



## Rotary Switches



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Customization is standard with Honeywell's rotary switches. Honeywell's broad range of product options make building the specific rotary switch for an application simple. Optional features of momentary positions, terminal and integral connector types, UL-ratings, and various circuitry configurations are available to promote design flexibility. These options, coupled with the wide electrical rating and temperature range, come standard on every switch to meet growing customers' needs.

These rugged and reliable switches enhance application reliability and facilitate equipment operation and control with their ability to keep dirt and moisture out of the contact chamber, thereby supporting longer switch life. The two-, three- and four- position rotary switch options integrate into specific application designs.

Designed to withstand harsh environments with a durable, environmentally sealed design, Honeywell rotary switches are found in rugged applications, from off-road vehicles like ATVs, snowmobiles, and motorcycles to agriculture, construction, industrial, and lawn and garden equipment.

## *What makes our switches better?*

- Durable design with o-rings and weep holes promotes consistent performance in harsh environments
- Multiple position, circuitry, contact, knob, and connector options to address unique application requirements
- UL certified listings offered
- Decades of engineering, design, and application experience

***Manufactured for harsh,  
rugged environments***



HIGH DURABILITY  
MULTIPLE CONNECTOR CHOICES

## Features and Benefits

### **ENVIRONMENTAL PROTECTION**

Honeywell rotary switches are designed and tested to withstand a wide range of environmental conditions and contaminants: temperature cycling, chemical splashes, pressure wash, vibration, dust, humidity, and salt. The knob protects rotary cylinder from dust and ingress.

***Form factor! Easily customized for specific applications***

### **DURABLE CONSTRUCTION**

Polypropylene plastic housing (rear) improves durability and supports equipment weight reduction.

### **WIDE RANGE OF CONFIGURATIONS**

Two-, three-, or four-position switches, maintained and momentary (recoil) positions and numerous circuitry configurations allow for customization of equipment operation and control. UL certification options available, as well.

### **CONNECTOR CHOICES**

Integral connector (Metri-Pack, Sumitomo): Two-, three-, or four-position switches.  
Screw terminal: Two- or three-position switches.

### **FASTER ASSEMBLY**

Integral connectors facilitate quick assembly and minimize the potential for wiring errors.

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## Potential Applications



Honeywell rotary switches can be used in a variety of transportation and industrial applications ranging from run/start ignition to single-point control for lights and accessories.

### TRANSPORTATION

- All-terrain vehicles
- Snowmobiles
- Golf carts
- Aerial/scissor/boom lifts
- Telehandlers
- Construction equipment
- Skid loaders
- Forklifts
- Agricultural equipment
- Tractors
- Material handlers
- Marine equipment
- Generators



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Table 1. Electrical and Environmental Specifications

| Characteristics               | Integral Connector                 | Screw Terminal                          |
|-------------------------------|------------------------------------|---|
| Connector                     | Delphi Metri-Pack or Sumitomo      | screw                                   |
| Electrical ratings (res.)     | 12 Vdc, 20 A                       | 12 Vdc, 20 A; 24 Vdc, 10 A; 48 Vdc, 4 A |
| Operating temperature         | -40 °C to 85 °C [-40 °F to 185 °F] | -40 °C to 85 °C [-40 °F to 185 °F]      |
| Cycle life at electrical load | 25000 cycles                       | 25000 cycles                            |
| Position                      | 2 position; 3 position; 4 position | 2 position; 3 position                  |
| Mounting                      | panel                              | panel                                   |
| Depth behind panel            | 43,43 mm [1.71 in]                 | 39,88 mm [1.57 in]                      |
| Sealing                       | IP rating pending                  | IP rating pending                       |
| Contacts                      | brass/tin                          | copper                                  |
| Approvals                     | UL available                       | UL available                            |
| Front housing material        | 40 % mineral-filled nylon          | 40 % mineral-filled nylon               |
| Rear housing material         | polypropylene                      | polypropylene                           |
| Weight                        | 68 g [0.15 lb]                     | 68 g [0.15 lb]                          |



