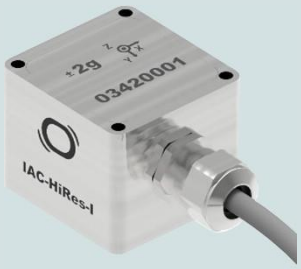
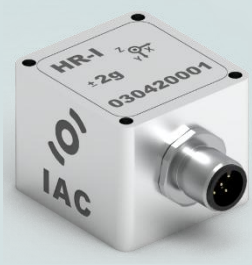
IAC-HiRes-I-03

HIGH RESOLUTION ACCELEROMETER (4-20mA)

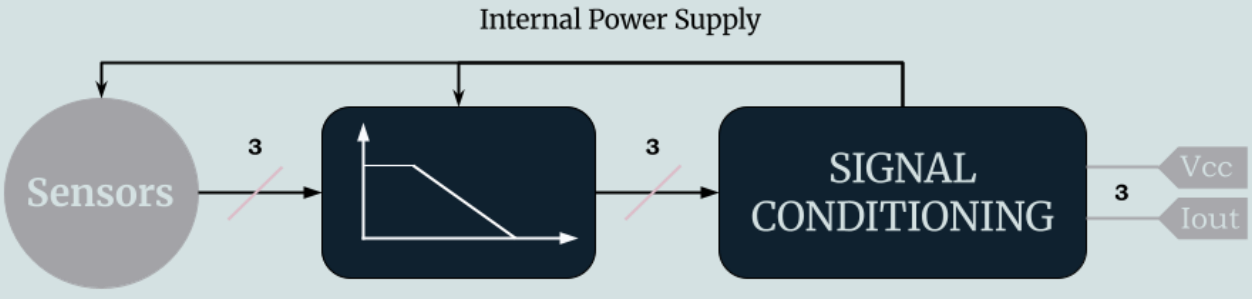




PROPERTIES

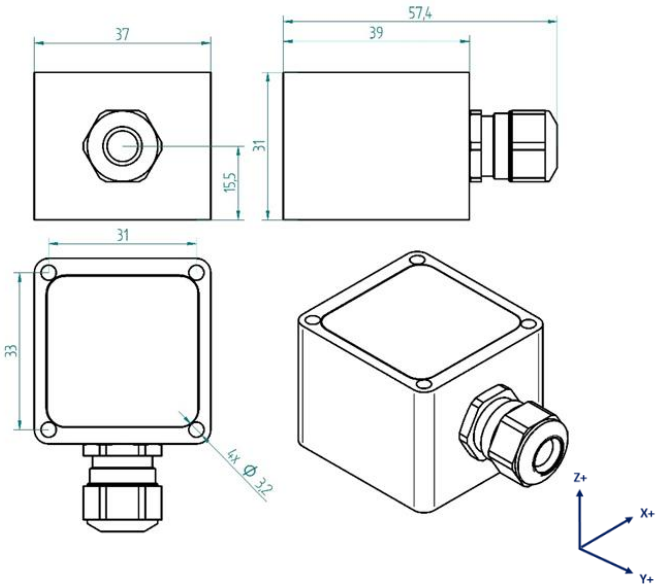
- 3-axes, low noise, high resolution
- Suited for direct connection to standard control and measurement equipment, e.g. PLCs or panel meters
- Embedded 4-20mA signal conditioning
- Galvanically isolated
- Protected against reverse polarization
- Compact and rugged design
- Protection grade IP 67
- Special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

