



# QX

## QX3/A0-1E

**Photo.Min, NPN+PNP-NO, M12 plug, Diffuse**  
DC MINIATURIZED CUBIC PHOTOELECTRIC SENSORS

## OVERVIEW

- Axial and right angle optics
- 2 LEDs (threshold and signal margin)
- Visible red light in retro-reflective, polarized and through-beam models
- Long distances capability
- Precision beam
- Fast response time (0,75-0,5 ms)
- NPN-PNP selectable output
- High output current (>300 mA)



## TECHNICAL FEATURES

### Detection properties

|                          |       |
|--------------------------|-------|
| Nominal sensing distance | 300mm |
|--------------------------|-------|

|                 |      |
|-----------------|------|
| Repeat Accuracy | ≤ 5% |
|-----------------|------|

|                        |         |
|------------------------|---------|
| Sensitivity adjustment | Trimmer |
|------------------------|---------|

### Application

|                    |                                              |
|--------------------|----------------------------------------------|
| Function Principle | Diffuse reflection (medium distance, ≤600mm) |
|--------------------|----------------------------------------------|

|                |       |
|----------------|-------|
| Optic position | Axial |
|----------------|-------|

Outputs

|                     |                       |
|---------------------|-----------------------|
| Output type         | NPN/PNP Selectable NO |
| Output Function     | NO                    |
| Switching frequency | 750Hz                 |
| Response time       | 666μs                 |

Electrical data

|                                |                                       |
|--------------------------------|---------------------------------------|
| Operating Voltage              | 10...30VDC                            |
| No-Load supply current         | ≤ 20mA                                |
| Load current                   | ≤300mA                                |
| Leakage current                | ≤ 100μA @ 30Vdc                       |
| Output voltage drop            | ≤1,2V@Iload=100mA                     |
| Max ripple content             | ≤10%                                  |
| LED indicators                 | Red(output status) , Geen (stability) |
| Time delay before availability | ≤200ms                                |
| Short-circuit protection       | Yes                                   |
| Reverse Polarity Protection    | Yes                                   |
| Emission                       | LED Infrared (880nm)                  |

|                                |                                     |
|--------------------------------|-------------------------------------|
| Interference to external light | 3000lux Incandescent Lamp, 10000lux |
|--------------------------------|-------------------------------------|

Mechanical data

|                       |                                   |
|-----------------------|-----------------------------------|
| Dimensions            | 15x23x41                          |
| Material              | ABS                               |
| Housing material      |                                   |
| Weight                | 70g                               |
| Connections           | M12 plug                          |
| Active Head Material  | Acrylic                           |
| Operating temperature | - 25°C...+ 70°C ( without freeze) |
| Diameter/Dimension    | Cubic                             |

Test/Approvals

|                       |                                                |
|-----------------------|------------------------------------------------|
| Approvals             | CE                                             |
| EMC compatibility     | EN 60947-5-2                                   |
| Shocks and vibrations | Vibration IEC 60068-2-6 / Shock IEC 60068-2-28 |
| Degree of protection  | IP65                                           |

Accessories

|                      |                                  |
|----------------------|----------------------------------|
| Supplied Accessories | ST70 mounting brakets and screws |
|----------------------|----------------------------------|

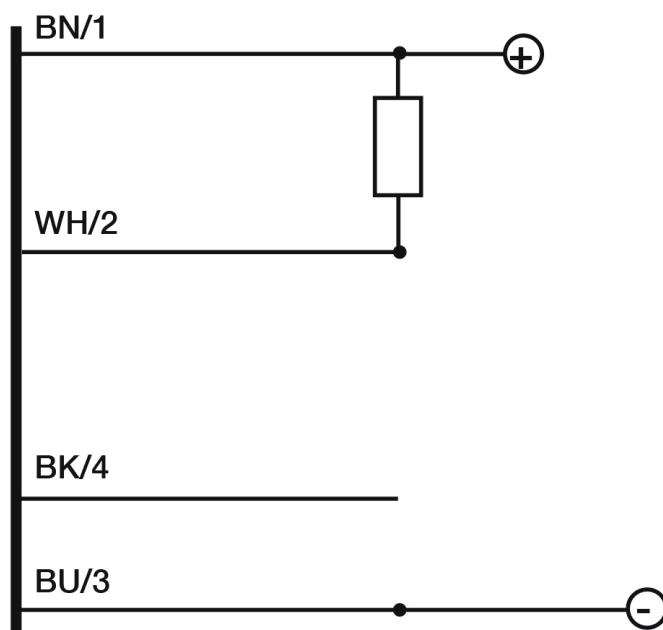
Generical Data

|  |  |
|--|--|
|  |  |
|--|--|

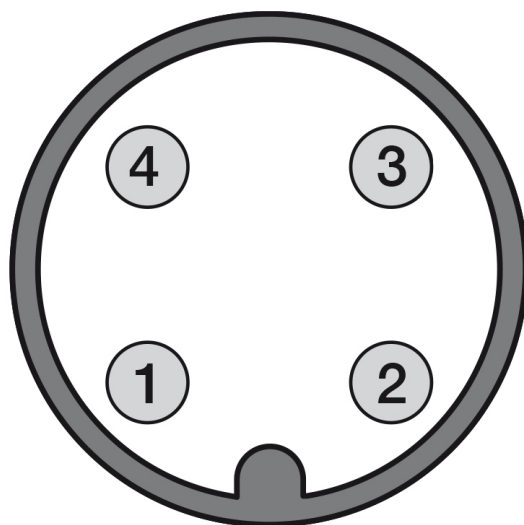
|                       |                                  |
|-----------------------|----------------------------------|
| Dimensions            | 15x23x40                         |
| Operating Temperature | - 25°C...+ 70°C (Without freeze) |
| Mechanical Protection | IP65                             |