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Table 2. Order Guide and Specifications

|   | Catalog Listing | Packaging                             | Knob/Handle    | Connector  | Positions | Functions                 |
|---|-----------------|---------------------------------------|----------------|------------|-----------|---------------------------|
|    | 87909-18        | 100 units per box, with screws & nuts | Knob           | Metri-Pack | 4         | Off-On-Acc-Start (Recoil) |
|    | 90233-18        | 100 units per box, with screws & nuts | Knob           | Metri-Pack | 3         | Off-On-Start              |
|   | 50087487-12     | 100 units per box, with screws & nuts | Flasher handle | Metri-Pack | 3         | On (1)-Off-On (2)         |
|  | 50089737-18     | 100 units per box, with screws & nuts | Knob           | Sumitomo   | 3         | Off-On (1)-On (2)         |
|  | 32309969-001-18 | 100 units per box, with screws & nuts | Knob           | Sumitomo   | 4         | Off-Drl-Lo-Beam-Hi-Beam   |

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| Terminals | Electrical Rating | Circuitry   |         |         |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
|-----------|-------------------|---|---------|---------|--------|---------|----------|-------|---|---|----------|---|----------|---|---|---|---|----------|---|---|---|---|
| 4         | 12 V, 20 A        | <p>Spring return – right to acc</p> <table border="1"> <thead> <tr> <th></th> <th>Off</th> <th>On</th> <th>Acc</th> <th>Start</th> </tr> </thead> <tbody> <tr> <td>A &amp; B</td> <td>X</td> <td>O</td> <td>X</td> <td>X</td> </tr> <tr> <td>A, B &amp; D</td> <td>X</td> <td>X</td> <td>O</td> <td>X</td> </tr> <tr> <td>A, B &amp; C</td> <td>X</td> <td>X</td> <td>X</td> <td>O</td> </tr> </tbody> </table> |         | Off     | On     | Acc     | Start    | A & B | X | O | X        | X | A, B & D | X | X | O | X | A, B & C | X | X | X | O |
|           | Off               | On  | Acc     | Start   |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| A & B     | X                 | O   | X       | X       |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| A, B & D  | X                 | X   | O       | X       |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| A, B & C  | X                 | X   | X       | O       |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
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|           | Off               | On  | Start   |         |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| B&C       | X                 | O   | O       |         |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| A&D       | X                 | X   | O       |         |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| 4         | 12 V, 20 A        | <p>Maintained</p> <table border="1"> <thead> <tr> <th></th> <th>On (1)</th> <th>Off</th> <th>On (2)</th> </tr> </thead> <tbody> <tr> <td>B&amp;C</td> <td>O</td> <td>X</td> <td>X</td> </tr> <tr> <td>A&amp;D</td> <td>X</td> <td>X</td> <td>O</td> </tr> </tbody> </table>   |         | On (1)  | Off    | On (2)  | B&C      | O     | X | X | A&D      | X | X        | O |   |   |   |          |   |   |   |   |
|           | On (1)            | Off   | On (2)  |         |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| B&C       | O                 | X   | X       |         |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| A&D       | X                 | X   | O       |         |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
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|           | Off               | On (1)  | On (2)  |         |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| A, C & D  | X                 | O   | X       |         |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| B, C & D  | X                 | X   | O       |         |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| 4         | 12 V, 20 A        | <p>Maintained</p> <table border="1"> <thead> <tr> <th></th> <th>Off</th> <th>Drl</th> <th>Lo-Beam</th> <th>Hi-Beam</th> </tr> </thead> <tbody> <tr> <td>C &amp; D</td> <td>X</td> <td>O</td> <td>X</td> <td>X</td> </tr> <tr> <td>A, C &amp; D</td> <td>X</td> <td>X</td> <td>O</td> <td>X</td> </tr> <tr> <td>B, C &amp; D</td> <td>X</td> <td>X</td> <td>X</td> <td>O</td> </tr> </tbody> </table>            |         | Off     | Drl    | Lo-Beam | Hi-Beam  | C & D | X | O | X        | X | A, C & D | X | X | O | X | B, C & D | X | X | X | O |
|           | Off               | Drl   | Lo-Beam | Hi-Beam |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| C & D     | X                 | O   | X       | X       |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| A, C & D  | X                 | X   | O       | X       |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |
| B, C & D  | X                 | X   | X       | O       |        |         |          |       |   |   |          |   |          |   |   |   |   |          |   |   |   |   |

