![smartswitch INFORMATION = CONTROL]

PR-100
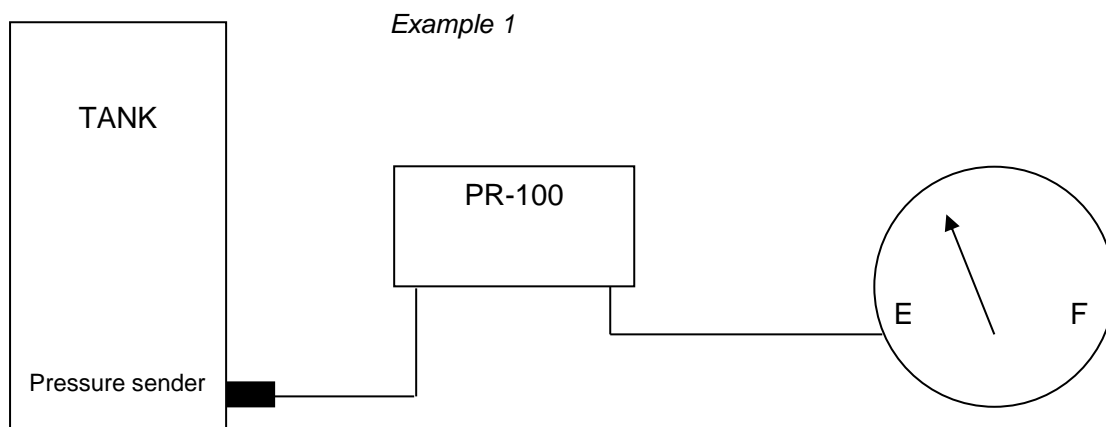**Pressure to Resistive Interface**

Installation Manual

Product Description

The PR-100 interface controller has a pressure sender input and a 10 - 180 ohms **or** 33 - 230 ohms output (jumper selectable see page 5)

This interface enables the use of a pressure sender input with a resistive output enabling you to connect to either an analogue gauge.

Either 2 or 5-point calibration can be used, giving a very accurate output.

Example 1

```
┌──────────┐
│          │
│   TANK   │                ┌──────────────┐
│          │                │    PR-100    │                     ╱──────────╲
│          │                │              │                    ╱            ╲
│          │                └──────────────┘                   │   ↖          │
│          │                                                   │   ╲          │
│Pressure sender ■──────────────────┘        └────────────────│ E  ╲      F  │
│          │                                                    ╲            ╱
└──────────┘                                                     ╲──────────╱
```

NOTE: Pressure sender can be either Top or Bottom mount.

Sensor Installation

```
┌──────────────────────────────────────────────────────────────┐
│                        !  WARNING !                          │
└──────────────────────────────────────────────────────────────┘
```

