32xPDIF

32 Channels differential pressure sensor for CAN bus

SN: P########

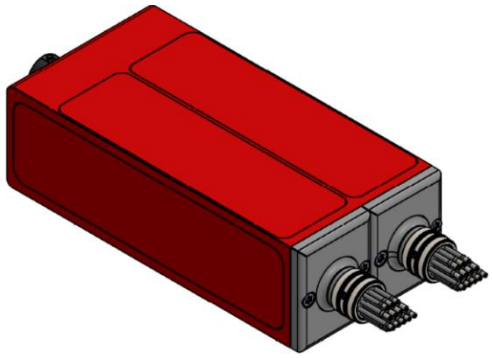
Texense sensors are designed for data logging. Should the users want to include this sensor in a closed loop system, they must undertake total responsibility from doing so.

Measurement features		
Range	± 50 to ± 1000	mBar
	± 0.7 to ± 15	Psi
Sensitive element	Piezo resistive cells	
Calibrator	Mensor CPC 4000	
Accuracy	± 0.5	%FS
Non-linearity / Hysteresis	± 0.7	%FS
Offset drift	± 0.5	%FS
Sensitivity drift	0.5	%
Sampling frequency	200	Hz
CAN 120Ω termination resistor	☐Connected	☒Not connected
CAN features		
CAN bus standard	2.0A or 2.0B	
Baudrate	125K to 1M	bps
Unit and resolution	1	mPSI/bit
	0.1	mBar/bit
Parameters	Identifiers, Baud rate, frequency, unit / resolution	
Output data frequency	1Hz to 200Hz, or on trigger	
Electrical features		
Supply voltage	6 to 16	V
Supply current	60	mA
Mechanical features		
Dimensions	105 x 50 x 31	Mm
Material	Aluminum	
Weight	250	G
Environment		
Protection	IP64	
Vibration test	20Gpp 5'	
Shock	500	G
Operating temperature	+5 to +85	°C
Storage temperature	-40 to +125	°C

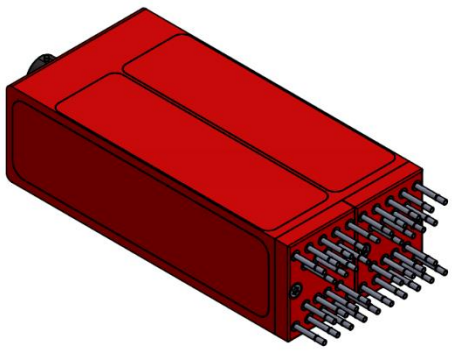
Pinout	
Connector ref: ASL006-05PN Mating: ASL606-05SN	
Pin	**Function**
1	Supply input
2	0V
3	CAN Low
4	CAN High
5	Reserved, do not connect

Version N: Rounded manifold, no connector provided

Version S: Rounded manifold, provided with Scanivalve 19M460 fitting, tube OD 0.040" (1.02mm), as shown on picture below

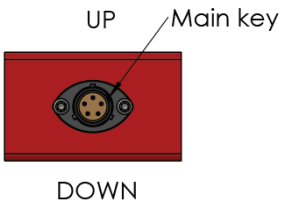


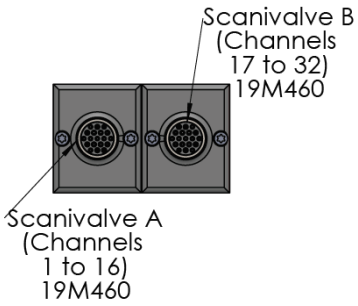
Version L: Manifold in line, tube diameter 0.063" (1.59mm)