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Table 3. Packaging Codes

| Code | Quantity/Packaging | Fastenings  |
|------|--------------------|---|
| 12   | 100 units per box  | 100 mounting nuts in a bag, 100 handles in a bag, and 100 mounting screws in a bag, placed in top layer of carton |
| 18   | 100 units per box  | 100 mounting nuts in a bag, 100 knobs in a bag, and 100 mounting screws in a bag, placed in top layer of carton   |

## DIMENSIONAL DRAWINGS

Figure 1. Model 87909 Rotary Switch Dimensions

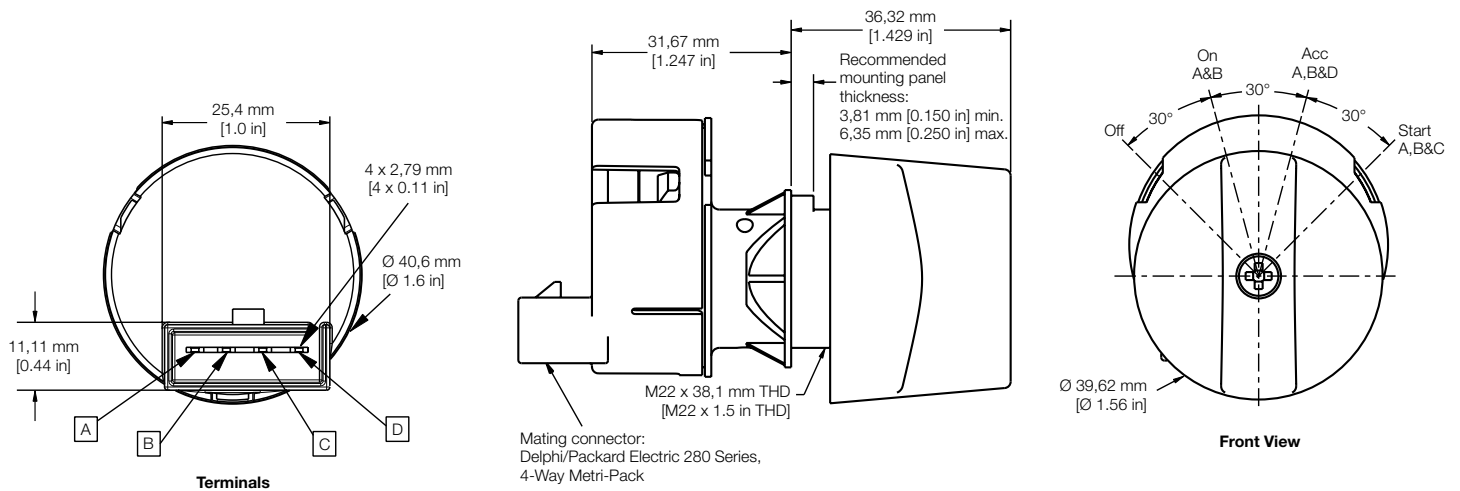
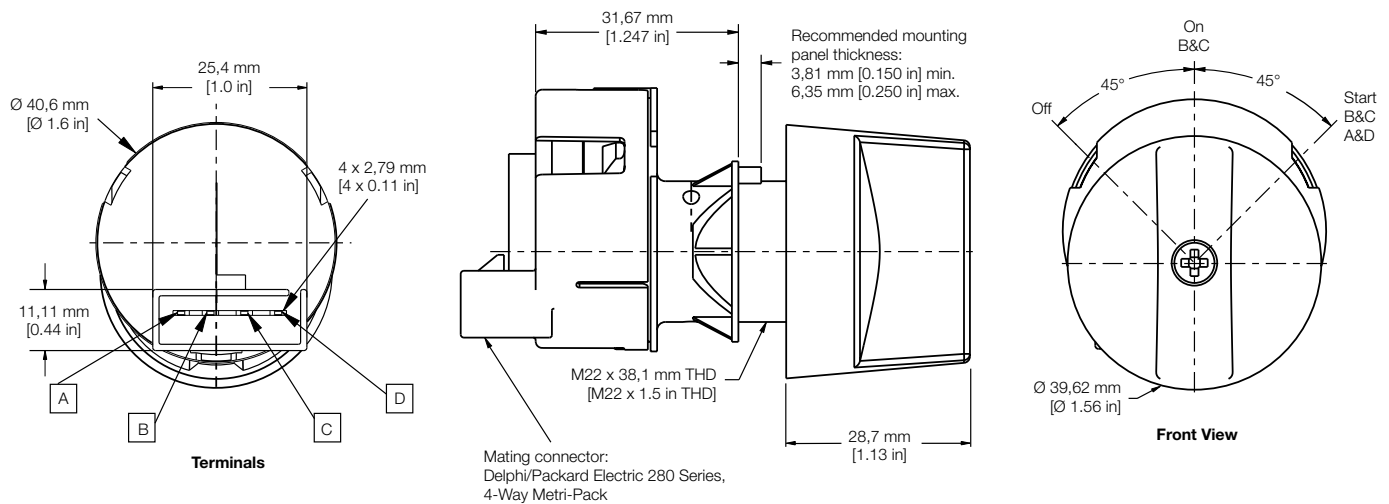


