

IB6-CAN-V2

3 AXIS Capacitive and Gas mixed Accelerometers and 3 AXIS Gyroscope with CAN output

Ref:

SN: Software version :

Texsys sensors are designed for data recording. If the user wants to include this sensor in a close loop system or active control, he must assume all responsibility.

CAN bus	2.0A or 2.0B	
CAN termination resistor	Switchable, 120Ω	
Baud rate	125k to 1Mbps	
Parameters	identifiers, baudrate, frequency, analog parameters.	
Output Frequency	1Hz to 500Hz**, request mode.	
Output Data	16 bits per channel	
Output format	16bits or mV	
Supply Voltage	6 to 16	V
Typical Supply Current	65	mA
Dimensions	36x26.5x25.5	mm
Material	Aluminum	
Weight	60	g
Protection	IP66	
Vibration test	20Gpp 5'	
Operating Temp	-20 to +100	°C
Storage Temp	-40 to +125	°C

Accelerometer capacitive		
Range	±5, ±10, ±15, ±20	G
Accuracy	±1.5	%FS
Sensitivity	400 to 100 +/-8%	mV/G
Bandwidth 6dB (std)	DC to 100	Hz
signal at 0G	2.5 ±0.05	V
Offset Drift (20 to 80°C)	±20	mV
Gain Drift (20 to 80°C)	±1	%
Cross axis sensitivity	2,5	%
Accelerometer gas		
Range	±3, ±5, ±10	G
Accuracy	±2	%FS
Sensitivity	666 to 200 ±2%	mV/G
Bandwidth 3dB	DC to 20 ±15%	Hz
signal at 0G	2.5 ±0.05	V
Offset Drift (20 to 80°C)	±20	mV
Gain Drift (20 to 80°C)	±1,5	%
Cross axis sensitivity	4	%
Gyroscope		
Range	±50, ±100, ±150	°/s
Accuracy	±2	%FS
Sensitivity	40, 20, 13.3	mV/°/s
Cut off frequency 1st order	50	Hz
Anti-Aliasing Filter	type	Low pass, Linear phase 5th-Order
	Cut of frequency	Programmable from 15 to 250Hz
signal at 0°/sec	2.5 ±0.1	V
Offset drift (20 to 80°C)	±25	mV
Gain Drift (20 to 80°C)	±1	%

**500Hz: Only with baudrate 1Mbps

Accelerometer Sensor Readings			
	X Gas	Y Gas	Z Capa
Signal (V) @ -1G			
Signal(V) @ 0G			
Signal (V) @ +1G			
Sensitivity (mV/G)			
Cut off frequency (Hz)			
Cross axis (%)			
Gyroscope Sensor Readings			
	0°/s	mV/°/s	
X			
Y			
Z			

Acc. Calibration table						Gyro. Calibration table			
g	3G 666mV/g	5G 400 mV/g	10G 200 mV/g	15G 133mV/g	20G 100mV/g	°/s	±50°/s 40mV/°/s	±100°/s 20mV/°/s	±150°/s 13.3mV/°/s
-20					0.5				
-15				0.5	1.0	-150			0.5
-10			0.5	1,17	1.5	-100		0.5	1,17
-5		0.5	1.5	1,83	2.0	-50	0.5	1.5	1,83
-3	0.5	1.3	1.9	2.1	2.2	-25	1.5	2	2.17
0	2.5	2.5	2.5	2.5	2.5	0	2.5	2.5	2.5
3	4.5	3.7	3.1	2.9	2.8	25	3.5	3	2.83
5		4.5	3.5	3,17	3.0	50	4.5	3.5	3.17
10			4.5	3,83	3.5	100		4.5	3,83
15				4.5	4.0	150			4.5
20					4.5				

