



# MAGIC SWITCH®

## TOUCHLESS ACTIVATION COMPARISON

### SOLUTION COMPARISON



**MS08**  
Adjustable range,  
4 to 24 inches



**MS09**  
Adjustable range,  
IP65 rated



**MS11**  
Adjustable range,  
stainless steel



**MS21**  
Short range,  
capacitive



**MS31**  
Adjustable range,  
relay hold time



**MS41**  
Stainless steel,  
adjustable range &  
relay hold time



|  | MS08 | MS09 | MS11 | MS21 | MS31 | MS41 |
|--|------|------|------|------|------|------|
|--|------|------|------|------|------|------|

#### TECHNICAL

|   |  |  |  |                                |  |   |
|---|--|--|--|--------------------------------|--|---|
| Technology                                      | Microwave - Doppler Radar                    | Microwave - Doppler Radar                    | Microwave - Doppler Radar  | Capacitance                    | Microwave - Doppler Radar  | Microwave - Doppler Radar   |
| Detection Mode                                  | Motion (Bi-directional)                      | Motion (Bi-directional)                      | Motion (Bi-directional)  | Proximity                      | Motion (Bi-directional)  | Motion (Bi-directional)   |
| Radiated Frequency                              | 24.125 GHz                                   | 24.125 GHz                                   | 24.125 GHz   | N/A                            | 24.125 GHz   | 24.125 GHz  |
| Radiated Power Density                          | < 5 mW/cm <sup>2</sup>                       | < 5 mW/cm <sup>2</sup>                       | < 5 mW/cm <sup>2</sup>   | N/A                            | < 5 mW/cm <sup>2</sup>   | < 5 mW/cm <sup>2</sup>  |
| Supply Voltage*                                 | 12 – 24 VAC ±10%<br>12 – 24 VDC, +30% / -10% | 12 – 24 VAC ±10%<br>12 – 24 VDC, +30% / -10% | 12 – 24 VAC / VDC  | 12 – 24 VAC / VDC              | 12 – 24 VAC ±10%<br>12 – 24 VDC +30% / -10%  | 12 – 24 VAC ±10%<br>12 – 24 VDC +30% / -10%   |
| Supply Frequency                                | 50 – 60 Hz                                   | 50 – 60 Hz                                   | 50 – 60 Hz   | 50 – 60 Hz                     | 50 – 60 Hz   | 50 – 60 Hz  |
| Power Consumption                               | < 1.5 W                                      | < 1.2 W                                      | < 2.8 W  | 37 mA                          | < 1.5 W  | < 1.5 W   |
| Relay   | Switch-over Contact<br>(voltage free)        | Switch-over Contact<br>(voltage free)        | 1-Form C Solid State Relay   | 1-Form C Solid State Relay     | Switch-over Contact<br>(voltage free)  | Switch-over Contact<br>(voltage free)   |
| Output - relay contact rating<br>(max. voltage) | 60 VDC / 125 VAC                             | 60 VDC / 125 VAC                             | 30 VAC / VDC   | 60 VAC / VDC                   | 60 VDC / 125 VAC   | 60 VDC / 125 VAC  |
| Output - relay contact rating<br>(max. current) | 1 A (resistive)                              | 1 A (resistive)                              | 1 A  | 0.4 A                          | 1 A (resistive)  | 1 A (resistive)   |
| Output - max switching power                    | 30 W (DC) / 60 V (AC)                        | 30 W (DC) / 60 V (AC)                        | 30 W (DC) / 60 V (AC)  | 30 W (DC) / 60 V (AC)          | 30 W (DC) / 60 V (AC)  | 30 W (DC) / 60 V (AC)   |
| Output Hold Time                                | 0.5 s  | 0.5 s  | 1 – 30 s   | 0.5 s                          | 0.5 – 30 s   | 0.5 – 30 s  |
| Temperature Range                               | -4 – 131° F<br>(-20 – 55° C)                 | -4 – 131° F<br>(-20 – 55° C)                 | -22 – 158° F   | -20 – 120° F                   | -4 – 131° F<br>(-20 – 55° C)   | -22 – 158° F<br>(-30 – 70° C)   |
| Enclosure Rating                                | IP54   | IP65   | IP65   | IP65                           | IP54   | IP55 / IP65**   |
| Sensing Zone                                    | 4 – 24"                                      | 4 – 24"                                      | 2 – 24"  | 0 – 4"                         | 4 – 24"  | 4 – 24"   |
| Material  | Polycarbonate                                | ABS, PC                                      | Stainless Steel, Acrylic   | Stainless Steel, Polycarbonate | PC, PE   | Stainless Steel   |
| Certification                                   | FCC / IC                                     | FCC / IC                                     | FCC  | FCC                            | FCC / IC   | FCC / IC  |
| Wire Harness Length                             | 6'   | 6'   | 12"  | 6"                             | 6"   | N/A   |
| Color   | White, Black, Cream                          | White  | Stainless Steel  | Stainless Steel                | White, Black, Gray   | Stainless Steel   |
| Dimensions                                      | Single Gang, Double Gang                     | Square Surface Mount Box                     | Jamb, Single Gang,<br>Double Gang  | 6" Round, 4.75" Square         | Jamb, Single Gang,<br>Double Gang, 6" Round  | Single Gang, Double Gang,<br>6" Round;<br>Cube 2.047" (H) x 2.047" (W)<br>x 1.093" (T)  |
| Mounting Options                                | 10BOX24SGSM;<br>10BOXDGSM                    | 10BOLLARD series - without<br>hole           | 10BOX24SGSM;<br>10BOXSGSMS;<br>10BOXDGSM; 10BOLLARD<br>series; 10BOXJAMBST | 10BOLLARD series               | 10BOXDGSM;<br>10BOXSGSMS;<br>10BOXJAMBST;<br>10BOX24SGSM;<br>10BOX45SQSM;<br>10BOX45SQFM;<br>10BOX475SQSM;<br>10BOX475SQFM;<br>10BOX6RNDMSM;<br>10BOX6RNDFM;<br>10BOLLARD series | 70.5236;<br>10BOXDGSM;<br>10ABOXSGSMS;<br>10BOX24SGSM;<br>10BOX45SQSM;<br>10BOX45SQFM;<br>10BOX475SQSM;<br>10BOX475SQFM;<br>10BOX6RNDMSM;<br>10BOX6RNDFM;<br>10BOLLARD series |

