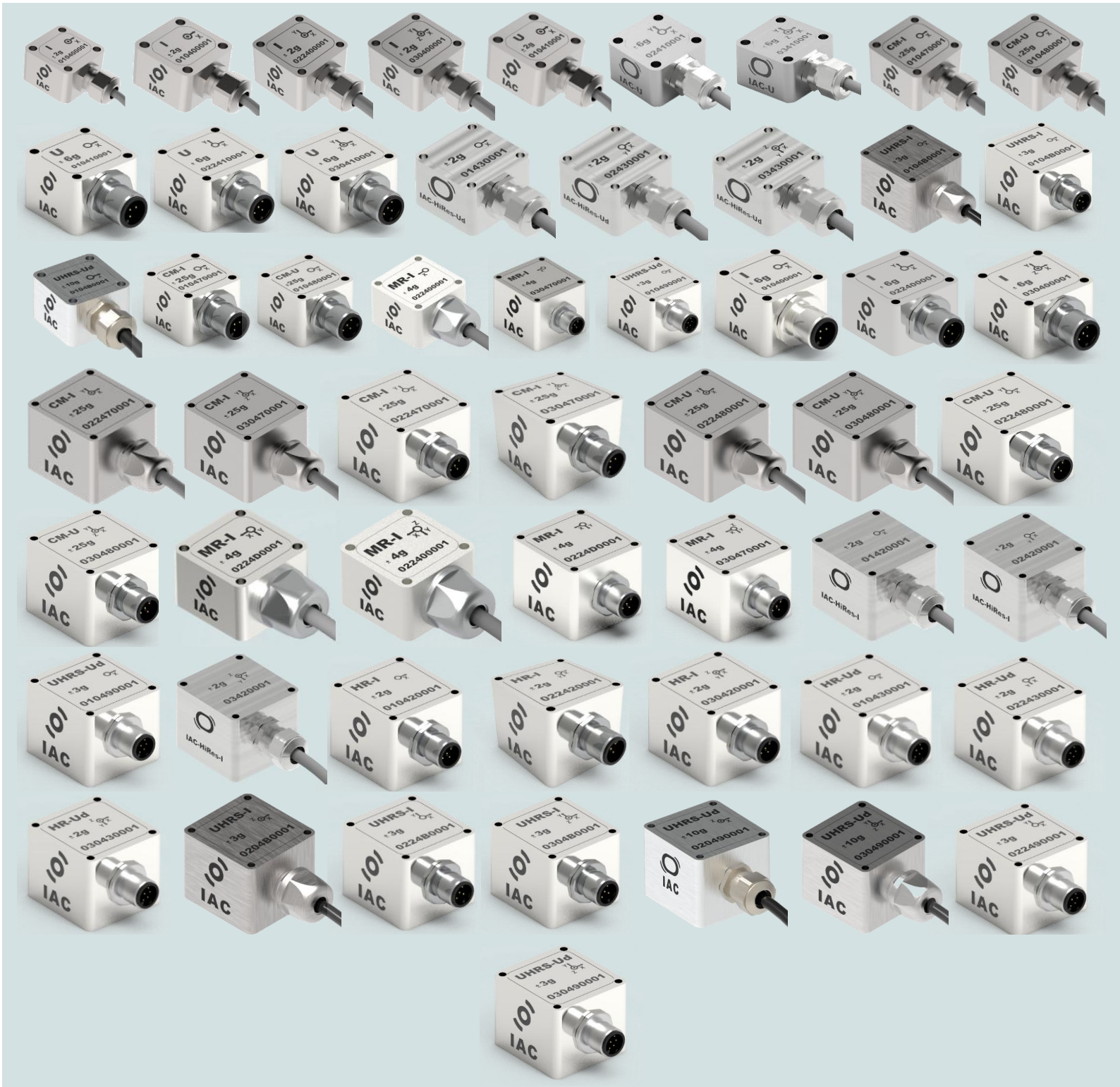
RECOVIB

IAC

RECOVIB® ROBUST ACCELEROMETERS



INTRODUCTION

The RECOVIB® accelerometers bridge the gap between the performance of laboratory accelerometers (which are often expensive, fragile and offer low protection) and the robustness of industrial accelerometers (which are sometimes cheaper but often noisy and inaccurate).

Our accelerometers can be deployed in industrial environments for monitoring machinery or structures.

The RECOVIB® accelerometers are of proven design and most of the models available are widely used in a variety of fields, such as the machine tools, precision machining and onshore and offshore wind energy sectors in monitoring or active vibration control applications.

