

# tSIB

texense Smart Interface Box

SN: Z#####

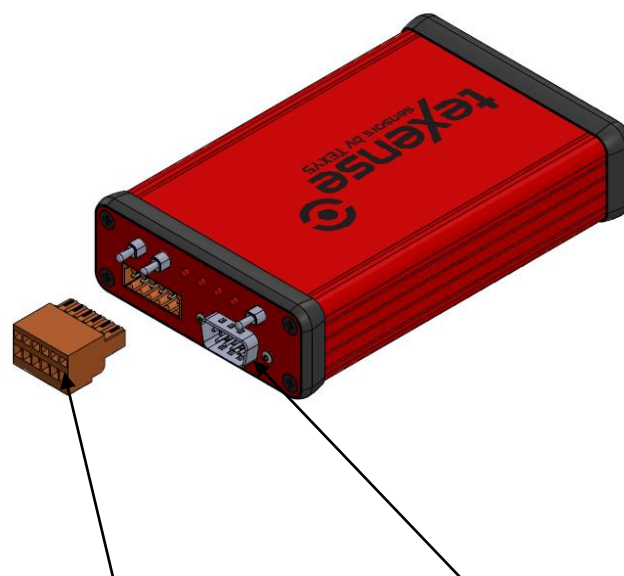
Supply input		
Consumption on USB (without sensor)	50	mA
Consumption on the 12V additional supply (without sensor)	30	mA
Supply output		
Output voltage	12	V
Max output current without additional supply	150	mA
Max current output with additional supply <sup>(1)</sup>	200	mA
CAN interface		
System requirements	Windows XP, 7, 8 or 10	
CAN bus	2.0 A or B	
CAN bus termination	Switchable 120Ω	
Serial interface		
System requirements	Windows XP, 7, 8 or 10	
Software requirements	Terminal (Teraterm, Hyperterminal, Putty,...)	
Wires	Configurable 1-Wire or 2-Wire	
Voltage level	Configurable 3V or 5V	
Mechanical features		
Dimension	126 x 81.1 x 30.1	mm
Box Material	Aluminum	
Weight	240	g
Environment		
Box protection	IP60	
Weight	240	g
Operating Temp	-20 to +70	°C
Storage Temp	-20 to +85	°C

(1) Not provided. We advise to use the ref VER12US120-JA from XP POWER.

Date		Operator	
Customer			
Order			
Product Ref	tSIB		

## Contents:

- 1x texense Smart Interface Box (tSIB)
- 1x Cable: USB-A to USB-B (1 meter)
- 1x 6-pin connector: Weidmuller SL 3.5/6/180G with its mating Weidmuller BL 3.5/6



### 6-pin connector:

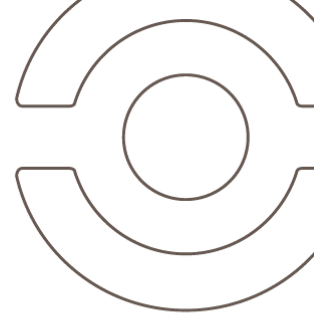
Weidmuller SL 3.5/6/180 +  
Weidmuller BL 3.5/6

Pin	Function
1	GND
2	CAN Low
3	1W or TX
4	12V Supply
5	CAN High
6	RX

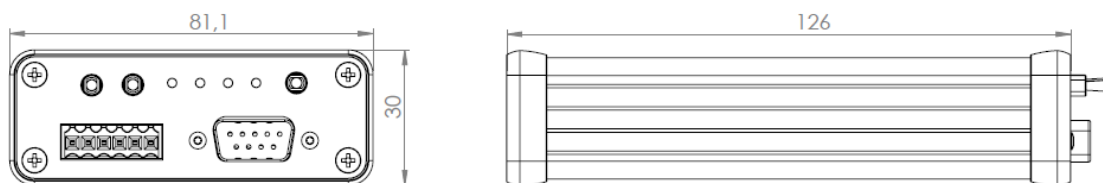
### CAN connector:

D-Sub Standard 9P Male

Pin	Function
1	Not used
2	CAN Low
3	GND
4	Not used
5	GND
6	Not used
7	CAN High
8	Not used
9	12 Supply



