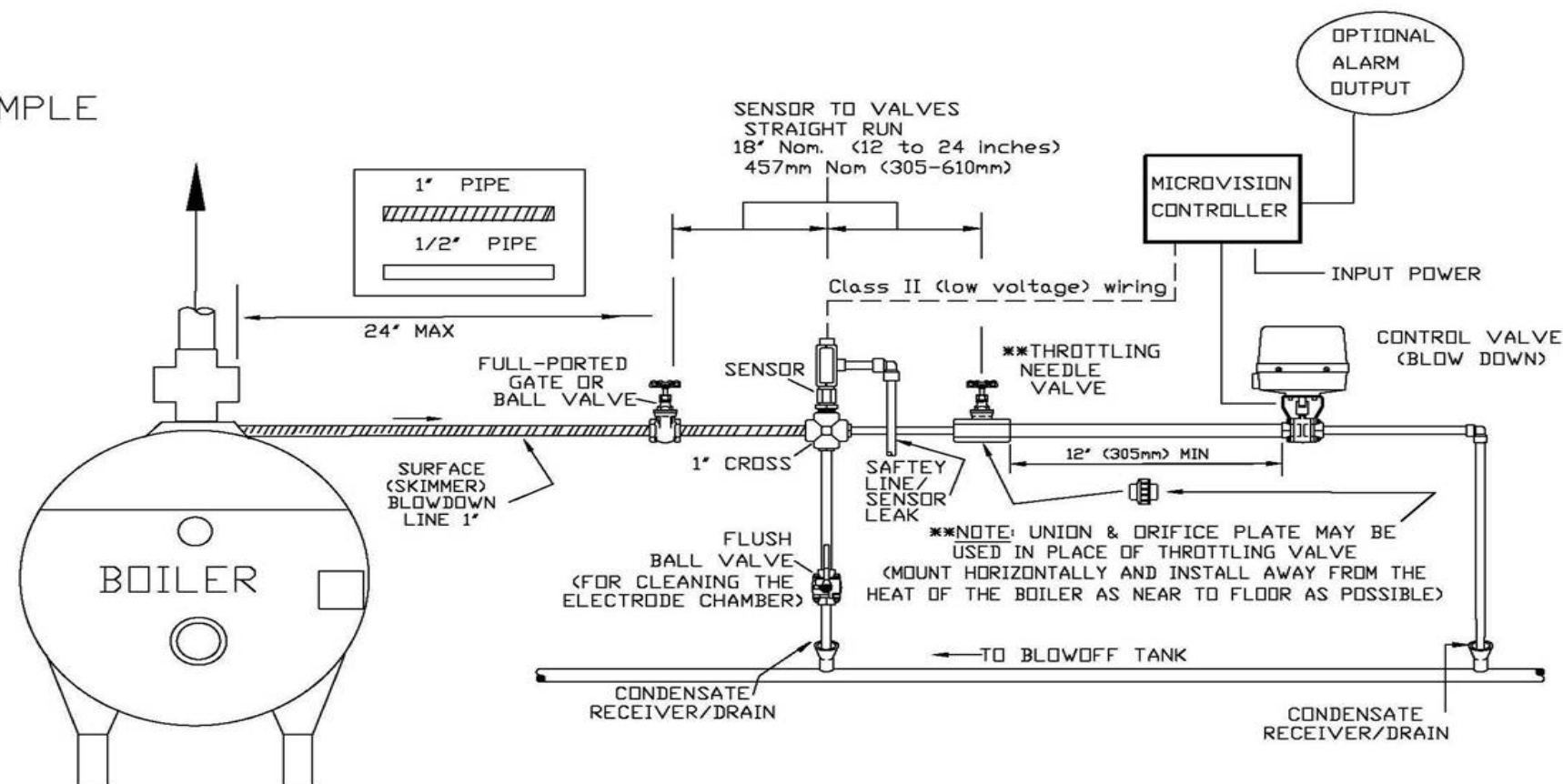


### Installation Requirements

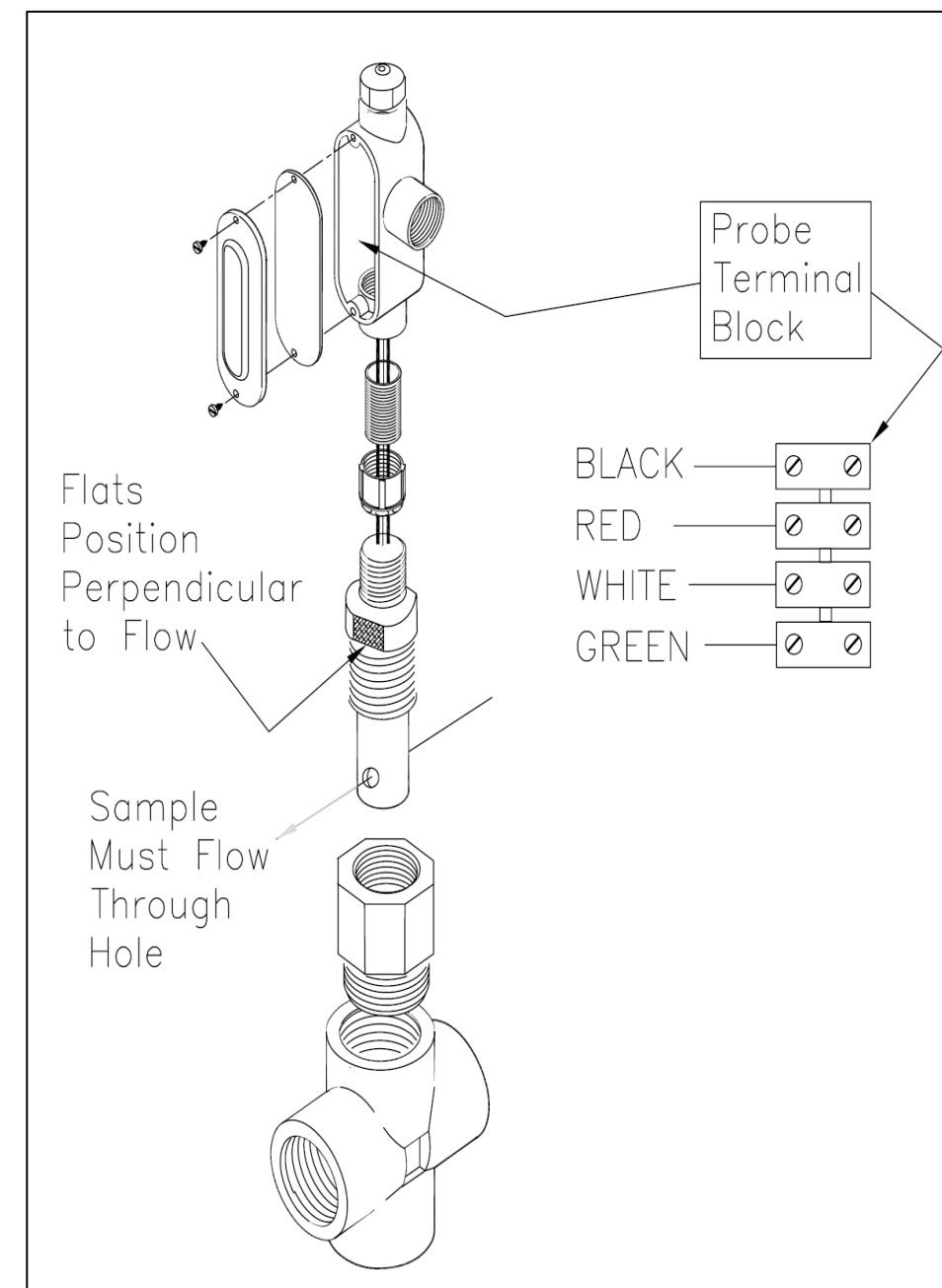
- Completely read and understand the installation and operation manual for this product before commissioning, failure to do so may result in serious personal injury or even death.
- The skimmer line must be installed 6" (inches) below the boiler water level, or per the boiler manufacturer's requirements.

- Failure to comply with the installation requirements may result in system failure and may void the equipment warranty.

