Limit Switches and Machine Safety

Honeywell

SENSING AND CONTROL

Product Range Guide

For innovation that's well apart, there's only Honeywell Sensing and Control.

With more than 50,000 products ranging from basic, limit, toggle, and pressure switches to position, speed, pressure, and airflow sensors, Honeywell Sensing and Control (S&C) has one of the broadest sensing and switching portfolios available.

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.

Our expertise in aerospace and defense, transportation, medical, and industrial industries means we offer products and solutions for a wide range of applications. But, an impressive product line is only one part. We possess unique engineering expertise and value-added capabilities.

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 worldclass product designs, technology integration, and customer-specific manufacturing.

With a 75-year legacy in the switch and sensor business, Honeywell S&C has earned a reputation for reliability and excellence. Our strong product designs, Six Sigma Plus manufacturing environment, and robust testing facilities help provide quality out of the box, as well as enhanced, sustainable performance down the line.

Global service, sourcing, and manufacturing. Industry-leading engineers. Value-added assemblies and solutions. Construction to required specifications. A one-stop, full-service, globally competitive supplier... Honeywell Sensing and Control.

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Offer a rugged, die-cast body with multiple mounting and actuator options. Low- and high-temp construction and factory-sealed, pre-wired versions available. Potential applications include food and beverage, construction and agriculture equipment, material handling, rail, industrial valves, chemical and food processing, shipboard, caustic waste handling, and power generation.

HDLS Series	Standard	316L Stainless Steel	Fully Potted, Epoxy Sealed
Housing type	HDLS plug-in and non-plug-in	316L stainless steel non plug-in	sealed HDLS body
Sealing	IP65/66/67; NEMA 1, 3, 4, 4X, 6, 6P, 12, 13	IP65/66/67; NEMA 1, 3, 3R, 4, 4X, 6, 6P, 12, 13	IP65/66/67; NEMA 1, 3, 4, 6, 6P, 12, 13
Temperature range (standard)	-12 °C to 121 °C [10 °F to 250 °F]	-12 °C to 121 °C [10 °F to 250 °F]	-12 °C to 121 °C [10 °F to 250 °F]
Low temperature range (optional)	-40 °C to 121 °C [-40 °F to 250 °F]	-40 °C to 121 °C [-40 °F to 250 °F]	-40 °C to 121 °C [-40 °F to 250 °F]
Housing material	zinc die-cast w/ epoxy coating	stainless steel	zinc die-cast w/ epoxy coating
Actuators/levers	• top pin plunger • top pin plunger, adjustable • top roller plunger • top rotary • side rotary • side rotary (maintained) • side pin plunger • side pin plunger, adjustable • side pin plunger, maintained • side roller plunger • wobble	• top pin plunger • top roller plunger • side rotary • side rotary (maintained) • side pin plunger • side roller plunger	• top pin plunger • top pin plunger, adjustable • top roller plunger • top rotary • side rotary • side rotary (maintained) • side pin plunger • side pin plunger, adjustable • side pin plunger, maintained • side roller plunger • wobble
Termination	• 0.5 in/0.75 in-14NPT conduit • 20 mm conduit • PG13.5 • 6-ft and 12-ft cable • manifold • 4, 5, and 9-pin mini-connector • 4-pin micro-connector	• 0.5 in/0.75 in-14NPT conduit • 12-ft cable	• cable (various lengths) • 4, 5, and 9-pin mini-connector
Approvals	UL, CE, CSA, CCC, EN60947-1, EN60947-5-1	UL, CE, CSA, CCC, EN60947-1, EN60947-5-1	UL, CE, CSA, CCC, EN60947-1, EN60947-5-1
Circuitry (double break contacts)	• 1NC 1NO SPDT, snap action • 1NC direct acting, • 2NC 2NO DPDT, snap action • 2NC 2NO DPDT sequential, snap action • 2NC 2NO DPDT center neutral, snap action	• 1NC 1NO SPDT, snap action • 1NC direct acting, • 2NC 2NO DPDT, snap action • 2NC 2NO DPDT sequential, snap action • 2NC 2NO DPDT center neutral, snap action	• 1NC 1NO SPDT, snap action • 1NC direct acting, • 2NC 2NO DPDT, snap action • 2NC 2NO DPDT sequential, snap action • 2NC 2NO DPDT center neutral, snap action
Contacts	silver, gold	silver, gold	silver, gold
Electrical rating	10 A (thermal) AC15, A600; DC13, R300	10 A (thermal) AC15, A600; DC13, R300	10 A (thermal) AC15, A600; DC13, R300
Measurements (H x W x D)	106,7 mm x 41,1 mm x 44,4 mm [4.20 in x 1.62 in x 1.75 in]	122,9 mm x 47,63 mm x 45,2 mm [4.84 in x 1.875 in x 1.78 in]	106,7 mm x 41,1 mm x 44,4 mm [4.20 in x 1.62 in x 1.75 in]
Features	wide variety of actuators, circuitry options, and connectivity; rugged and dependable, models in service for over 40 years	series 316L 300 stainless steel housing suitable for corrosive environment and wash down food and beverage applications	construction guards aganst fluid penetration into switch body; suitable for harsh-duty applications

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MICRO SWITCH™ Limit Switches
Global Limit Switches

Meet IEC standards for world-wide acceptance – often used in injection molding, PLC interface, machine tooling, escalators, packaging, food and beverage, industrial, lifts and elevators, electronic assembly, construction and agriculture equipment, material handling, and rail.