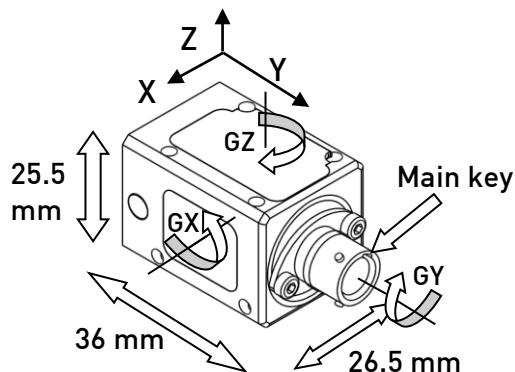
Out of Range

Setup parameters			
CAN	2.0A	2.0B	-
CAN termination resistor	<input type="checkbox"/> yes	<input type="checkbox"/> no	-
Baudrate			bps
Frequency			Hz
Rx trig ID			Hex
Tx1 ID			Hex
Tx2 ID			Hex
Output format	16bits	mV	-
Anti-aliasing filter cut off frequency			Hz

Connector : ASDD006-09PN-HE

Mating connector : ASDD606-09SN-HE

Function / Color	Description	Pin
Supply	Supply (6 to 16 V)	1
	GND	2
CAN	CAN HIGH	3
	CAN LOW	4
manufacturer reserved	do not connect	5
manufacturer reserved	do not connect	6
NC	NC	7
manufacturer reserved	do not connect	8
NC	NC	9



Data output

Frame #1 (default Tx1 Frame ID: 0x03F0)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03F0	ACC X MSB	ACC X LSB	ACC Y MSB	ACC Y LSB	ACC Z MSB	ACC Z LSB	-	-
Resolution: 1mV/bit if output format = mV 0.076mV/bit if output format = 16bit raw value							-	-

Frame #2 (default Tx2 Frame ID: 0x03F4)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03F4	GYR X MSB	GYR X LSB	GYR Y MSB	GYR Y LSB	GYR Z MSB	GYR Z LSB	-	-
Resolution: 1mV/bit if output format = mV 0.076mV/bit if output format = 16bit raw value							-	-

Changing parameters

Must be setup according to Texense's CAN protocol, or by using the Texense Android Smart Tool (tAST®) with your android device. Contact us at info@texense.com

CAN parameters:

N°	Parameter	Raw values	values	Comments
0x00	Baudrate & A or B (11 or 29bits ID)	0x00	CAN2.0A 1Mbps	Default
		0x01	CAN2.0A 500 Kbps	
		0x02	CAN2.0A 250 Kbps	
		0x03	CAN2.0A 125 Kbps	
		0x10	CAN2.0B 1Mbps	
		0x11	CAN2.0B 500 Kbps	
		0x12	CAN2.0B 250 Kbps	
0x01	Emission frequency	0x00	Rx frame trig	Request mode - 100Hz max
		0x01	1 Hz	
		0x02	5 Hz	Default
		0x03	10 Hz	
		0x04	50 Hz	
		0x05	100 Hz	
		0x06	200 Hz	Only with baudrate 1Mbps
		0x07	500 Hz**	
0x02	Rx frame ID	if CAN2.0A: 0 to 0x07F0		MSB
0x03		if CAN2.0B: 0 to 0xFFFF		LSB
0x04	Tx1 frame ID	if CAN2.0A: 0 to 0x07F0		MSB
0x05		if CAN2.0B: 0 to 0xFFFF		LSB
0x06	Tx2 frame ID	if CAN2.0A: 0 to 0x07F0		MSB
0x07		if CAN2.0B: 0 to 0xFFFF		LSB
0x08	CAN termination resistor	0	Not connected	Default: 0
		1	Connected	

Analog parameters:

0x09	Output format	0	16bits	Default: 1
		1	mV	
0x0A	cut off frequency	15 to 250	Hz	Default: 40

Ordering ref ex: IB6-CAN-V2-XY5-Z15-GX150-GY50-GZ150

IB6-CAN-V2-XYRange-ZRange-GXRange-GYRange-GZRange

Range				
Acc XY	±3g	±5g	±10g	
Acc Z	±5g	±10g	±15g	±20g
Gyro XYZ	±50°/s	±100°/s	±150°/s	

For complete information, contact us at info@texense.com