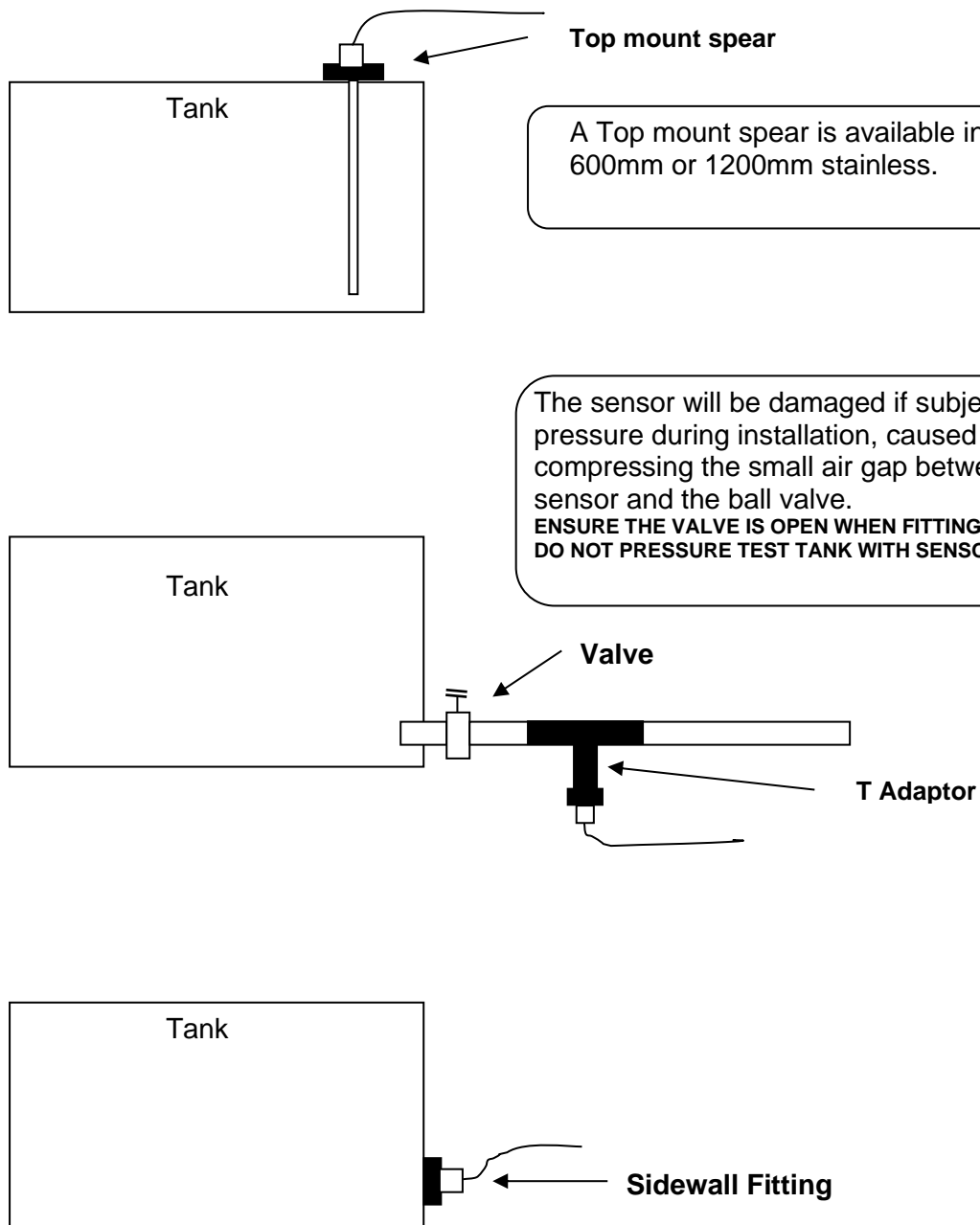**PLEASE NOTE: For sensor Model SEN-100 The Maximum Tank Height is 1 Meter**
PLEASE NOTE: For sensor Model SEN-250 The Maximum Tank Height is 2.5 Meter
PLEASE NOTE: For sensor Model SEN-B300 The Maximum Tank Height is 2.2 Meter
The maximum surge and safe pressure is 28psi.

Sensor Installation:

The sensor should be mounted as low in the sidewall as possible.

Top mount spear

Tank

A Top mount spear is available in either 600mm or 1200mm stainless.

The sensor will be damaged if subject to over pressure during installation, caused by compressing the small air gap between the sensor and the ball valve.
ENSURE THE VALVE IS OPEN WHEN FITTING THE SENSOR
DO NOT PRESSURE TEST TANK WITH SENSOR FITTED

Tank

Valve

T Adaptor

Tank

Sidewall Fitting

Sensor Programming Instructions

Two different methods of tank programming are available if using the pressure sensor:

2 Point Calibration: sets tank low and tank high points which can only be used if the tank is a regular size and shape.

5 Point Calibration: sets tank low, tank quarter, tank half, tank three quarters and tank full points, offering more accuracy if the tank is an irregular size and shape.
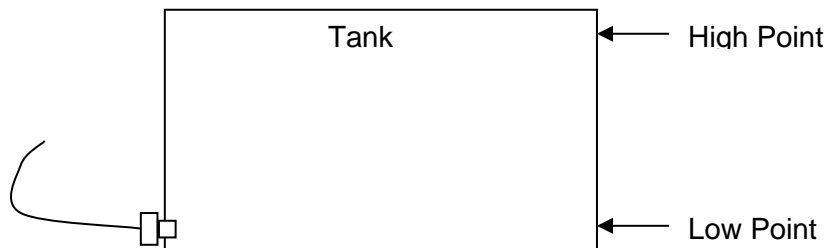
2 Point Calibration:

Apply power to the PR-100 and fill the tank to the required TANK LOW LEVEL and wait for the LED to stop flashing.