# CONNECTIONS

Eletrical diagram

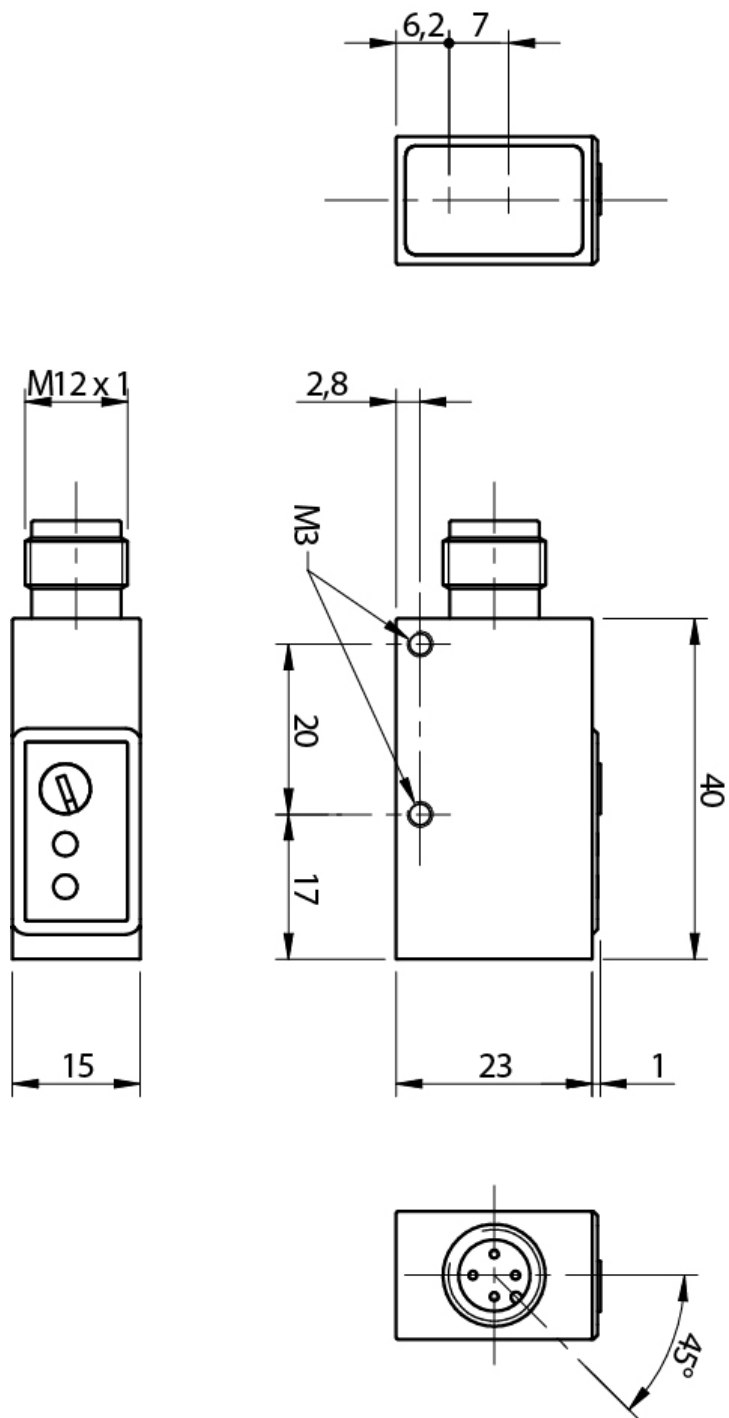


Connector

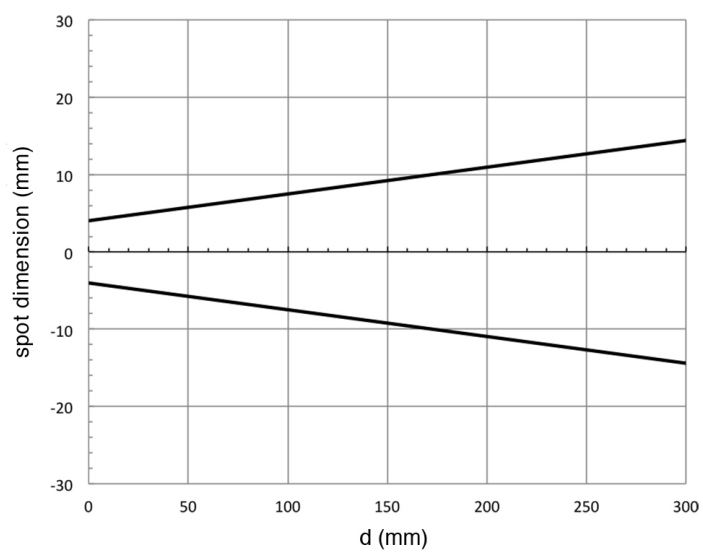


# OTHERS

Dimensions



Response curves



**Datasensing  
S.r.l.**

Strada S.Caterina, 235  
41122 Modena (MO)  
Tel. 059 420411  
Fax 059 253973  
E-mail  
[info@datasensing.com](mailto:info@datasensing.com)

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