



# UK1

## UK1F/G2-1ESY

**Ultra.M18,4-20mA,M12 plug,Diffuse**

**M18 CYLINDRICAL DIRECT DIFFUSE &  
RETRO-REFLECTIVE ULTRASONIC SENSOR UK1 WITH  
TEACH-IN BUTTON**

## OVERVIEW

- Models with digital programmable output
- Models with current or voltage analogue outputs
- Adjustable Hysteresis function: model with programmable double digital outputs, specific for levels
- Working area adjusting (window teach or single point teach) by Teach-in button suitable for all models for a fast coming into work
- Multifunction LED indicator: output type, adjustment procedure, NO/NC selection and reverse analog output slope



## TECHNICAL FEATURES

### Detection properties

|                          |          |
|--------------------------|----------|
| Nominal sensing distance | 2200mm   |
| Thermal drift of Sr      | ±2%      |
| Repeat Accuracy          | 0,50%    |
| Beam angle               | 14° ± 2° |
| Resolution               | ≤3mm     |

|                                       |                 |
|---------------------------------------|-----------------|
| Sensitivity adjustment                | Teach-in button |
| Hysteresis                            | 1%              |
| thermal compensation                  | Yes             |
| Minimum sensing distance (blind zone) | 200mm           |
| Linearity error                       | 1%              |

Application

|                    |                    |
|--------------------|--------------------|
| Function Principle | Diffuse reflection |
|--------------------|--------------------|

Outputs

|                     |          |
|---------------------|----------|
| Output type         | 4...20mA |
| Output Function     |          |
| Switching frequency | 2Hz      |
| Response time       | 500ms    |

Electrical data

|                        |                      |
|------------------------|----------------------|
| Operating Voltage      | 10 - 30Vdc           |
| No-Load supply current | ≤50mA                |
| Load current           | 100mA                |
| Leakage current        | 10µA @ 30Vcc         |
| Output voltage drop    | 2,2Vmax. @ IL=100 mA |

|                                  |                              |
|----------------------------------|------------------------------|
| Max ripple content               | 5%                           |
| LED indicators                   | green: echo - yellow: output |
| Time delay before availability   | ≤300ms                       |
| Short-circuit protection         | Yes                          |
| Reverse Polarity Protection      | Yes                          |
| Impulsive Overvoltage Protection | Yes                          |

Mechanical data

|                       |                                 |
|-----------------------|---------------------------------|
| Dimensions            | M18 x 1 / L = 91,6mm            |
| Housing material      | stainless steel AISI 316L       |
| Weight                | 100g                            |
| Connections           | M12 Plug                        |
| Tightening torque     | 50Nm                            |
| Operating temperature | - 20°C...+ 70°C                 |
| Storage temperature   | - 35°C...+ 80° C without freeze |
| Transducer Frequency  | 200kHz                          |
| Diameter/Dimension    | M18                             |

Test/Approvals

|           |          |
|-----------|----------|
| Approvals | CE cULus |
|-----------|----------|

|                       |                       |
|-----------------------|-----------------------|
| EMC compatibility     | IEC 60947-5-2         |
| Shocks and vibrations | IEC EN60947-5-2 / 7.4 |
| Degree of protection  | IP67                  |

Accessories

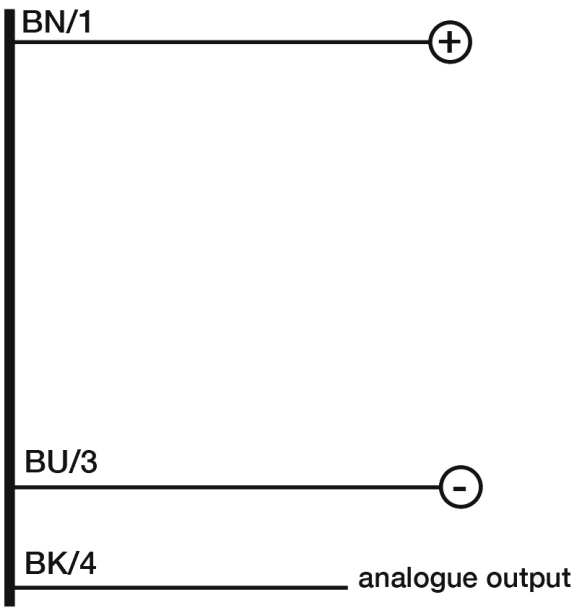
|                      |                              |
|----------------------|------------------------------|
| Supplied Accessories | 2 nuts M18x1, 2 washers Ø 18 |
|----------------------|------------------------------|

Generical Data

|                       |                      |
|-----------------------|----------------------|
| Dimensions            | M18 x 1 / L = 91,6mm |
| Operating Temperature | - 20°C...+ 70°C      |
| Mechanical Protection | IP67                 |

CONNECTIONS

Eletrical diagram



Connector



OTHERS

Dimensions



**1** Teach-in

**2** LED

Response curves



## Datasensing S.r.l.

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

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