Press and hold down the Program Button for **3** seconds, as soon as the LED turns ON release the program button. The low level has now been set.

Fill the tank to the required TANK FULL LEVEL and wait for the LED to stop flashing. Press and release the Program Button, the LED will flash twice and turn OFF, the high level point has now been set.

The device is now ready for use.

```
┌─────────────────────────────┐
│           Tank          ◄─── High Point
│                             │
│                             │
│                             │
│                         ◄─── Low Point
└─────────────────────────────┘
```

If the LED flashes 8 times this indicates there has been no change between tank levels.

For more information see "Calibration Tips & Tricks" on our web site www.smartswitch.co.nz

Sensor Programming Instructions

5 Point Calibration:

Apply power to the PR-100 and fill the tank to the required TANK LOW LEVEL and wait for the LED to stop flashing.

Press and hold down the Program Button until the LED will flashes 5 times (approx 7 seconds) and stays ON, release the program button. The low level has now been set.
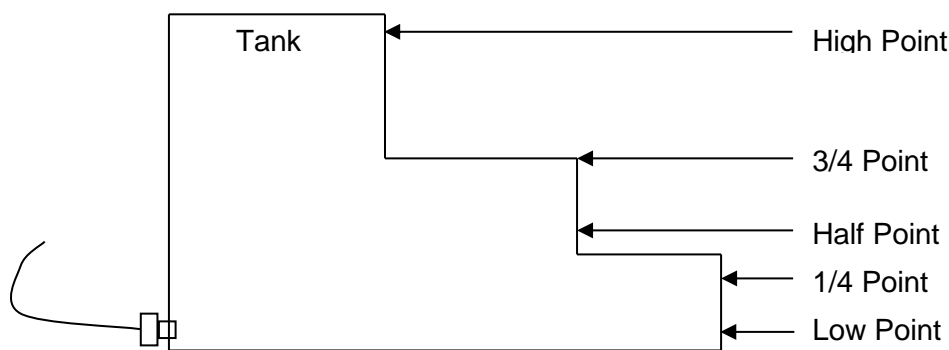
Fill the tank to the required QUARTER LEVEL and wait for the LED to stop flashing. Press and release the Program Button, the LED will flash twice and stay ON, the tank 1/4 level point has now been set.

Fill the tank to the required HALF LEVEL and wait for the LED to stop flashing. Press and release the Program Button, the LED will flash three times and stay ON, the tank 1/2 level point has now been set.

Fill the tank to the required THREE QUARTERS LEVEL and wait for the LED to stop flashing. Press and release the Program Button, the LED will flash four times and stay ON, the tank 3/4 level point has now been set.