## Mechanical drawing



## User guide

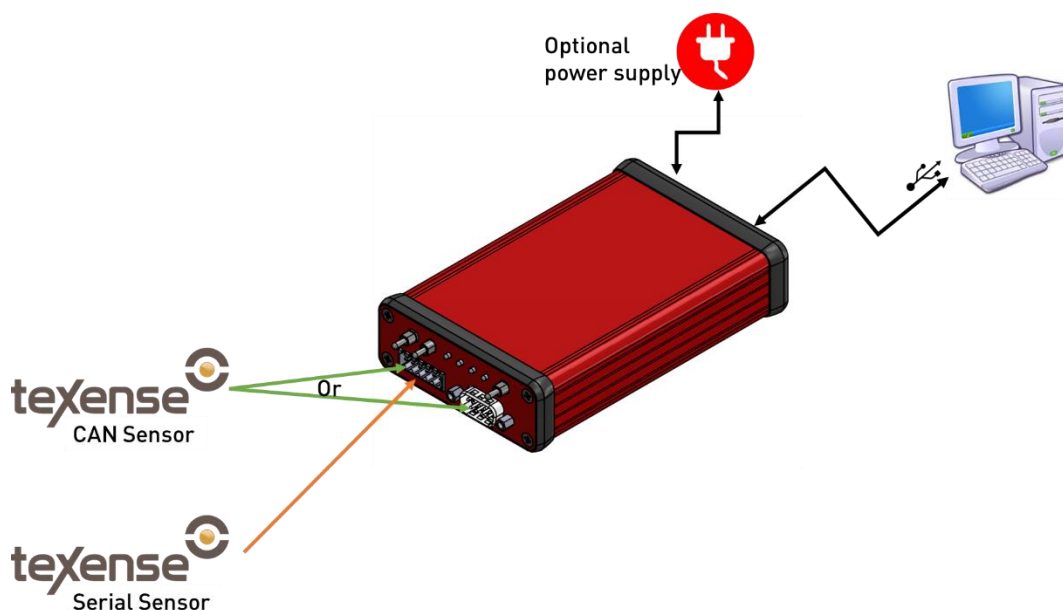
### 1. Install tWiST application

Download the last version of the tWiST (texense Windows Software Tool) application available on this link:

<https://databalt.cloud.databalt.net/s/Twist>

Launch the setup to start installation, third party programs will also be installed to communicate with the sensors.

### 2. Connect tSIB interface



Connect the tSIB to the computer using the USB-A to USB-C cable provided. Power LED of the tSIB should be on.

The tSIB allow you to communicate with Texense sensors using two different protocols:

- Through CAN protocol with the embedded CAN interface.
- Through Serial port embedded in the tSIB.

The tSIB can power the sensors from two different sources:

- If the overall consumption of the sensors is less than 150mA (refer to the specifications of the sensors to know their consumption), the USB cable is enough to power the tSIB.
- If the overall consumption of the sensors is more than 150mA the tSIB must be powered by an external power through the jack connector. We advise to use the ref VER12US120-JA from XP POWER (not provided).

### 3. CAN interface

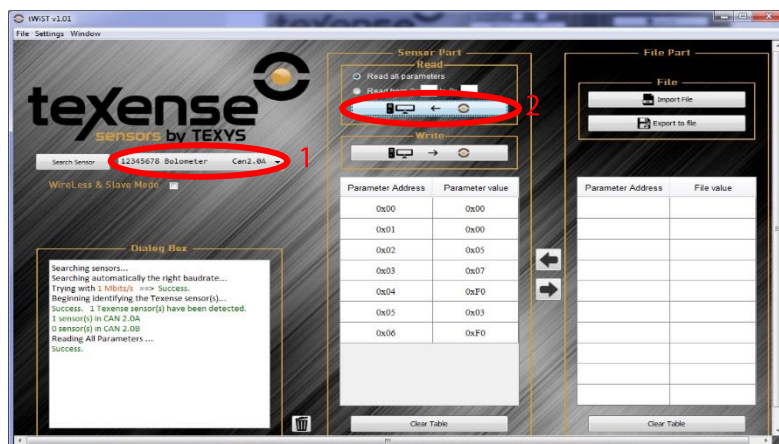
Connect one or several sensors (the pinout description is printed on the housing). If your CAN bus does not contain any 120Ω termination resistor, activate the one in the tSIB with the 120Ω switch.