FIELD OF APPLICATIONS

- Transport: Railways, Marine, Aeronautics
- Piping & pumps
- Machine tools
- Civil engineering
- Building vibration monitoring
- Paper/Printing machines
- Semiconductor industry
- Energy: Wind turbines (both onshore and offshore), power-plants
- Astronomy

ADVANTAGES

INTERNAL SIGNAL CONDITIONING

The signals from the vibration sensor are amplified and conditioned by the accelerometer unit itself before being passed to the data acquisition system through a disturbed industrial medium. Our accelerometers are equipped either with a voltage output or a 4-20 mA current output.

GALVANIC ISOLATION

The RECOVIB® accelerometers offer galvanic isolation of the signal conductors. An additional isolation module is therefore not needed. Multiple sensors can be distributed in multiple locations and connected to the same acquisition system without signal degradation, even in environments with high ground potential differences due to heavy electrical loads operating in close proximity.

LEVEL OF PROTECTION

The RECOVIB® accelerometers are sealed to an ingress protection level of IP67. We can design and develop custom-made units using special protective materials (for example, 316L stainless steel for marine environments, special cabling for vacuum application).

LOW FREQUENCY MEASUREMENT

The RECOVIB® accelerometers operate down to DC allowing for the accurate measurement of low frequency signals. They are therefore also suitable for the monitoring of slow processes (such as monitoring the foundation movements of an offshore wind turbine etc.).

TYPE OF SENSORS

IAC : for most applications, general use, noise (< 50 µg/√Hz),

IAC-MR : for applications requiring low noise (25 µg/√Hz)

IAC-HiRes : for applications requiring very low noise (10 µg/√Hz)

IAC-UHRS : for very high resolution (seismic - 2 µg/√Hz)

IAC-CM : for machine monitoring requiring a higher-bandwidth (up to 24kHz)

IAC ↓ Characteristics — Type →	General Use	MR	HiRes	Seismic	CM
Can measure ultralow frequencies	✓	✓	✓	✓	✓
Highest Bandwidth					✓
Lowest Noise Floor/ Highest Resolution			✓	✓	
Widest Measurement Range					✓
Ratio noise/ price	✓	✓			

TYPE OF OUTPUTS

- 4-20mA current loop for long cables and EMI immunity
- Unipolar Voltage
- Differential voltage for high-resolution sensors

All sensors are available with Aluminum or Stainless-Steel (AISI316L) casing, in 1-axis, 2-axis (any combination) or 3-axis configurations.

