Honeywell



Key and Ignition Switches



Datasheet

Key and Ignition Switches

Customization is standard with Honeywell's key and ignition switches. Honeywell's broad range of product options make building the specific key switch for an application simple. Optional features of multiple unique key codes, momentary positions, terminal and integral connector types, UL-ratings, and various circuitry configurations are available to provide design flexibility. To maintain consistent branding, Honeywell also offers over-molded keys with custom logos. 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 increase application reliability and facilitate seamless equipment operation and control with their ability to keep dirt and moisture out of the contact chamber, thereby prolonging switch life. The two-, three-, and four position key switch options easily integrate into specific application designs.

Designed to withstand harsh environments, Honeywell key and ignition switches are found in the toughest applications, from off-road vehicles like ATVs, snowmobiles, and motorcycles to agriculture, construction, industrial, and lawn and garden equipment.

What makes our key switches better?

- Robust design with o-rings, weep holes, and overmolded keys delivers consistent performance in harsh environments
- Multiple position, circuitry, contact, key, and connector options to address unique application requirements
- UL certified listings offered
- Availability of over-molded keys with custom logos and ability to match existing key codes
- Decades of engineering, design, and application experience

Manufactured for harsh, rugged environments



HIGH DURABILITY
MULTIPLE CONFIGURATIONS

Features and Benefits

ENVIRONMENTAL PROTECTION

Honeywell key and ignition 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. O-rings protect the contact chamber from moisture and dust while weep holes in the key cylinder housing facilitate drainage.

IMPROVED DURABILITY

Stainless steel keyhole shroud and keyhole dust shutter add **durability and corrosion resistance to the key tumbler/cylinder assembly**. The key cover (key boot) protects key cylinder from dust and ingress.

Form factor! Easily customized for specific applications

ROBUST CONSTRUCTION

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

WIDE RANGE OF CONFIGURATIONS

Two-, three-, or four-position switches, maintained and momentary (recoil) key positions, and numerous circuitry configurations allow for customization of equipment operation and control. **UL certification options** available, as well. To maintain consistent branding, Honeywell also offers **over molded keys with custom logos**.

MULTIPLE KEY OPTIONS

Double-sided keys allow for **easy key insertion** and switches can be designed to allow for **key removal in various key positions**. Up to **300 unique key codes** are available to provide increased security and compatibility with existing keys.

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.

Potential Applications







Honeywell key and ignition 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.

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

Key and Ignition Switches

Table 1. Specifications

Characteristic	Integral Connector	Screw Terminal
Connector	Delphi Metri-Pack or Sumitomo	Screw
Electrical rating (resistive)	12 Vdc, 20 A; 24 Vdc, 8 A; 12 Vdc, 10 mA	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]
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]
Stationary contacts	brass with tin plating standard, silver or gold plating optional	copper or copper alloy
Moving contacts	phosphor bronze standard, silver or gold plating optional	silver alloy
Approvals	–	UL available
Front housing material	mineral-filled nylon	mineral-filled nylon
Rear housing material	polypropylene	glass-filled nylon
Weight	68 g [0.15 lb]	68 g [0.15 lb]

Table 2. Integral Connector MCTF, Standard Construction (90 % confidence interval)

Electrical Rating	Integral Connector
20 A, 12 Vdc	11,000 cycles
8 A, 24 Vdc	24,000 cycles
10 mA, 12 Vdc	25,000 cycles

Table 3. Screw Terminal MCTF, Standard Construction (90 % confidence interval)

Electrical Rating	Screw Terminal
20 A, 12 Vdc	7,000 cycles
10 A, 24 Vdc	11,000 cycles
4 A, 48 Vdc	15,000 cycles
2 A, 12 Vdc	25,000 cycles

Per SAE J 259. Each circuit tested independently with resistive load at above voltage/current. 50 % duty cycle (1 second on, 1 second off). Criteria for failure is >2 % voltage drop. Representative samples tested. The above data may not apply to all configurations.

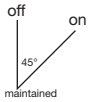
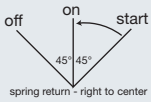
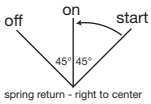
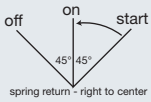
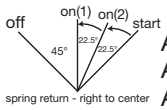
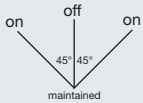
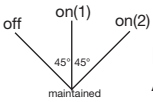
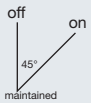
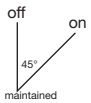
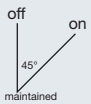
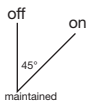
Key and Ignition Switches

