Honeywell

Product Range Guide

Basic, Toggle, And Rocker Switches

For innovation that's well apart, there's only Honeywell

With more than 50,000 products ranging from snap-action, limit, toggle, and pressure switches to position, speed, pressure, and airflow sensors, Honeywell has one of the broadest sensing and switching portfolios.

Honeywell sensor, switch, and control components are tailored to exact specifications for stronger performance, longer productivity, and increased safety. Enhanced accuracy and durability are built into every part, improving output and endurance. For our customers, this can reduce expenditures and operational costs. Our global footprint and channels help to competitively price such components for your chosen application and provide immediate technical support.

While Honeywell's switch and sensor solutions are suitable for a wide array of basic and complex applications, our custom-engineered solutions offer enhanced precision, repeatability, and ruggedness. We offer domain knowledge and technology resources, along with a close working relationship, to develop and deliver cost-effective, individually tailored solutions. Whether clean-slate development or simple modifications to an existing design are needed, our expertly engineered solutions help to meet the most stringent requirements with world-class product designs, technology integration, and customer-specific manufacturing.

Global service, sourcing, and manufacturing. Industry-leading engineers. Value-added assemblies and solutions. A one-stop, full-service, globally competitive supplier.

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Simple or precision on/off, end of limit, presence/absence, pressure, temperature, and manual operator interface application needs. Potential uses include a variety of applications, including business equipment, valves, manually operated devices, vending machines, water heaters, appliances, and industrial controls.

Series	V7	V15	V15W Watertight
Type	premium	standard	watertight
Amp rating	0.1 A to 25 A	5 A to 26 A	0.1 A, 5 A, 10 A
Circuitry	SPDT, SPNO, SPNC	SPDT, SPNO, SPNC	SPDT, SPNO, SPNC
Operating force	0.7 oz max. to 14.6 oz max.	US: ≥ 100 g (16 A to 26 A) AP: 15 g to 400 g (5 A to 26 A)	15 g, 25 g, 50 g, 100 g, 200 g
Terminations	quick connect, pc board, pcb straight angle left	quick connect, screw, solder, RAST 5 & 7	preleaded; terminals: 4,8 mm x 0,8 mm or 4,8 mm x 0,5 mm
Actuators/levers	pin plunger, straight, roller, sim. roller	pin plunger, straight, roller, sim. roller	pin plunger, straight, roller, sim. roller
Voltage	125 Vac, 250 Vac, 277 Vac	125 Vac, 250 Vac	125 Vac, 250 Vac, 30 Vdc, 48 Vdc
Approvals	UL, CSA, ENEC	UL, cUL, ENEC, CQC	UL, cUL, ENEC, CQC
Operating temperature range	-40ºC to 150ºC [-40ºF to 302ºF]	-25ºC to 150ºC [-13ºF to 300ºF]	-40ºC to 85ºC [-40ºF to 185ºF]
Contacts	silver, silver cadmium oxide, gold	silver, silver cadmium oxide, gold-plated silver	silver nickel, gold-plated option
Housing material	PCT polyester thermoplastic	PBT polyester thermoplastic	PBT polyester thermoplastic
Measurements	15,9 mm H x 10,2 mm W x 28,8 mm L [0.63 in H x 0.4 in W x 1.14 in L]	15,9 mm H x 10,3 mm W x 27,8 mm L [0.63 in H x 0.41 in W x 1.09 in L]	15,9 mm H x 10,3 mm W x 33 mm L [0.63 in H x 0.41 in W x 1.3 in L]
Features	extended mechanical and electrical life; wide temperature range; custom engineered solutions	broad range of electrical loads; wide temperature range; limited configuration options available	designed for harsh-duty, wash down areas; high sealing capability with an IP67 rating (pre-leaded only)

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Designed for high precision, presence and absence detection, where physical contact with an object is permissible and in simple on-and-off actions. These compact, highly reliable and rugged switches are used in potential applications including aerospace, HVAC, instrumentation, office equipment, medical/dental, valves, and vending machines.

Series	SM	SX
Type	premium	premium
Amp rating	0.1 A to 11 A	1 A to 7 A
Circuitry	SPDT	SPDT, SPNO
Operating force	0.04 oz to 2 oz	0.71 oz to 6 oz
Terminations	quick connect, solder, pcb	quick connect, solder, pcb
Actuators/levers	pin plunger, straight, roller, sim. roller, paddle	pin plunger, straight, roller, sim. roller, offset flag, crossed roller
Voltage	115 Vac, 125 Vac, 250 Vac, 30 Vdc	125 Vac, 250 Vac, 28 Vdc
Approvals	UL, CSA, ENEC, CE	UL, CSA, ENEC, CE
Operating temperature range	-55°C to 121°C [-67°F to 250°F] high temperature options to 204°C [400°F]	-55°C to 121°C [-67°F to 250°F] high temperature options to 204°C [400°F]
Contacts	silver, gold	silver, gold
Housing material	phenolic	phenolic
Measurements	12,7 mm H x 6,35 mm W x 20,3 mm L [0.5 in H x 0.25 in W x 0.8 in L]	12,7 mm H x 6,35 mm W x 20,3 mm L [0.5 in H x 0.25 in W x 0.8 in L]
Features	extended operating life; elongated mounting holes; MIL-PRF-8805 qualified listings available	extended operating life; elongated mounting holes; MIL-PRF-8805 qualified listings available