TIMED SAMPLE



### Probe Installation Detail

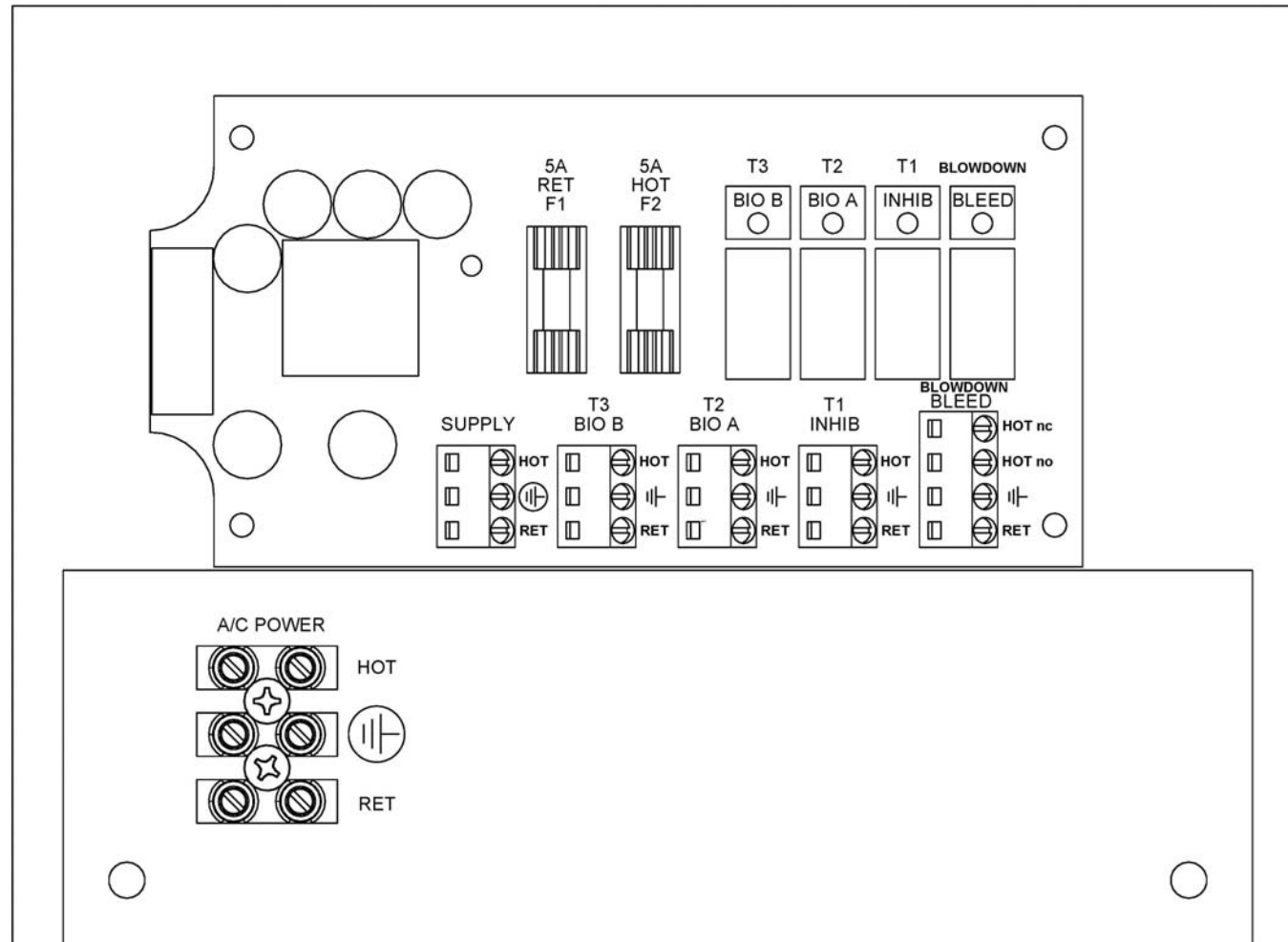


**WARNING**  
 AVOID LOCATIONS WHERE THE CONTROLLER WOULD BE SUBJECTED TO EXTREME COLD OR HEAT {LESS THAN 0°F (-17,8°C) OR GREATER THAN 150 °F (65°C)}, DIRECT SUNLIGHT, VIBRATION, VAPORS, LIQUID SPILLS, OR EMI (ELECTROMAGNET INTERFERENCE; E.G., STRONG RADIO TRANSMISSION AND ELECTRIC MOTORS).