Table 4. Key Switch Order Guide and Specifications

	Catalog Listing[1]	Packaging	Connector	Positions	Functions	Terminals	
	**84825-01**	25 units per box, no screws, w/ nuts	Metri-Pack	2	Off-On	4	
	84825-02	100 units per box, no screws, w/ nuts					
	84825-04	140 units per box, no screws, w/ nuts					
	**84826-01**	25 units per box, no screws, w/ nuts	Metri-Pack	3	Off-On-Start (Recoil)	4	
	84826-02	100 units per box, no screws, w/ nuts					
	84826-04	140 units per box, no screws, w/ nuts					
	**89165-01**	25 units per box, no screws, w/ nuts	Metri-Pack	3	Off-On-Start (Recoil)	6	
	89165-02	100 units per box, no screws, w/ nuts					
	**50084828-04**	140 units per box, no screws, w/ nuts	Metri-Pack	3	Off-On-Start (Recoil)	4	
	50084828-05	100 units per bag					
	**89477-01**	25 units per box, no screws, w/ nuts	Metri-Pack	4	Off-On(1)-On(2)-Start	4	
	89477-04	140 units per box, no screws, w/ nuts					
	**89680-02**	100 units per box, no screws, w/ nuts	Metri-Pack	3	On-Off-On	6	
	**89697-01**	25 units per box, no screws, w/ nuts	Metri-Pack	3	Off-On(1)-On(2)	4	
	89697-02	100 units per box, no screws, w/ nuts					
	**89951-02**	100 units per box, no screws, w/ nuts	Sumitomo	2	Off-On	4-pin	
	**84828-07**	25 units per box, with screws & nuts	Screw	2	Off-On	3	
	84828-08	100 units per box, with screws & nuts					
	84828-09	140 units per box, with screws & nuts					
	**89850-07**	25 units per box, with screws & nuts	Screw	2	Off-On	3	
	89850-08	100 units per box, with screws & nuts					
	**89947-08**	100 units per box, with screws & nuts	Screw	2	Off-On	6	

[1] Numbers before the dash indicate the model number; numbers following the dash indicate the packaging option. For more information on packaging options, see Table 3.
[2] When there are two adjacent closures in the circuitry options, contacts remain closed between positions.

Key and Ignition Switches

Contacts	Electrical Rating	Circuitry[2] O = Circuit Open; X = Circuit Closed	Key Re-move-able	Key Style	Key Code	Spring-Return	Dimen-sions
brass/tin	12 V, 20 A	 A&D O X B&C X O	Off	two-sided	6896	no	Figure 1
brass/tin	12 V, 20 A	 A&D O O X B&C O X X	Off	two-sided	6896	yes	Figure 2
brass/tin	12 V, 20 A	 E&F X O O A&F O X O C&D O X X A&B O O X	Off	two-sided	6896	yes	Figure 3
brass/tin	12 V, 20 A	 A&D O O X B&C O X X	Off	two-sided	8001	yes	Figure 2
brass/tin	12 V, 20 A	 A&B O X X X A&B&D O O X X A&B&C&D O O O X	Off	two-sided	6896	yes	Figure 4
brass/tin	12 V, 20 A	 E&F X O O A&F O X O C&D O X X A&B O O X	Off	two-sided	6896	no	Figure 5
brass/tin	12 V, 20 A	 B&C O X X A&D O O X	Off, On(1)	two-sided	6896	no	Figure 6
brass/tin	12 V, 20 A	 B&C X O A&D O X	Off	two-sided	1000	no	Figure 7
copper	12 Vdc, 20 A 24 Vdc, 10 A 48 Vdc, 4 A	 B&C X O A&D O X	Off	two-sided	6896	no	Figure 8
copper	12 Vdc, 20 A 24 Vdc, 10 A 48 Vdc, 4 A	 B&B1 X X B&3 O X	Off	one-sided	3000	no	Figure 8
copper	12 Vdc, 20 A 24 Vdc, 10 A 48 Vdc, 4 A	 B&3 O X B1&4 O X	Off	two-sided	6896	no	Figure 9

Key and Ignition Switches

Table 4. Key Switch Order Guide and Specifications, continued

	Catalog Listing[1]	Packaging	Connector	Positions	Functions	Terminals	
	**84829-02**	100 units per box, no screws, w/ nuts	Screw	3	Off-On-Start (Recoil)	3	
	84829-07	25 units per box, with screws & nuts					
	84829-08	100 units per box, with screws & nuts					
	84829-09	140 units per box, with screws & nuts					
	**84830-02**	100 units per box, no screws, w/ nuts	Screw	3	On(1)-Off-On(2)	6	
	84830-07	25 units per box, with screws & nuts					
	84830-08	100 units per box, with screws & nuts					
	84830-09	140 units per box, with screws & nuts					
	**89476-08**	100 units per box, with screws & nuts	Screw	3	On(1)-Off-On(2)	6	
	89476-09	140 units per box, with screws & nuts					
	**89997-07**	25 units per box, with screws & nuts	Screw	3	On(1)-Off-On(2)	6	
	89997-09	140 units per box, with screws & nuts					
	**90173-09**	140 units per box, with screws & nuts	Screw	3	On(1)-Off-On(2)	6	
	**90220-08**	100 units per box, with screws & nuts	Screw	3	On(1)-Off-On(2)	6	

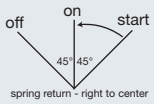
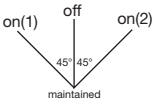
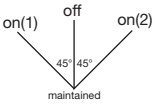
[1] Numbers before the dash indicate the model number; numbers following the dash indicate the packaging option. For more information on packaging options, see Table 3.
[2] When there are two adjacent closures in the circuitry options, contacts remain closed between positions.