Series	GLA	GLC
Housing type	EN 50041	EN 50047
Sealing	IP67; NEMA 1, 3, 4, 12, 13	IP66/IP67; NEMA 1, 4, 12, 13
Temperature range	-25 °C to 85 °C [-13 °F to 185 °F] side rotary: -40 °C to 85 °C [-40 °F to 185 °F]	-40 °C to 85 °C [-40 °F to 185 °F]
Housing material	zinc die-cast, epoxy coated	zinc die-cast, epoxy coated
Actuators/levers	side rotary, top pin plunger, top roller lever, top roller plunger, wobble	side rotary, top pin plunger, top roller lever, top roller plunger, wobble
Termination	conduit: 0.5 in - 14NPT, 20 mm, PG13.5	conduit: 0.5 in - 14NPT, 20 mm, PG13.5, Deutsch-style connector (4-pin)
Approvals	UL, CE, CSA, CCC, IEC 947-5-1, EN60947-5-1, UL508	UL, CE, CSA, CCC, IEC 947-5-1, EN60947-5-1, UL508
Circuitry (double break contacts)	• SPDT snap action • SPDT slow action, BBM/MBB • DPDT snap action • DPDT sequential • DPDT center neutral • 2NO or 2NC	• SPDT snap action • SPDT slow action, BBM/MBB • 2NC slow action • 2NO slow action
Contacts	silver, gold	silver, gold
Electrical rating	10 A (thermal) AC15, A600; DC13, Q300	10 A (thermal) AC15, A300; DC13, Q300
Measurements (H x W x D)	103 mm x 42,0 mm x 42,0 mm [4.06 in x 1.65 in x 1.65 in]	85,6 mm x 30,5 mm x 31,1 mm [3.37 in x 1.20 in x 1.23 in]
Features	positive-opening NC contacts ➡	positive-opening NC contacts ➡

GLD	GLE	91MCE	SZL-VL
EN 50047	EN 50047 compatible	–	–
IP66; NEMA 1, 4X (indoor), 12, 13	IP66; NEMA 1, 4, 12, 13	IP67	IP64
-40 °C to 85 °C [-40 °F to 185 °F]	-40 °C to 85 °C [-40 °F to 185 °F]	-25 °C to 85 °C [-13 °F to 185 °F]	-20 °C to 60 °C [-4 °F to 140 °F]
high-strength thermoplastic	zinc die-cast, epoxy coated	zinc die-cast	zinc die-cast/thermoplastic
side rotary, top pin plunger, top roller plunger, wobble	side rotary, top pin plunger, top roller plunger, wobble	side rotary, top pin plunger, top roller plunger, panel-mount actuators	side rotary, top pin plunger, top roller plunger, wobble, wobble cat whisker
conduit: 0.5 in - 14NPT, 20 mm, PG13.5, Deutsch-style connector (4-pin)	conduit: 0.5 in - 14NPT, 20 mm, PG13.5, Deutsch-style connector (4-pin)	4-pin M12 connector, side exit cable, bottom exit cable	cable gland (cable Ø 6 mm to Ø 9 mm)
UL, CE, CSA, CCC, IEC 60947-5-1, EN60947-5-1, UL508, UL746-C	UL, CE, CSA, CCC, IEC 60947-5-1, EN60947-5-1, UL508	cULus, CE, CCC	UL, cULus, CE
• 1NC 1NO SPDT snap action • 1NC 1NO SPDT slow action, BBM/MBB • 2NC • 2NO	• 1NC 1NO SPDT snap action • 1NC 1NO SPDT slow action, BBM/MBB • 2NC 2NO DPDT snap action • 2NC • 2NO	• 1NO 1NC snap action • 1NC 1NO slow action: BBM	• 1NC 1NO SPDT
silver, gold	silver, gold	silver	gold-plated silver
10 A (thermal) AC15, A300; DC13, Q300	10 A (thermal) AC15, A300; DC13, Q300	10 A (thermal) AC15, A300; DC13, Q300	5.0 A @ 250 Vac max. 0.4 A @ 125 Vdc max.
84,05 mm x 30,5 mm x 32,6 mm [3.31 in x 1.20 in x 1.28 in]	85,9 mm x 65 mm x 31,1 mm [3.38 in x 2.56 in x 1.23 in]	66,5 mm x 30 mm x 16 mm [2.62 in x 1.18 in x 0.63 in]	82,5 mm x 28 mm x 25 mm [3.25 in x 1.102 in x 0.98 in]
positive-opening NC contacts	positive-opening NC contacts	positive-opening NC contacts; side and bottom exit connection options	integral cord grip; gold-plated silver contacts

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MICRO SWITCH™ Limit Switches
Medium-Duty Limit Switches

Featuring a small metal package size. Potential applications include material handling, printing, machine tools, agricultural equipment, cranes, packaging, earth moving, conveyors, surtran, textile, and printing.

Series	14CE/914CE	LS/LS-4
Housing type	minature	compact/non-plug-in, plug-in
Sealing	IP65, IP66, IP67; NEMA 1, 3, 3R, 4, 6, 6P, 12 (boot seal), 13	NEMA 1, 3, 4, 6, 13
Temperature range	0 °C to 70 °C [35 °F to 158 °F] -40 °C [-40 °F] low temp (optional)	-29 °C to 71 °C [-20 °F to 160 °F] -29 °C to 120 °C [-20 °F to 298 °F] (optional)
Housing material	zinc die-cast, epoxy coated	zinc die-cast/aluminum die cast epoxy coated
Actuators/levers	side rotary, top pin plunger, top roller plunger, pushbutton, wobble, panel mount	side rotary, side rotary (maintained), top pin plunger, top roller plunger, side roller plunger, side roller, wobble
Termination	cable, micro-connector	conduit: 0.5 in - 14NPT, 20 mm, PG13.5
Approvals	14CE: CE, IEC947-5-1, EN60947-5-1 914CE: UL, CE, CSA, IEC947-5-1, EN60947-5-1	LS: UL, CSA (select listings) LS-4: CE (select listings)
Circuitry	SPDT	SPDT double break, DPDT double break
Contacts	silver, gold	silver
Electrical rating	5 A (thermal) AC14, D300; DC13, R300	LS: 10 A (125, 250 or 480 Vac) LS-4: AC15, A300; DC13, P300
Measurements (H x W x D)	49 mm x 40 mm x 16 mm [1.93 in x 1.58 in x 0.63 in]	102,9 mm x 30,2 mm x 28,7 mm [4.05 in x 1.19 in x 1.13 in]
Features	rugged metal housing; miniature size; pre-leaded or various quick-connect terminations; low-temperature available	mode of operation is field adjustable; variety of operating characteristics; models in service for more than 60 years