Figure 2. Model 90233 Rotary Switch Dimensions





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Figure 3. Model 50087487 Rotary Switch Dimensions

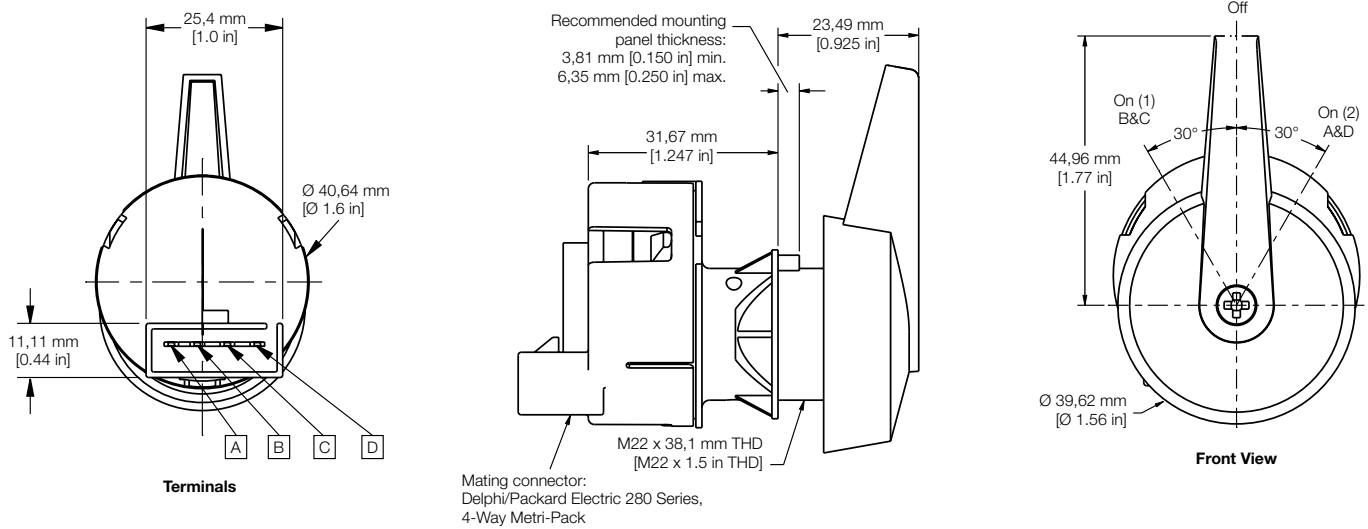


