## A Series Proximity Switches

## Characteristics

|  | 3-wire DC | 2-wire AC |
| :--- | :---: | :---: |
| Leakage Current (max) | $10 \mu \mathrm{~A}$ | 2 mA |
| Voltage Drop (max) | 2 V DC | 7 V AC |
| Inrush Current |  | $1.7 \mathrm{~A} / 20 \mathrm{~ms}$ |
| Short Circuit, Overload <br> Protection and Reverse <br> Polarity Protection | Yes |  |
| Supply Voltage | $10-36 \mathrm{VDC}$ | $20-250 \mathrm{VAC}$ |
| Supply Current | $10 \mathrm{~mA}(24 \mathrm{~V})$ |  |
| Repeatability | $5 \%$ |  |
| Hysteresis | $10 \%$ |  |
| LED Yes |  |  |
| False Pulse Protection | Yes |  |
| Temperature Range | -25~70 ${ }^{\circ} \mathrm{C}$ |  |
| Degree of Protection | IP67 |  |



## Selection Guide



|  | M8 |  | M12 |  | M18 |  | M30 |  | 17X17 |  | 25X25 |  | 40X40 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3-Wire DC | Shielded | NonShielded | Shielded | NonShielded | Shielded | NonShielded | Shielded | NonShielded | Shielded | NonShielded | Shielded | NonShielded | Shielded | NonShielded |
| Sensing Range | 1.5 mm | 3 mm | 2 mm | 5 mm | 5 mm | 10 mm | 10 mm | 15 mm | 5 mm | 10 mm | 10 mm | 15 mm | 15 mm | 20 mm |
| Load Current | 200 mA |  | 200 mA |  | 200 mA |  | 200 mA |  | 200 mA |  | 200 mA |  | 200 mA |  |
| Switching Frequency | 2500 Hz | 2000 Hz | 2000 Hz | 1500 Hz | 800Hz | 500 Hz | 500 Hz | 300 Hz | 800Hz | 500 Hz | 500Hz | 300 Hz | 300 Hz | 150Hz |
| 2-Wire AC |  |  | Shielded | NonShielded | Shielded | NonShielded | Shielded | NonShielded |  |  | Shielded | NonShielded | Shielded | NonShielded |
| Sensing Range |  |  | 2 mm | 5 mm | 5 mm | 10 mm | 10 mm | 15 mm |  |  | 10 mm | 15 mm | 15 mm | 20 mm |
| Load Current | 5-100mA |  | $5-200 \mathrm{~mA}$ |  | 5-200mA |  | $5-200 \mathrm{~mA}$ |  |  |  | 5-200mA |  | 5-200mA |  |
| Switching Frequency |  |  | 25 Hz |  | 25 Hz |  | 25 Hz |  |  |  | 25 Hz |  | 25 Hz |  |

## A Series Proximity Switches

Prewired Type Wiring Diagram
NPN

Quick Connector Type Wiring Diagram

|  | Normal Open | Normal Close |
| :---: | :---: | :---: |
|  | NPN ${ }^{\text {a }}$ ( PNP | NPN $\quad$ PNP |
| 3-Wire DC Type |  |  |
| 2-Wire AC Type |  |  |

## Dimensions

|  | Thread | Type | $\begin{gathered} \mathrm{A} \\ (\mathrm{~mm}) \end{gathered}$ | $\begin{gathered} B \\ (\max , \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} C \\ (\min , \mathrm{~mm}) \end{gathered}$ | $\begin{gathered} D \\ (\max , \mathrm{~mm}) \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M8 X 1 | Shielded | 8 | 45 | 35 |  |
|  |  | Unshielded |  | 50 | 35 | 4.5 |
|  | M12 X 1 | Shielded | 12 | 55 | 40 |  |
|  |  | Unshielded |  | 60 | 40 | 5.0 |
|  | M18 X 1 | Shielded | 18 | 60 | 45 |  |
|  |  | Unshielded |  | 68 | 45 | 8.5 |
|  | M30 X 1 | Shielded | 30 | 60 | 45 |  |
|  |  | Unshielded |  | 73 | 45 | 13 |
|  | M8 X 1 | Shielded | 8 | 66 | 40 |  |
| CKNUT |  | Unshielded |  | 70 | 40 | 4.5 |
| -WAY | M12 X 1 | Shielded | 12 | 66 | 35 |  |
|  |  | Unshielded |  | 70 | 35 | 5.0 |
| $12 \times 1$ C $B$ | M18 X 1 | Shielded | 18 | 62 | 40 |  |
|  |  | Unshielded |  | 70 | 40 | 8.5 |
|  | M30 X 1 | Shielded | 30 | 68 | 37 |  |
|  |  | Unshielded |  | 81 | 37 | 13 |
|  |  |  |  |  |  |  |

