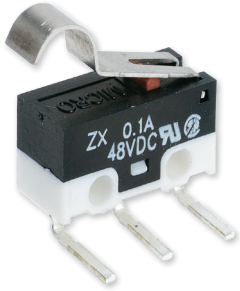


ZX SERIES

004990

Issue 3

MICRO SWITCH Subminiature Basic Switches



DESCRIPTION

MICRO SWITCH ZX Series is a subminiature snap-action switch from the family of Z series subminiature basic switches. Although small in size, the ZX Series is rated for controlling electrical loads ranging from logic-level/computer-based circuits to limited power-duty switching (up to 3 A/125 Vac). The ZX subminiature switch package is available with either solder terminals or a variety of different styles of printed circuit board (PCB) terminals to fulfill the requirements for electrical connectivity.

A wide variety of stainless steel levers are available and when combined with the subminiature package size, can adapt the ZX Series to a wide range of applications. To enhance the versatility of ZX switches, the family is certified to UL, cUL, ENEC, CE, UKCA and CQC for worldwide use. The ZX Series is the right choice for a cost-effective subminiature switch package.

FEATURES

- Subminiature package size (6,5 mm x 12,8 mm [0.25 in x 0.50 in]) allows the switch to fit in applications where other sensors or switches are too large
- Switch design helps assure control of limited power-duty switching with silver contacts or logic-level (low voltage and milliamperes) with gold-plated contacts
- Designed with a pin plunger for actuation, the series is also available with various styles of levers that expand the versatility of the switch in the application
- Variety of terminations designed to provide flexibility for the electrical connectivity. Certified to cUL, UL, ENEC, CE, UKCA and CQC for global applications
- RoHS compliant
- Available worldwide through Honeywell's network

DIFFERENTIATION

- Designed to operate in a variety of applications
- Current carrying capacity, up to 3 A, allows for a solution in many applications where space is a premium
- Cost-effective switch in a compact package
- Subminiature switch package designed to meet a wide range of temperature requirements

APPLICATIONS

- Circuit breaker box module interlock
- Electric utility meter tamper switch
- Tamper switch for computer modules
- Small residential appliances
- ATM equipment
- Hospital bed pendant controls
- Infusion pumps (end of travel)
- Syringes (end of travel)

PORTFOLIO



The MICRO SWITCH ZX joins Honeywell's Subminiature Basic Switch Series ideal for applications where space on the equipment is at a premium. These switches may be adapted to a wide variety of applications. To view the entire product portfolio, click here.

MICRO SWITCH SUBMINIATURE BASIC SWITCHES ZX SERIES

PRODUCT NOMENCLATURE

ZX	10	E	10	A	01	—
Switch Type	Current Rating	Operating Force ³ (at pin plunger)	Terminal Type	Actuator Type ⁴ (Levers Mounted Internal)	Circuitry	Special Designator ²
ZX Series Subminiature Basic Switch	10 0.1 A 48 Vdc/125 Vac 0.2 A 60 Vdc gold-plated contacts	C 90 gf max.	10 Solder, straight	A Pin plunger	01 SPDT	A special designator is used to indicate non-standard features. This code consists of three alphanumeric characters max. A special designator is required when Terminal Type is "99" and/or Actuator Type is "S"
	40 1 A/3 A 125 Vac silver contacts	E 150 gf max.	20 PCB (straight)	B Short straight lever (10 mm)		
30 PCB (snap-in)	C Standard straight lever (13 mm)					
50 PCB (right side)	E Sim. roller lever (11,8 mm, r 2,5 mm)					
60 PCB (left side)	F Roller lever (10,7 mm, Ø 4,8 mm)					
99 SPECIAL ²	G Sim. roller lever (10 mm, r 1,3 mm)					
	H Sim. roller lever (15 mm, r 1,3 mm)					
	J Long straight lever (30 mm)					
	S SPECIAL ²					

NOTES:

¹ Not all combinations of model code are available.

Please contact your Honeywell provider/representative for assistance.

