**Proximity Sensors with Built-in Amplifier Square Type**

- 2-Wire, 3-wire / Non Shielded -

**General-purpose Square Proximity Sensors at reasonable prices and short lead times.**

**Specifications**

**Part Number** | **Detecting Surface** | **Detecting Distance (mm)** | **Outputs** | **Unit Price** | **-2-Wire Type** | **3-Wire Type** |
--- | --- | --- | --- | --- | --- | --- |
EX4-F12 | Front Surface | 4mm | N.O. | 14.90 | 12.60 |
EX4-T12 | Front Surface | 4mm | N.O. | 14.90 | 12.60 |
EMX2.5-F8 | Front Surface | 2.5mm | N.O. | 32.00 | 29.00 |
EMX2.5-T8 | Front Surface | 2.5mm | N.O. | 32.00 | 29.00 |
EMX4-F12 | Front Surface | 4mm | N.O. | 14.90 | 12.60 |
EMX4-T12 | Front Surface | 4mm | N.O. | 14.90 | 12.60 |
EMX4-F12C | Front Surface | 4mm | N.O. | 14.90 | 12.60 |
EMX4-T12C | Front Surface | 4mm | N.O. | 14.90 | 12.60 |

**Cautions for Mounting**

- When mounting hole is Ø2.5, ±0.2mm tolerance is required.
- Select the screw length according to the depth of the mounting plate, etc.

**Shape Properties (Representative Example)**

- DETECTED SIGNAL: Short (ON)
- INPUT VOLTAGE: DC, 3-wire, 2-Wire
- OUTPUT VOLTAGE: DC, 3-wire, 2-Wire
- OPERATING DISTANCE: 4mm

**Operation Range Fig. (Representative Example)**

- DETECTING RANGE:
  - DC 2-Wire: Proximity Sensor
  - DC 3-Wire: Proximity Sensor
- MATERIAL:
  - Metal: 304 Stainless Steel, Aluminum
  - Nonmetal: Polycarbonate

**Reciprocal Interference and Same Frequency Classification**

- Mutual Interference may occur if the interval is inadequate.

**Mounting (Detection distance 4mm)**

- Exposed Type: EMX4-F12, EMX4-F12C, EMX4-T12, EMX4-T12C
- Mounting: M5, 12 Pan Head Screw (Recommended)

**Before using the products**

- This product may output a detection signal when the power turns on. For about 25ms when there is no object, for about 100ms when there are some objects around.

**Caution for Mounting**

- When tightening by screw, ensure that the sensor is not subjected to stress.
- *Sensors may be damaged by tightening with over tightening Torque 0.4Nm.

**Note on the term**

- “Operation distance” means the distance from the face of Proximity Sensor.

**Part Number** | **O.D. (approx. Ø3) mm** | **P.87** |
--- | --- | --- |
EMX4-F12 | 1.0 | 10 |
EMX4-T12 | 1.0 | 10 |
EMX2.5-F8 | 1.0 | 10 |
EMX2.5-T8 | 1.0 | 10 |
EMX4-F12C | 1.0 | 10 |
EMX4-T12C | 1.0 | 10 |

**Installation**

- In circuit diagrams, “t” represents the distance of the power source from the sensor.

**Operation Distance**

- For distances over 2.5mm, the output will be equal to the on power level.

**Material**

- Polycarbonate

**Detected subject**

- Metallic: 304 Stainless Steel, Aluminum
- Nonmetallic: Polycarbonate

**Cautions for Mounting**

- Mounting: M3x0.5 Pan Head Screw (Recommended)
- When installing 2 or more Proximity Sensors closely, the distance should be 10 times or more as far as operation distance (from center to center).