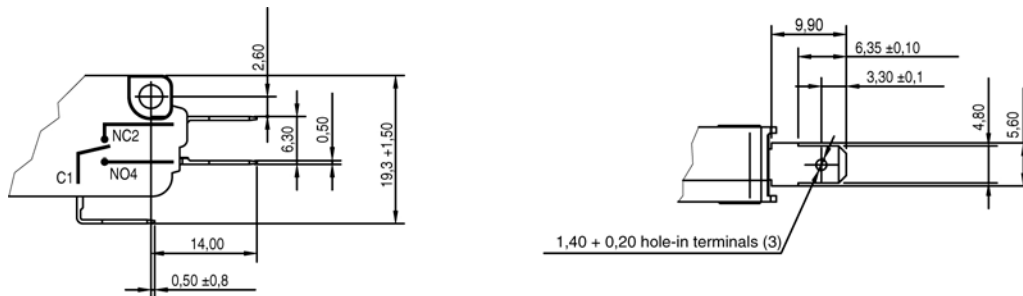
### C-style quick connect - 6,35 mm wide x 0,8 mm thick



### D-style quick connect - 4,80 mm wide x 0,8 mm thick



### E-style quick connect - 4,80 mm wide x 0,5 mm thick



# MICRO SWITCH™ V-Basic Switch Standard V15 Series

## STANDARD LEVER OPTIONS

| Lever code/Description      | Outline dimensions   |
|-----------------------------|--|
| A01/Straight short lever    | <p>Technical drawing of the A01/Straight short lever. The drawing shows a side view of the lever mechanism. Key dimensions are labeled: PT (Pivot to Tip), OP (Operational Point), a horizontal distance of 20,20 ±1,5 from the pivot to the tip, and a distance of 8,10 from the pivot to the roller. The lever is a simple straight line.</p>  |
| A02/Standard straight lever | <p>Technical drawing of the A02/Standard straight lever. The drawing shows a side view of the lever mechanism. Key dimensions are labeled: PT (Pivot to Tip), OP (Operational Point), a horizontal distance of 35,6 ±1,5 from the pivot to the tip, a horizontal distance of 20,20 ±1,5 from the pivot to the roller, and a distance of 8,10 from the pivot to the roller. The lever is a simple straight line.</p>                                    |
| A03/Long straight lever     | <p>Technical drawing of the A03/Long straight lever. The drawing shows a side view of the lever mechanism. Key dimensions are labeled: PT (Pivot to Tip), OP (Operational Point), a horizontal distance of 59,5 ±1,5 from the pivot to the tip, a horizontal distance of 20,20 ±1,5 from the pivot to the roller, and a distance of 8,10 from the pivot to the roller. The lever is a simple straight line.</p>  |
| A04/Simulated roller lever  | <p>Technical drawing of the A04/Simulated roller lever. The drawing shows a side view of the lever mechanism. Key dimensions are labeled: PT (Pivot to Tip), OP (Operational Point), a vertical distance of 3,00 from the pivot to the roller, a radius of R3,20 for the roller, a horizontal distance of 32,60 ±1,5 from the pivot to the roller, and a distance of 8,10 from the pivot to the roller. The lever has a curved end.</p>                |
| A05/Short roller lever      | <p>Technical drawing of the A05/Short roller lever. The drawing shows a side view of the lever mechanism. Key dimensions are labeled: PT (Pivot to Tip), OP (Operational Point), a roller with dimensions "Roller: 5,0 dia. x 4,2", a horizontal distance of 20,60 ±1,5 from the pivot to the roller, and a distance of 8,10 from the pivot to the roller. The lever has a curved end.</p>   |
| A06/Roller lever            | <p>Technical drawing of the A06/Roller lever. The drawing shows a side view of the lever mechanism. Key dimensions are labeled: PT (Pivot to Tip), OP (Operational Point), a roller with dimensions "Roller: 5,0 dia. x 4,2", a horizontal distance of 34,00 ±1,5 from the pivot to the roller, a horizontal distance of 20,20 ±1,5 from the pivot to the roller, and a distance of 8,10 from the pivot to the roller. The lever has a curved end.</p> |