² Actuator Type "99" and/or Actuator Type "S" designates a special and requires a special designator at the end of the listing.

³ Operating force is measured at the plunger. Adding an actuator/lever will change the operating force. See pages 6 and 7 for operating forces.

⁴ Lever length dimension is measured as follows: Straight lever - from center line of lever pivot to end of lever;

Roller and simulated roller lever - from center line of pivot to center of roller diameter. See page 8 for dimension details.

MICRO SWITCH SUBMINIATURE BASIC SWITCHES

ZX SERIES

TABLE 1. SPECIFICATIONS

CHARACTERISTIC	ZX10 SERIES (LOGIC LEVEL)	ZX40 SERIES (POWER DUTY)
Circuitry	SPDT	SPDT
Operating force	90 g or 150 g at plunger	90 g or 150 g at plunger
Termination	PCB, solder	PCB, solder
Sealing	internal live parts protected to IP40, IP00 due to exposed terminals	internal live parts protected to IP40, IP00 due to exposed terminals
Actuators (Levers 300 Series stainless steel)	pin plunger, short flat lever, standard flat lever, long flat lever, roller lever, short simulated roller lever, standard simulated roller lever, long sim. roller lever, special levers	pin plunger, short flat lever, standard flat lever, long flat lever, roller lever, short simulated roller lever, standard simulated roller lever, long sim. roller lever, special levers
Agency certification CE, UKCA	UL, cUL, ENEC, CE, UKCA, CQC, RoHS compliant	UL, cUL, ENEC, CE, UKCA, CQC, RoHS compliant
Operating temperature (manufacturer rated)	-40°C to 85°C [-40°F to 185°F]	-40°C to 85°C [-40°F to 185°F]
Mechanical endurance (cycles)	3,000,000 min. at 120 cycles/minute max.	3,000,000 min. at 120 cycles/minute max.
Electrical endurance (cycles)	10,000 min. at 30 cycles/minute max.	10,000 min. at 30 cycles/minute max.
Switch resistance (initial)	100 Ohm max.	50 Ohm max.
Insulation resistance (initial)	100 Ohm min. (500 Vdc for one minute)	100 Ohm min. (500 Vdc for one minute)
Dielectric strength (initial) (Between live parts and ground)	1500 VRMS for one minute < 0.5 mA leakage current	1500 VRMS for one minute < 0.5 mA leakage current
Contact material	gold-plated silver	silver
Housing material	case, polyamide (nylon); cover, polyamide (nylon)	case, polyamide (nylon); cover, polyamide (nylon)

Note: Refer to engineering drawing for additional information

TABLE 2. ELECTRICAL RATINGS

	CQC (ASIA-PACIFIC) PER GB 15092-1	ENEC, CE, UKCA (EUROPE/UNITED KINGDOM) PER IEC 61058-1	UL, CUL (AMERICAS) UL 61058-1, FILE 12252
ZX10 Series (Gold-plated contacts)	0.1 A, 125 Vac 0.1 A, 48 Vdc; 0.2 A, 60 Vdc 10,000 cycles	0.1 A, 125 Vac 0.1 A, 48 Vdc; 0.2 A, 60 Vdc 10,000 cycles	0.1 RA, 125 Vac 0.1 RA, 48 Vdc; 0.2 RA, 60 Vdc 10,000 cycles
ZX40 Series (Silver contacts)	3 A, 125 Vac 10,000 cycles	3 A, 125 Vac 10,000 cycles	3 RA, 125 Vac 10,000 cycles

Note. UL, cUL; CQC, CE, UKCA and ENEC *use temperature*; 0°C to 55°C [32°F to 131°F].