## Wiring Requirements

### RELAY BOARD CONNECTIONS

INSIDE/BOTTOM VIEW OF CONTROLLER

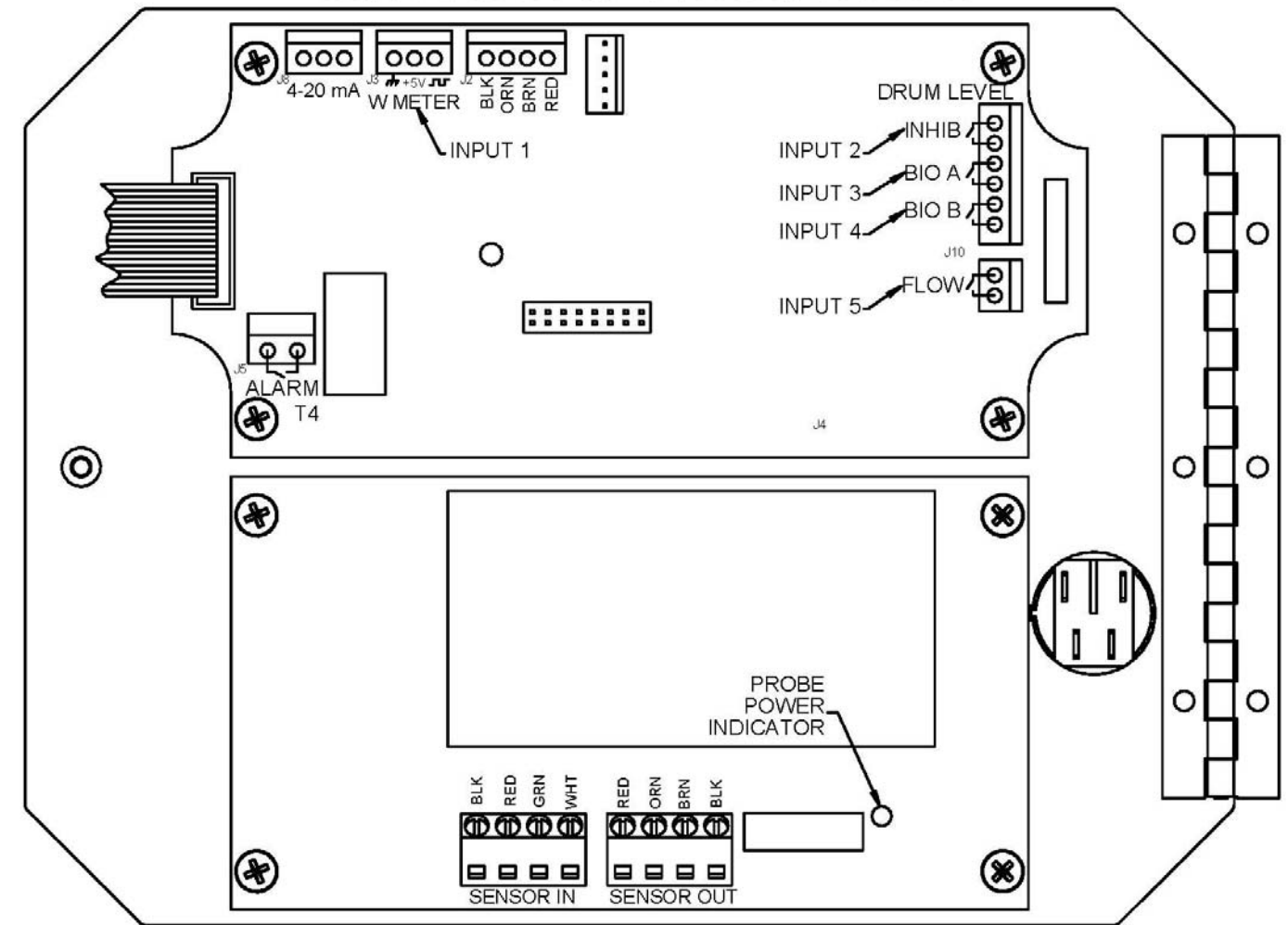


## Low Voltage Connections

The low voltage connections are found on the low voltage (front panel) board (Fig. 7).

Use 22-24 AWG (.76 mm<sup>2</sup>) wire for: interlock, drum levels, dry alarm, and water meter connections. These signal wires must be run separate from AC power lines.

INSIDE VIEW OF CONTROL PANEL



**NOTE** Low voltage signal wires, e.g., water meter, must be run separate from AC power lines. These connections will be covered in the Low Voltage section of the manual.