Table 5. Packaging Codes

Code	Quantity/Packaging[3]	Fastenings
01	25 units per box	25 mounting nuts in bag, placed in top layer of carton (no screws)
02	100 units per box	100 mounting nuts in bag, placed in top layer of carton (no screws)
04	140 units per box	140 mounting nuts in bag, placed in top layer of carton (no screws)
07	25 units per box	25 mounting nuts in a bag and the required amount of screws in a bag, placed in top layer of carton
08	100 units per box	100 mounting nuts in a bag and the required amount of screws in a bag, placed in top layer of carton
09	140 units per box	140 mounting nuts in a bag and the required amount of screws in a bag, placed in top layer of carton
10	50 units per box	50 switches individually bagged with mounting nuts and required amount of screws

[3] Key switches are bulk packed in cardboard layers with dividers. Products are not individually boxed.

Key and Ignition Switches

Contacts	Electrical Rating	Circuitry[2] O = Circuit Open; X = Circuit Closed	Key Re-move-able	Key Style	Key Code	Spring-Return	Dimen-sions
copper	12 Vdc, 20 A 24 Vdc, 10 A 48 Vdc, 4 A	 B&B1 Off O On X Start X B&3 O O X	Off	two-sided	6896	yes	Figure 10
copper	12 Vdc, 20 A 24 Vdc, 10 A 48 Vdc, 4 A	 B&1 On(1) X Off O On(2) O B1&2 X O O B&3 O O X B1&4 O O X	Off	two-sided	6896	no	Figure 11
copper	12 Vdc, 20 A 24 Vdc, 10 A 48 Vdc, 4 A	 B&1 On(1) X Off O On(2) O B1&2 X O O B&3 O O X B1&4 O O X	Off	one-sided	9901	no	Figure 11
copper	12 Vdc, 20 A 24 Vdc, 10 A 48 Vdc, 4 A	 B&1 On(1) X Off O On(2) O B1&2 X O O B&3 O O X B1&4 O O X	All posi-tions	one-sided (Ronis 455 key-cut)	3000	no	Figure 11
copper	12 Vdc, 20 A 24 Vdc, 10 A 48 Vdc, 4 A	 B&1 On(1) X Off O On(2) O B1&2 X O O B&3 O O X B1&4 O O X	Off	one-sided (Ronis 455 key-cut)	3000	no	Figure 11
copper	12 Vdc, 20 A 24 Vdc, 10 A 48 Vdc, 4 A	 B&1 On(1) X Off O On(2) O B1&2 X O O B&3 O O X B1&4 O O X	All posi-tions	two-sided	6896	no	Figure 11

