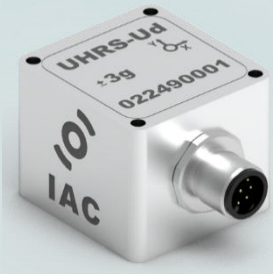
IAC-UHRS-Ud-02

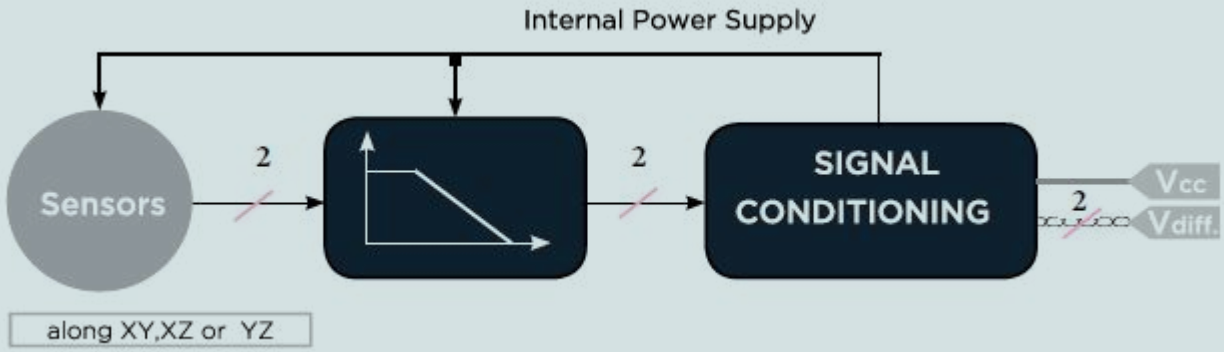
ULTRA HIGH RESOLUTION ACCELEROMETER (+/- 2.7V)



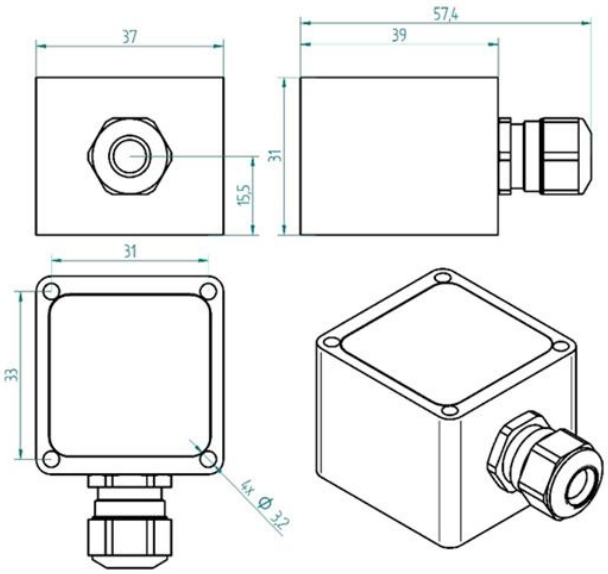
PROPERTIES

- 2-axis, very low noise accelerometer
- Amplified +/- 4V differential output
- Suited for direct connection to standard control and measurement equipment, e.g. PLCs or panel meters
- Embedded signal conditioning
- Compact and rugged design
- Protection grade IP 67

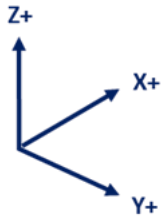
BLOCK DIAGRAM



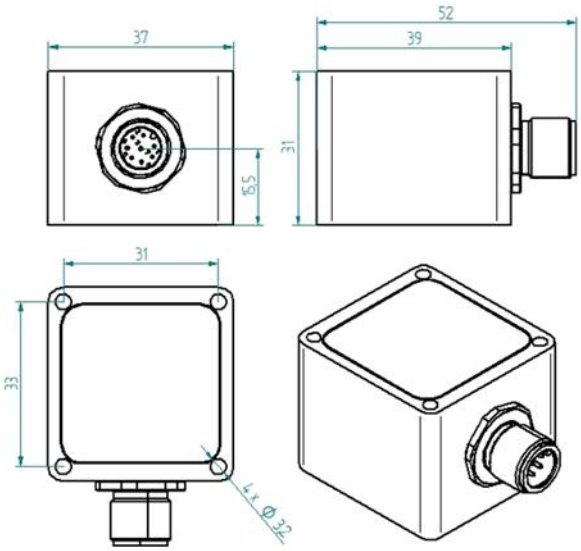
DIMENSIONS – Cable Gland Model

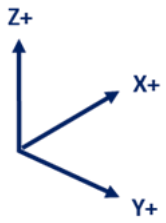


NOTE
When mounted with sensing axis vertical all units will indicate 1 g offset due to gravity