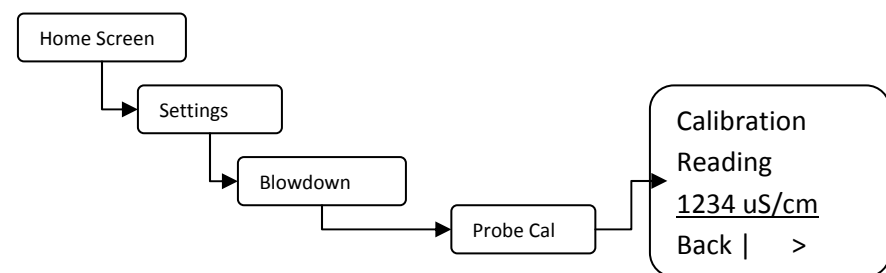
### Probe Calibration (Timed modes only see IOM for continuous sample mode)

Calibration must be performed at the conductivity control set point, manually bring the boiler into control with a hand held tester before calibrating. This can be done with either the manual activation of the skimmer line blowdown, or by the bottom blowdown if possible.

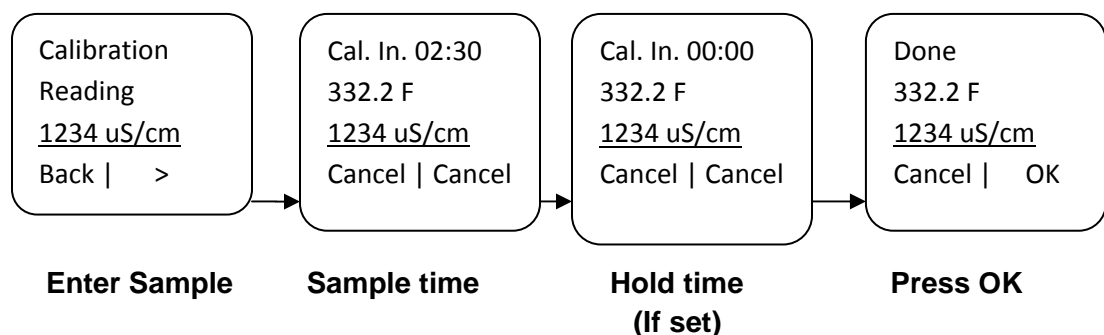
If the controller is calibrated at a point more than 1000uS/cm from the control set point it should be recalibrated after the boiler conductivity is in control.

**Timed Sample and Sample & hold Calibration** – In this method the Hand held sample is entered into the calibration screen and the controller automatically activates for the sample times.

