

# 16xPDIF

16-CHANNEL DIFFERENTIAL PRESSURE SENSOR FOR CAN BUS

Ref :

SN: Software version :

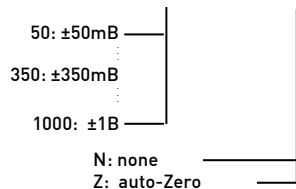
Texys sensors are designed for data recording. If the user wants to include this sensor in a close loop system or active control, he must assume all responsibility.

Range	+/- 50 to +/- 1000	mBar
	+/- 0.7 to +/- 15	PSI
Sensitive Element	Piezo resistive Cells	
Accuracy at FS	+/- 0.5	% FS
Non linearity/ Hysteresis	+/- 0.7	% FS
Offset Drift	+/- 0.5	% FS
Sensitivity drift	0.5	%
Sampling Frequency SF	200	Hz
CAN bus2.0 A or B	120Ω : <input type="checkbox"/> yes <input type="checkbox"/> no	
Output Data	Calibrated Pressure : 2 bytes per channel (signed int)	
Unit	1	mPSI/bit
	0.1	mBar/bit
Parameters	Identifiers, Baud rate, Frequency, Unit /Resolution	
Baud rate	125k to 1Mbps	
Data Frequency	1 to 200	Hz
	or on trigger	
Supply Voltage	6 to 16	V
Supply Current	30	mA
Calibrator	Height of water	
Dimensions	100 x 28 x 24	mm
Material	Aluminum	
Weight (without cable)	TBD	g
Protection	IP64	
Vibration test	20Gpp 5'	
Shock	500	G
Operating Temp	+5 to +85	°C
Storage Temp	-40 to +125	°C

This sensor withstands high humidity. Avoid water entering in the tube as well as condensation, it may block the pressure.  
Do not blow into the tubes with the mouth or a compressed air line

## Ordering reference:

16xPDIF - range - option -



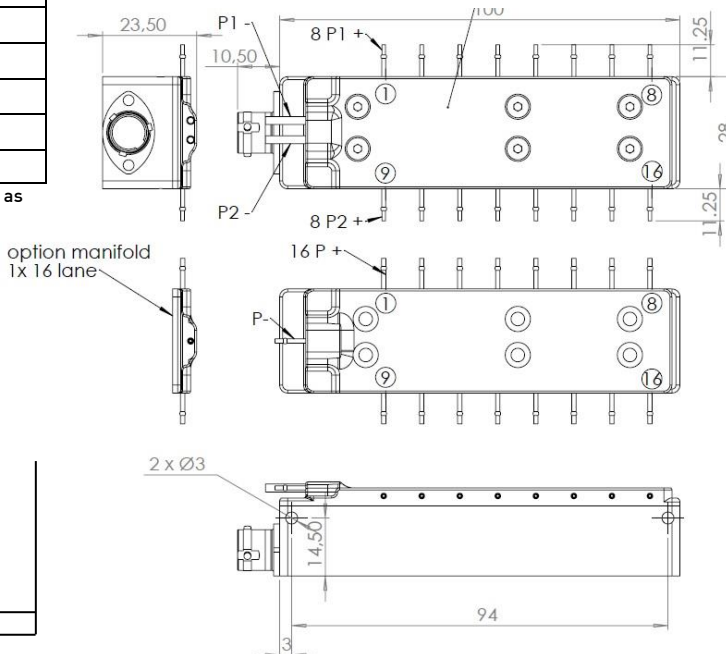
Sensor Readings			
Channel	at .....	at .....	at .....
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

Setup parameters			
CAN	2.0A	2.0B	-
Baudrate			bps
Frequency			Hz
Rx trig ID			Hex
Tx1 ID			Hex
Tx2 ID			Hex
Tx3 ID			Hex
Tx4 ID			Hex
Unit	0.1mBar/bit	0.001PSI/bit	-

Connector : 8STA00406PN

Mating connector : 8STA60406SN

PIN	Function
1	Supply
2	0 V
3	CAN Low
4	CAN High
5	Reserved, do not connect
6	Reserved, do not connect



# CAN overview

## 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	Channel 1 MSB	Channel 1 LSB	Channel 2 MSB	Channel 2 LSB	Channel 3 MSB	Channel 3 LSB	Channel 4 MSB	Channel 4 LSB
	Pressure 1		Pressure 2		Pressure 3		Pressure 4	

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	Channel 5 MSB	Channel 5 LSB	Channel 6 MSB	Channel 6 LSB	Channel 7 MSB	Channel 7 LSB	Channel 8 MSB	Channel 8 LSB
	Pressure 5		Pressure 6		Pressure 7		Pressure 8	

Frame #3 (default Tx3 Frame ID: 0x03F8)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03F8	Channel 9 MSB	Channel 9 LSB	Channel10 MSB	Channel10 LSB	Channel11 MSB	Channel11 LSB	Channel12 MSB	Channel12 LSB
	Pressure 9		Pressure 10		Pressure 11		Pressure 12	

Frame #4 (default Tx4 Frame ID: 0x03FB)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03FB	Channel13 MSB	Channel13 LSB	Channel14 MSB	Channel14 LSB	Channel15 MSB	Channel15 LSB	Channel16 MSB	Channel16 LSB
	Pressure 13		Pressure 14		Pressure 15		Pressure 16	

## Input command

Auto-zero (optional)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x07F1	0xFF	-	-	-	-	-	-	0x01

This command can be used to re-zero all channels. Each time the sensor will receive the above CAN frame, the autozero function will be launched (except during first second after power-on). When autozero function is launched, a "customer offset" is set up and added for each channel on top of factory calibration. Those "Customer offsets" will be stored in volatile memory. Therefore, they will be lost when switching OFF the sensor and they will be initialized to 0 when switching ON the sensor.

## 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](mailto:info@texense.com)

CAN parameters:

N°	Parameter	Raw values	values	Comments
0x00	Baudrate	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	On request - 10Hz max.
		0x01	1 Hz	
		0x02	5	Default
		0x03	10	
		0x04	50	
		0x05	100	
0x06	200			
0x02	Rx frame ID	if CAN2.0A: 0 to 0x7F0		MSB of triggering frame ID
0x03		if CAN2.0B: 0 to 0xFFFF		LSB of triggering frame ID
0x04	Tx1 frame ID	if CAN2.0A: 0 to 0x7F0		MSB of data frame 1 ID
0x05		if CAN2.0B: 0 to 0xFFFF		LSB of data frame 1 ID
0x06	Tx2 frame ID	if CAN2.0A: 0 to 0x7F0		MSB of data frame 2 ID
0x07		if CAN2.0B: 0 to 0xFFFF		LSB of data frame 2 ID
0x08	Tx3 frame ID	if CAN2.0A: 0 to 0x7F0		MSB of data frame 2 ID
0x09		if CAN2.0B: 0 to 0xFFFF		LSB of data frame 2 ID
0x0A	Tx4 frame ID	if CAN2.0A: 0 to 0x7F0		MSB of data frame 2 ID
0x0B		if CAN2.0B: 0 to 0xFFFF		LSB of data frame 2 ID

Sensor parameters:

0x0C	Unit	0x00	PSI	0.001 PSI / bit	Default
		0x01	Bars	0.1 mBar / bit	