MICRO SWITCH SUBMINIATURE BASIC SWITCHES ZX SERIES

- O.T. • Operating Torque
- O.F. • Operating Force
- P.T. • Pretravel
- O.T. • Overtravel
- D.T. • Differential Travel
- O.P. • Operating Position

TABLE 3. PRODUCT SPECIFICATIONS AND LISTINGS * CONTACT YOUR HONEYWELL REP OR DISTRIBUTOR FOR ADDITIONAL LISTINGS

	Catalog Listing	Contact Material	Elect. Rating Spec. (page 2)	Termination	O.F. Max. N [g]	R.F. Min. N [g]	O.P. From Mounting Hole mm [in] (See Page 6)	O.P. From Plastic Switch Base mm [in] (See Page 6)	O.P. From Form in PCB Terminals mm [in] (See Page 6)	P.T. Max. mm [in]	O.T. Min. mm [in]	D.T. Max. mm [in]
 <p>Pin plunger</p>	ZX10C10A01	Gold plated	0.1 A	Solder	0,88 [90]	0,15 [15]	5,5 ±0,3 [0.22 ±0.01]	—	—	1,3 [0.05]	0,2 [0.01]	0,3 [0.01]
	ZX10C30A01	Gold plated	0.1 A	PCB snap-in	0,88 [90]	0,15 [15]	—	7,0 ±0,3 [0.28 ±0.01]	—	1,3 [0.05]	0,2 [0.01]	0,3 [0.01]
	ZX10C50A01	Gold plated	0.1 A	PCB right	0,88 [90]	0,15 [15]	—	—	9,1 ±0,3 [0.36 ±0.01]	1,3 [0.05]	0,2 [0.01]	0,3 [0.01]
	ZX10C60A01	Gold plated	0.1 A	PCB left	0,88 [90]	0,15 [15]	—	—	9,1 ±0,3 [0.36 ±0.01]	1,3 [0.05]	0,2 [0.01]	0,3 [0.01]
	ZX10E10A01	Gold plated	0.1 A	Solder	1,47 [150]	0,2 [20]	5,5 ±0,3 [0.22 ±0.01]	—	—	1,3 [0.05]	0,2 [0.01]	0,3 [0.01]
	ZX40C20A01	Silver	3 A	PCB straight	0,88 [90]	0,15 [15]	—	7,0 ±0,3 [0.28 ±0.01]	—	1,3 [0.05]	0,2 [0.01]	0,3 [0.01]
	ZX40C30A01	Silver	3 A	PCB snap-in	0,88 [90]	0,15 [15]	—	7,0 ±0,3 [0.28 ±0.01]	—	1,3 [0.05]	0,2 [0.01]	0,3 [0.01]
	ZX40E10A01	Silver	3 A	Solder	1,47 [150]	0,2 [20]	5,5 ±0,3 [0.22 ±0.01]	—	—	1,3 [0.05]	0,2 [0.01]	0,3 [0.01]
	ZX40E30A01	Silver	3 A	PCB snap-in	1,47 [150]	0,2 [20]	—	7,0 ±0,3 [0.28 ±0.01]	—	1,3 [0.05]	0,2 [0.01]	0,3 [0.01]
	ZX40E60A01	Silver	3 A	PCB left	1,47 [150]	0,2 [20]	—	—	9,1 ±0,3 [0.36 ±0.01]	1,3 [0.05]	0,2 [0.01]	0,3 [0.01]