BLOCK DIAGRAM

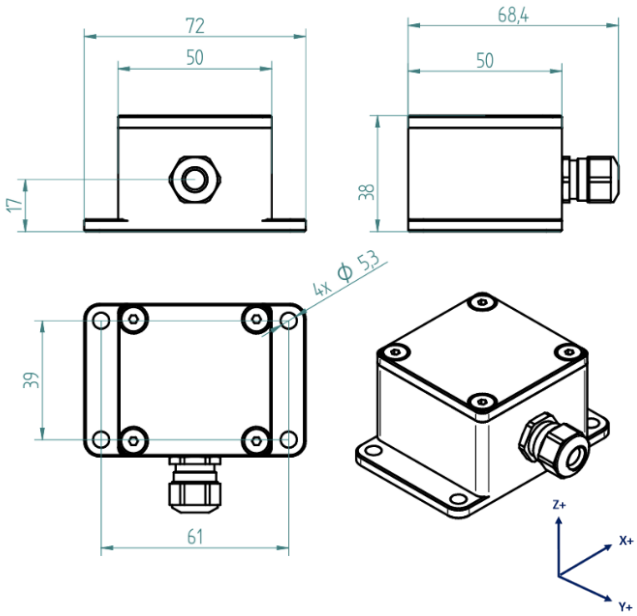


DIMENSIONS – Cable Gland Model

Standard Casing



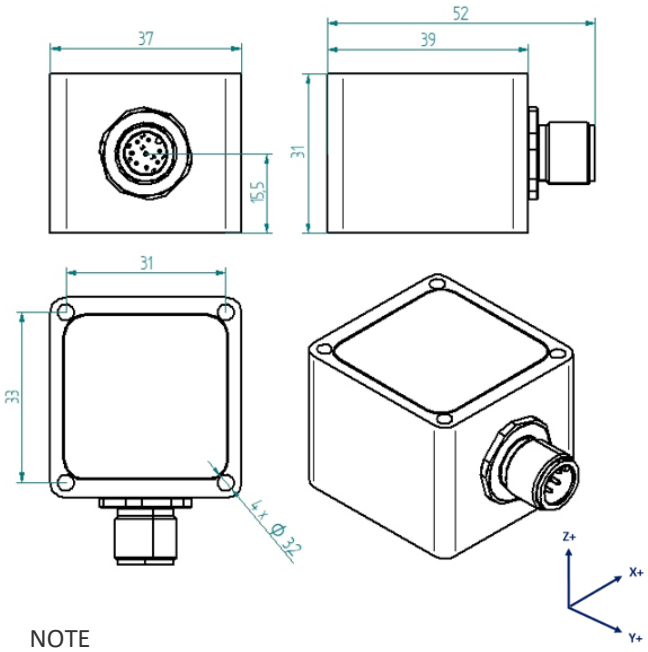
Harsh Environment Casing



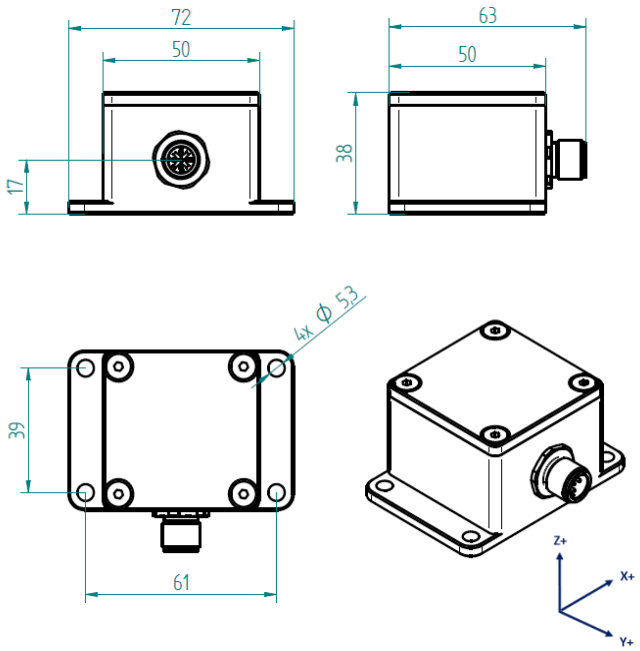
NOTE
When mounted with sensing axis vertical all units will indicate 1 g offset due to gravity

DIMENSIONS – M12 Connector Model

Standard Casing



Harsh Environment Casing



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

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 % F.S.
	Sensitivity Error	0.5 % typ. – 1 % max.
	Transverse Sensitivity	2 % typ. – 3 % max.
	Offset	0.2 % F.S. typ. – 0.5 % F.S. max
	Destruction limit[1]	± 2000g (±2g / ±5g variants) ; ± 5000g (other variants)
ENVIRONMENTAL CHARACTERISTICS	Temperature Range[2]	Operating -40 to 85°C / -40 to 185°F
	Temperature coefficient of sensitivity	± 0.03 %/°C
	Temperature drift of zero point	± 0.02 % F.S./°C
	Protection grade	IP67
MECHANICAL DATA (Standard Model)	Weight Without Cable (g)	[3] CG/203, CO/223 - [4] CG/117, CO/137
	Case Material	Stainless Steel or Aluminium
	Mounting	3.2 mm diameter holes (4×)
MECHANICAL DATA (HE Model)	Weight Without Cable (g)	CG/620, CO/640
	Case Material	Stainless Steel
	Mounting	5.3 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] Variant casing HE: Tested with change of temperature, from -40°C to +75°C with a rate of change of 1°C/min during 20 hours. And with change of temperature, from -10°C to +10°C with a rate of change of 0.4°C/min during 7 days