ALL RANGE TECHNICAL CHARACTERISTICS

1 Axis	2 Axes	3 Axes	Range	Max. Bandwidth (-3dB)	Internal Sensor Sensitivity mV/g	Output Sensitivity	Noise µg/√Hz (Typical)	Resolution (1) g (over max. bandwith)	Output Signal	Casing (See bottom)	Weight SS gr	Weight AL gr
CURRENT OUTPUT												
IAC - CM I (Condition Monitoring)												
IAC-CM-I-01	IAC-CM-I-02	IAC-CM-I-03	+/- 25 g	0-10 kHz	80	0,257 mA/g	40	0,004000	4-20 mA	01 CG/CO - B 02 CG/CO - D 03 CG/CO - D	75/102 198/218 203/223	42/68 112/132 117/137
IAC-CM-I-01	IAC-CM-I-02	IAC-CM-I-03	+/- 50 g	0-10 kHz	40	0,128 mA/g	40	0,004000	4-20 mA			
IAC-CM-I-01	IAC-CM-I-02	IAC-CM-I-03	+/- 100 g	0-10 kHz	20	0,064 mA/g	45	0,004500	4-20 mA			
IAC-CM-I-01	IAC-CM-I-02	IAC-CM-I-03	+/- 200 g	0-15 kHz	10	0,032 mA/g	70	0,007000	4-20 mA			
IAC-CM-I-01	IAC-CM-I-02	IAC-CM-I-03	+/- 500 g	0-24 kHz	4	0,0128 mA/g	150	0,015000	4-20 mA			
IAC - I												
IAC-I-01S			+/- 2 g	0-1000 Hz	600	4,0 mA/g	50	0,001581	4-20 mA	01S CG - A (3)	-	22
IAC-I-01S			+/- 6 g	0-1000 Hz	200	1,33 mA/g	50	0,001581	4-20 mA			
IAC-I-01	IAC-I-02 (2)	IAC-I-03	+/- 2 g	0-1000 Hz	600	3,20 mA/g	50	0,001581	4-20 mA	01 ; 02 ; 03 CG - B	75 ; 78 ; 80	42 ; 44 ; 46
IAC-I-01	IAC-I-02 (2)	IAC-I-03	+/- 6 g	0-1000 Hz	200	1,07 mA/g	50	0,001581	4-20 mA	01 ; 02 ; 03 C0 - C	118 ; 121 ; 125	77 ; 81 ; 84
IAC - MR I (Medium Resolution)												
IAC-MR-I-01	IAC-MR-I-02	IAC-MR-I-03	+/- 2 g	0-1000 Hz	400	3,53 mA/g	24	0,000759	4-20 mA	01 CG - B / CO - C	75/102	42/68
IAC-MR-I-01	IAC-MR-I-02	IAC-MR-I-03	+/- 4 g	0-1000 Hz	200	1,76 mA/g	27	0,000854	4-20 mA	02 CG - C /CO - D	101/218	60/132
IAC-MR-I-01	IAC-MR-I-02	IAC-MR-I-03	+/- 8 g	0-1000 Hz	100	0,88 mA/g	30	0,000949	4-20 mA	03 CG - C /CO - D	104/223	64/137
IAC - HiRes I (High Resolution)												
IAC-HiRes-I-01	IAC-HiRes-I-02	IAC-HiRes-I-03	+/- 2 g	0-400 Hz	2000	4 mA/g	11	0,000160	4-20 mA	01 CG/CO - D 02 CG/CO - D 03 CG/CO - D	193/213 198/218 203/223	107/127 112/132 117/137
IAC-HiRes-I-01	IAC-HiRes-I-02	IAC-HiRes-I-03	+/- 5 g	0-600 Hz	800	1,6 mA/g	13	0,000245	4-20 mA			
IAC-HiRes-I-01	IAC-HiRes-I-02	IAC-HiRes-I-03	+/- 10 g	0-1000 Hz	400	0,8 mA/g	19	0,000411	4-20 mA			
IAC-HiRes-I-01	IAC-HiRes-I-02	IAC-HiRes-I-03	+/- 25 g	0-1500 Hz	160	0,32 mA/g	26	0,001084	4-20 mA			
IAC-HiRes-I-01	IAC-HiRes-I-02	IAC-HiRes-I-03	+/- 50 g	0-2000 Hz	80	0,16 mA/g	50	0,002370	4-20 mA			
IAC-HiRes-I-01	IAC-HiRes-I-02	IAC-HiRes-I-03	+/- 100 g	0-2500 Hz	40	0,08 mA/g	100	0,005000	4-20 mA			
IAC-HiRes-I-01	IAC-HiRes-I-02	IAC-HiRes-I-03	+/- 200 g	0-3000 Hz	20	0,04 mA/g	200	0,010954	4-20 mA			
IAC-HiRes-I-01	IAC-HiRes-I-02	IAC-HiRes-I-03	+/- 400 g	0-4000 Hz	10	0,02 mA/g	400	0,025298	4-20 mA			
IAC - UHRS I (Ultra High Resolution / Seismic)												
IAC-UHRS-I-01	IAC-UHRS-I-02	IAC-UHRS-I-03	+/- 3 g	0-500 Hz	900	2,67 mA/g	2	0,000045	4-20 mA	01 CG /CO - C	97/118	57/77
IAC-UHRS-I-01	IAC-UHRS-I-02	IAC-UHRS-I-03	+/- 5 g	0-650 Hz	540	1,60 mA/g	3	0,000076	4-20 mA	02 ; 03 CG/CO - D	198/218 ; 203/223	112/132 ; 117/137
VOLTAGE OUTPUT (4)												
IAC - CM U (Condition Monitoring)												