Key and Ignition Switches

DIMENSIONAL DRAWINGS

Figure 1. Model 84825 Key Switch Dimensions

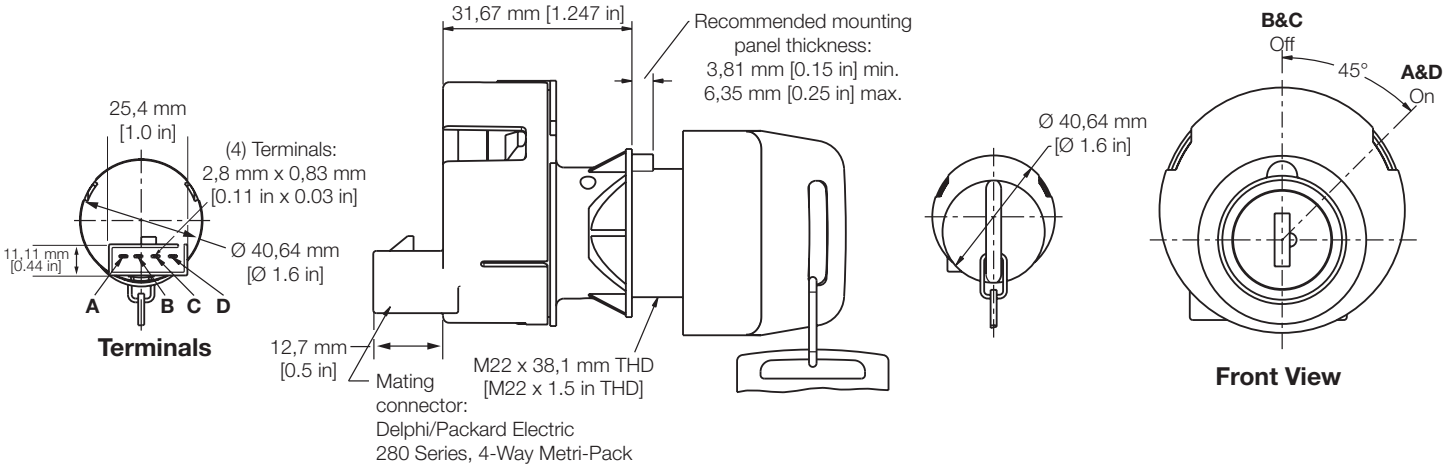


Figure 2. Models 84826 and 50084828 Key Switch Dimensions

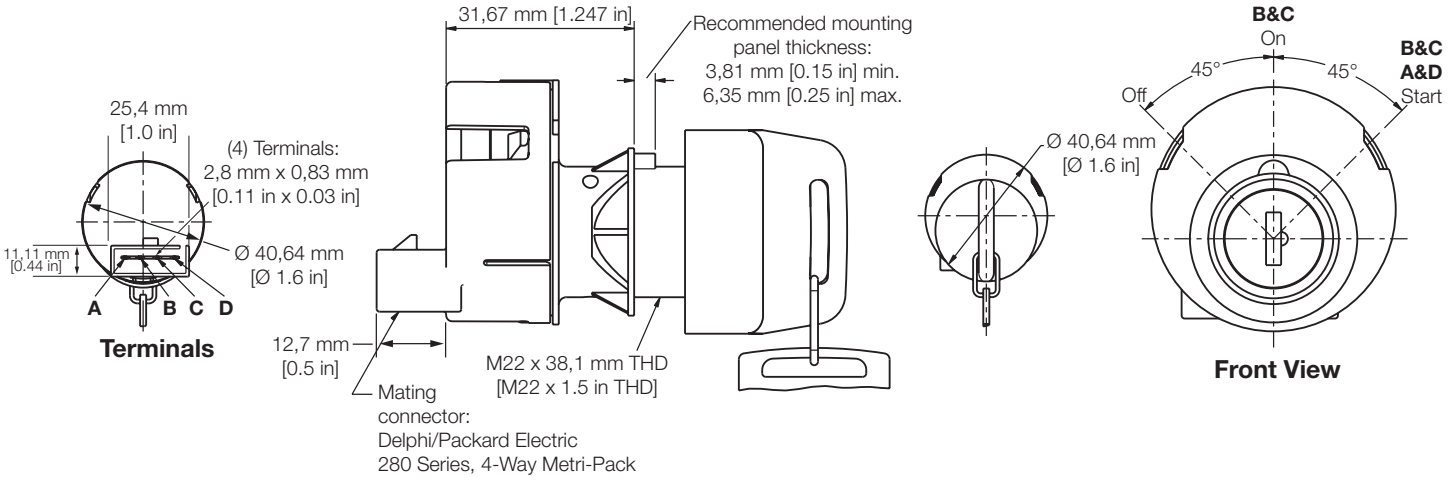
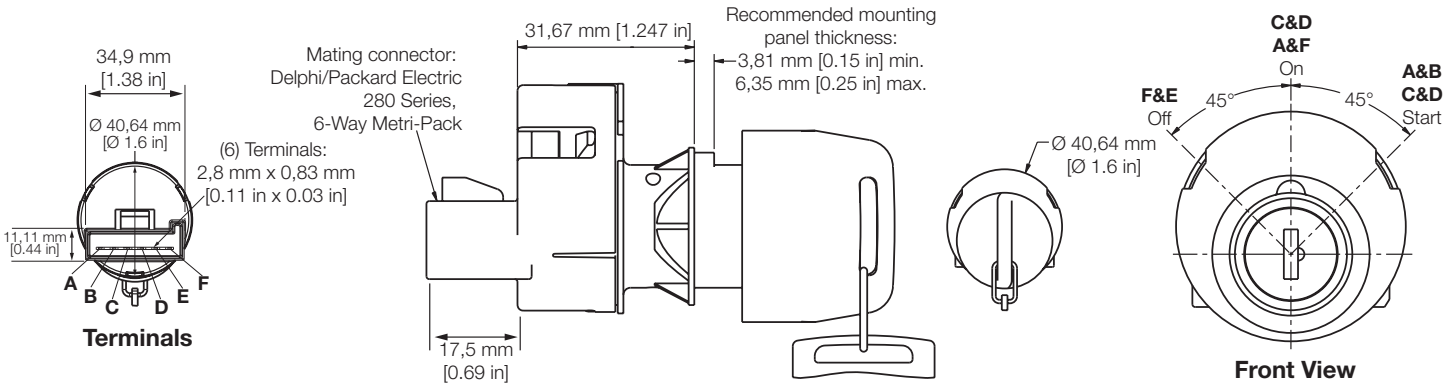