E6/V6	E7/V7	SL1
side mount, flange mount	side mount, flange mount	side mount
E6/V6-RQ: IP40; NEMA 1 E6/V6-RN: IP66; NEMA 1, 3, 4	E7/V7-RQ: IP50 E7/V7-RN or RQN: IP65	IP67; NEMA 3, 4, 13
-32 °C to 71 °C [-25 °F to 160 °F] -40 °C [-40 °F] low temp (optional)	-30 °C to 70 °C [22 °F to 158 °F]	-10 °C to 70 °C [14 °F to 158 °F]
zinc die-cast, epoxy coated	aluminum die-cast, epoxy coated	zinc die-cast
top pin plunger, maint. with reset plunger, wobble, top roller lever, top roller plunger, cross roller plunger, one-way roller lever	top pin plunger, top roller plunger, top roller lever, one-way roller lever, wobble, cross-roller plunger	top pin plunger, top roller plunger, top cross roller plunger, top roller lever
0.5 in - 14NPT (or NPSM) conduit, mini-connector, cable	20 mm, PG13.5 single or double conduit	cable gland (cable diameter 5,8 mm to 9,6 mm)
UL, CSA, CE	CE	UL, CSA
SPDT, DPDT	SPDT, DPDT	SPDT
silver, gold	silver	silver, gold
10 A, 15 A, 22 A @ 125, 250, or 480 Vac EN 60947-5-1; IEC 60947-5-1; AC15, B300	SPDT: AC15, A300; DC13, Q300 DPDT: AC15, B300; DC13, R300	5 A
63,5 mm x 25,4 mm x 77,2 mm [2.50 in x 1.00 in x 3.04 in]	single conduit: 45,3 mm x 76,4 mm x 25,4 mm [1.79 in x 3.01 in x 1.00 in] double conduit: 45,2 mm x 84,6 mm x 25,4 mm [1.78 in x 3.33 in x 1.00 in]	59,8 mm x 44,2 mm x 18 mm [2.35 in x 1.74 in x 0.71 in]
rugged electrostatic, epoxy-coated housing; booted versions sealed to IP66; unsealed actuators sealed to IP40; side or flange mount; low temperature options; models in service for more than 60 years	compact, general-purpose limit switch for medium-duty indoor or outdoor applications	often ideal source for replacement parts for machine tools; rugged housing; snap-in terminal enclosures; standard and low temperature ranges

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MICRO SWITCH™ Hazardous Area Switches
Hazardous Area Switches

Designed to extinguish the flame path in a potentially explosive environment, MICRO SWITCH™ hazardous area switches are weatherproof, water-tight, and dust-tight. These highly reliable, rugged switches are often used in control valves, petrochemical, conveyors, grain elevators, and material handling.

Series	EX	14CE100
Approvals	UL, CSA, ATEX (CE), IEC Ex	ATEX (CE)
Designations	NEMA 7, Div. 1 & 2, Class I, Groups **B**, C, & D **(select catalog listings)** NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G II 2 G; EEx d IIB + H2 T6	II 2 G; Ex d IIC T6 II 2 D; Ex tD A21 T85°C
Sealing	NEMA 1	IP65 IP66 (select catalog listings)
Housing material	aluminum, epoxy coated	zinc, epoxy coated
Actuators/ levers	side rotary, top pin plunger, top roller plunger, manual	top pin plunger, top roller plunger, cross-roller plunger
Termination	0.5 in - 14NPT conduit, lead wires	harmonised Cenelec cable (various lengths)
Circuitry	1NC 1NO SPDT snap action; 1NC 1NO SPDT maintained; 2NC 2NO DPDT snap action	1NC 1NO SPDT snap action
Operating temperature (standard)	-40 °C to 71 °C [-40 °F to 160 °F] -40 °C to 204 °C [-40 °F to 400 °F] optional EXHT catalog listing	0 °C to 70 °C [32 °F to 158 °F]
Electrical rating	1 A, 10 A, 15 A, 20 A	AC14, D300; DC13, R300
Measurements (H x W x D)	65,0 mm x 93,0 mm x 51,3 mm [2.56 in x 3.66 in x 2.02 in]	49,0 mm x 40,0 mm x 16,0 mm [1.93 in x 1.57 in x 0.63 in]
Features	smallest metal housing intended for indoor applications; ample wiring space; mounts from any of four sides; used in temperature range of -40 °C to 71 °C [-40 °F to 160 °F]; global agency approvals	pre-wired versions; gang-mounting capability; cable length variations; simple two screw mounting; A-P and European approvals

GXA	GXE	CX
ATEX (CE)	ATEX (CE), IEC Ex EN 50041 mounting compatible	UL, CSA, ATEX (CE), IN METRO, IEC Ex (consult factory for applicable listings)
II 2 G; EEx d IIC T6 II 2 D; Ex tD A21 T85°C	II 2 G; EEx d IIC T6 II 2 D; Ex tD A21 T85°C	NEMA 7, Div. 1 & 2, Class I, Groups **B**, C, & D **(select catalog listings)** NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G II 2 G; Ex d IIC T6 II 2 D; Ex d tD A21 T85°C
IP66	IP66	IP66; NEMA 1, 3, 4, 4X, 6, 6P, 13
zinc, epoxy coated	zinc, epoxy coated	aluminum (epoxy coated), bronze
side rotary, top pin plunger, top roller plunger	side rotary, top pin plunger, top roller plunger	side rotary, pin plunger
5 m of harmonised Cenelec cable (three conductor)	5 m of harmonised Cenelec cable (three conductor)	0.75 in - 14 NPT conduit, 25 mm conduit
1NC 1NO SPDT snap action	1NC 1NO SPDT snap action	max. of 6NC/6NO 4 mA to 20 mA; analog output
-20 °C to 75 °C [-4 °F to 167 °F]	-20 °C to 75 °C [-4 °F to 167 °F]	-25 °C to 85 °C [-13 °F to 185 °F] -40 °C to 85 °C [-40 °F to 185 °F] (optional)
AC15, 4 A, 250 V; DC13, 0.15 A, 250 V	AC15, 4 A, 250 V; DC13, 0.15 A, 250 V	1 A, 10 A, 15 A, 20 A
103 mm x 42,0 mm x 42,0 mm [4.06 in x 1.65 in x 1.65 in]	85,9 mm x 65 mm x 30,0 mm [3.38 in x 2.56 in x 1,18 in]	short cover: 101,6 mm x 101,6 mm x 104 mm [4.00 in x 4.00 in x 4.09 in] standard cover: 101,6 mm x 101,6 mm x 145,0 mm [4.00 in x 4.00 in x 5.71 in]
EN 50041 mounting compatible; double-insulated switch element; snap-action basic switch; A-P and European approvals	EN 50047 mounting compatible; double-insulated switch element; snap-action basic switch; A-P and European approvals	operate point field adjustable; low temp seals; available models for on/off position switching or continuous analog output sensing; single or double pole, double-throw available; global agency approvals