IAC-U-CM-01	IAC-U-CM-02	IAC-U-CM-03	+/- 25 g	0-10 kHz	80	80 mV/g	40	0,004000	0-5 V	01 CG/CO - B 02 CG/CO - D 03 CG/CO - D	75/102 198/218 203/223	42/68 112/132 117/137
IAC-U-CM-01	IAC-U-CM-02	IAC-U-CM-03	+/- 50 g	0-10 kHz	40	40 mV/g	40	0,004000	0-5 V			
IAC-U-CM-01	IAC-U-CM-02	IAC-U-CM-03	+/- 100 g	0-10 kHz	20	20 mV/g	45	0,004500	0-5 V			
IAC-U-CM-01	IAC-U-CM-02	IAC-U-CM-03	+/- 200 g	0-15 kHz	10	10 mV/g	70	0,007000	0-5 V			
IAC-U-CM-01	IAC-U-CM-02	IAC-U-CM-03	+/- 500 g	0-24 kHz	4	4 mV/g	150	0,015000	0-5 V			
IAC - U												
IAC-U-01	IAC-U-02	IAC-U-03	+/- 2 g	0-1000 Hz	600	600 mV/g	50	0,001581	0-3 V	01 ; 02 ; 03 CG - B	75 ; 78 ; 80	42 ; 44 ; 46
IAC-U-01	IAC-U-02	IAC-U-03	+/- 6 g	0-1000 Hz	200	200 mV/g	50	0,001581	0-3 V	01 ; 02 ; 03 C0 - C	118 ; 121 ; 125	77 ; 81 ; 84
IAC - MR U (Medium Resolution)												
IAC-MR-U-01	IAC-MR-U-02	IAC-MR-U-03	+/- 2 g	0-1000 Hz	400	666,7 mV/g	24	0,000759	0-3 V	01 CG - B / CO - C	75/102	42/68
IAC-MR-U-01	IAC-MR-U-02	IAC-MR-U-03	+/- 4 g	0-1000 Hz	200	333,3 mV/g	27	0,000854	0-3 V	02 CG - C /CO - D	101/218	60/132
IAC-MR-U-01	IAC-MR-U-02	IAC-MR-U-03	+/- 8 g	0-1000 Hz	100	166,7 mV/g	30	0,000949	0-3 V	03 CG - C /CO - D	104/223	64/137
DIFFERENTIAL VOLTAGE OUTPUT												
IAC - HiRes Ud (High Resolution)												
IAC-HiRes-Ud-01	IAC-HiRes-Ud-02	IAC-HiRes-Ud-03	+/- 2 g	0-400 Hz	2000	2000 mV/g	10	0,000100	+/- 4 V	01 ; 02 ; 03 CG - C 01 ; 02 ; 03 C0 - D	97 ; 101 ; 104 232 ; 237 ; 242	57 ; 60 ; 64 146 ; 151 ; 156
IAC-HiRes-Ud-01	IAC-HiRes-Ud-02	IAC-HiRes-Ud-03	+/- 5 g	0-600 Hz	800	800 mV/g	12	0,000171	+/- 4 V			
IAC-HiRes-Ud-01	IAC-HiRes-Ud-02	IAC-HiRes-Ud-03	+/- 10 g	0-1000 Hz	400	400 mV/g	18	0,000316	+/- 4 V			
IAC-HiRes-Ud-01	IAC-HiRes-Ud-02	IAC-HiRes-Ud-03	+/- 25 g	0-1500 Hz	160	160 mV/g	25	0,000968	+/- 4 V			
IAC-HiRes-Ud-01	IAC-HiRes-Ud-02	IAC-HiRes-Ud-03	+/- 50 g	0-2000 Hz	80	80 mV/g	50	0,002236	+/- 4 V			
IAC-HiRes-Ud-01	IAC-HiRes-Ud-02	IAC-HiRes-Ud-03	+/- 100 g	0-2500 Hz	40	40 mV/g	100	0,005000	+/- 4 V			
IAC-HiRes-Ud-01	IAC-HiRes-Ud-02	IAC-HiRes-Ud-03	+/- 200 g	0-3000 Hz	20	20 mV/g	200	0,010954	+/- 4 V			
IAC-HiRes-Ud-01	IAC-HiRes-Ud-02	IAC-HiRes-Ud-03	+/- 400 g	0-4000 Hz	10	10 mV/g	400	0,025298	+/- 4 V			
IAC - UHRS Ud (Ultra High Resolution / Seismic)												
IAC-UHRS-Ud-01	IAC-UHRS-Ud-02	IAC-UHRS-Ud-03	+/- 3 g	0-500 Hz	900	900 mV/g	1,0	0,000022	+/- 2,7 V	01 CG /CO - B	75/121	42/87
IAC-UHRS-Ud-01	IAC-UHRS-Ud-02	IAC-UHRS-Ud-03	+/- 5 g	0-650 Hz	540	540 mV/g	1,5	0,000038	+/- 2,7 V	02 ; 03 CG/CO - D	198/237 ; 203/242	112/151 ; 117/156

Casing dimension (without CG or CO)	
CG = Cable Gland / CO = M12 Connector	
A	L:23 x W:23 x H:14 mm
B	L:27 x W:27 x H:18 (CG) or 20 mm (CO)
C	L:30 x W:30 x H:20 mm
D	L:39 x W:37 x H:31 mm

Casing materials
AL = Aluminium or SS = Stainless Steel

All accelerometers can be made in IP68 (up to 5 BAR with marine cable)

(1) : Resolution for other bandwidth can be computed using
Resolution (µg) = Noise (µg/√Hz) x √bandwidth(Hz)

(2) : Exist in flat casing

(3) : Only in AL and with CG

(4) : Other range upon request

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

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