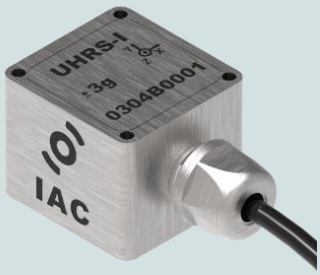
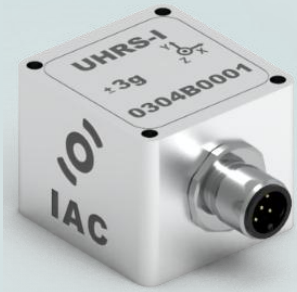
IAC-UHRS-I-03

# ULTRA HIGH RESOLUTION ACCELEROMETER (4-20mA)

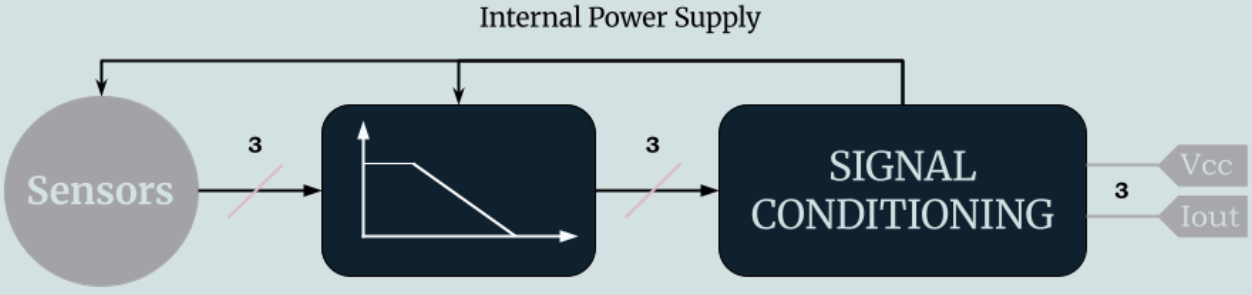


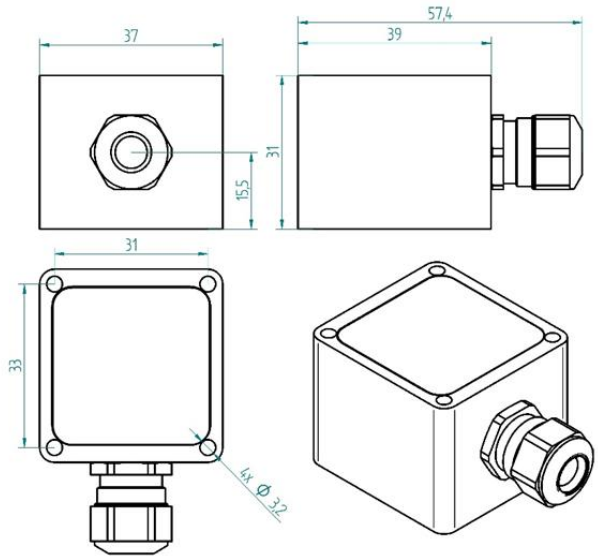

## PROPERTIES

- 3-axes, very low noise, ultra-high resolution
- Suited for direct connection to standard control and measurement equipment, e.g. PLCs or panel meters
- Embedded 4-20mA signal conditioning
- Galvanically isolated
- Protected against reverse polarization
- Compact and rugged design
- Protection grade IP 67