MICRO SWITCH™ Hazardous Area Switches
Hazardous Area Switches

Designed to extinguish the flame path in a potentially explosive environment, MICRO SWITCH™ hazardous area switches are weatherproof, water-tight, and dust-tight. These highly reliable, rugged switches are often used in control valves, petrochemical, conveyors, grain elevators, and material handling.

Series	LSX	BX
Approvals	UL, CSA	BX (1/2 NPT or 3/4 NPT): UL, CSA, ATEX, IEC Ex, NEPSI (China) BX (20 mm): ATEX, IEC Ex, NEPSI (China), EAC (Russia), IN METRO (Brasil)
Designations	NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G	NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G II 2 G; Ex d IIC T6 II 2 D; Ex d tD A21 T85°C
Sealing	IP67; NEMA 1, 3, 4, 6, 13	P67; NEMA 1, 3, 4, 6, 13
Housing material	aluminum, epoxy coated	aluminum, epoxy coated
Actuators/ levers	side rotary, side rotary (maintained), side pin plunger, side pin plunger - adjustable, side roller plunger, top rotary, top pin plunger, top pin plunger - adjustable, top roller plunger, wobble	side rotary, side rotary (maintained), side pin plunger, side pin plunger - adjustable, side roller plunger, top rotary, top pin plunger, top pin plunger - adjustable, top roller plunger, wobble
Termination	0.5 in - 14NPT conduit, 0.75 in - 14NPT conduit	0.5 in - 14NPT conduit, 0.75 in - 14NPT conduit, 20 mm conduit
Circuitry (double break contacts)	• 1NC 1NO SPDT snap action • 2NC 2NO DPDT snap action • 2NC 2NO DPDT snap action, center neutral • 2NC 2NO DPDT snap action, sequential	• 1NC 1NO SPDT snap action • 2NC 2NO DPDT snap action • 2NC 2NO DPDT snap action, center neutral • 2NC 2NO DPDT snap action, sequential
Operating temperature	-12 °C to 121 °C [10 °F to 250 °F] -40 °C to 121 °C [-40 °F to 250 °F] (optional)	-40 °C to 70 °C [-40 °F to 158 °F]
Electrical rating	10 A (thermal) AC15, A600; DC13, R300	10 A (thermal) AC15, A600; DC13, R300
Measurements (H x W x D)	146,1 mm x 76,2 mm x 72,9 mm] [5.75 in x 3.00 in x 2.87 in]	146,1 mm x 76,2 mm x 72,9 mm] [5.75 in x 3.00 in x 2.87 in]
Features	10 A thermal electrical rating; variety of actuators and circuitry options; silver or gold contacts; field adjustable to meet various application needs	diverse conduit selection; compatible with LSX; tracking interchangeability with MICRO SWITCH™ HDLS; variety of heads and non-sparking actuators; 10 A thermal electrical rating; silver or gold contacts; ATEX-required external ground screw; global agency approvals

BX2	GSX	CLSX
BX2 (1/2 NPT, 3/4 NPT, 20 mm): UL, cUL, ATEX, IEC Ex, NEPSI (China), EAC (Russia), IN METRO (Brasil)	cULus, ATEX, IEC Ex, IN METRO (Brasil)	UL, CSA
NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G II 2 G; Ex d IIC T6 II 2 D; Ex d tD A21 T85°C	NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G II 2 G; Ex d IIC T6 II 2 D; Ex d tD A21 T85°C	NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G
IP67; NEMA 1, 3, 4, 6, 13	IP67; NEMA 1, 4, 12, 13	NEMA 1, 3, 4, 13
stainless steel	aluminum, epoxy coated	aluminum, epoxy coated
side rotary, side rotary (maintained), side pin plunger, side roller plunger, top pin plunger, top roller plunger	side rotary, top pin plunger, top roller plunger, top roller lever	cable/rope pull, maintained
conduit: 0.5 in - 14NPT, 0.75 in - 14NPT, 20 mm	conduit: 0.5 in - 14NPT, 20 mm, PG13,5	conduit: 0.5 in - 14NPT, 0.75 in - 14NPT
• 1NC 1NO SPDT snap action • 2NC 2NO DPDT snap action • 2NC 2NO DPDT snap action, center neutral • 2NC 2NO DPDT snap action, sequential	• 1NC 1NO snap action • 2NC 2NO snap action • 2NC slow action • 2NO slow action • 1NC 1NO BBM slow action • 1NC 1NO MBB slow action • 2NC 1NO BBM slow action • 2NC 2NO BBM slow action • 3NC 1NO BBM slow action • 4NC slow action	• 1NC • 1NC 1NO • 2NC
-40 °C to 70 °C [-40 °F to 158 °F]	-40 °C to 70 °C [-40 °F to 158 °F]	-1 °C to 70 °C [-30 °F to 158 °F]
10 A (thermal) AC15, A600; DC13, R300	10 A (thermal) AC15, A300/A600; DC13, Q300	10 A (thermal) AC15, A300/A600; DC13, Q300
146,1 mm x 76,2 mm x 72,9 mm] [5.75 in x 3.00 in x 2.87 in]	154,2 mm x 76,2 mm x 72 mm [6.07 in x 3.00 in x 2.84 in]	158,24 mm x 76,2 mm x 73,2 mm [6.23 in x 3.00 in x 2.88 in]
corrosion-resistant stainless steel housing; diverse conduit selection; tracking interchangeability with MICRO SWITCH™ LSX and BX series products; variety of heads and non-sparking actuators; 10 A thermal electrical rating; silver or gold contacts; ATEX-required external ground screw; global agency approvals	snap-action or slow-action contacts with positive break of NC contacts; simple installation; positive action push plunger; global agency approvals; silver or gold contacts	positive-opening operating of NC contacts; cable length may be 200 ft in straight line; internal grounding screw

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Limitless™ Solutions
Wireless Limit Switches

New alternative enables designers to work without limitations of traditional tethered devices. Enables presence, absence, or position in applications where wired products are not feasible due to functionality and/or cost. Potential applications include door position, construction/ag machines, conveyors, cranes, grain diverters, lifts, material handling, presses, and valves.