 <p>Std. straight lever 13 mm [0.51 in]</p>	ZX10C10C01	Gold plated	0.1 A	Solder	0,29 [30]	0,05 [5]	6,9 ±0,8 [0.27 ±0.03]	—	—	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX10C30C01	Gold plated	0.1 A	PCB snap-in	0,29 [30]	0,05 [5]	—	8,4 ±0,8 [0.33 ±0.03]	—	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX10C50C01	Gold plated	0.1 A	PCB right	0,29 [30]	0,05 [5]	—	—	10,5 ±0,8 [0.41 ±0.03]	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX10E10C01	Gold plated	0.1 A	Solder	0,49 [50]	0,08 [8]	6,9 ±0,8 [0.27 ±0.03]	—	—	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX10E30C01	Gold plated	0.1 A	PCB snap-in	0,49 [50]	0,08 [8]	—	8,4 ±0,8 [0.33 ±0.03]	—	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX10E50C01	Gold plated	0.1 A	PCB right	0,49 [50]	0,08 [8]	—	—	10,5 ±0,8 [0.41 ±0.03]	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX10E60C01	Gold plated	0.1 A	PCB left	0,49 [50]	0,08 [8]	—	—	10,5 ±0,8 [0.41 ±0.03]	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX40C10C01	Silver	3 A	Solder	0,29 [30]	0,05 [5]	6,9 ±0,8 [0.27 ±0.03]	—	—	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX40C30C01	Silver	3 A	PCB snap-in	0,29 [30]	0,05 [5]	—	8,4 ±0,8 [0.33 ±0.03]	—	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX40E10C01	Silver	3 A	Solder	0,49 [50]	0,08 [8]	6,9 ±0,8 [0.27 ±0.03]	—	—	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX40E20C01	Silver	3 A	PCB straight	0,49 [50]	0,08 [8]	—	8,4 ±0,8 [0.33 ±0.03]	—	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX40E30C01	Silver	3 A	PCB snap-in	0,49 [50]	0,08 [8]	—	8,4 ±0,8 [0.33 ±0.03]	—	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]
	ZX40E60C01	Silver	3 A	PCB left	0,49 [50]	0,08 [8]	—	—	10,5 ±0,8 [0.41 ±0.03]	3,4 [0.13]	0,6 [0.02]	1,3 [0.05]