Figure 3. Model 89165 Key Switch Dimensions



Key and Ignition Switches

Figure 4. Model 89477 Key Switch Dimensions

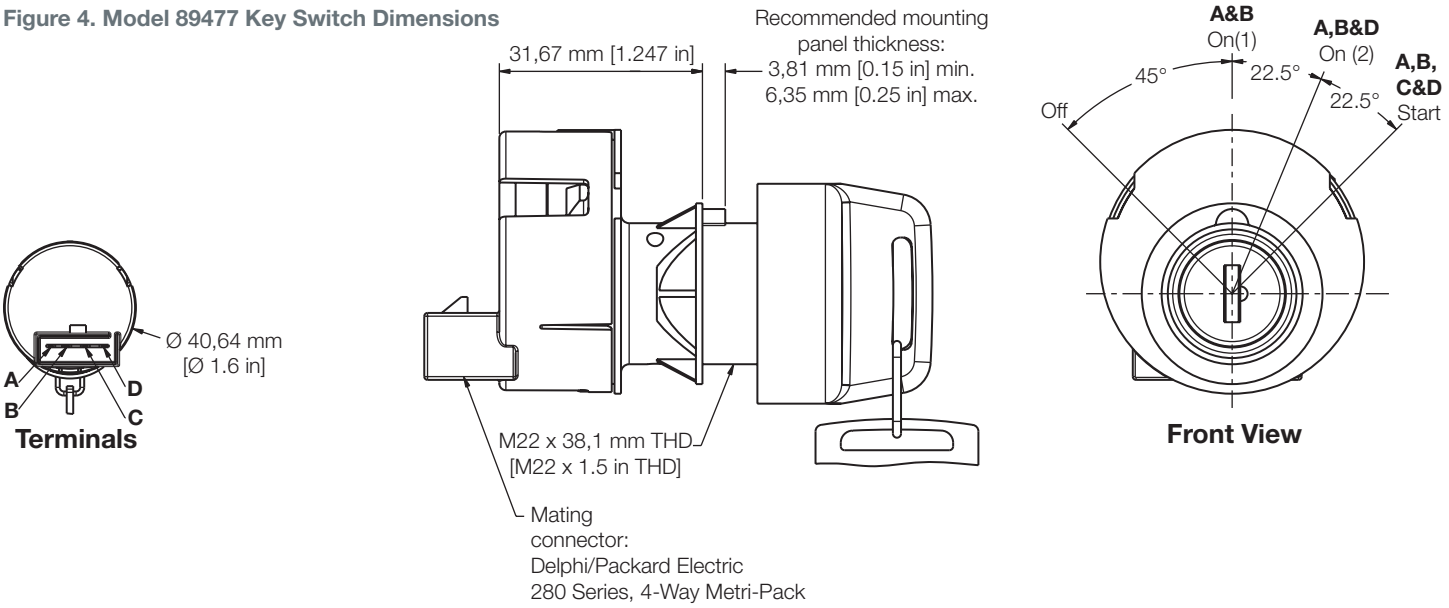