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

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

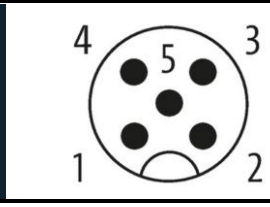
PERFORMANCES – By Model

Range - g	Sensitivity - µA/g	Freq. Response (-3dB) - Hz	Noise - µg/√Hz (Typical)
± 2	4000	0 – 400	11
± 5	1600	0 – 600	13
± 10	800	0 – 1000	19
± 25	320	0 – 1500	26
± 50	160	0 – 2000	50
± 100	80	0 – 2500	100
± 200	40	0 – 3000	200
± 400	20	0 – 4000	400

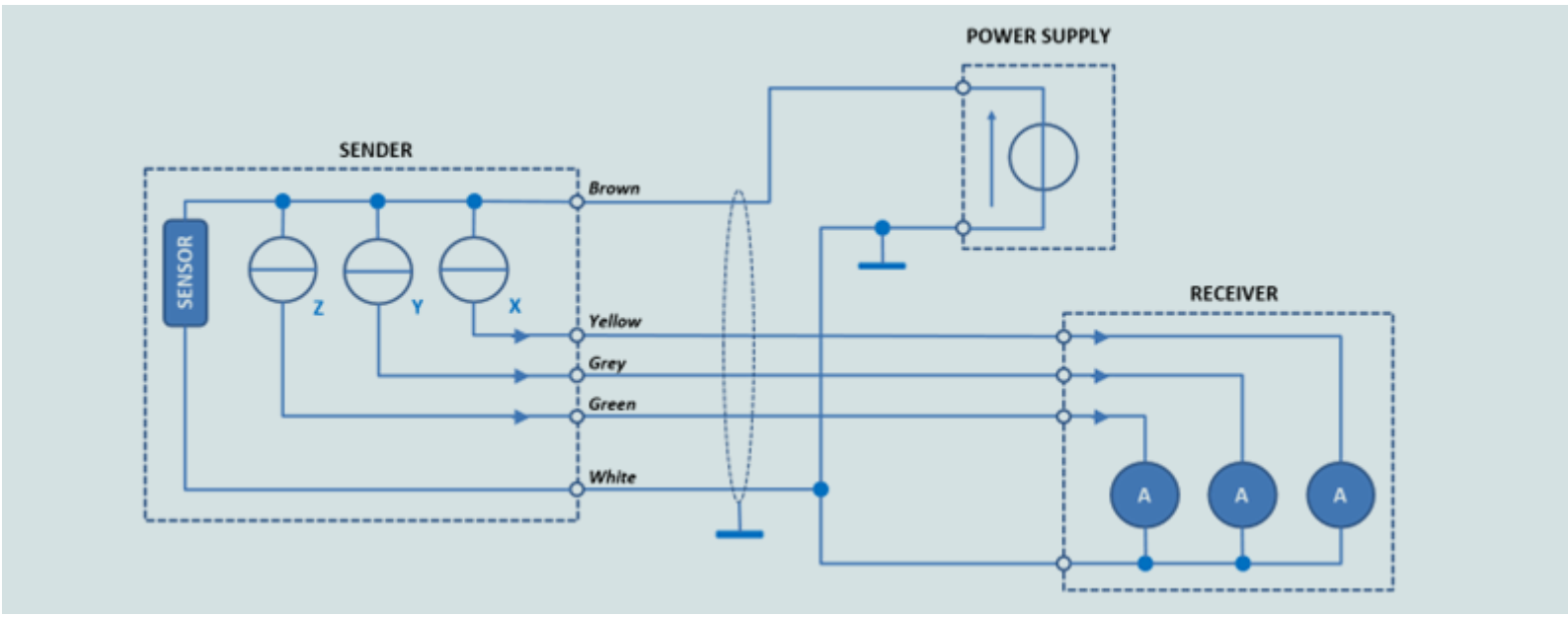
ELECTRICAL CONNECTIONS – Cable Gland Model

Signal X sensing	Signal Y sensing	Signal Z sensing	5 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			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 - HiRes	-	I	-	03	-	XX	-	XX	-	Xg	-	XXXXHz	-	X	-	XX.X m

Cable Connection	
CG	Cable Gland
CO	M12

Casing	
AL	Aluminium
SS	Stainless Steel
HE	Harsh Environment

Range
± 2g
± 5g
± 10g
± 25g
± 50g
± 100g
± 200g
± 400g

Low Pass Filter Frequencies	
0100	100Hz
0250	250Hz
0500	500Hz
1000	1000Hz

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

Cable Length
Value in meter

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

MICROMEGA WÖLFEL GROUP
Rue du Trou du Sart 10
B-5380 Fernelmont | Belgium
EU ID.:BE0466034916
Tel. +32(0)81248100 | Fax. +32(0)81248101
info@micromega-dynamics.com
www.micromega-dynamics.com