Figure 4. Model 50089737 Rotary Switch Dimensions

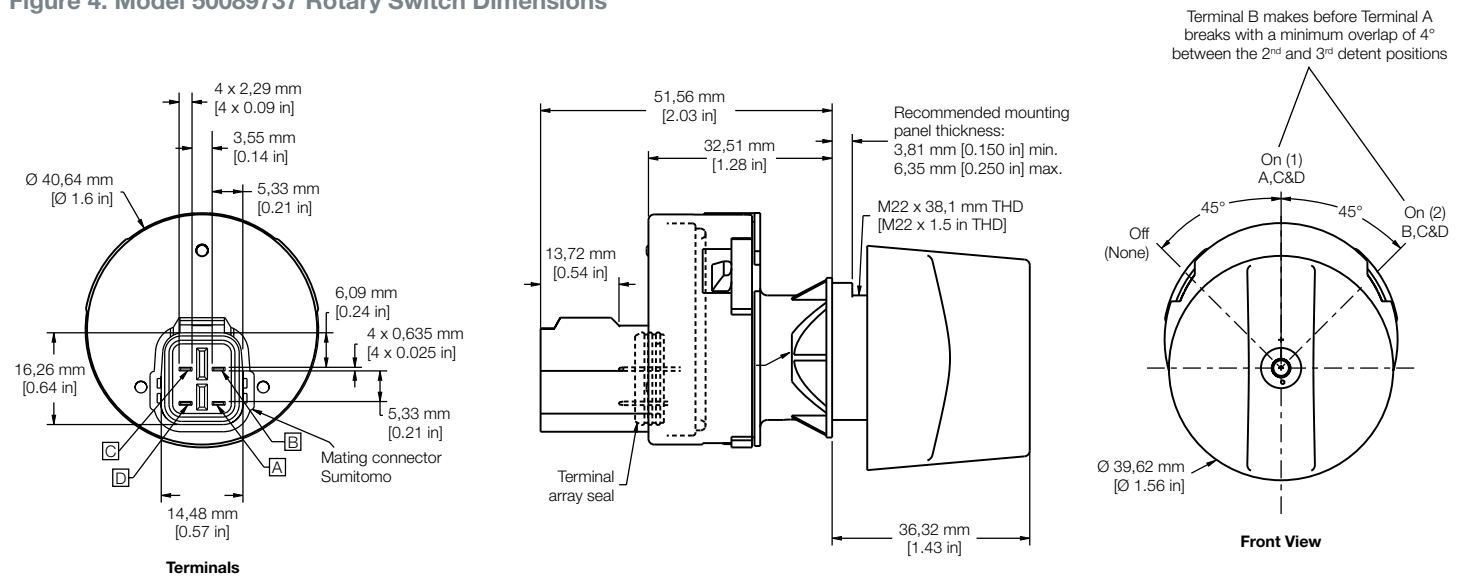
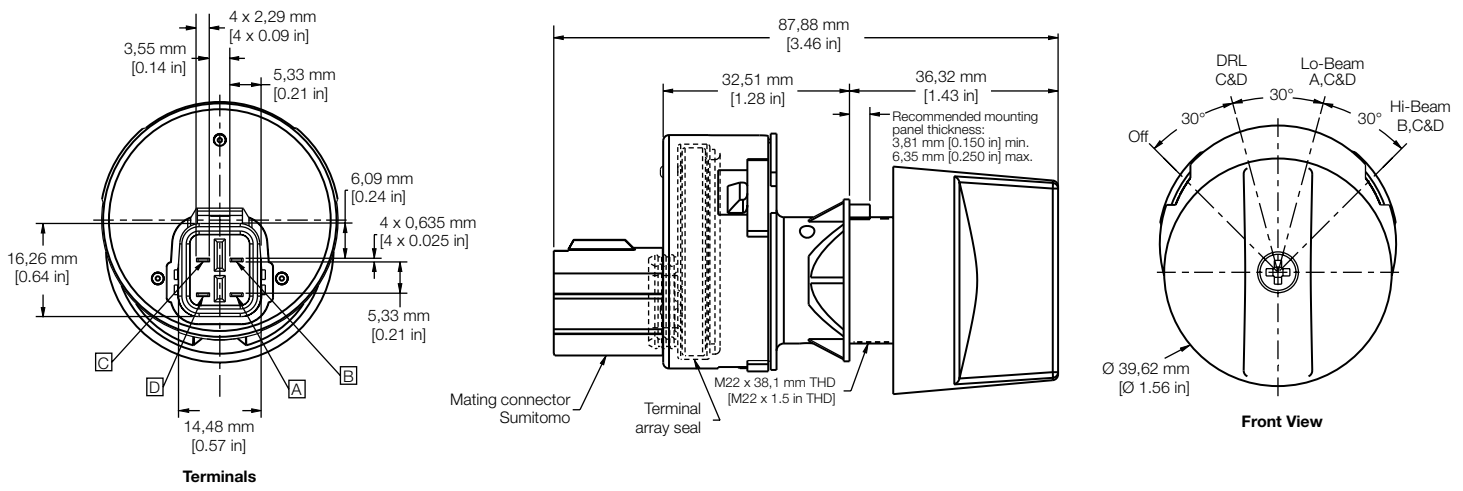
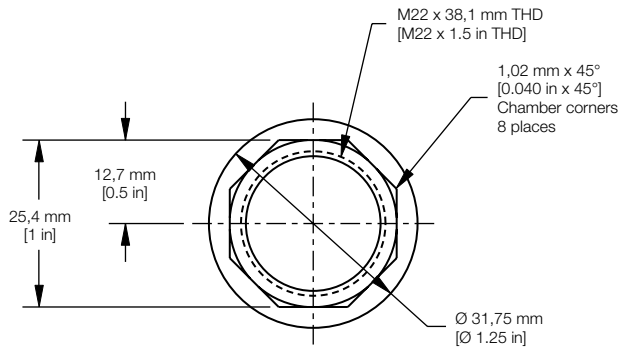