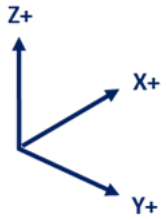
## BLOCK DIAGRAM



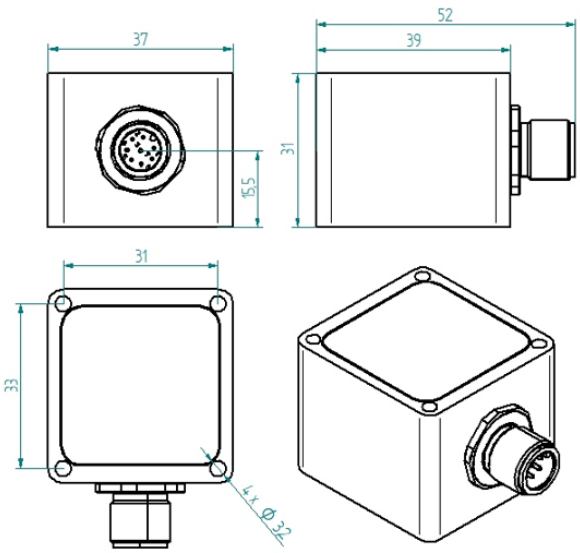
## DIMENSIONS – Cable Gland Model

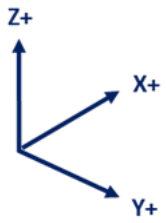



NOTE
When mounted with sensing axis vertical all units will indicate 1 g offset due to gravity




## DIMENSIONS – M12 Connector Model




## MOUNTING ACCESSORIES

*See "IAC – Accelerometer Accessories data sheet"*

## SPECIFICATIONS – All Models

| | | |
|---|---|---|
| OUTPUT / CHANNEL | Output Range | 4-20mA |
| | Supply Voltage | 10–30 VDC |
| | Lower frequency limit | 0 Hz (DC) |
| | Non-linearity | ± 0.5 % typ. - 1.5% max. |
| | Sensitivity Error | 2% |
| | Transverse Sensitivity | 2 % typ. - 3 % max. |
| | Offset | ± 20 mg |
| | Destruction limit[1] | ± 1000g |
| ENVIRONMENTAL CHARACTERISTICS | Temperature Range | Operating<br>-40 to 85°C / -40 to 185°F |
| | Temperature coefficient of sensitivity | 150 ppm/°C |
| | Temperature drift of zero point | ± 0.5 mg/°C |
| | Protection grade | IP67 |
| MECHANICAL DATA | Weight Without Cable (g) | [2] CG/203, CO/223 - [3] CG/117, CO/137 |
| | Case Material | Stainless Steel or Aluminium |
| | Mounting | 3.2 mm diameter holes (4×) |

[1] Handle the component with caution: dropping the accelerometer on a hard surface can generate several thousand g of acceleration, potentially exceeding absolute maximum limits and damaging the product.

[2] Stainless Steel Casing Grade (e.g. for offshore/marine environment)

[3] Aluminium (MIL-A-8625 Type II coating)

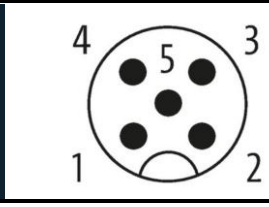
## PERFORMANCES – By Model

| Range - g | Sensitivity - mA/g | Freq. Response (-3dB) - Hz | Noise - µg/√Hz (Typical) |
|---|---|---|---|
| ± 3 | 2.67 | 0 - 500 | 2.0 |
| ± 5 | 1.60 | 0 - 650 | 2.5 |