#### FUNCTIONALITY

|                          |                  |                  |                                       |                            |                           |                                       |
|--------------------------|------------------|------------------|---------------------------------------|----------------------------|---------------------------|---------------------------------------|
| Sensitivity (Adjustable) | YES              | YES              | YES                                   | YES                        | YES                       | YES                                   |
| Relay                    | Pulse            | Pulse            | Timed / Toggle                        | Pulse                      | Timed / Toggle            | Timed / Toggle                        |
| Output Hold Time         | NO               | NO               | YES                                   | NO                         | YES                       | YES                                   |
| Audible Alert            | NO               | NO               | YES                                   | YES                        | NO                        | YES                                   |
| LED                      | LED [dot] (Blue) | LED [dot] (Blue) | LED [window] (Blue / Green<br>Toggle) | LED [ring] (Blue w/ Logic) | LED [dot] (Blue w/ Logic) | LED [ring] (Blue / Green<br>w/ Logic) |

#### USER INTERFACE

|                  |              |              |        |            |            |            |
|------------------|--------------|--------------|--------|------------|------------|------------|
| Sensitivity      | POT          | POT          | POT    | POT        | POT        | POT        |
| Relay            | Slide Switch | Slide Switch | Jumper | N/A        | DIP Switch | DIP Switch |
| Output Hold Time | N/A          | N/A          | POT    | N/A        | POT        | POT        |
| Audible Alert    | N/A          | N/A          | Jumper | DIP Switch | N/A        | DIP Switch |
| LED              | N/A          | N/A          | N/A    | DIP Switch | DIP Switch | DIP Switch |

\* To be operated from SELV-compatible power supplies only  
\*\* Apply silicone to achieve IP65