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ZD	ZM	ZM1	ZW	ZX
standard	standard (coil internal spring)	standard (flat internal spring)	standard	standard
0.1 A, 3 A	0.1 A, 5 A, 10.1 A	0.1 A, 3 A, 6 A, 10.1 A, 16 A	0.1 A, 6 A	0.1 A, 3 A
SPDT	SPST, SPDT, SPNO	SPDT, SPNO, SPNC	SPDT, SPNO, SPNC	SPDT
130 gf to 195 gf	0.18 oz to 8.78 oz	12 gf to 355 gf	1.94 oz to 7.16 oz	0.53 oz to 5.3 oz
solder, pcb straight, pcb left angle, pcb right angle, pre-wired	quick connect, solder, pcb	quick connect, solder, pcb	quick connect, solder, cable bottom/end, cable side exit	solder, pcb snap-in, pcb left angle, pcb right angle
pin plunger, straight, sim. roller	pin plunger, straight, roller, sim. roller, L-shaped	pin plunger, straight, roller, sim. roller, L-shaped	pin plunger, straight, roller, sim. roller	pin plunger, straight, sim. roller, special
125 Vac, 12 Vdc	125 Vac, 250 Vac, 30 Vdc	125 Vac, 250 Vac	125 Vac, 250 Vac	125 Vac, 48 Vdc
UL, cUL, CE, ENEC	UL, CSA, CE	UL, cUL, ENEC	UL, cUL, CE, ENEC	UL, CSA
-40ºC to 85ºC [-40ºF to 185ºF]	-40ºC to 120ºC [-40ºF to 248ºF]	-40ºC to 125ºC [-40ºF to 257ºF]	-25ºC to 70ºC [-13ºF to 158ºF] (with wires) -25ºC to 120ºC [-13ºF to 248ºF] (without wires)	-40ºC to 65ºC [-40ºF to 149ºF]
silver, gold-plated silver	silver, gold-plated silver, silver-tin-indium oxide	silver, gold-plated silver, gold-plated brass, silver-tin-indium oxide	silver, gold-plated silver	silver, gold-plated silver
PBT polyester	polyamide (nylon)	polyamide (nylon)	PBT (polyester)	polyamide (nylon)
10,6 mm H x 6,35 mm W x 19,8 mm L [0.42 in H x 0.25 in W x 0.78 in L]	10,6 mm H x 6,4 mm W x 19,8 mm L [0.42 in H x 0.25 in W x 0.78 in L]	10,6 mm H x 6,4 mm W x 19,8 mm L [0.42 in H x 0.25 in W x 0.78 in L]	9,0 mm H x 6,4 mm W x 19,8 mm L [0.36 in H x 0.25 in W x 0.78 in L]	6,5 mm H x 5,7 mm W x 12,7 mm L [0.26 in H x 0.22 in W x 0.50 in L]
low energy or power-duty electrical ratings; gold-plated or silver contacts; PBT polyester housing material	low energy or power-duty electrical ratings; gold-plated or silver contacts	low energy or power-duty electrical ratings; gold-plated or silver contacts	IP67 available; low energy or power-duty electrical ratings; gold-plated or silver contacts; PBT polyester housing material	low energy or power-duty electrical ratings; gold-plated or silver contacts; polybutylene terephthalate housing

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MICRO SWITCH Basic Series | Large Switches and Accessories

Often ideal for high cost-of-failure applications. Low operating force and differential travel. Current ratings from 10 A to 25 A. Designed to withstand 100K operations at full load or 10M for mechanical life. Have been used in a variety of applications including irrigation, transportation, medical/dental, valves, office equipment, presses, machine tools, and HVAC.

Series	BZ/BA/BM/BE	DT
Type	premium	premium
Amp rating	15 A (BZ), 22 A (BM), 20 A (BA), 25 A (BE)	10 A
Circuitry	SPDT	DPDT
Operating force	1.0 oz to 28 oz	7.0 oz to 10.0 oz
Terminations	quick connect, solder, screw	screw
Actuators/levers	pin plunger, overtravel plunger, straight, roller, flexible roller leaf, flexible leaf	pin plunger, straight, roller
Voltage	115 Vac, 125 Vac, 250 Vac	250 Vac, 28 Vdc
Approvals	UL, CSA, ENEC, CE (varies by model)	UL, CSA
Operating temp. range	-55°C to 85°C [-67°F to 185°F] 121°C [250°F] and 204°C [400°F] options available	-55°C to 85°C [-67°F to 185°F]
Contacts	silver, silver cadmium oxide	silver
Housing material	general purpose phenolic	general purpose phenolic
Measurements	25,4 mm H x 17,8 mm W x 50,8 mm L [1.0 in H x 0.7 in W x 2.0 in L]	25,4 mm H x 17,8 mm W x 50,8 mm L [1.0 in H x 0.7 in W x 2.0 in L]
Features	worldwide standard "large basic" switch; low operating force and travel; extended mechanical life; momentary or maintained actions	mounting interchangeability with BZ Series switches; permits several wiring combinations