Figure 5. Model 32309969 Rotary Switch Dimensions



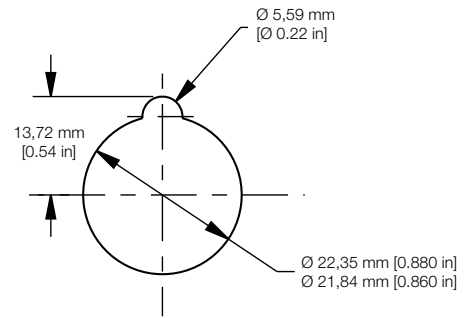
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Figure 6. Mounting Nut Dimensions



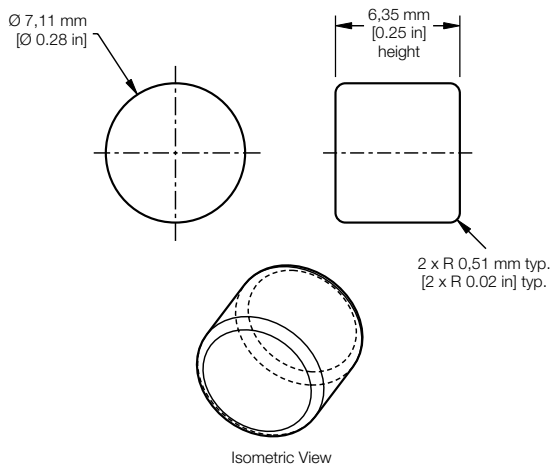
**Part number 81942**  
Torque to 0,576 Kg-m [50 in-lb] max.