Series	WGLA	WLS
Housing type	EN 50041	EN 50041 and back-mounting
Housing material	powder-coated, zinc die-cast	powder-coated phosphate epoxy finish, zinc die-cast
Radio	WPAN 802.15.4; 2.4 GHz	WPAN 802.15.4; 2.4 GHz
Signal range	1000 ft [305 m] in US/Canada	1000 ft [305 m] in US/Canada
Sealing	IP67; NEMA 1, 4, 12, 13	IP67/IP68; NEMA 1, 3, 4, 6, 6P, 12, 13
Actuators/ operating heads	side rotary, top pin plunger, top roller plunger, top roller lever	over 15 side rotary actuators; pin/roller plunger, side/top rotary (with more than 15 levers), cat whisker, wobble stick, side shaft eyelet pull, maintained/ momentary side plunger, and cable pull operating heads
Antenna types	direct or remote mounts, omni-directional	direct or remote mounts, omni-directional
Sensing target	–	–
Electrical connection	–	–
Electromechanical switch	–	–
Operating characteristics	–	–
Measurements (H x W x D) (without antenna)	102,85 mm x 42 mm x 42 mm [4.05 in x 1.65 in x 1.65 in]	106,68 mm x 41,15 mm x 44,45 mm [4.20 in x 1.62 in x 1.75 in]
Features	reliable, flexible, and secure wireless transmission; EN 50041 die-cast metal enclosure; WPAN 802.15.4 2.4 GHz point-to-point; FCC 15, IC, ACMA, & ETSI; EMI immunity; full complement of operating heads and levers; direct or remote mount antenna options	operating head rotary tested in excess of 50 million cycles; diaphragm seal between head and body cavity; twin shaft seals protect head and internal components from corrosion and debris; reliable, flexible, and secure wireless transmission; EN 50041 die-cast metal enclosure; WPAN 802.15.4 2.4 GHz point-to-point; FCC 15, IC, ACMA, & ETSI; EMI immunity; direct or remote mount antenna options

WLS Non-Contact Switch	WLS Single-Switch Adapter	WOI
EN 50041 and back-mounting	EN 50041 mounting compatible and back-mounting	screw mount
zinc head and body are phosphate treated and epoxy finished; 30% glass-filled PBT plastic head	zinc body is phosphate treated and epoxy filled; 30 % glass-filled PBT plastic head	powder-coated aluminum
WPAN 802.15.4; 2.4 GHz	WPAN 802.15.4; 2.4 GHz	WPAN 802.15.4; 2.4 GHz
1000 ft [305 m] in US/Canada	1000 ft [305 m] in US/Canada	1000 ft [305 m] in US/Canada
IP67; NEMA 1, 4, 12, 13	IP67; NEMA 1, 4, 12, 13	IP65
–	–	pushbutton operators: 22 mm round flush momentary, 29 mm mushroom head momentary, 40 mm mushroom head maintained (push-pull); no operator option available for use with user supplied 22 mm operator and contact blocks
direct or remote mounts, omni-directional	direct or remote mounts, omni-directional	direct or remote mounts, omni-directional
top and side of head		–
–	4-pin M12 micro-connector with three-pole, single keyway female receptacle cable grip with internal screw connector (maximum cable length 3 m [9.84 ft])	–
–	SPDT (Form C) switch with low-energy contacts (i.e., gold) capable of reliably controlling a 3.6 Vdc @ 30 mA electrical load to ensure proper operation	–
operating point: 3,81 mm [0.15 in] min.; release point: 15,24 mm [0.60 in] max. with use of WMG1 magnet (included with WLS Series Non-Contact Switch)	–	–
122,43 mm x 41,15 mm x 44,45 mm [4.82 in x 1.62 in x 1.75 in]	137,16 mm x 41,15 mm x 44,45 mm [5.40 in x 1.62 in x 1.75 in]	130 mm x 85 mm x 66 mm] [5.1 in x 3.4 in x 2.6 in]
non-contact presence/absence detection of a variety of different magnet styles and magnetic actuators; reliable, flexible, and secure wireless transmission; EN 50041 die-cast metal enclosure; WPAN 802.15.4 2.4 GHz point-to-point; FCC 15, IC, ACMA, & ETSI; EMI immunity; direct or remote mount antenna options	converts almost any electromechanical switch with low-energy contacts (i.e., gold) into a wireless switch; reliable, flexible, and secure wireless transmission; EN 50041 die-cast metal enclosure; WPAN 802.15.4 2.4 GHz point-to-point; FCC 15, IC, ACMA, & ETSI; EMI immunity; direct or remote mount antenna options	enables operator indication (i.e. push button) from remote locations where wiring is too costly or not possible; flex-ibility for users to choose and install their desired operator type; i.e. 22 mm rotary switch, 22 mm key switch, etc.; aility to reconfigure and network multiple WOI inputs, or point-to-point with personalized addresses

Honeywell

Limitless™ Solutions
Wireless Monitors and Receivers

Provide a visual, audio, and output based on a signal received from a Limitless™ input. Wireless technology eliminates the need for communications cabling or power line installation, saving both ime and money. Potential applications include positioners, manual process valves, eye bath stations, emergency showers, tank level, steam traps, louvers, relief valve doors, dampers, mining conveyor applications, and grain diverters.