Series	8MA1	8MA2	17MA1-B
Type	adjustable mounting bracket	adjustable mounting bracket	conversion mounting bracket
Description	adjustment slot on the left	adjustment slot on the right	–
Housing material	steel	steel	corrosion-resistant metal
Measurements	60,2 mm W x 21,3 mm H x 7,4 mm D [2.37 in W x 0.84 in H x 0.29 in D]	60,2 mm W x 21,3 mm H x 7,4 mm D [2.37 in W x 0.84 in H x 0.29 in D]	66,8 mm W x 19,0 mm D [2.63 in W x 0.75 in D]
Features	sturdy plated steel construction; fast, easy screwdriver adjustment; can be used with all standard basic switches		converts standard basic switches from side to top mount; snaps into mounting holes without tools

	MT	3MN	6AS	AC	DM
	premium	premium	premium	special application	special application
	10 A	15 A	10 A, 15 A, 20 A	5 A to 25 A	10 A, 16 A
	SPDT	two circuit, double break (2 CKT DB)	SPDT	SPDT	SPDT, DPDT
	2.0 oz to 18 oz	7.0 oz to 20 oz	8 oz to 14 oz	–	4,17 N [15 oz] max.
	screw	screw	solder, screw, A2, T	turret-solder, screw, flying leads	quick connect
	pin plunger, straight, roller	pin plunger	straight, roller, leaf	rod	bullet nose, concave, pull-to-cheat plungers
	125 Vac, 125 Vdc	480 Vac	125 Vac, 250 Vac, 480 Vac	125 Vac, 250 Vac, 480 Vac, 30 Vdc	125 Vac, 250 Vac, 277 Vac
	UL, CSA	UL, CSA	UL	UL versions available	UL, CSA
	-55°C to 82°C [-67°F to 180°F]	-55°C to 85°C [-67°F to 185°F]	-55°C to 85°C [-67°F to 185°F]	-54°C to 121°C [-65°F to 250°F]	-37°C to 82°C [-35°F to 180°F]
	silver	silver	silver	silver	silver
	arc resistant melamine	general purpose phenolic	general purpose phenolic	die-cast stainless steel bracket, stainless steel or polyester rod	polyester
	25,4 mm H x 17,8 mm W x 50,8 mm L [1.0 in H x 0.7 in W x 2.0 in L]	25,4 mm H x 17,8 mm W x 50,8 mm L [1.0 in H x 0.7 in W x 2.0 in L]	20,1 mm H x 35,1 mm W x 49,3 mm L [0.79 in H x 1.38 in W x 1.94 in L]	varies by model	48,8 mm H x 31,8 mm W x 14,0 mm D [1.93 in H x 1.25 in W x 0.55 in D]
	mounting interchangeability with BZ/BA Series switches; arc-extinguishing design in contact area; arc-resistant case	double-break circuitry; extended mechanical life; space between terminals reduces possibility of shorting; arc-resistant plastic	tandem switch assembly; field adjustable operating point on one or both basic switches	cuts power when door/drawer is opened; momentary, maintained, or pull-to-cheat actuation; one or two SPDT switches	easy installation; momentary, alternate push-pull, or pull-to-cheat operation; expected mechanical life: 1 million operations

	3PA1	3PA28	3PA2	5PA1	5PA2	5PA3
	die-cast zinc enclosure (side mount)	die-cast zinc enclosure (side mount)	die-cast zinc enclosure (flange mount)	plastic terminal enclosure	plastic terminal enclosure	plastic terminal enclosure
	mounted from either side through 3,55 mm [0.140 in] dia. holes on 25,4 mm [1.0 in] centers	mounted from either side through 3,55 mm [0.140 in] dia. holes on 25,4 mm [1.0 in] centers. 1/2-14 NPSM internal thread conduit hub	switch secured in enclosure; two 4,37 mm [0.172 in] dia. holes in flange accept #8 screws for mounting on 41,3 mm [1.625 in] centers	used with solder terminal switches	use with screw terminal switches	used with either solder or screw terminal switches with auxiliary actuators assembled
	die-cast zinc	die-cast zinc	die-cast zinc	plastic	plastic	plastic
	74,8 mm W x 42,9 mm H x 25,4 mm D [2.95 in W x 1.69 in H x 1.00 in D]	74,8 mm W x 42,9 mm H x 25,4 mm D [2.95 in W x 1.69 in H x 1.00 in D]	74,8 mm W x 42,9 mm H x 25,4 mm D [2.95 in W x 1.69 in H x 1.00 in D]	52,8 mm W x 16,1 mm H [2.08 in W x 0.64 in H]	52,8 mm W x 20,2 mm H x 21,0 mm D [2.08 in W x 0.80 in H x 0.83 in D]	52,8 mm W x 20,2 mm H x 21,0 mm D [2.08 in W x 0.80 in H x 0.83 in D]
	protects the switch from physical abuse and personnel from contact with exposed terminals			easy to use; screw and solder terminal versions; protect personnel from contact with exposed terminals		

Sealed switches are snap-action precision switches enclosed within a corrosion-resistant housing that seals the switch contacts from contamination. These sealed switches have often been used in aerospace, ordnance, industrial, marine, and transportation applications.