Figure 7. Mounting Hole Cutout Dimensions



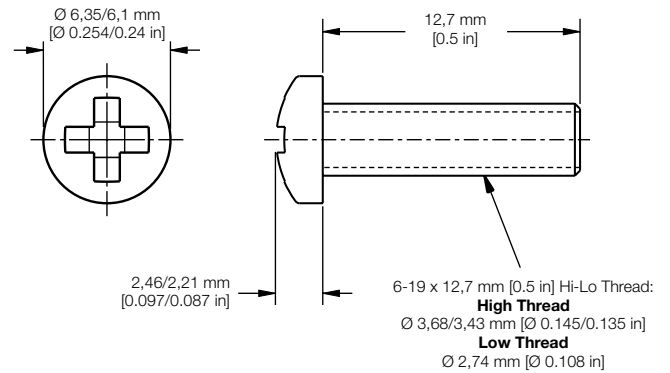
Recommended mounting panel thickness:  
3,81 mm [0.15 in] min.  
6,35 mm [0.25 in] max.

Figure 8. Mounting Plug Dimensions



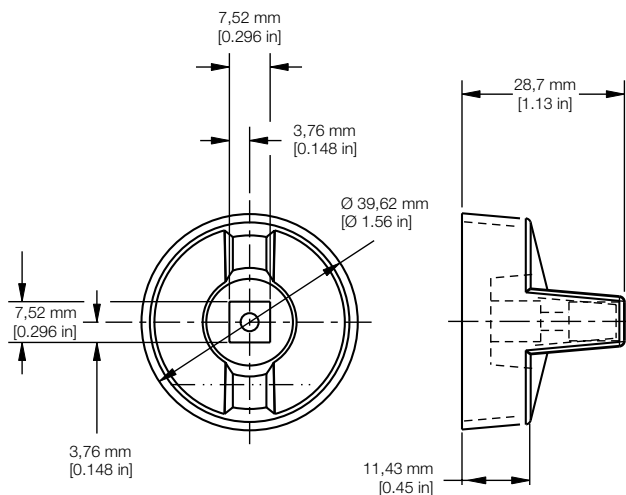
**Part number 88552**

Figure 9. Mounting Screw Dimensions



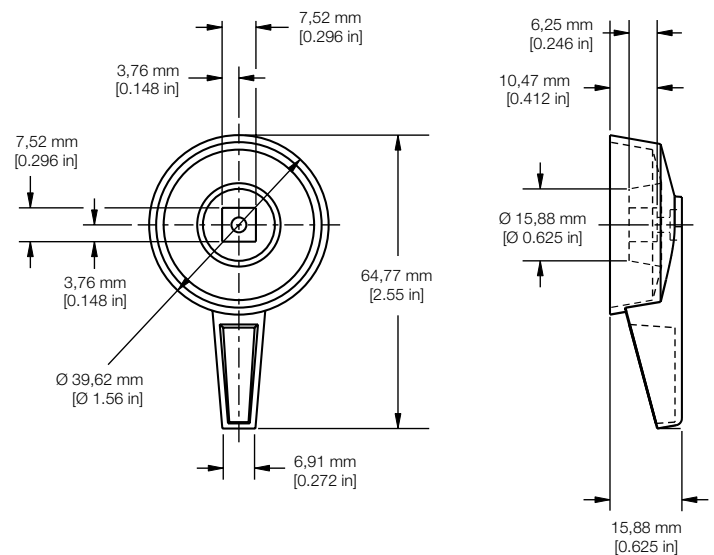
**Part number 84833**  
#6-19 x 12,7 mm [0.5 in] screw  
Torque to 0,046 Kg-m [4 in-lb]

Figure 10. Mounting Knob Dimensions



**Part number 88024**

Figure 11. Mounting Flasher Handle Dimensions



**Part number 73243**

## ADDITIONAL INFORMATION

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

- Product installation instructions
- Product range guide
- Product line guide
- Product application-specific information
  - Application note: Sensors and switches in front loaders
  - Application note: Sensors and switches in mobile cranes
  - Application note: Sensors and switches in oil rig applications

### Find out more

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.

To learn more about Honeywell's sensing and control products, call **+1-815-235-6847** or **1-800-537-6945**, visit **[sensing.honeywell.com](http://sensing.honeywell.com)**, or email inquiries to **[info.sc@honeywell.com](mailto:info.sc@honeywell.com)**

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**[honeywell.com](http://honeywell.com)**

### **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 website, it is up to the customer to determine the suitability of the product in the application.

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# Honeywell