MICRO SWITCH SUBMINIATURE BASIC SWITCHES ZX SERIES

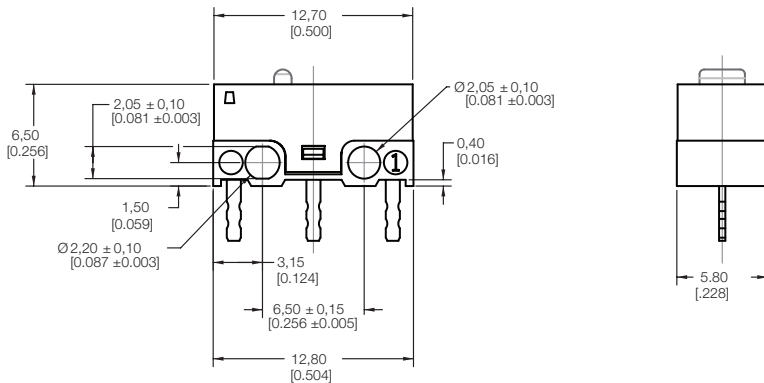
- O.T. • Operating Torque
- O.F. • Operating Force
- P.T. • Pretravel
- O.T. • Overtravel
- D.T. • Differential Travel
- O.P. • Operating Position

TABLE 3. PRODUCT SPECIFICATIONS AND LISTINGS CONTINUED

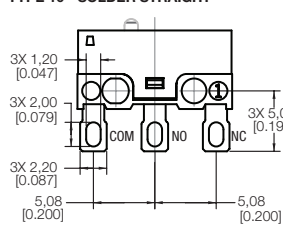
	Catalog Listing	Contact Material	Elect. Rating Spec. (page 2)	Termination	O.F. max. N [g]	R.F. min. N [g]	O.P. From Mounting Hole mm [in] (See Page 6)	O.P. From Plastic Switch Base mm [in] (See Page 6)	O.P. From Form in PCB Terminals mm [in] (See Page 6)	P.T. Max. mm [in]	O.T. Min. mm [in]	D.T. max. mm [in]
 Short straight lever 10 mm [0.40 in]	ZX10C30B01	Gold plated	0.1 A	PCB snap-in	0,39 [40]	0,06 [6]	—	7,9 ±0,8 [0.31 ±0.03]	—	3,4 [0.13]	0,6 [0.02]	1,0 [0.04]
 Std. sim. roller lever, 11,8 mm [0.47 in]	ZX10C30E01	Gold plated	0.1 A	PCB snap-in	0,34 [35]	0,05 [5]	—	11,1 ±0,8 [0.44 ±0.03]	—	3,8 [0.15]	0,6 [0.02]	1,3 [0.05]
	ZX10E10E01	Gold plated	0.1 A	Solder	0,54 [55]	0,08 [8]	9,6 ±0,8 [0.38 ±0.03]	—	—	3,8 [0.15]	0,6 [0.02]	1,3 [0.05]
	ZX10E20E01	Gold plated	0.1 A	PCB straight	0,54 [55]	0,08 [8]	—	11,1 ±0,8 [0.44 ±0.03]	—	3,8 [0.15]	0,6 [0.02]	1,3 [0.05]
	ZX10E50E01	Gold plated	0.1 A	PCB right	0,54 [55]	0,08 [8]	—	—	13,2 ±0,8 [0.52 ±0.03]	3,8 [0.15]	0,6 [0.02]	1,3 [0.05]
	ZX40E10E01	Silver	3 A	Solder	0,54 [55]	0,08 [8]	9,6 ±0,8 [0.38 ±0.03]	—	—	3,8 [0.15]	0,6 [0.02]	1,3 [0.05]
	ZX40E30E01	Silver	3 A	PCB snap-in	0,54 [55]	0,08 [8]	—	11,1 ±0,8 [0.44 ±0.03]	—	3,8 [0.15]	0,6 [0.02]	1,3 [0.05]
	ZX40E50E01	Silver	3 A	PCB sight	0,54 [55]	0,08 [8]	—	—	13,2 ±0,8 [0.52 ±0.03]	3,8 [0.15]	0,6 [0.02]	1,3 [0.05]
 Short sim. roller lever 10 mm [0.40 in]	ZX10E20G01	Gold plated	0.1 A	PCB straight	0,69 [70]	0,06 [6]	—	10,23 ±0,8 [0.40 ±0.03]	—	2,6 [0.10]	0,4 [0.02]	1,0 [0.04]
 Long sim. roller lever 15 mm [0.59 in]	ZX40C30H01	Silver	3 A	PCB snap-in	0,26 [27]	0,04 [4]	—	10,5 ±0,8 [0.41 ±0.03]	—	3,8 [0.15]	0,6 [0.02]	1,5 [0.06]
 Long straight lever 30 mm [1.18 in]	ZX10C20J01	Gold plated	0.1 A	PCB straight	0,15 [15]	0,02 [2]	—	10,79 ±2,1 [0.42 ±0.08]	—	10,1 [0.4]	0,9 [0.04]	3,0 [0.12]
	ZX10C30J01	Gold plated	0.1 A	PCB snap-in	0,15 [15]	0,02 [2]	—	10,79 ±2,1 [0.42 ±0.08]	—	10,1 [0.4]	0,9 [0.04]	3,0 [0.12]
	ZX40E10J01	Silver	3 A	Solder	0,22 [22]	0,03 [3]	9,29 ±2,1 [0.37 ±0.08]	—	—	10,1 [0.40]	0,9 [0.04]	3,0 [0.12]