Series	SE/XE	HM
Type	anodized aluminum	stainless steel
Sealing	MIL-PRF-8805, symbol 3, watertight	MIL-PRF-8805, symbol 5, hermetic
Operating temperature range	-53°C to 105°C [-65°F to 221°F]	-65°C to 121°C [-85°F to 250°F] high temp available: 500°F
Actuators/levers	auxiliary actuators available	integral lever; aux. actuators: leaf, roller leaf, straight, roller lever
Termination	solder, leadwire	solder, leadwire
Circuitry	SPDT	SPDT
Contacts	silver, gold, bifurcated gold	silver, gold, bifurcated gold
Amp rating	0.5 A to 7 A	0.5 A to 3 A
Approvals	CE, UL/CSA, MIL-PRF-8805 (selected listings)	MIL-PRF-8805 (select listings qualified)
Measurements	SE: 19,05 mm H x 8,64 mm W x 22,35 mm L [0.75 in H x 0.34 in W x 0.88 in L] XE: 19,05 mm H x 8,13 mm W x 15,75 mm L [0.75 in H x 0.32 in W x 0.62 in L]	12,7 mm H x 6,35 mm W x 20,3 mm L [0.5 in H x 0.25 in W x 0.8 in L]
Features	watertight and military standard construction per MIL-PRF-8805; corrosion-resistant aluminum housing	hermetically sealed per MIL-PRF-8805; high temperature construction; reduced sensitivity to changes in altitude or pressure

Series	HS
Type	stainless steel, phenolic
Sealing	MIL-PRF-8805, symbol 5, hermetic
Operating temperature	-54°C to 121°C [-65°F to 250°F]
Actuators/levers	integral lever
Termination	screw, leadwire
Circuitry	SPDT
Contacts	silver
Amp rating	1 A to 25 A
Approvals	UL, CSA, MIL-PRF-8805 (select listings qualified)
Measurements	25,4 mm H x 17,8 mm W x 50,8 mm L [1.0 in H x 0.7 in W x 2.0 in L]
Features	hermetically sealed per MIL-PRF-8805; high temperature construction; reduced sensitivity to changes in altitude or pressure

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Lighted or unlighted, pushbuttons are designed to enhance manual operation with a flexible and attractive interface. Snap-in surface products are easy to apply, operate, and maintain. Potential applications include control boards and panels found in industrial machinery, instrumentation, flight decks, and test equipment.

Series	PB
Panel area	20,32 mm x 35,56 mm [0.8 in x 1.4 in] max. (behind panel)
Display	8,1 mm [0.32 in] and other button sizes
Colored buttons	available
Mounting	threaded bushing
Termination	solder, H58, quick connect
Sealing	panel-sealed and hermetic-sealed switches available
Electrical	0.5 A to 5 A; 125/250 Vac, 28 Vdc
Approvals	UL, CSA, some meet MIL-PRF-8805/23
Features	up to four poles - double throw; compact size

Series	AML	MML
Panel area	20,5 mm [0.80 in] square; 20,5 mm x 30,5 mm [0.80 in x 1.20 in] rectangular	15 mm x 9,9 mm [0.59 in x 0.39 in] rectangular; 17,8 mm x 12,7 mm [0.70 in x 0.50 in] rectangular; 9,9 mm [0.39 in] square
Display	15,0 mm [0.59 in] square; 15 mm x 25 mm [0.59 in x 0.99 in] buttons	13 mm x 6,6 mm [0.51 in x 0.26 in] rectangular; 6,8 mm [0.27 in] square
Illumination	incandescent T-1-3/4 lamps – 6 V, 14 V, 28 V; LEDs – 2 V, 4 V, 5 V, 10 V, 15 V; neon lamps – 125 V, 250 V	T-1 – 5 V, 28 V; incandescent T-1-3/4 LEDs – 2 V, 2.5 V, 3 V
Behind panel	43,1 mm [1.7 in]	17,0 mm [0.67 in]
Mounting	snap-in individual, strip, matrix, sub-panel, pcb	snap-in individual, strip, sub-panel, pcb, bezel
Termination	solder, quick connect, pc board, push-on	solder, quick connect, printed wiring board
Sealing	optional panel seal	–
Electrical	electronic control: up to 3 A, 125 Vac	silver contacts: up to 1 A, 125 Vac; 6 A @ 125 Vac, 250 Vac; 2 A @ 30 Vdc; 1 A @ 125 Vdc; 1/10 hp @ 125 Vac; gold contacts: up to 0.25 A, 30 Vdc; UL rating 0.10 A
Approvals	UL, CSA, VDE, CE (selected products)	UL, CSA
Features	silver or gold contacts; full guard bezel option; lamp circuit independent of switch circuit	silver or gold contacts; pwb or panel-mount switches; multi-unit strip mounting available

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Hermetic and environmentally sealed toggle switches offer enhanced reliability with MICRO SWITCH technology. Can be used in a variety of applications where a panel-mount switch with an environment-proof rating is needed, including industrial equipment, military and commercial aviation, agriculture, process control, and medical.