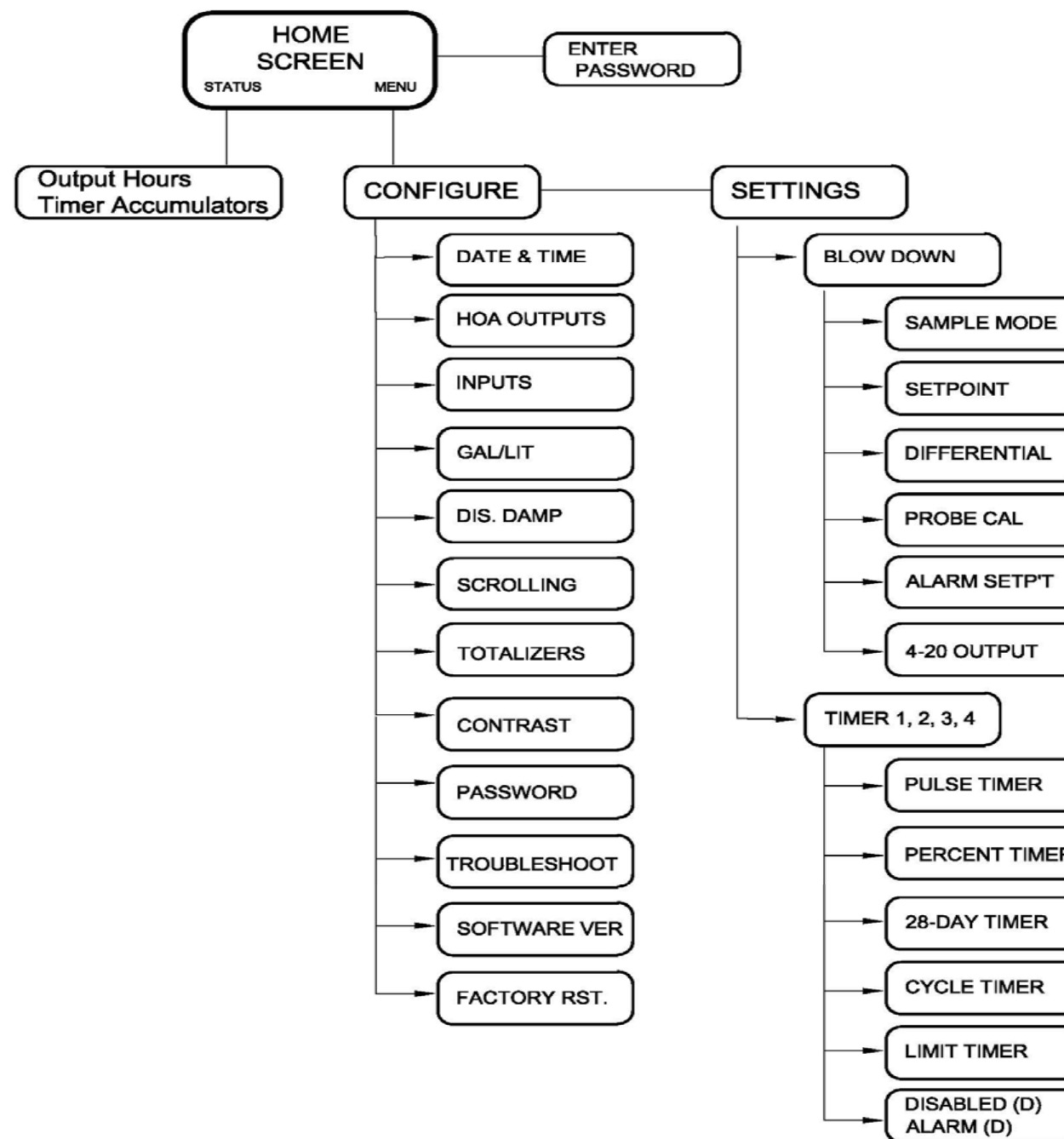
**Step 1** – Move to the Probe Calibration screen.



**Step 2** – Draw a sample of the process flow water and measure the conductivity using a calibrated meter. For best results cool the sample for the hand held to 25°C (77°F), this is required for non-temperature compensated hand held's. Enter the conductivity value and then press the > key. The controller will then sample the boiler for the programmed sample time and subsequent hold time (if programmed as sample and hold). During the calibration sample time, the temperature and real time probe readings are displayed. The temperature at the end of the sample time should be close to the temperature shown on the saturated steam table for the boilers operating pressure and the conductivity reading should also be stable. If they are not, the sample time may be too short, or steam flashing is present. In the sample and hold mode, the conductivity reading stabilizes during the hold time.



### Programming Menu



Steam Table

PSI Guage	BAR	Temp °F	Temp °C	PSI Guage	BAR	Temp °F	Temp °C
0	0	212	100	90.3	6	331	166
1.3	0	216	102	95.3	7	335	168
2.3	0	219	104	100.3	7	338	170
3.3	0	222	106	105.3	7	341	172
4.3	0	225	107	110.3	8	344	173
5.3	0	228	109	115.3	8	347	175
7.3	1	233	112	120.3	8	350	177
10.3	1	240	116	125.3	9	353	178
20.3	1	250	121	130.3	9	356	180
25.3	2	259	126	135.3	9	358	181
30.3	2	267	131	140.3	10	361	183
35.3	2	274	134	145.3	10	363	184
40.3	3	287	142	150.3	10	366	186
45.3	3	293	145	155.3	11	368	187
50.3	3	298	148	160.3	11	370	188
55.3	4	303	151	165.3	11	373	189
60.3	4	307	153	170.3	12	375	191
65.3	5	312	156	175.3	12	377	192
70.3	5	316	158	180.3	12	380	193
75.3	5	320	160	185.3	13	382	194
80.3	6	324	162	210.3	15	392	200
85.3	6	328	164				

Inputs:

The MicroVision has 5 digital inputs that can be programmed as follows:

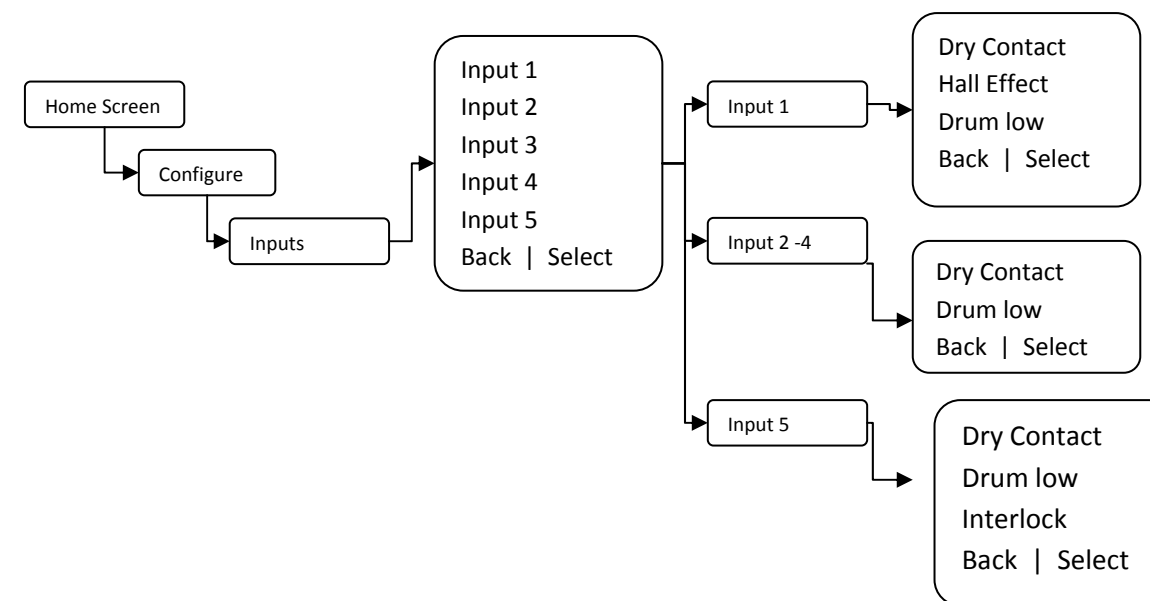
Programmable Inputs	Input 1	Input 2	Input 3	Input 4	Input 5
Drum Level		X (Timer 2)	X (Timer 3)	X (Timer 4)	X (Timer5)
Water meter	X	X	X	X	X
Hall effect	X				
Interlock					X

**Drum Levels-** If input #2, for example, is set as drum level it will be linked to relay two and may be set by the user to either deactivate the relay, or only to activate an alarm.

**Water Meter-** Each input may be programmed as water meter inputs that are capable of reading a dry contact water meter. Input number one can be set to read a Hall Effect type water meter.

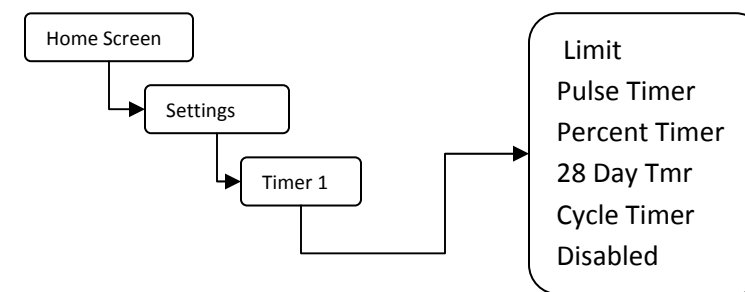
**Interlock-** The interlock input requires that an auxiliary relay (not supplied) is installed across the boiler operation controls to produce a dry contact closure when the boiler is off line. Open = not interlocked; closed = Interlock on.

Inputs Menu



Mode Menus

From this menu pick the mode that the timers will operate in.



**Limit Timer** – Set this value to the maximum amount of time you want the inhibitor to feed while the blowdown function is running. If this time is exceeded the controller will go into alarm and the inhibitor feed control output will de-energize.

**Pulse Timer** – See the menu for this function in the installation manual.

**Percent Timer** – Set the timer run time period and percentage of the time period.

**28 Day Timer**– See the menu for this function in the installation manual