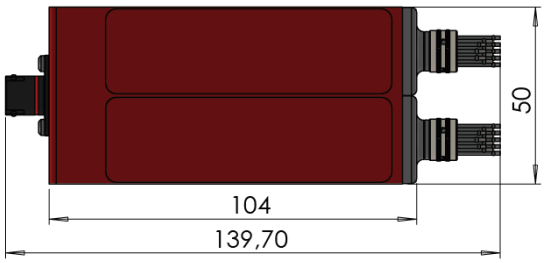


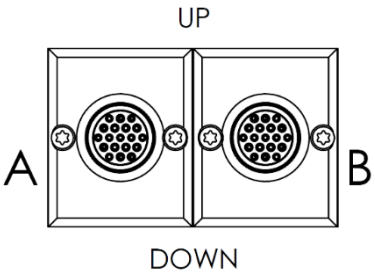
Mechanical drawings

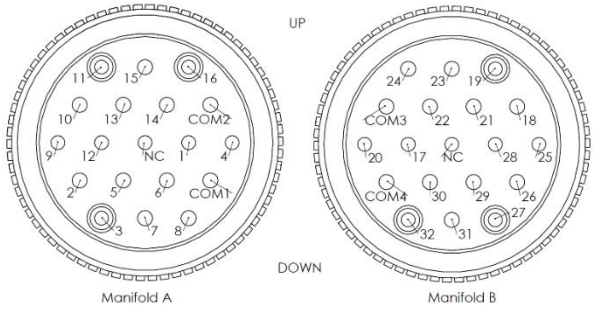
S version



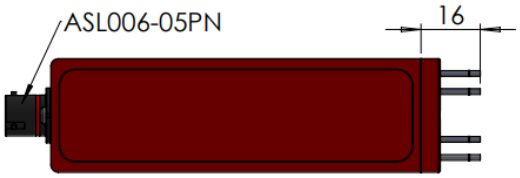


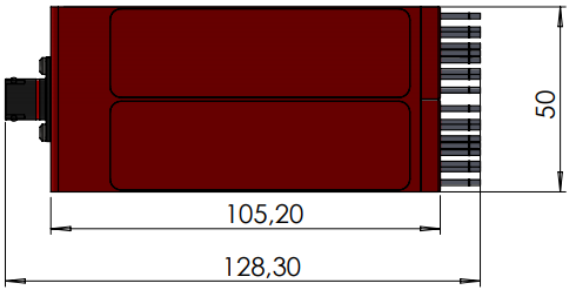


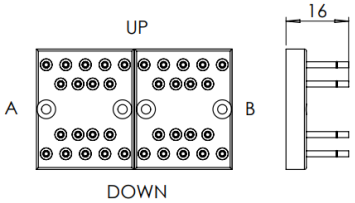


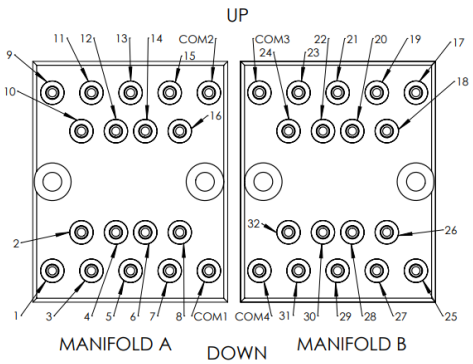


L version









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	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: 0x03FC)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03FC	Channel13 MSB	Channel13 LSB	Channel14 MSB	Channel14 LSB	Channel15 MSB	Channel15 LSB	Channel16 MSB	Channel16 LSB
	Pressure 13		Pressure 14		Pressure 15		Pressure 16	

Frame #5 (default Tx5 frame ID: 0x400)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03FC	Channel13 MSB	Channel13 LSB	Channel14 MSB	Channel14 LSB	Channel15 MSB	Channel15 LSB	Channel16 MSB	Channel16 LSB
	Pressure 17		Pressure 18		Pressure 19		Pressure 20	

Frame #6 (default Tx6 frame ID: 0x404)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03FC	Channel13 MSB	Channel13 LSB	Channel14 MSB	Channel14 LSB	Channel15 MSB	Channel15 LSB	Channel16 MSB	Channel16 LSB
	Pressure 21		Pressure 22		Pressure 23		Pressure 24	

Frame #7 (default Tx7 frame ID: 0x408)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03FC	Channel13 MSB	Channel13 LSB	Channel14 MSB	Channel14 LSB	Channel15 MSB	Channel15 LSB	Channel16 MSB	Channel16 LSB
	Pressure 25		Pressure 26		Pressure 27		Pressure 28	

Frame #8 (default Tx8 frame ID: 0x40C)

ID	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x03FC	Channel13 MSB	Channel13 LSB	Channel14 MSB	Channel14 LSB	Channel15 MSB	Channel15 LSB	Channel16 MSB	Channel16 LSB
	Pressure 29		Pressure 30		Pressure 31		Pressure 32	

Input command

Auto-zero

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 auto-zero function will be launched (except during first second after power-on). When auto-zero function is launched, a "customer offset" is set up and added for each channel on top of factory calibration. Those "customer offset" 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 CAN protocol, or by using the tWist® software (texense Windows software tool) with the tSIB (texense Smart Interface Box).

Address	Parameter	Raw values	Values	Comments	
0x00	Baudrate	0x00	CAN2.0**A** 1Mbps	Default	
		0x01	CAN2.0**A** 500 Kbps		
		0x02	CAN2.0**A** 250 Kbps		
		0x03	CAN2.0**A** 125 Kbps		
		0x10	CAN2.0**B** 1Mbps		
		0x11	CAN2.0**B** 500 Kbps		
		0x12	CAN2.0**B** 250 Kbps		
		0x13	CAN2.0**B** 125 Kbps		
0x01	Emission frequency	0x00	Rx frame trig	On request – 10Hz max.	
		0x01	1 Hz		
		0x02	5		
		0x03	10	Default	
		0x04	50		
		0x05	100		
		0x06	200		
0x02	Rx frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x07F0
0x03				LSB	
0x04	Tx1 frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x03F0
0x05				LSB	
0x06	Tx2 frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x03F4
0x07				LSB	
0x08	Unit	0x00	PSI	1 mPSI / bit	
		0x01	Bars	0.1 mBar / bit	Default
0x09	Tx3 frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x03F8
0x0A				LSB	
0x0B	Tx4 frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x07FC
0x0C				LSB	
0x0D	Tx5 frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x0400
0x0E				LSB	
0x0F	Tx6 frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x0404
0x10				LSB	
0x11	Tx7 frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x0408
0x12				LSB	
0x13	Tx8 frame ID	if CAN2.0A: 0x1 to 0x7F0 if CAN2.0B: 0x1 to 0xFFFF (except 0x7F1 to 0x7F3)		MSB	Default 0x040C
0x14				LSB	

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

Ordering information

Ordering ref:

32xPDIF – *Range* – *Manifold*

50: ±50mbar
350: ±350mbar
1000: ±1000mbar

S: connectors 19M460 provided tube diameter 0.040" (1.02mm)
L: in line manifold tube diameter 0.063" (1.59mm)
N: No connector provided

ex: 32xPDIF-350-S