Series	AT	TS	TW
Type	stainless steel toggle	stainless steel, phenolic toggle	miniature stainless steel toggle
Sealing	MIL-PRF-8805/26/98	–	qualified to MIL-DTL-83781
Operating temp.	various	-54°C to 71°C [-65°F to 160°F]	-65°C to 71°C [-85°F to 160°F]
Actuator/lever	standard, locking, tab, special design	standard	standard, locking, special design, tab
Action	2-position, momentary & maintained	2- or 3-position, momentary & maintained	2- or 3-position, momentary & maintained
Mounting	15/32 in bushing, 1/4 in bushing, 3-hole, above panel	15/32 in bushing	bushing 15/32 in or 1/4 in
Termination	solder, solder T2, screw, quick connect, leadwire, H58	solder, screw, quick connect	IWTS, solder, screw, quick connect, H58, T2
Circuitry	SPDT, DPDT, DPNO, 3PDT, 4PDT, 6PDT, 8PDT, 10PDT	SPDT, DPDT	SPST, SPDT, DPST, DPDT
Contacts	silver, gold, bifurcated gold	silver tin oxide and indium oxide	fine silver, gold-plated
Amp rating	0.01 A to 5 A (resistive)	0.4 A to 10 A @ 126 Vac to 277 Vac 0.4 A to 20 A @ 0.5 Vac to 125 Vac	0.1 A to 5.0 A @ 0.5 Vdc to 28 Vdc; 0.1 A to 5.0 A @ 0.5 Vac to 115 Vac
Measurements	various	various	49,78 mm H x 14,61 mm W x 14,61 mm D [1.96 in H x 0.575 in W x 0.575 in D]
Approvals	qualified to MIL-PRF-8805/26/98	UL, CSA, CE	UL, qualified to MIL-DTL-83781
Features	choice of sealed bushing; short behind panel depth	optional step-case design provides added space between terminals to prevent shorting	saves space and weight; sealed bushing versions

Series	AML
Housing type	non-lighted, rectangle; 1 lamp circuit, rectangle; 2 lamp circuits, rectangle
Circuitry	SPST, SPDT, DPST, DPST, 4PDT
Action	2 position, 3 position
Mounting	snap-in panel
Termination	solder, quick connect, printed circuit, push-on
Ampere/voltage range	0.4 A to 2 A @ 0.5 Vdc to 30 Vdc; 0.4 A to 3 A @ 0.5 Vac to 125 Vac; 0.4 A to 2 A @ 0.5 Vac to 250 Vac
Light (if applicable)	no lamp installed; incandescent 6 V, 14 V, 28 V; neon
LED/neon color	red, yellow, green
Measurements	various
Approvals	–
Features	silver and gold contacts; available with or without diode protection for LEDs; lamp circuit independent of switch circuit

ET	**MT**	**NT**	**TL**
magnetically held toggle	miniature toggle	commercial-grade toggle	military-grade toggle
most listings qualified to MIL-S-5594	IEC 60529-2001, IP67, IP68	IP67/68; NEMA 3, 3R, 4 and 13	qualified to MIL-DTL-3950
-65°C to 71°C [-85°F to 160°F]	-40°C to 85°C [-40°F to 185°F]	-40°C to 71°C [-40°F to 160°F]	-65°C to 71°C [-85°F to 160°F]
standard, pull/push-to-unlock, tab	standard	standard, locking, special design, tab	standard, special design, tab, paddle, none
2- or 3-position, momentary & maintained	2- or 3-position, momentary & maintained	2- or 3-position, momentary & maintained	2- or 3-position, momentary & maintained
bushing 15/32 in	bushing 15/32 in	bushing 15/32 in	bushing 15/32 in
screw, leadwire, turret	solder	solder, screw, quick connect	IWTS, solder, screw, quick connect, leadwire
SPDT, DPDT, 4PDT	SPST, SPDT, DPST, DPDT	SPST, SPDT, DPST, DPDT, 4PST, 4PDT	SPST, SPDT, DPST, DPDT 3PST, 3PDT, 4PST, 4PDT
fine silver	silver, gold-plated	silver alloy, gold-plated	silver alloy, gold-plated
7 A max. (resistive)	5 A, 28 Vdc (silver contacts) 100 mA, 28 Vdc (gold-plated contacts)	up to 20 A (resistive)	up to 20 A (resistive)
51,56 mm H x 25,4 mm W x 25,4 mm D [2.03 in H x 1.0 in W x 1.0 in D]	43,1 mm H x 19,05 mm W x 14,55 mm D [1.697 in H x 0.75 in W x 0.573 in D]	58,4 mm H x 33,5 mm W x 22,6 mm D [2.3 in H x 1.32 in W x 0.89 in D]	58,4 mm H x 33,5 mm W x 22,6 mm D [2.3 in H x 1.32 in W x 0.89 in D]
qualified to MIL-S-5594	UL, CE	UL, CSA, CE	UL, CSA, CE, qualified to MIL-DTL-3950
holding coil replaces mechanical holding mechanisms to maintain toggle in operate	high seal rating to protect from water ingress, 60k life cycle offers enhanced application life	completely sealed switching chamber; enhanced tactile feedback	environment-proof sealing; qualified to MIL-DTL-3950

TP
non-lighted, rectangle
SPST, SPDT, DPDT, 4PDT
2 position, 3 position
flush mount; above panel mount
screw
silver alloy
–
–
various
UL recognized, CSA certified, CE approved
2- or- 3-position operating action; various button colors; dust and splash-proof sealed; silver or gold contacts available; can be provided with or without buttons

Honeywell

As one of the world's leading providers of sensors and switches, Honeywell understands and meets the requirements of a wide variety of industries.

Honeywell is a global leader in providing reliable, cost-effective sensing and switching solutions for our customers' applications. We serve thousands of customers in four core industry segments: industrial, medical equipment, transportation, and aerospace/military products.

