**SERIE BX Installation manual**

- **MINIATURE DC AREA SENSOR WITH 4 OR 10 OPTICAL ELEMENTS IN A RECTANGULAR HOUSING**
  - Emitter with power adjustment and check input on request.
  - Controlled area high up to 90 mm
  - Sensing range up to 2 m
  - Complete protection against electrical damages.
  - Extremely strong housing.
  - IP 67 protection degree

**SPECIFICATIONS**

- **General Description**
  - New generation of multiple beam photoelectronic sensors for detecting the presence or passage of objects; no wiring synchronization between emitter and receiver is required.
  - The new housing, rectangular and extremely compact, is manufactured through the injection moulding technique. The use of fibre-glass strengthened plastic with walls of substantial thickness, make the housing extremely strong and suitable for use in industrial environments. The protection degree is IP67. These sensors' operation is based on the total beam crossing principle: the emitter photodiodes are switched on at a time in sequence and the light given out by each emitter will be seen simultaneously by all the receiver photodiodes. The height of the area checked is 90 mm, irrespective of the number of beams (whether 4 or 10 optical elements).
  - The light from the emitter is modulated to minimize sensitivity of the system to ambient light. The photodiodes' nominal sensing range of 200mm and a minimum range of 300mm (blind zone); all elements must be seen simultaneously by all of the receivers.
  - The main applications are implemented placing emitter and receiver at opposite sides of a conveyor belt and orientating them perpendicularly to the motion direction. Depending on the different requirements and on the ambient light, to be detected, the controlled area can lie entirely above the belt conveying surface, or it can be half above and half below the said surface. In this last case, the BX pair is positioned at an interruption in the belt, at the end or at the separation point between two adjacent belts. The sensor thickness of only 20mm is particularly suitable for applications of the latter type.

- **Supplied Material**
  - Installation Manual
  - Sensor / Sensors depending on code
  - N. 1. bracket ST18-B for each element
  - N. 1. M18 metal fastening ring nut for each element
  - N. 1. bracket ST18-C for each element
  - N. 1. M20x1 metal fastening ring nut for each element

- **Supplied Material**
  - Nickel-plated metal receptacle for each element

- **Specification**
  - Model BX04/**-** / BX10/**-**
  - Medium Resolution Area Sensor
  - Nom. Sensing Distance (Sn) 2m
  - Emission Infrared (IR) modulated
  - Controlled Area Height 50mm
  - Nominal Detectable Object ø 60 / ø 45 / ø 35 mm
  - Sensitivity Adjustment
  - Differential Travel < 0.5
  - Operating Voltage 10 - 26 Vcc
  - Ripple < 10% (at 100 mA nominal current)
  - Load Current 100 mA
  - Leakage Current < 10 µA (at 100 mA nominal current)
  - Voltage Drop 30 Vcc
  - Polarity Reversal, Transient 5 ms (no freeze)
  - Viva Delay Before Availability 300 ms
  - Response Time (Light / Dark) 34 ms
  - Response Time (Dark / Light) 5 ms
  - Output Peak Power (PNP) 250 mA
  - Output Peak Power (NPN) 250 mA
  - Supply Voltage 24 Vcc
  - Red LED and High input on request.

- **Mechanical Drawings**

- **Connectors**
  - SUPPLY
  - RECEIVER

- **Wiring Diagrams**

**WARNING**

These products are not SAFETY sensors and are NOT suitable for use in personal safety application.