Figure 5. Model 89680 Key Switch Dimensions

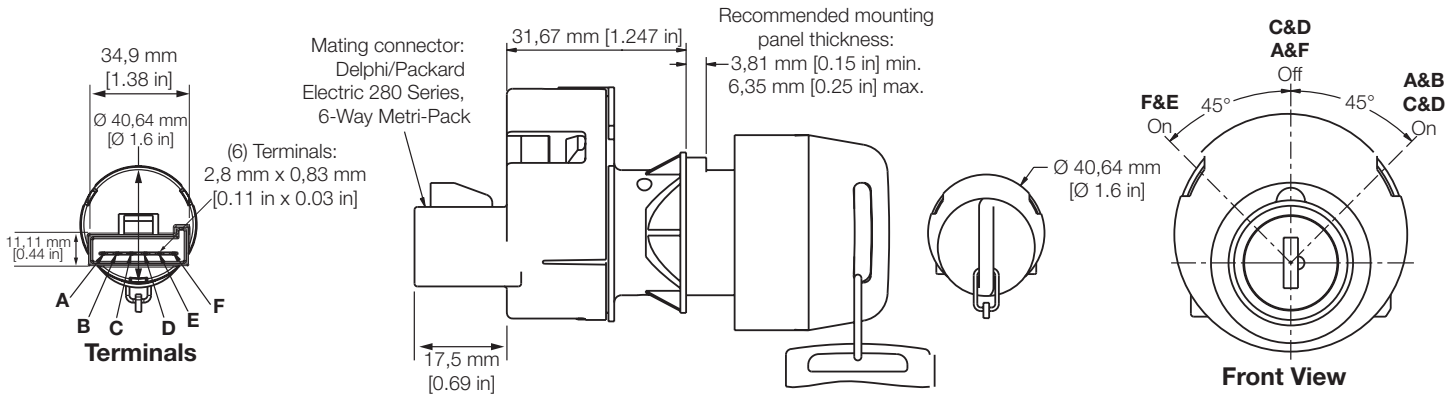
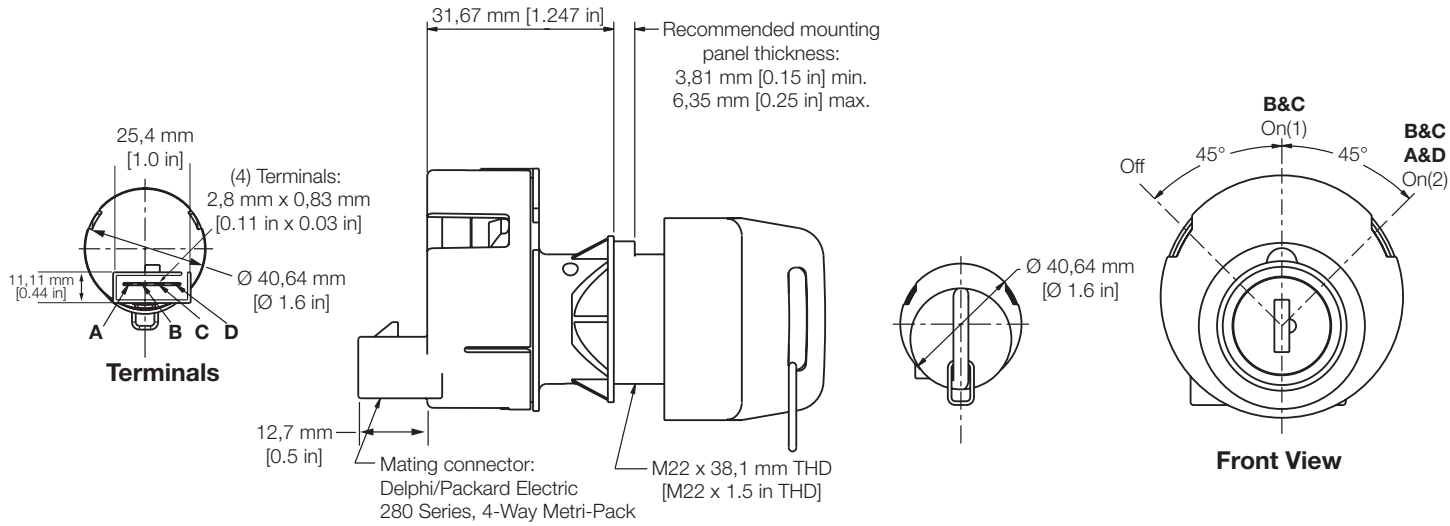