Aerospace and Defense

Aerospace applications are among the most demanding for any type of product. Rigorous FAA requirements, extreme environments (temperature, shock, vibration, the need for hermetic sealing), and the ability to customize devices are just a few of the parameters often required of sensors and switches in these applications. Aerospace customers typically value speed in prototyping and development, and Honeywell's vertically integrated, AS9100-approved manufacturing locations enhance our ability to produce devices in a wide variety of packages. The precision output of our products helps reduce risk and cost in key applications while also minimizing the need for unscheduled maintenance.

Honeywell's in-depth aerospace engineering experience allows us to work with customers in the design and development of products that best meet the specified requirements of their individual applications. Making products simple to install makes the job easier every step of the way. And, the odds are that Honeywell is already on the list of trusted suppliers for many

aerospace companies, underscoring the decades of experience we bring to this field.

Honeywell products for this industry (many of them PMA-certified) include force sensors, load cells, potentiometers, pilot controls, pressure sensors, pressure switches, resolvers, sensor/actuator assemblies for systems ranging from aerostructures to fuel control to flight surfaces, speed sensors, temperature probes, thermostats, torque sensors, y-guides for cargo systems, MICRO SWITCH sealed and high-accuracy switches, MICRO SWITCH pushbutton switches, and MICRO SWITCH rocker and toggle switches.

Medical

Medical applications typically require sensors and switches that are highly stable and extremely reliable to enhance patient safety and comfort. Stability is often essential to minimize long term drift, reduce the need for recalibration, and improve ease of use for medical equipment operators. Reliability enhances patient safety in life-critical applications, reduces downtime, and improves test throughput in applications such as clinical diagnostics. The product needs to be

easy to use and easy to design into a system, so Honeywell's extensive customization and built-in calibration/amplification capabilities are strong benefits. Confidence in Honeywell's product performance, reliability, and availability provide peace of mind for medical equipment manufacturers who choose Honeywell.

Honeywell offerings for this industry include airflow sensors, board mount pressure sensors and heavy duty pressure transducers, Hall-effect magnetic position sensors, humidity sensors, flexible heaters, force sensors, thermostats, infrared sensors, pressure and vacuum switches, potentiometers and encoders, MICRO SWITCH pushbutton, rocker, and toggle switches, and hour meters.

Industrial

The industrial arena can be a rough one. From high-speed food processing to high-force stamping applications, reliable and cost-effective sensors and switches often help minimize repair costs, maximize system life, and reduce overall system expense. Durability can mean the difference between smooth-running processes and expensive downtime. Accurate, repeatable sensor or switch output can reduce the need for calibration once the device is applied. Because of the wide variety of potential applications, Honeywell's ability to deliver a customized product that can meet virtually any size, weight, and power requirement – as well as any packaging stipulations for tough, harsh environments – often makes it easy to incorporate and use our devices. Safety is another important consideration for industrial users, and our products meet a wide variety of regulatory safety requirements.

Honeywell's industrial product line includes airflow sensors, current sensors, humidity sensors, fiber-optic and liquid-level sensors, linear position sensors, oxygen

sensors, potentiometers and encoders, speed sensors, temperature probes, ultrasonic sensors, thermostats, flexible heaters, SMART position sensors, board mount pressure sensors and heavy duty pressure transducers, force sensors, push-pull switches, and MICRO SWITCH basic switches, hazardous area switches, key and rotary switches, limit switches, sealed and high-accuracy switches, pushbutton, rocker, toggle switches, and relays.

Transportation

Getting from Point A to Point B is often challenging for end-customers of transportation providers – Honeywell aims to make the trip easier with highly reliable, cost-effective switches and sensors. Our products are designed to support rigorous engine requirements, and their efficiency can also help optimize engine performance. Customization is often required to allow a switch or sensor to be mounted in tight or challenging environments including vibration, temperature extremes, and road contamination. The durability of Honeywell products enhances system reliability, which is also boosted by the stable, accurate output of our devices. All of these capabilities allow demanding customers to rely on Honeywell's many years of experience in the transportation industry.

Honeywell products for transportation applications include Hall-effect rotary position sensors, inertial measurement units, infrared sensors, keyless entry sensors, magnetic position sensors, pressure sensors, speed and direction sensors, ultrasonic sensors, thermostats, temperature probes, SMART position sensors, and MICRO SWITCH pushbutton, rocker, and toggle switches.

Honeywell

Product Portfolio — Product reliability. Industry knowledge. Expertise. Standard with every order.

SENSORS
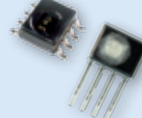
Thermostats: Commercial and precision snap-action. Automatic or manual reset options, phenolic or ceramic housings.
May be used in: Telecommunications • Battery Heater Controls • Computers • Copy Machines • Fax Machines • Food Service • Food Carts • Small and Major Appliances • Heat and Smoke Detectors • HVAC Equipment

Pressure transducers – heavy duty: Provide a complete amplified and compensated pressure measurement solution. Choice of ports, connectors, outputs and pressure ranges, engineered to be resistant to a wide variety of media for use in most harsh environments.
May be used in: Industrial HVAC/R and Air Compressors • General System and Factory Automation Pump, Valve and Fluid Pressure • Transportation (Heavy Equipment and Alternative Fuel Vehicles) System • Pneumatics • Hydraulics