## ELECTRICAL CONNECTIONS – Cable Gland Model

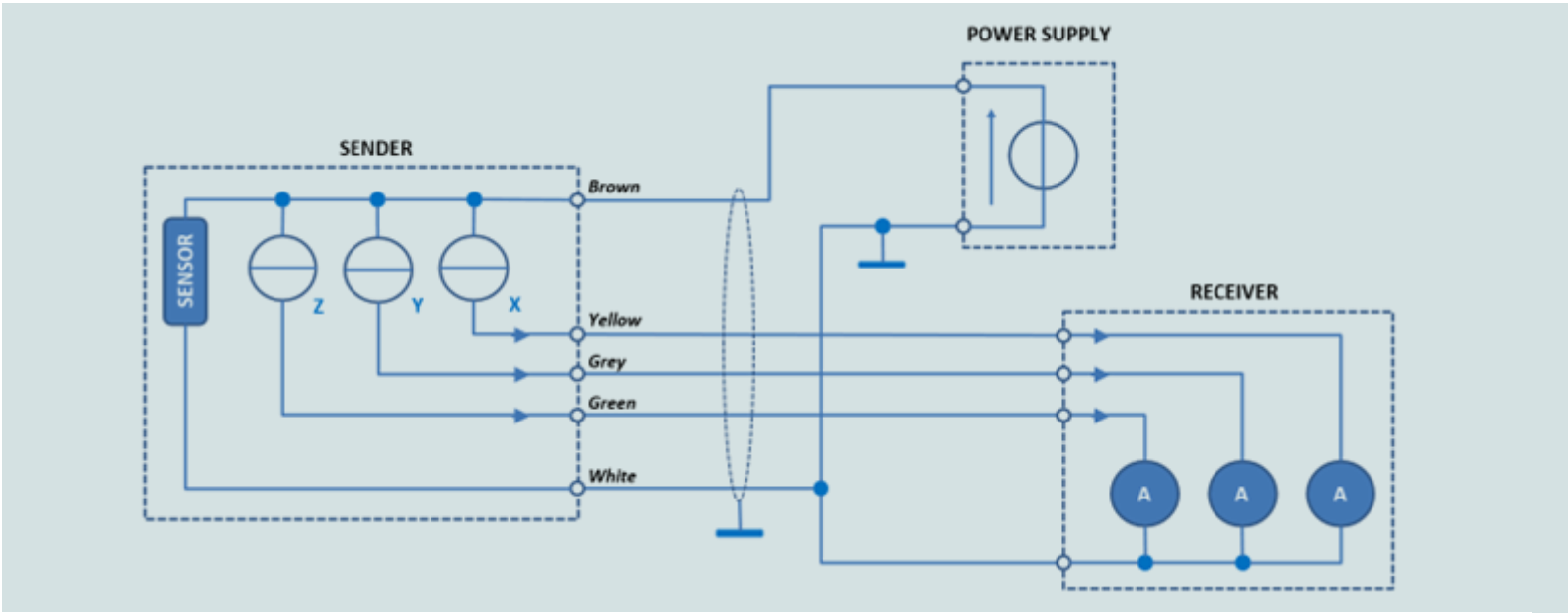
| Signal X sensing | Signal Y sensing | Signal Z sensing | 5 x 0,25$^2$ |
|---|---|---|---|
| Sensor supply + input | Sensor supply + input | Sensor supply + input | Brown |
| Sensor supply – input | Sensor supply – input | Sensor supply – input | White |
| X Axis Out | | | Yellow |
| | Y Axis Out | | Grey |
| | | Z Axis Out | Green |

## ELECTRICAL CONNECTIONS – M12 Connector Model

| | | | | |
|---|---|---|---|---|
| I 03 |  | 1 | OUT X | 4-20mA current output |
| | | 2 | OUT Y | 4-20mA current output |
| | | 3 | OUT Z | 4-20mA current output |
| | | 4 | +24 VDC | Sensor supply + input |
| | | 5 | 0 VDC | Sensor supply – input |



## ELECTRICAL CONNECTIONS




## ORDERING INFORMATION

| IAC - UHRS | - | I | - | 03 | - | XX | - | XX | - | Xg | - | XXXXHz | - | X | - | XX.X m |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Cable Connection | |
|---|---|
| CG | Cable Gland |
| CO | M12 |

| Casing | |
|---|---|
| AL | Aluminium |
| SS | Stainless Steel |

| Range |
|---|
| ±3g |
| ±5g |

| Low Pass Filter Frequencies | |
|---|---|
| 0100 | 100Hz |
| 0250 | 250Hz |
| 0500 | 500Hz |

| Low Pass Filter Orders | |
|---|---|
| 1 | 1st order |
| 2 | 2nd order |

| Cable Length |
|---|
| Value in meter |

*Specifications subject to change without notice. – Last updated: April 2026*

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