### 3.2. tWiST interface

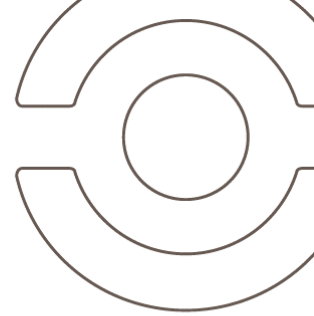
Launch the tWiST application on your computer. Then click on the “Search sensor” button:



Once the search is done the list next to the search button should contain all the texense sensors detected on the CAN bus (1). Select the sensor you want to configure and click on the button in the read panel (2) to display sensor's configuration:

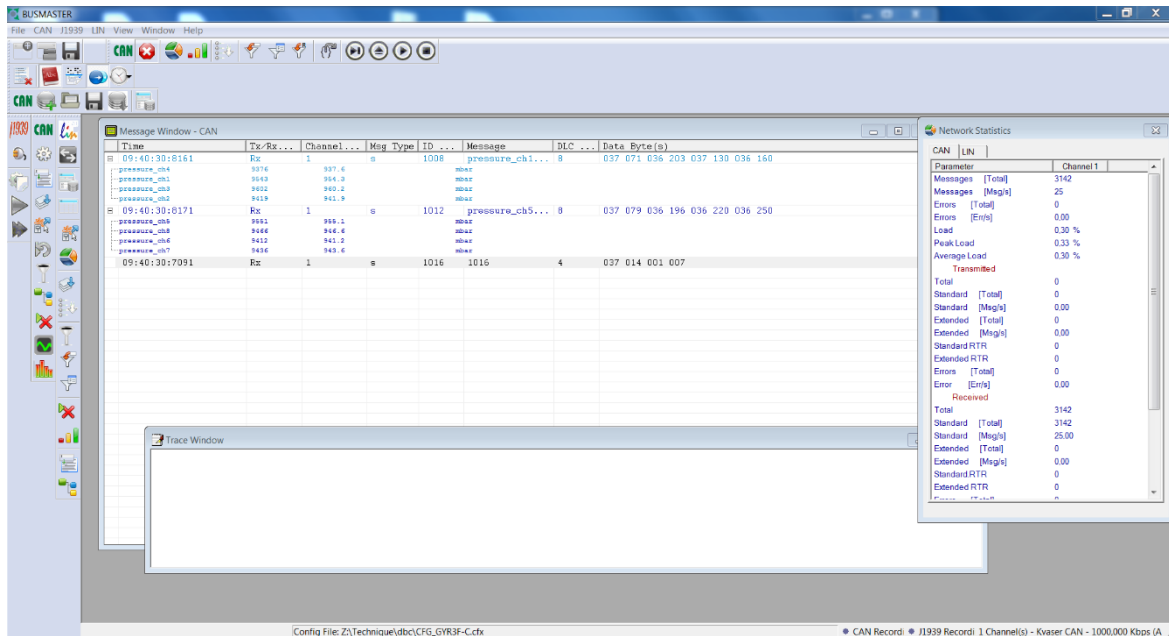


Change the parameters according to its specification sheet and click on the write button to send the parameters to the sensor. You can read it back to ensure the modification was acknowledged by the sensor. Any out-of-bounds writing will be replaced by the default value.



### 3.4. Bus master interface

The hardware includes a Kvaser interface so it is compatible with many generic CAN software tools. You can for example use the free software Bus master to see real time CAN data using DBC or DBF files. Download link: <https://rbei-etas.github.io/busmaster/>



## 4. Serial interface (1-wire or 2-wire)

### 4.1. Wiring up the sensor

Connect one sensor to the 6-pin connector:

- If the sensor is a 1-Wire interface, connect the 1-Wire to the 1W/Tx pin. Use the switch to select the 1-Wire mode.
- If the sensor is a 2-Wire interface, connect the Tx wire of the sensor to the Rx pin of the tSIB and the Rx wire of the sensor to the Rx pin of the tSIB. Use the switch to select the 2-Wire mode.

Use the switch to configure the voltage of the serial interface, please refer to the specification of the sensor to know which voltage you should use.

### 4.2. Terminal interface

Launch the COM port terminal application (we advise to use TeraTerm) to connect to the sensor serial interface. Since the configuration differs from sensors to sensors, please refer to the sensor's specification to know the settings to use.

## 5. Troubleshooting

In case of difficulties to connect to a CAN sensor:

- Verify there is at least one and at last two can termination resistor (120Ω).
- Try with a CAN bus containing only one sensor.
- If the parameter is written but there is no change when read back, verify that the new value is not out-of-bounds.

For any question, please send an email to [info@texense.com](mailto:info@texense.com).