MICRO SWITCH SUBMINIATURE BASIC SWITCHES ZX SERIES

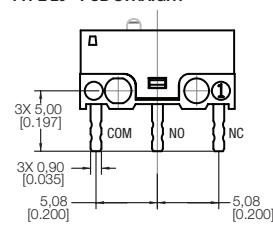
MOUNTING DIMENSIONS



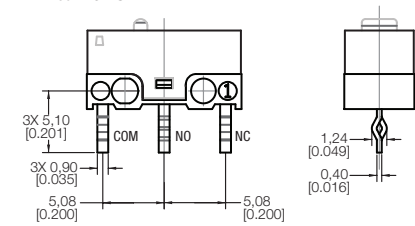
TYPE 10 - SOLDER STRAIGHT



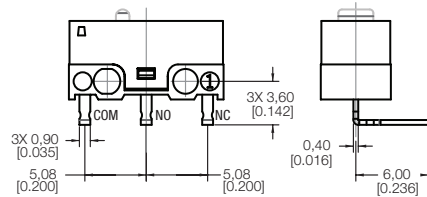
TYPE 20 - PCB STRAIGHT



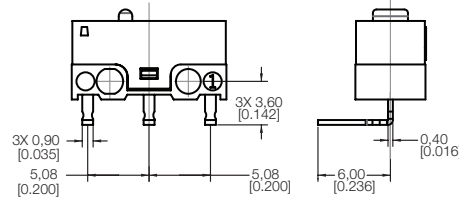
TYPE 30 - PCB SNAP-IN



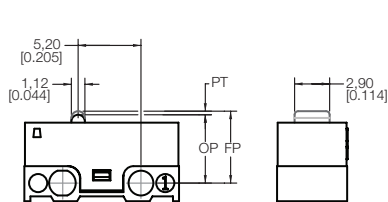
TYPE 50 - PCB RIGHT SIDE



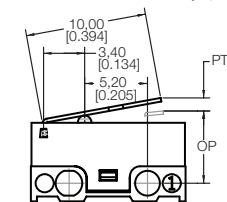
TYPE 60 - PCB LEFT SIDE



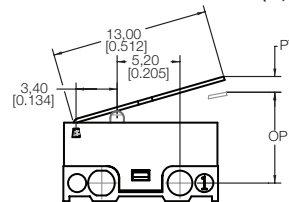
**TYPE A
PIN PLUNGER**



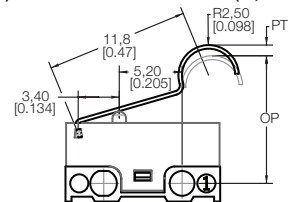
**TYPE B
SHORT STRAIGHT LEVER (10,0 mm)**



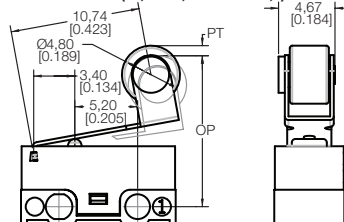
**TYPE C
STANDARD STRAIGHT LEVER (13,0 mm)**



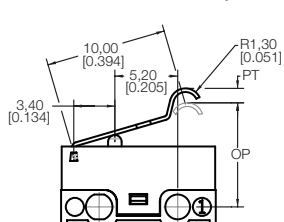
**TYPE E
SIMULATED ROLLER LEVER (11,8 mm; R2,5)**



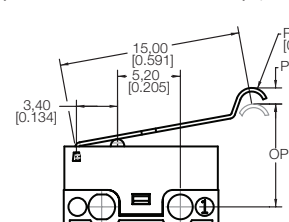
**TYPE F
ROLLER LEVER (10,7 mm, ROLLER Ø4,8)**



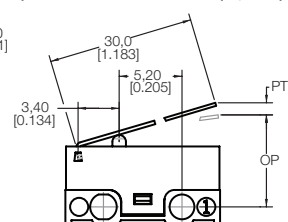
**TYPE G
SIMULATED ROLLER LEVER (10,0 mm, R1,3)**



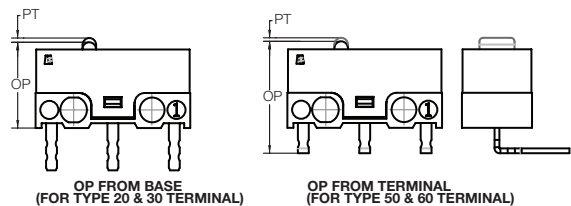
**TYPE H
SIMULATED ROLLER LEVER (15,0 mm; R1,3)**



**TYPE J
LONG STRAIGHT LEVER (30,0 mm)**



ABOVE OP FROM MOUNTING HOLE



Notes:

1. Unless otherwise specified, tolerance of $\pm 0,4$ mm [0.016 in] applies to all dimensions.
2. All terminal thickness tolerances $\pm 0,05$ mm [0.002 in].

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.

FOR MORE INFORMATION

Honeywell Advanced Sensing Technologies services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or the nearest Authorized Distributor, visit [our website](#) or call:

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Europe	+44 1344 238258
Japan	+81 (0) 3-6730-7152
Singapore	+65 6355 2828
Greater China	+86 4006396841

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⚠ WARNING MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

Honeywell