# Electromechanical Basic Switches

## NOMENCLATURE TREE

| V15  | T              | 16   | C  | Z            | 200                                  | A                      | 01                        | XX   | K              |
|--|----------------|--|--|--------------|--------------------------------------|------------------------|---------------------------|--|----------------|
| Switch type  | Temp. grade °C | Electrical rating  | Terminal style   | Circuit code | Operating force at pin plunger, max. | Lever position         | Lever type                | Special designator   | Mounting holes |
| MICRO SWITCH™ V-Basic Switch Standard (V15 Series) | T T125         | 11<br>ENEC/CQC: 11(3) A, 125/150 Vac 25T85 µ 5E4<br>UL/cUL: 11(3) A, 125/150 Vac 25T85 µ 5E4 | C<br>Quick connect 6,35 mm x 0,80 mm [0.250 in x 0.032 in] | Z SPDT       | 100 100 gf 0.98 N                    | No lever pin plunger   | No lever pin plunger      | A special designator letter is used only when Terminal Type is "X" or Actuator/Lever Type is "99" to specify that the terminals or the actuator of the switch is special. Review Product Specification to determine the exact differences. | Metric Ø3,1 mm |
|  | H T150         | 16<br>ENEC/CQC: 16(4)A 250 Vac<br>UL/cUL: 16 1/2HP 125/250 Vac                               | D<br>Quick connect 4,80 mm x 0,8 mm [0.187 in x 0.032 in]  | P SPST-NO    | 200 200 gf 1.96N                     | A Far from pin plunger | 01 Short straight lever   |  | USA Ø2,9 mm    |
|  | S T85          | 22<br>ENEC/CQC: 22(8) A, 250 Vac<br>UL/cUL: 22 A 1HP, 125/250 Vac                            | E<br>Quick connect 4,80 mm x 0,5 mm [0.187 in x 0.020 in]  | C SPST-NC    | 300 300 gf 2.94 N                    | B Near pin plunger     | 02 Std. straight lever    |  |                |
|  |                | 26<br>ENEC: 26(10) A, 250 Vac  | H Push-in terminals  |              | 400 400 gf 3.92 N                    |                        | 03 Long straight lever    |  |                |
|  |                |  |  |              |                                      |                        | 04 Simulated roller lever |  |                |
|  |                |  |  |              |                                      |                        | 05 Roller lever           |  |                |
|  |                |  |  |              |                                      |                        | 06 Long roller lever      |  |                |
|  |                |  |  |              |                                      |                        | 99 Special lever          |  |                |

Disclaimer: Not all configurations are immediately available.

### ORDER GUIDE

The MICRO SWITCH™ V-Basic Switch Standard, V15 Series, provides customers with the flexibility to request quotes FOB Hong Kong or FOB Freeport. In addition, drop shipments can be arranged to any location in Asia Pacific.

- FOB Freeport orders will be entered using ICOM. Lead time 8 weeks.
- FOB New House orders will be entered using SAP. Lead time 8 weeks.
- FOB Hong Kong or drop shipments a special order request form will need to be submitted please contact your application engineer or product manager for details.

# MICRO SWITCH™ V-Basic Switch Standard V15 Series

This Honeywell datasheet supports the following MICRO SWITCH™ V15 V-Basic Standard Basic Switch Listings