Magnetic sensors: Digital and analog Hall-effect position ICs, magnetoresistive position ICs, Hall-effect vane and magnetic sensors.
May be used in: Speed and RPM Sensing • Motor/Fan Control • Magnetic Encoding • Disc Speed • Tape • Flow-Rate Sensing • Conveyors • Ignitions • Motion Control/Detection • Power/Position • Magnetic Code Reading • bration • Weight Sensing

Humidity sensors: Digital, analog, and combined humidity/temperature sensing versions. Provide on-chip signal conditioning with accuracy capability to ±1.7 %RH. Stable, reliable, low-drift performance. Standardized, platform-based sensors.
May be used in: Medical • HVAC/R • Weather Stations • Air Compressors • Telecommunications • Grain Storage • Incubators

Current sensors: Accurate and fast response. Almost no thermal drift or offset with temperature. Adjustable linear, null balance, digital and linear.
May be used in: Variable Speed Drives • Overcurrent Protection • Power Supplies • Ground Fault Detectors • Robotics • Industrial Process Control • Wattmeters

Flexible heaters: Flat or custom geometry configurations with single, multiple and variable watt densities. Stable, uniform heating. Can be bonded parts or combined in value-added assemblies.
May be used in: Medical • HVAC/R • LCD Displays • Power Generation • Telecommunication

Pressure sensors – board mount: Full line of industrial-grade sensors: media-isolating design, multiple ports and outlets, and electrical configurations.
May be used in: Pneumatic Controls • Air Compressors • Process Monitoring • Hydraulic Controls • VAV Controls • Clogged Filter Detection • Presence/Absence of Flow • Transmissions

Temperature sensors: Customized probes, thermistors and RTD sensors. Plastic/ceramic, miniaturized, surface-mount housings and printed circuit board terminations.
May be used in: Semi-Conductor Protection • Vending Machines • Power Generation • Hydraulic Systems • Medical • Thermal Management • Temperature Compensation

ELECTROMECHANICAL SWITCHES

MICRO SWITCH basic switches: Snap-action precision switches. Compact. Lightweight. Designed for repeatability and enhanced life. Basic switches: large, standard, miniature, subminiature, hermetically sealed, water-tight and high-temperature versions.
May be used in: Vending Machines • Communication Equipment • HVAC • Appliances • Automotive • Electronic Gaming Machinery • Valve Controls • Irrigation Systems • Foot Switches • Pressure • Temperature Controls

MICRO SWITCH sealed and high accuracy switches: Precision "snap action" mechanisms. Wide variety of actuators, terminations, circuitry configurations, electrical ratings, contact materials and operating characteristics.
May be used in: Landing Gear • Flap/Stabilizer Controls • Thrust Reversers • Space Vehicles • Armored Personnel Carriers • De-Icer Controls • Wingfold Actuators • Industrial Environments • Valves • Underwater

MICRO SWITCH hazardous area switches: Flame path designed to contain and cool escaping hot gases that could cause an explosion. MICRO SWITCH EX, BX, CX and LSX Series.
May be used in: Grain Elevators and Conveyors • Off-Shore Drilling • Petrochemical • Waste-Treatment Plants • Control Valves • Paint Booths • Hazardous Waste Handling Facilities

Key and rotary switches: Environmentally sealed, 2-3-4 position switches. O-rings help keep dirt and moisture out and prolong life.
May be used in: All-Terrain Vehicles • Golf Carts • Snowmobiles • Scissor Lifts • Telehandlers • Construction and Marine Equipment • Skid Loaders • Agricultural Equipment • Material Handlers

Pressure and vacuum switches: Feature setpoints from 3 psi to 4500 psi. Rugged components have enhanced repeatability, flexibility and wide media capability. Uses diaphragm or quad seal/piston.
May be used in: Transmissions • Hydraulics • Brakes • Steering • Generators/Compressors • Dental Air • Embalming Equipment • Oxygen Concentrators • Air Cleaners • Fuel Filters • Pool Water Pressure

MICRO SWITCH toggle switches: Hermetic and environmentally sealed options. Enhanced reliability. Center pin for ultimate stabilization. Available in many shapes, sizes and configurations.
May be used in: Aerial Lifts • Construction Equipment • Agriculture and Material-Handling Equipment • Factory-Floor Controls • Process Control • Medical Instrumentation • Test Instruments • Military/Commercial Aviation

LIMITLESS™ WIRELESS SOLUTIONS

Limitless™ switches and receivers: Combines the best of MICRO SWITCH limit switches with commercial wireless technology. Beneficial for remote monitoring where wiring/maintenance is not physically possible or economically feasible. Used for position sensing and presence/absence detection.
Limitless™ Operator Interface: Adds a human interface device to the product-driven interfaces of Limitless™ switches and receivers. Choose and install a desired operator or utilize one of Honeywell's pushbuttons.
May be used in: Valve Position • Crane Boom/Jib/Skew Position • Lifts • Material Handling • Presses • Construction/Ag Machines • Conveyors • Industrial Environments • Remote/Temporary Equipment • Grain Diverters or Flaps • Door Position

sensing.honeywell.com

With more than 50,000 sensing, switching and control products ranging from snap-action, limit, toggle and pressure switches to position, speed, pressure and airflow sensors, Honeywell has one of the broadest sensing and switching portfolios available.