Series	WPMM	WDRR
Housing type	snap-in panel or screw mount design	din-rail or screw mount design
Housing material	LCP, VECTRA E130i	flame retardant ABS (acrylonitrile butadiene styrene)
Radio	–	WPAN 802.15.4; 2.4 GHz
Signal range	1000 ft [305 m] in US/Canada	1000 ft [305 m] in US/Canada
Sealing	IP67	IP20
Outputs	NPN normally open current sinking; PNP normally open current sourcing; solid state relay	Selectable: NPN-type current sinking open collector or NPN-type "totem pole"; PNP-type current sourcing open collector or PNP-type "totem pole"
Antenna types	direct or remote mounts, omni-directional	direct or remote mounts, omni-directional
Supply voltage	10 Vdc to 30 Vdc with reverse polarity protection	10 Vdc to 28 Vdc with reverse polarity protection
Supply current	750 mA	500 mA max.
Measurements (H x W x D) (without antenna)	31,75 mm x 53,84 mm x 74,30 mm [1.250 in x 2.120 in x 2.925 in]	88,9 mm x 152,4 mm x 45,8 mm [3.5 in x 6 in x 1.8 in]
Temperature range	-40 °C to 85 °C [-40 °F to 185 °F]	-20 °C to 70 °C [-4 °F to 158 °F]
Features	reliable, flexible, and secure wireless transmission; can potentially monitor up to 16 Limitless™ switches; field pairing function allows for rapid configuration (adding or subtracting switches); WPAN 802.15.4 2.4 GHz point-to-point; FCC 15, IC, ACMA, & ETSI; EMI immunity; direct or remote mount antenna options	selectable npn or pnp output; configurable normally open or normally closed output for up to 14 Limitless™ inputs; WPAN 802.15.4 2.4 GHz point-to-point; FCC 15, IC, ACMA, & ETSI; EMI immunity; LEDs indicate change of status, low battery, RF signal loss, pairing function, and diagnostic functions; eliminates issues with wire connection integrity on moving equipment

Specialty Limit Switches
Relialign™ Door Interlock Switches

Designed specifically for residential and commercial swing-door applications, including swing-door elevators, platform lifts, dumbwaiters, and lifts for the mobility impaired. Holds the door in place and prevents it from being opened when not desired. Design features contribute to increase safety, reduce nuisance stoppages and call-backs, and contribute to simplified wiring and installation.

Door Interlock	Relialign™ RDI Series	Relialign™ CDI Series
Description	door interlock for residential swing-style doors, elevators, and vertical lifts. available with metal housing	door interlock for commercial swing-style doors, elevators, and vertical lifts. available with metal housing
Use	**In the USA:** residential swing door applications, specifically dumbwaiters, lifts for the mobility impaired, and swing-door elevators **In Canada:** residential swing door applications, specifically elevators and dumbwaiters	**In the USA:** swing door applications, specifically dumbwaiters, material lifts, lifts for the mobility impaired and private residence swing-door elevators **In Canada:** swing door applications, specifically dumbwaiters, material lifts, and residential elevators
Housing	metal (white and architectural bronze)	metal (white)
Approvals	compliant to ASME A17.1 and UL 104	compliant to ASME A17.1, ASME A18.1, cULus, and CAN/CSA B44
Voltage	24 Vdc; 24 Vac	24 Vac/Vdc, ±5 %
Connection	terminal strip or cat 5 available	terminal strip or cat 5 available
Measurements (H x W x D)	247,65 mm x 51,44 mm x 49,23 mm [9.75 in x 2.025 in x 1.938 in]	247,65 mm x 51,44 mm x 49,23 mm [9.75 in x 2.025 in x 1.938 in]
Features	two separate mechanisms to indicate door closure; metal key; internal solenoid control; no open or exposed contacts; configurable product platform	long life of 1 million operations minimum; exceeds commercial pull force standard of 675 pound pull force by 2X

Machine Safety
MICRO SWITCH™ Safety Switches

From factory floor to assembly line, from packaging machinery to robot cells, Honeywell delivers reliability and safety in compact, cost-effective safety switches. Enhanced performance, extended productivity, and full-line flexibility. Most models are SIL 3 capable.

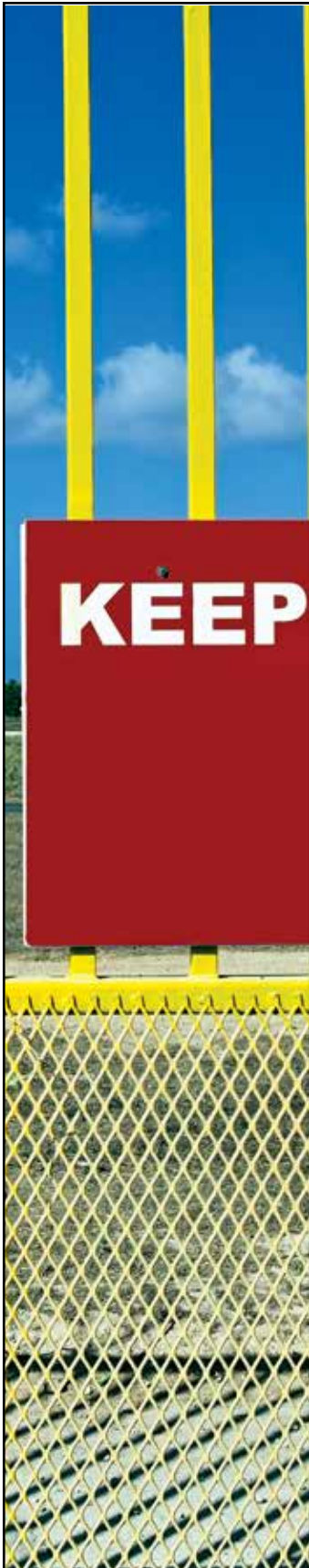| Series	CPS/2CPS	24CE/924CE
Attributes	single/dual head cable pull designed to provide emergency stop protection; often used for exposed conveyor and assembly lines	miniature, compact die-cast zinc housing construction with a wide variety of actuators, IEC945-5-1, EN60947-5-1
Potential applications	conveyor applications, perimeter guard	small doors and apertures
Housing	zinc, epoxy coated	zinc, epoxy coated
Approvals	UL, CSA, CE, SIL 3 capable	24CE: CE; 924CE: UL, CE, SIL 3 capable
Sealing	IP67; NEMA 1, 4, 12, 13	IP66
Contacts	silver, gold	silver
Circuitry **(double break contacts, except FF and FFS)**	• 1NC 1NO • 2NC 2NO • 3NC 1NO • 4NC	• 1NC slow action, • 1NC 1NO slow action BBM • 1NC 1NO slow action MBB
Differentiator	rugged, sealed, large wiring cavity; indicators; wide temperature tolerance; longest span available (up to 500 feet/152 m on dual head 2CPS)	smallest safety switch offering from Honeywell; tough and rugged switch, designed to operate in harsh operating environments
Measurements (less levers) H x W x D	1CPS: 178,2 mm x 99,1 mm x 65,3 mm [6.8 in x 3.9 in x 2.57 in] 2CPS: 152,4 mm x 165,1 mm x 84,1 mm [6.0 in x 6.5 in x 3.31 in]	49,0 mm x 40,0 mm x 16,0 mm [1.93 in x 1.57 in x 0.63 in]
Temperature	-40 °C to 85 °C [-40 °F to 185 °F]	0 °C to 70 °C [32 °F to 158 °F] -40 °C to 70 °C [-40 °F to 158 °F] (optional)
Electrical rating	10 A (thermal); AC15, A300; DC13, Q300	AC15, B300; DC13, R300
Features	optional hardware packs; heavy-duty terminals: gold contacts; positive opening of NC contacts (up to 4 contacts); LED status lights; positive opening NC contacts	simple two screw mounting; available pre-wired with choice of cable lengths or connector fitted; side and bottom cable entry; positive opening NC contacts