|                   |                   |                    |                   |                    |
|-------------------|-------------------|--------------------|-------------------|--------------------|
| V15H16-CP100      | V15H16-CZ400B02   | V15H22-CZ100A02-K  | V15T16-CC200      | V15T16-DZ100A04    |
| V15H16-CP100A02   | V15H16-CZ400B02-K | V15H22-CZ100A03    | V15T16-CC200-K    | V15T16-DZ100A05    |
| V15H16-CP100A02-K | V15H16-CZ400-K    | V15H22-CZ100A03-K  | V15T16-CC300A01-K | V15T16-DZ100A06    |
| V15H16-CP200      | V15H16-EP100      | V15H22-CZ100A05    | V15T16-CC300A05-K | V15T16-DZ200A02    |
| V15H16-CP200B03   | V15H16-EP100A05   | V15H22-CZ100A05-K  | V15T16-CC300-K    | V15T16E2C300-70D-K |
| V15H16-CP200B03-K | V15H16-EP100A05-K | V15H22-CZ100A06    | V15T16-CC300-K    | V15T16-EC200       |
| V15H16-CP400      | V15H16-EP200      | V15H22-CZ100A06-K  | V15T16-CP100-01   | V15T16-EC400-K     |
| V15H16-CP400B04   | V15H16-EP200B06   | V15H22-CZ100-K     | V15T16-CP100-K    | V15T16-EP100-K     |
| V15H16-CP400B04-K | V15H16-EP200B06-K | V15H22-CZ200B04-K  | V15T16-CP200      | V15T16-EP200-K     |
| V15H16-CP400-K    | V15H16-EP400      | V15H22-CZ300A02-K  | V15T16-CP200-K    | V15T16-EZ100-K     |
| V15H16-CZ100      | V15H16-EP400A03   | V15H22-CZ300A03-K  | V15T16-CZ100A02   | V15T16-EZ200A01-K  |
| V15H16-CZ100A02   | V15H16-EP400A03-K | V15H22-CZ300A05-K  | V15T16-CZ100A02-K | V15T16-EZ200A02-K  |
| V15H16-CZ100A02-K | V15H16-EP400-K    | V15H22-CZ300A06-K  | V15T16-CZ100A03   | V15T16-EZ200A03-K  |
| V15H16-CZ100A03   | V15H16-EZ100      | V15H22-CZ300-K     | V15T16-CZ100A03-K | V15T16-EZ200A04-K  |
| V15H16-CZ100A03-K | V15H16-EZ100A01   | V15H22-CZ400B06-K  | V15T16-CZ100A05   | V15T16-EZ200A05-K  |
| V15H16-CZ100A05   | V15H16-EZ100A01-K | V15H22-CZ400-K     | V15T16-CZ100A05-K | V15T16-EZ200A06-K  |
| V15H16-CZ100A05-K | V15H16-EZ200      | V15S05-CZ100A05    | V15T16-CZ100A06   | V15T16-EZ200-K     |
| V15H16-CZ100A06   | V15H16-EZ200B02   | V15S05-CZ100A05-01 | V15T16-CZ100A06-K | V15T16-SZ200       |
| V15H16-CZ100A06-K | V15H16-EZ200B02-K | V15S05-EZ100-01    | V15T16-CZ100-K    | V15T22-CC200       |
| V15H16-CZ100-K    | V15H16-EZ400      | V15S05-EZ100A05    | V15T16-CZ200      | V15T22-CP100-K     |
| V15H16-CZ200      | V15H16-EZ400A01   | V15S05-EZ100-K     | V15T16-CZ200-K    | V15T22-CP200-K     |
| V15H16-CZ200B04   | V15H16-EZ400A01-K | V15S05-EZ100-K01   | V15T16-CZ300      | V15T22-CZ100-K     |
| V15H16-CZ200B04-K | V15H16-EZ400-K    | V15S05-EZ200-01    | V15T16-CZ300      | V15T22-CZ200       |
| V15H16-CZ300A02-K | V15H22-CP100A02-K | V15S11-HZ200       | V15T16-CZ300A02-K | V15T22-CZ200-K     |
| V15H16-CZ300A03-K | V15H22-CP200B03-K | V15T16-CC100A01    | V15T16-CZ300A02-K | V15T22-EC200       |
| V15H16-CZ300A05-K | V15H22-CP400B03-K | V15T16-CC100A01-K  | V15T16-CZ300A03-K | V15T26-CC200-K     |
| V15H16-CZ300A06-K | V15H22-CP400-K    | V15T16-CC100A05    | V15T16-CZ300A05-K | V15T26-CP200-K     |
| V15H16-CZ300-K    | V15H22-CZ100      | V15T16-CC100A05-K  | V15T16-CZ300-K    | V15T26-CZ300-K     |
| V15H16-CZ400      | V15H22-CZ100A02   | V15T16-CC100-K     | V15T16-CZ400      |                    |
|                   |                   |                    | V15T16-DZ100A02   |                    |
|                   |                   |                    | V15T16-DZ100A03   |                    |

## **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.**

## **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.**

### **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.

### **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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# Honeywell



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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