Fill the tank to the required FULL LEVEL and wait for the LED to stop flashing. Press and release the Program Button, the LED will flash five times and urn OFF, the tank FULL level point has now been set.
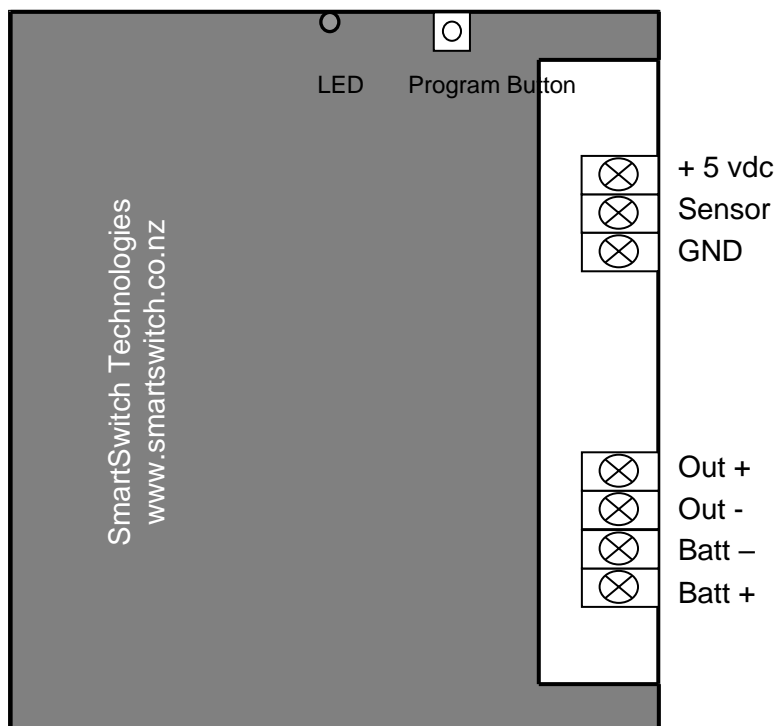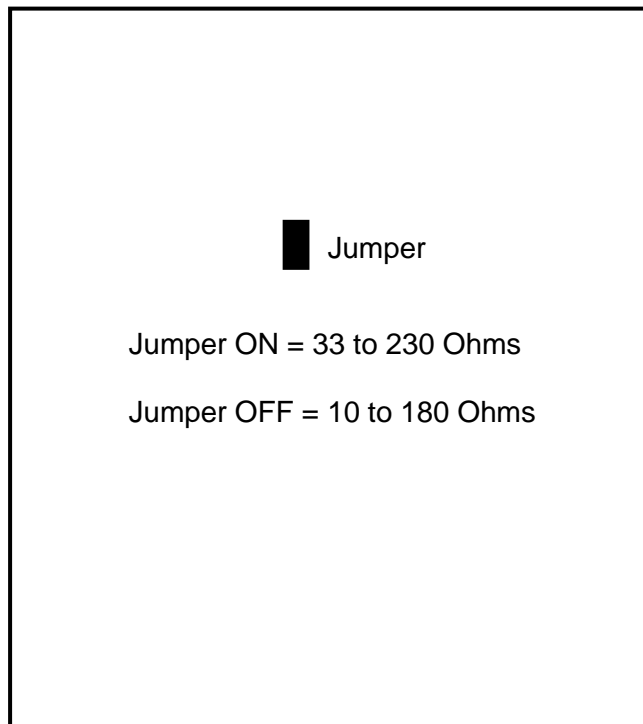
The device is now ready for use.

```
           ┌──────────┬────────◄───────────────  High Point
           │   Tank   │
           │          │
           │          └────────────┐
           │                ◄───────┤──────────  3/4 Point
           │                        │
           │                ◄───────┤──────────  Half Point
           │                        └────┐
           │                        ◄────┤─────  1/4 Point
           │                        ◄────┤─────  Low Point
          ─┴┬┴──────────────────────────┘
           └
```

If the LED flashes 8 times this indicates there has been no change between tank levels.

For more information see "Calibration Tips & Tricks" on our web site www.smartswitch.co.nz

Lay-Out

PR-100 (Side of Case)

▉ Jumper

Jumper ON = 33 to 230 Ohms

Jumper OFF = 10 to 180 Ohms

LED   Program Button

SmartSwitch Technologies
www.smartswitch.co.nz

+ 5 vdc
Sensor
GND

Out +
Out -
Batt –
Batt +

Connections

The connect to a analogue gauge as per example 1 (page 1)

Batt + = 12 to 24 +vdc
Batt - = Battery Negative
Out - = Battery Negative
Out+ = Gauge Sensor Terminal

+ 5vdc = Red on SEN-B300
Sensor = Green on SEN-B300
GND = Black on SEN-B300

Electrical Specifications PR-100

Supply Voltage	10 to 30 Volts DC (Auto-Sensing)
Quiescent Current	22 mA @12 VDC