Position sensors: The SMART position sensor measures linear, angular or rotary position of a magnet attached to a moving object so that the object's position can be determined or controlled. Its simple, non-contact design eliminates mechanical failure mechanisms, reduces wear and tear, and improves reliability and durability.
May be used in: Valve Position • Material Handling • Plastic Molding • Passenger Bus Level Position • Truck-Mounted Crane Outrigger Position • Aerial Work Lift Platform • Front Loader and Digger/Excavation Boom Position
Potentiometer sensors: Measure linear, rotary position or displacement. Honeywell's proprietary conductive plastic delivers extensive temperature range and infinite resolution, and provides precision position measurement.
May be used in: Robotic Motion Control • Marine Steering • In-Tank Level Sensing
Ultrasonic sensors: Measure time delays between emitted and echo pulses, often accurately determining the sensor-to-target distance.
May be used in: Level Measurement • Height and Thickness Sensing • Diameter Control

Infrared sensors: IREDs, sensors and assemblies for object presence, limit and motion sensing, position encoding and movement encoding. Variety of package styles, materials and terminations.
May be used in: Printers/Copiers • Motion Control Systems • Metering • Data Storage Systems • Scanning • Automated Transaction • Drop Sensors • Non-Invasive Medical Equipment

Force sensors: Variety of package styles and various electrical interconnects including pre-wired connectors, printed circuit board mounting and surface mounting for flexibility.
May be used in: Infusion and Syringe Pumps • Blood Pressure Equipment • Pump Pressure • Drug Delivery Systems • Occlusion Detection • Kidney Dialysis Machines

Proximity sensors: Designed to meet demanding temperature, vibration, shock and EMI/EMP interference requirements. Number of housing materials and termination styles.
May be used in: Aircraft Landing Gear • Gun Turret Position Control • Door/Hatch Monitoring

Speed sensors: Measure speed, position and presence detection utilizing magnetoresistive, variable reluctance, and Hall-effect technologies.
May be used in: Cam and Crankshafts • Transmissions • Fans • Pumps • Mixers • Rollers • Motors

Airflow sensors: Advanced microstructure technology. Sensitive and fast response to flow, amount/direction of air or other gas. Analog or digital output. Thin-film, thermally isolated bridge structure consists of a heater and temperature sensing elements.
May be used in: HVAC • Respirators • Process Control • Oxygen Concentrators • Gas Metering • Chromatography • Leak Detection Equipment • Medical/Analytical Instrumentation • Ventilation Equipment

Rotary position sensors: Digital and analog Hall-effect, magnetoresistive and potentiometric devices and resolvers for sensing presence of a magnetic field or rotary position. Directly compatible with electronic circuits for application flexibility.
May be used in: Audio and Lighting • Frequency • Temperature • Position • Medical/Instrumentation • Computer Peripherals • Manual Controls • Joysticks • Telecom • Welding • Heating • Aerospace

MICRO SWITCH aerospace-grade pressure switches: Lightweight, compact pressure switches. Meets military and DO-160 standards. Lower operating force provides application versatility with enhanced precision. Design modularity allows for configuration of the switch, facilitating rapid customization.
May be used in: Aerospace Systems • Engines, Fuel Pressure and Hydraulic Systems • Military Ground Vehicles • Ordnance and Munitions Release Systems • Military Maritime Systems

MICRO SWITCH limit switches: Broadest and deepest limit switch portfolio. Rugged, dependable position detection solutions. MICRO SWITCH heavy-duty limit switches (HDLS), medium-duty and global limit switches. Hermetically and environmentally sealed switches.
May be used in: Machine Tools • Woodworking • Textile • Printing Machinery • Metal Fabrication • Balers/Compactors • Forklifts • Bridges • Robotics • Wind Turbines • Elevators • Moving Stairs • Doors • Dock Locks/Levelers • Aerial Lifts • Cranes • Conveyors • Rail • Shipboards • Dock Side

MICRO SWITCH pushbutton switches: Lit or unlit. Wide range of electrical and display design, pushbuttons and manual switches. Many shapes, sizes and configurations. Easy to apply, operate and maintain.
May be used in: Control Boards and Panels • Industrial and Test Equipment • Flight Decks • Medical Instrumentation • Process Control

MICRO SWITCH sealed and standard rocker switches: Wide range of electrical and display design. Many shapes, sizes, buttons and configurations to enhance manual operation.
May be used in: Transportation • Agricultural and Construction Equipment • Test Equipment • Heavy-Duty Machinery • Marine Equipment • Small Appliances • Telecom • Medical Instrumentation • Commercial Aviation

SAFETY SWITCHES

MICRO SWITCH safety switches: For operator point-of-operation protection, access detection, presence sensing, gate monitoring and electrical interfacing. High-quality, dependable, cost-effective solutions.
May be used in: Packaging and Semi-Conductor Equipment • Plastic-Molding Machinery • Machine Tools • Textile Machines • Lifts • Industrial Doors • Balers • Compactors • Aircraft Bridges • Telescopic Handlers • Refuse Vehicles

Honeywell

Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgment 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 that Honeywell, in its sole discretion, 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 Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is buyer's sole responsibility 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 writing. However, Honeywell assumes no responsibility for its use.

Find out more

To learn more about Honeywell's sensing and switch products, call **+1-815-235-6847**, email inquiries to **info.sc@honeywell.com**, or visit **sensing.honeywell.com**

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