Figure 6. Model 89697 Key Switch Dimensions



Key and Ignition Switches

Figure 7. Model 89951 Key Switch Dimensions

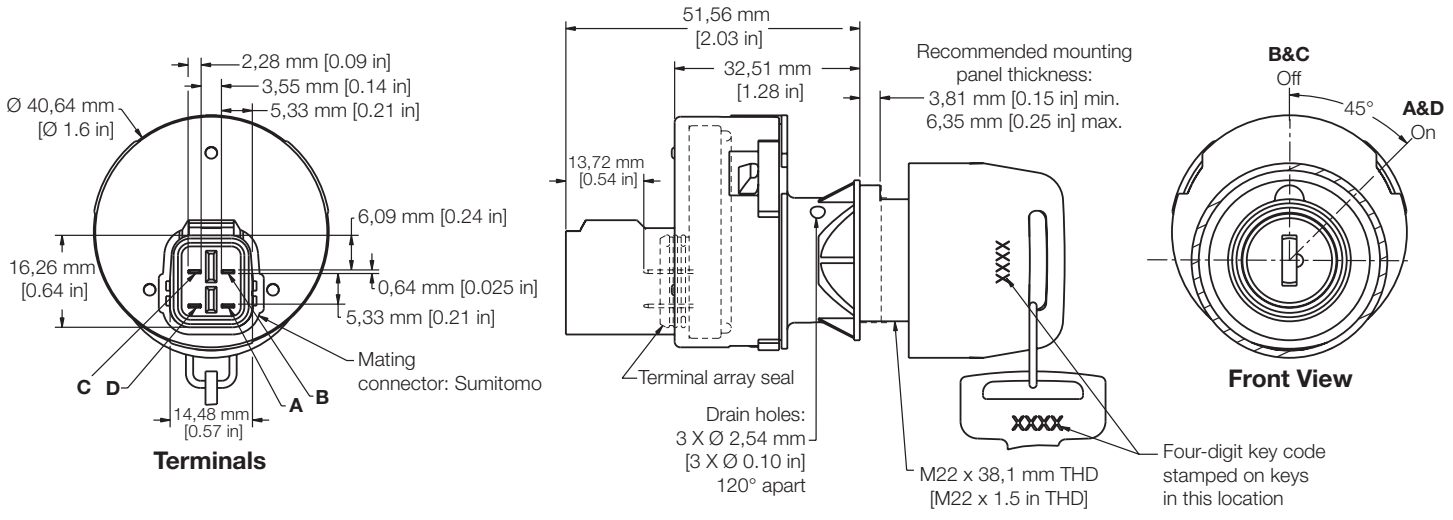


Figure 8. Models 84828 and 89850 Key Switch Dimensions

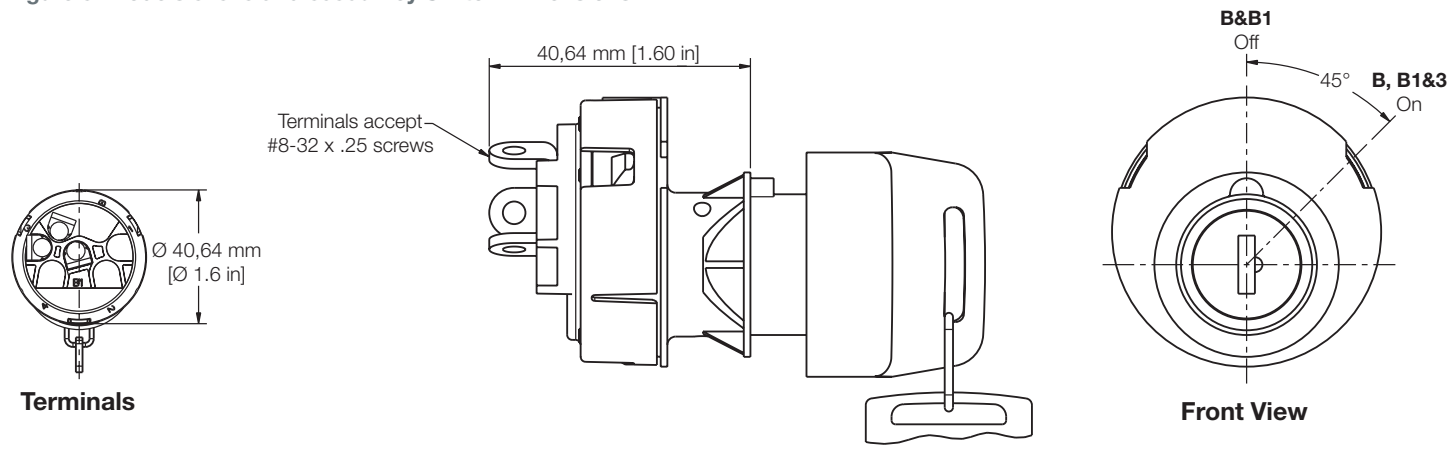
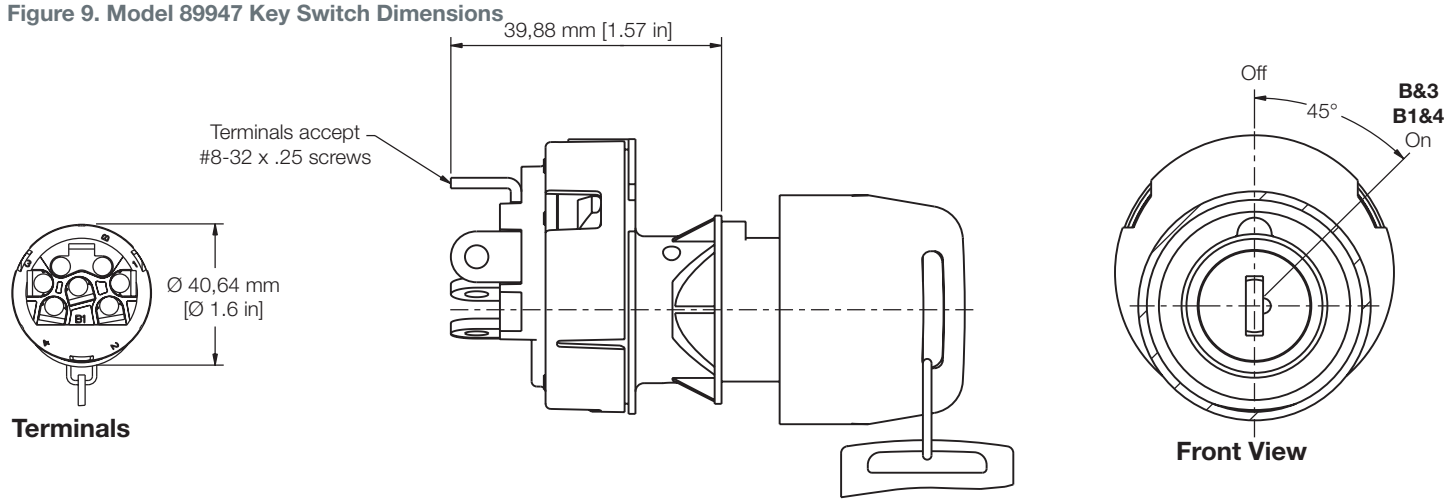