DIMENSIONS – M12 Connector Model





MOUNTING ACCESSORIES

See "IAC – Accelerometer Accessories data sheet"

SPECIFICATIONS – All Models

OUTPUT / CHANNEL	Output Range	± 2.7V
	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 -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/198, CO/237 - [3] CG/107, CO/146
	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)

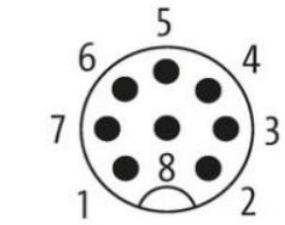
PERFORMANCES – By Model

Range - g	Sensitivity - mV/g	Freq. Response (-3dB) - Hz	Noise - µg/√Hz (Typical)
± 3	900	0 - 500	1.0
± 5	540	0 - 650	1.5

ELECTRICAL CONNECTIONS – Cable Gland Model

Signal XY sensing	Signal XZ sensing	Signal YZ sensing	3 x 2 x 0,25²
Sensor supply + input	Sensor supply + input	Sensor supply + input	Brown
Sensor supply – input	Sensor supply – input	Sensor supply – input	White
X Axis + Out	X Axis + Out	Y Axis + Out	Yellow
X Axis - Out	X Axis - Out	Y Axis - Out	Green
Y Axis + Out	Z Axis + Out	Z Axis + Out	Pink
Y Axis - Out	Z Axis - Out	Z Axis - Out	Grey

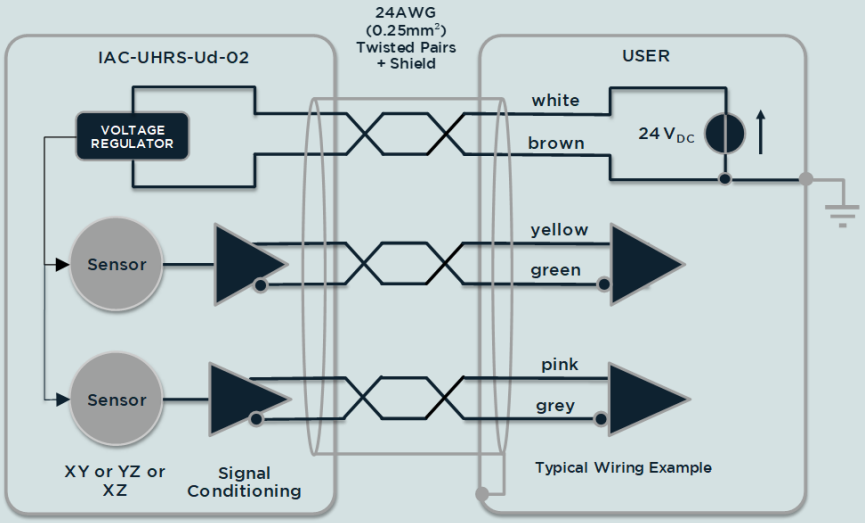
ELECTRICAL CONNECTIONS – M12 Connector Model

Ud 02		1	+24VDC	Sensor supply + input
		2	NC	-
		3	NC	-
		4	OUT 2 -	- Voltage differential output
		5	OUT 2 +	+ Voltage differential output
		6	OUT 1 -	- Voltage differential output
		7	OUT 1 +	+ Voltage differential output
		8	0VDC	Sensor supply - input

Selected Axes:

X	OUT 1	X	OUT 1	Y	OUT 1
Y	OUT 2	Z	OUT 2	Z	OUT 2

ELECTRICAL CONNECTIONS



ORDERING INFORMATION

IAC - UHRS - Ud - 02 - AA - XX - XX - Xg - XX.X m

Sensing Axis
XY
XZ
YZ

Cable Connection	
CG	Cable Gland
CO	M12

Casing	
AL	Aluminium
SS	Stainless Steel

Range
±3g
±5g

Cable Length
Value in meter

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

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