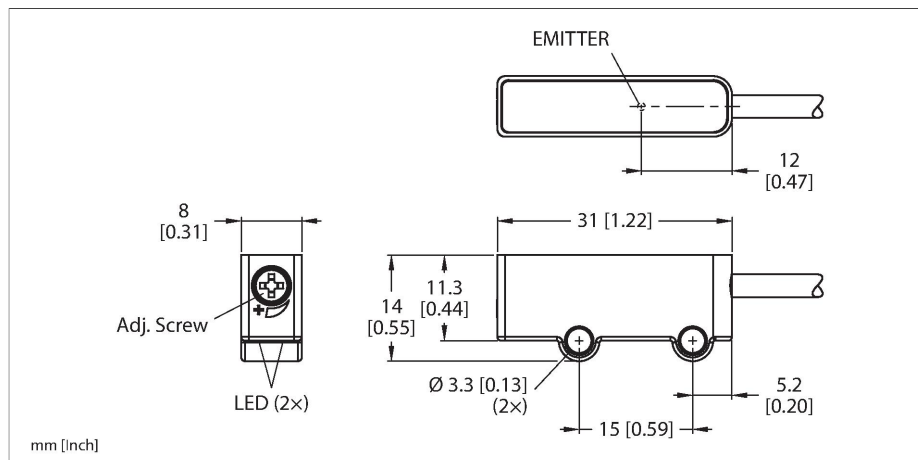


# Q2XAPAF150-2M

## Photoelectric Sensor – Diffuse-Mode Sensor



### Technical data

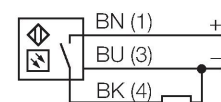
|                                  |                                    |
|----------------------------------|------------------------------------|
| Type                             | Q2XAPAF150-2M                      |
| ID                               | 3808057                            |
| Optical data                     |                                    |
| Function                         | Proximity switch                   |
| Operating mode                   | Background suppression, adjustable |
| Light type                       | Red                                |
| Wavelength                       | 645 nm                             |
| Range                            | 2...150 mm                         |
| Electrical data                  |                                    |
| Operating voltage $U_B$          | 10...30 VDC                        |
| Residual ripple                  | < 10 % $U_{ss}$                    |
| DC rated operating current $I_o$ | ≤ 16 mA                            |
| Reverse polarity protection      | yes                                |
| Output function                  | PNP                                |
| Readiness delay                  | ≤ 120 ms                           |
| Response time typical            | < 0.85 ms                          |
| Setting option                   | Potentiometer                      |
| Mechanical data                  |                                    |
| Design                           | Rectangular, Q2X                   |
| Dimensions                       | 14 x 31 mm                         |
| Housing material                 | Plastic, PC<br>ABS                 |
| Lens                             | acrylic, Acrylic                   |
| Electrical connection            | Cable, PVC                         |
| Number of cores                  | 3                                  |
| Ambient temperature              | -25...+50 °C                       |
| Relative humidity                | 0...95 %                           |



### Features

- Miniature sensor with slim housing for confined spaces
- Protection class IP67
- Connection via 2-m PVC cable, 3-wire
- Range: 150 mm
- Crosstalk protection
- Adjusted via potentiometer
- PNP switching output, light operation

### Wiring diagram



### Functional principle

Diffuse-mode sensors with background suppression operate with a single emitter and several receiver elements. The position of the object to be detected and the optical structure of the sensor dictate which receiver element gets the most light. The sensor electronics determine whether the reflecting object is within or outside the detection range. The sensors are available with adjustable or fixed cut-off point.

Technical data

|                        |                                   |
|------------------------|-----------------------------------|
| Protection class       | IP67                              |
| Special features       | Miniature<br>Crosstalk protection |
| Power-on indication    | LED, Green                        |
| Switching state        | LED, Yellow                       |
| Excess gain indication | LED, yellow, flashing             |
| Tests/approvals        |                                   |
| Approvals              | CE, cURus                         |

Accessories

|         |                                                                               |         |                                                                                                 |
|---------|-------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------------------|
| SMBQ2XB | 3812494                                                                       | SMBQ2XA | 3812493                                                                                         |
|         | Mounting bracket, stainless steel, for Q2X design, L-shaped for wall mounting |         | Mounting bracket, stainless steel, for Q2X design, L-shaped for mounting on horizontal surfaces |