Figure 9. Model 89947 Key Switch Dimensions



Key and Ignition Switches

Figure 10. Model 84829 Key Switch Dimensions

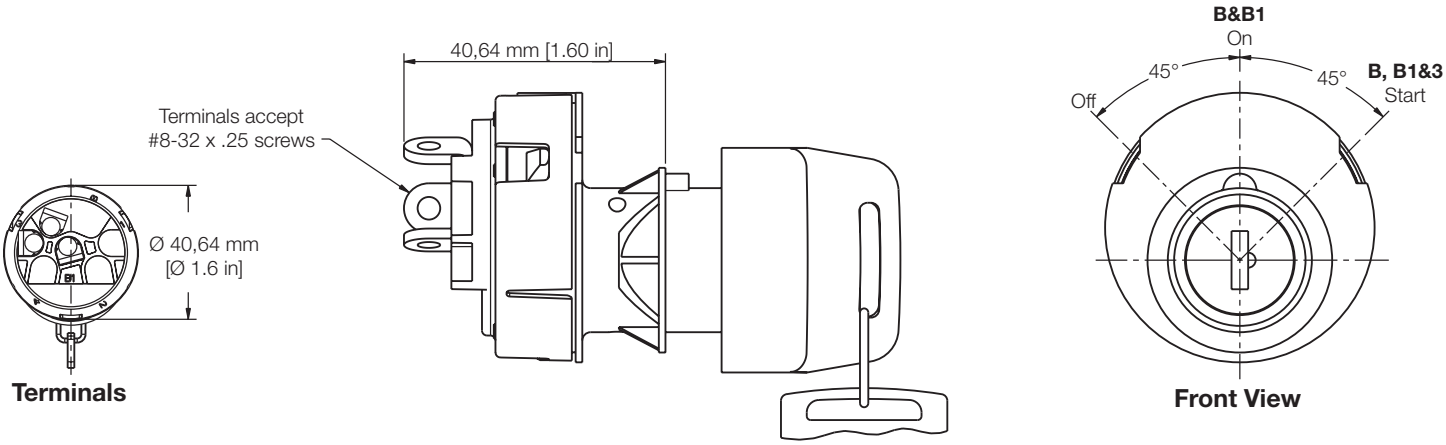


Figure 11. Models 84830, 89476, 89997, 90173, 90220 Key Switch Dimensions

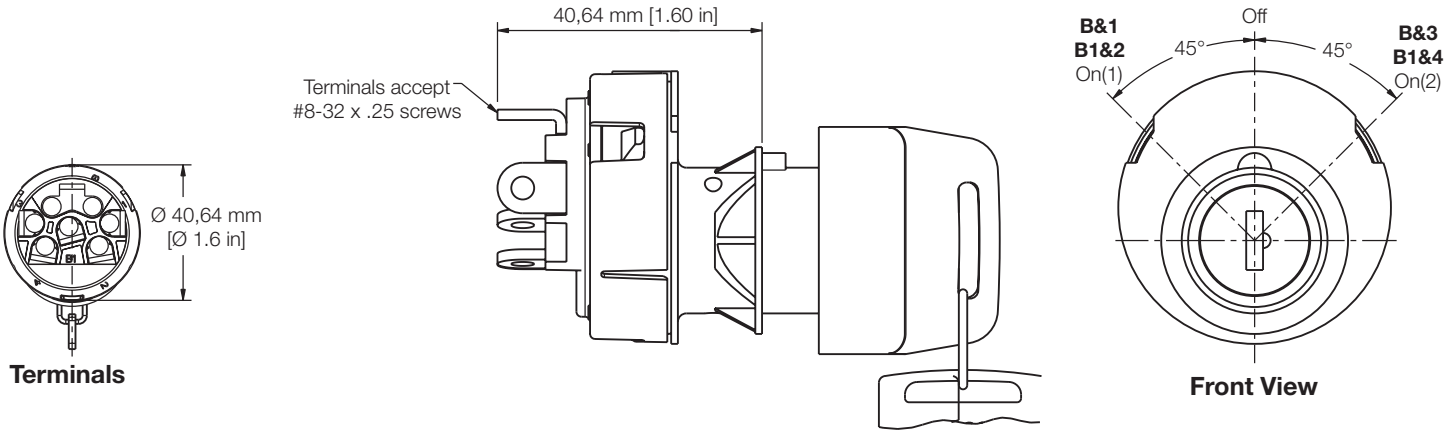
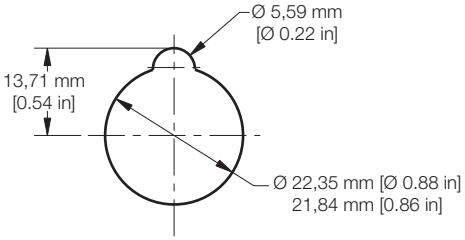
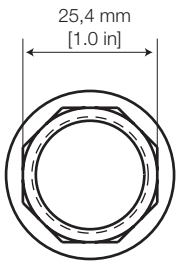


Figure 12. Mounting Hole Cutout Dimensions



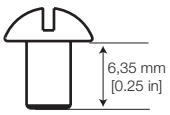
Recommended Mounting Hole
Recommended mounting panel thickness:
3,81 mm [0.15 in] min.
6,35 mm [0.25 in] max.

Figure 13. Mounting Nut Dimensions



Mounting Nut (Part number 81942)
Torque to 0.576 Kg-m [50 in-lb] max.

Figure 14. Screw Dimensions



Philips Screw (Part number 3630)
#8-32 x 0.25 screw
Torque to 10 in-lb ±1 in-lb max.

ADDITIONAL INFORMATION

The following associated literature is available on the Honeywell web site at 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

⚠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.

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.

For more information

Honeywell Sensing and Internet of Things services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or the nearest Authorized Distributor, visit sensing.honeywell.com or call:

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

Sensing and Control
Honeywell
1985 Douglas Drive North
Golden Valley, MN 55422
honeywell.com

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