



4xPDIF-S-CAN

4-CHANNEL DIFFERENTIAL PRESSURE SENSOR FOR CAN BUS

Ref:

SN: Software version :

N°article : 3D : STEP-CO-001 (Ø0.04")

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	mBars
	+/- 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
Autozero	<input type="checkbox"/> available <input type="checkbox"/> not available	
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	Mensor CPC 4000	
Dimensions	51 x 35 x 14	mm
Material	Aluminum	
Weight (without cable)	25	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.

Ordering ref.:

4xPDIF-S-CAN-1- Range(mbar) - diameter -Option

Range 50 : ±50mBar
 350 : ±350mBar
 1000 : ±1000mBar
 Diameter 40 : Pressure tube diameter 0.040"
 63 : Pressure tube diameter 0.063"
 Option N : None
 Z : Auto-Zero

Ex: 4xPDIF-S-CAN-1-350-63-N

Sensor Readings			
Channel	at	at	at
1			
2			
3			
4			

Setup parameters			
CAN type	2.0A	2.0B	-
CAN output	Standard Multiplexed		-
Baudrate			bps
Frequency			Hz
Rx trig ID			Hex
Tx1 ID			Hex
Sensor ID			Hex
Unit	mBar	mPSI	-

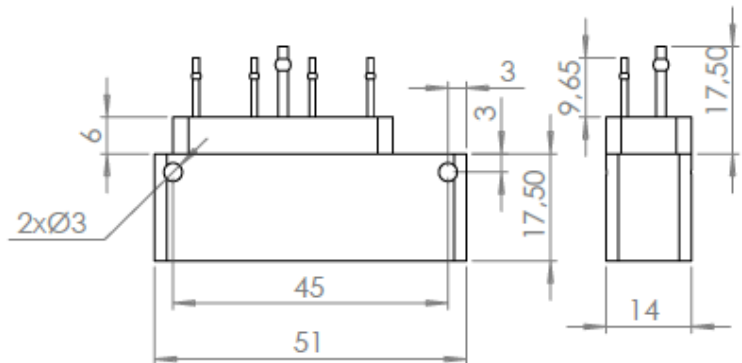
Cable : 5X26AWG FEP tinned copper braided cable 250V 200°C

Length: mm Tubing:

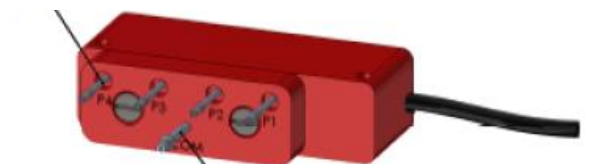
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Connector:

Colour	Function	Pin
Red	Supply	
Black	0V	
Green	CAN High	
White	CAN Low	
Yellow	Do not connect and isolate	
Braid		



Pressure Port
Diameter 0.040'' or 0.063''



Nominal Torque : 1 N.m
Max Torque : 2 N.m

com Port
Diameter 0.063''

CAN overview

Standard CAN 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	Channel1 MSB	Channel1 LSB	Channel2 MSB	Channel2 LSB	Channel3 MSB	Channel3 LSB	Channel4 MSB	Channel4 LSB
	Pressure 1		Pressure 2		Pressure 3		Pressure 4	

Multiplexed CAN Data output (interframe spacing 1.5ms)

Frame #1 (default Tx1 Frame ID: 0x03F0, default Sensor ID: 0xF4)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03F0	Sensor ID	Multiplexed Msg ID = 0	Channel1 MSB	Channel1 LSB	Channel2 MSB	Channel2 LSB	Channel3 MSB	Channel3 LSB
			Pressure 1		Pressure 2		Pressure 3	

Frame #2 (default Tx1 Frame ID: 0x03F0, default Sensor ID: 0xF4)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03F0	Sensor ID	Multiplexed Msg ID = 1	Channel4 MSB	Channel4 LSB	Signed char	0	-	-
			Pressure 4		Internal Temp. (°C)		Don't care	

Input command

Rx Frame (default Rx Frame ID: 0x07F0)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x07F0	Sensor ID		Multiplexed Msg ID		Don't Care			
	ID / 0xFF (all sensors)		0,1 / 0xFF(all Msg)					

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

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					
		0x13	CAN2.0B 125 Kbps					
0x01	Emission frequency AND Standard CAN	0x00	Rx frame trigger mode	Default				
		0x01	1 Hz					
		0x02	5					
		0x03	10					
		0x04	50					
		0x05	100					
		0x06	200					
	Emission frequency AND Multiplexed CAN	0x10	Rx frame trigger mode					
		0x11	1 Hz					
		0x12	5					
		0x13	10					
		0x14	50					
		0x15	100					
		0x16	200					
		0x02	Rx frame ID			if CAN2.0A: 0x1 to 0x7F0	MSB	Default
		0x03				if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)	LSB	
0x04	Tx1 frame ID	if CAN2.0A: 0x1 to 0x7F0	MSB	Default				
0x05		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)	LSB		0x03F0			
0x06	Don't care (may be changed without consequence)							
0x07	Sensor ID	0 to 0xFE	Sensor ID	0xF4				

Sensor parameters:

0x08	Unit	0x00	PSI	0.001 PSI / bit	Default
		0x01	Bars	0.1 mBar / bit	

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