GSS	GSS Hinge	GSX	FF and FFS
EN50047 (metal or plastic), EN50041 (metal), designed to global standards	EN50047 mounting compatible, metal or plastic housing for access door safety hinge applications	switch characteristics to EN50041, heavy-duty metal body, explosion-proof safety switch designed for hazardous area applications	non-contact safety switches either magnetically operated or by electronically coded magnets providing high degree of tamper-resistant, reliable operation
medium/large doors and apertures	medium/large doors	gates, doors, access panels, cages	small doors and apertures
glass-filled polyester, zinc epoxy coated	glass-filled polyester, zinc epoxy coated	aluminum, epoxy coated	ABS resin-filled, stainless steel
UL, CSA, CE, SIL 3 capable	UL, CSA, CE, SIL 3 capable	cULus, ATEX, IEC Ex, IN METRO (Brasil) SIL 3 capable	UL, CE
metal: IP66; NEMA 1, 4, 12, 13 plastic: IP66/IP67; NEMA 1, 4 (indoor), 12, 13	metal: IP66; NEMA 1, 4, 12, 13 plastic: IP66; NEMA 1, 4 (indoor), 12, 13	IP67; NEMA 1, 4, 6, 12, 13	IP67, NEMA 4
silver, gold	silver, gold	silver, gold	–
EN50041 • 1NC 1NO snap action • 1NC 1NO slow action BBM • 1NC 1NO slow action MBB • 2NC slow action • 2NC 2NO snap action • 4NC slow action • 2NC 1NO slow action BBM • 2NC 2NO slow action BBM • 3NC 1NO slow action BBM EN50047 • 1NC 1NO snap action • 1NC 1NO slow action BBM • 1NC 1NO slow action MBB • 2NC slow action	• 1NC 1NO snap action • 2NC slow action • 4 NC slow action • 2NC 2 NO slow action BBM • 3NC 1NO slow action BBM	• 1NC 1NO snap action • 1NC 1NO slow action BBM • 1NC 1NO slow action MBB • 2NC slow action • 2NC 2NO snap action • 4NC slow action • 2NC 1NO slow action BBM • 2NC 2NO slow action BBM • 3NC 1NO slow action BBM	1 or 2 safety contacts. Select catalog listings offer an auxiliary contact
highly visible red housing; snap action and slow action basic switches	highly visible red housing; actuator head may be rotated in 90° increments	hazardous location and positive-break safety switch with cULus, ATEX, IEC Ex, IN METRO approvals	large actuation window from almost any angle (ranges ~6 mm to 20 mm); sealed, compact and rugged design
83,0 mm x 30,5 mm x 30,0 mm [3.27 in x 1.20 in x 1.18 in]	83,0 mm x 30,5 mm x 30,0 mm [3.27 in x 1.20 in x 1.18 in]	154,2 mm x 76,2 mm x 72 mm [6.07 in x 3.00 in x 2.84 in]	87 mm x 24 mm x 19 mm [3.43 in x 0.95 in x 0.75 in]
-25 °C to 85 °C [-13 °F to 185 °F] -40 °C to 85 °C [-40 °F to 185 °F] (side rotary operating heads)	-25 °C to 85 °C [-13 °F to 185 °F]	-40 °C to 70 °C [-40 °F to 158 °F]	-10 °C to 55 °C [14 °F to 131 °F]
multiple contact options (up to 4 NC); full range of actuator heads and levers; reliable low energy switching; tested to 15 million operations; positive opening NC contacts	low profile design; available with 3 actuator styles (left, center, right); multiple contact options; reliable low energy switching; positive opening NC contacts	extensive switching and actuating options; designed so even welded contacts will open and machine will stop in emergency with positive opening NC contacts (direct mechanical linkage)	guard status indication; small, easy to mount; either pre-wired or connector fitted; allows for door misalignment with door closed sensing

Machine Safety
MICRO SWITCH™ Safety Switches

Designed to help pass any test with the most impressive safety switch portfolio and solutions for application-specific needs. Widest range of sizing, sealing alternatives, enclosure materials, actuator styles, and contact options available.

