

8xPDIF-S

SHORT 8-CHANNEL DIFFERENTIAL PRESSURE SENSOR FOR CAN BUS WITH SCANIVALVE COMPATIBLE MANIFOLD

Ref :

SN:

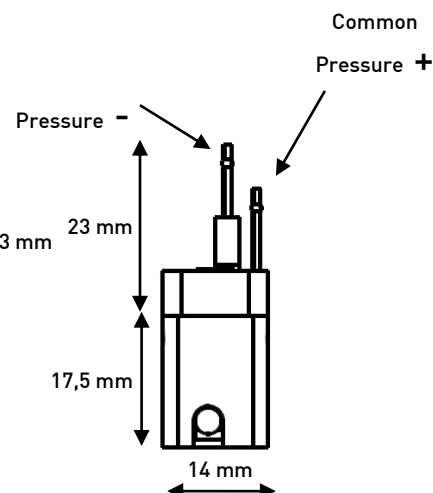
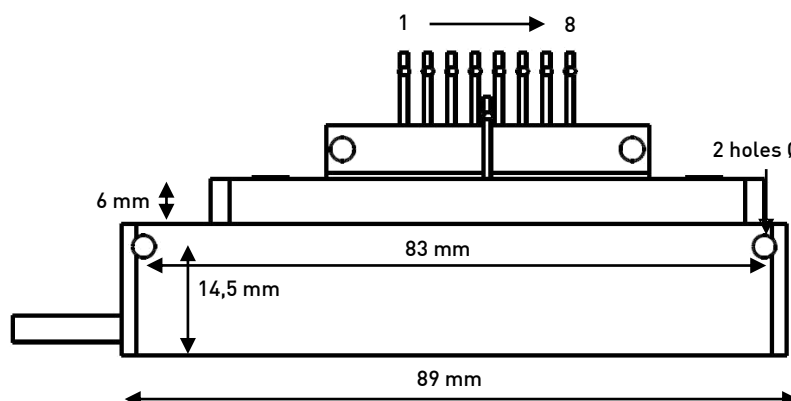
Software version :

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 +/- 0.7 to +/- 15	mBar 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	☐ available ☐ not available	
CAN bus2.0 A or B	120Ω : ☐ yes ☐ 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	89 x 35 x 14	mm
Material	Aluminum	
Weight (without cable)	TBA	g
Protection	IP64	
Vibration test	20Gpp 5'	
Shock	500	G
Operating Temp	+5 to +85	°C
Storage Temp	-40 to +125	°C
Internal gasket	GSK8P.EPDN.b	EPDM 70sh

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



Sensor Readings			
Channel	at	at	at
1			
2			
3			
4			
5			
6			
7			
8			

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

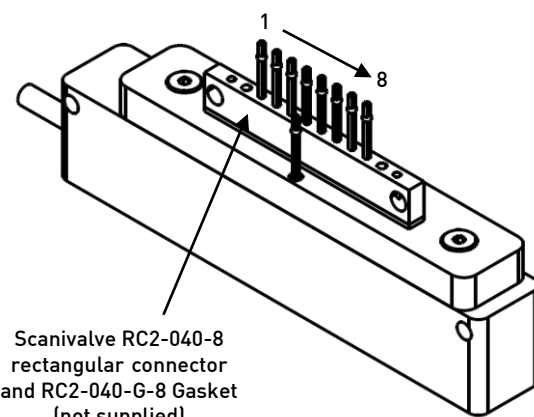
Cable : 5X26AWG FEP tinned copper braided cable 250V 200°C

Length: mm Tubing:

Connector:

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

☐ Optional 1.6 mm [0.063"] common pressure port (standard : 1 mm [0.04"])



Scanivalve RC2-040-8 rectangular connector and RC2-040-G-8 Gasket (not supplied)

CAN overview

Standard CAN Data output (interframe spacing 2ms)

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		

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	Channel5 MSB	Channel5 LSB	Channel6 MSB	Channel6 LSB	Channel7 MSB	Channel7 LSB	Channel8 MSB	Channel8 LSB
Pressure 5		Pressure 6		Pressure 7		Pressure 8		

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	Channel5 MSB	Channel5 LSB	Channel6 MSB	Channel6 LSB
			Pressure 4		Pressure 5		Pressure 6	

Frame #3 (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 = 2	Channel7 MSB	Channel7 LSB	Channel8 MSB	Channel8 LSB	Signed char	0
			Pressure 7		Pressure 8		Internal Temp. [°C]	

CAN Data input

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)	0,1,2 / 0xFF(all Msg)						

Auto-Zero command (optional)

Command input frame

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

Acknowledge output frame

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x07F3	0xFF	Serial Number				0x00	0x00	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	
		0x01	1 Hz	
		0x02	5	
		0x03	10	Default
		0x04	50	
		0x05	100	
	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 of triggering frame ID
0x03		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB of triggering frame ID
0x04	Tx1 frame ID	if CAN2.0A: 0x1 to 0x7F0		MSB of data frame 1 ID
0x05		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB of data frame 1 ID
0x06	Tx2 frame ID	if CAN2.0A: 0x1 to 0x7F0		MSB of data frame 2 ID
0x07		if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		LSB of data frame 2 ID
0x06	if Multiplexed CAN: Sensor ID	Don't care		Not used
0x07		0 to 0xFE		Sensor ID

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

Ordering reference:

8xPDIF-S - range - option