Series	GKR/L	GKM
Attributes	heavy-duty metal body solenoid trapped key interlock switch designed not to release until hazard has been removed; for large doors/cages	most compact key-operated safety product available; fully sealed construction
Potential applications	large, heavy door, cage and gate machine apps	small doors and apertures
Housing	zinc, epoxy coated	glass-filled polyester
Approvals	UL, CSA, CE, SIL 3 capable	UL, CSA, CE, SIL 3 capable
Sealing	IP68; NEMA 1, 4, 6P, 12, 13	IP67; NEMA 1, 12, 13
Contacts	silver, gold	silver, gold
Circuitry (double break contacts)	• 1NC 1NO slow action BBM • 2NC 1NO slow action BBM • 2NC 2NO slow action BBM • 3NC 1NO slow action BBM • 2NC slow action • 4NC slow action • 2NC 2NO snap action	• 1NC 1NO BBM • 2NC
Differentiator	rugged design withstands vibration, harsh environments; provides long-term durability	can be used for doors as small as 160 mm [6.3 in] with small closed radius; available cabled or with integrated M12 connectors for plug-and-play install
Measurements (less levers) H x W x D	160,0 mm x 110,0 mm x 48,8 mm [6.3 in x 4.33 in x 1.92 in]	69,4 mm x 34,0 mm x 16,0 mm [2.73 in x 1.34 in x 0.63 in]
Temperature	-25 °C to 40 °C [-13 °F to 104 °F]	-25 °C to 85 °C [-13 °F to 185 °F]
Electrical rating	AC15, A300; DC13, Q300	AC15, A300; DC13, Q300
Features	solenoid power-to-lock or power-to-unlock; key retain force 1000 N max; multiple key and lockout devices; dual LED indicator; available with key entry (4 face orientations); up to 4 contacts; manual override; positive opening NC contacts	double insulated, no ground wiring required; wiring entrance options from bottom, side, or both (dual entry GKME for daisy chain capability); variety of keys available for top or front entry options; positive opening NC contact

GKE	GKN	GK
compact housing size, standard IEC 20 mm mounting	common footprint safety switch for multiple applicability; multiple contacts, multiple key and wiring entry points	heavy duty metal body keyed interlock switch designed for large doors and cages
small doors and apertures	small/medium doors and apertures	large, heavy door cage and gate applications
glass-filled polyester	glass-filled polyester	zinc, epoxy coated
cULus, CE, S-mark, SIL 3 capable	cULus, CE, CCC, S-mark, SIL 3 capable	UL, CSA, CE, SIL 3 capable
IP66/IP67; NEMA 1, 4X (indoor), 12, 13	IP67; NEMA 1, 4X (indoor use only), 12, 13	IP67; NEMA 1, 4, 12, 13
silver	silver	silver, gold
• 1NC 1NO snap action • 1NC 1NO slow action BBM • 2NC slow action	• 2NC 1NO slow action BBM • 3NC slow action	• 1NC 1NO snap action • 2NC 2NO snap action • 1NC 1NO slow action BBM • 1NC 1NO slow action MBB • 2NC 1NO slow action BBM • 2NC 2NO slow action BBM • 3NC 1NO slow action BBM • 2NC slow action • 4NC slow action
small MIN-DIN footprint; simple wiring and mounting; double insulated	one switch stocking for multiple contact, key entry, and wiring application combinations; large wiring cavity	unique friction feature for key retention; rugged design withstands vibration, harsh environments, and provides long-term durability (tested 15 million cycles)
95,7 mm x 30,5 mm x 32,9 mm [3.77 in x 1.20 in x 1.30 in]	90,0 mm x 64,0 mm x 30,0 mm [3.55 in x 2.52 in x 1.18 in]	121,6 mm x 42 mm x 42,6 mm [1.79 in x 1.652 in x 1.68 in]
-25 °C to 85 °C [-13 °F to 185 °F]	-25 °C to 70 °C [-13 °F to 158 °F]	-25 °C to 85 °C [-13 °F to 185 °F]
AC15, A300/A600; DC13, Q300	AC15, A600; DC13, Q300	AC15, A300/A600; DC13, Q300
medium duty switch covers most common 1NC/1NO and 2NC applications key entry from top and front	multi-use, multi-option; up to 3 contacts for additional monitoring; 4 key head entries; knock-out points for wiring entry; double insulated body; rigid and flexible key options available	top or side entry lockout device options available; LED indicator; up to four contacts; positive opening NC contacts

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 Sensing and Control 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

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 and stainless steel media isolated pressure sensors, Hall-effect magnetic position sensors, humidity sensors, flexible heaters, force sensors, thermostats, commercial solid state sensors, infrared sensors, oxygen 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, pressure sensors, potentiometers and encoders, speed sensors, temperature probes, ultrasonic sensors, wirewound resistors, thermostats, commercial solid state sensors, flex heaters, SMART position sensors, board mount and stainless steel media isolated pressure sensors, force sensors, safety light curtains, push-pull switches, and MICRO SWITCH™ basic switches, hazardous area switches, safety 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.
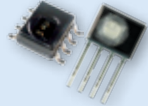
Honeywell products for transportation applications include Hall-effect rotary position sensors, inertial measurement units, infrared sensors, keyless entry sensors, magnetic position sensors, pressure sensors, speed and direction sensors, ultrasonic sensors, thermostats, temperature probes, commercial solid state sensors, SMART position sensors, and MICRO SWITCH™ pushbutton, rocker, and toggle switches.

Honeywell

Sensing and Control Product Portfolio — Product reliab

With more than 50,000 sensing, switching and control products ranging from snap-action, limit, toggle and pressure switches to position, spe

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

Pressure sensors – heavy duty: Small, allowing use on their own in tight packages or as the building block for a complete transducer. Developed for potential use in pressure applications that involve measurement of hostile media in harsh environments compatible with 316 stainless steel.
May be used in: Industrial Controls • Process Control Systems • Industrial Automation

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 current sensors.
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

Magnetic sensors: Digital and analog Hall-effect position ICs, magnetoresistive position ICs, Hall-effect vane, gear-tooth 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 • Vibration • Weight Sensing

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

bility. Industry knowledge. Expertise. Standard with every order.

eed, pressure and airflow sensors, Honeywell Sensing and Control 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 PRODUCTS

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

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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.

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

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