

PSM INSTRUMENTATION LTD

ISS

Configuration software for the ICT 1000 series level transmitter

Installation & Operation Manual V2.610

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NOTE

PSM Instrumentation has a policy of continual improvement of their product range. Please ensure by visiting www.psmmarine.com/documentation that you are using the latest issue of this manual.

Where PSM manuals contain reference to specific firmware versions of the ICT 1000 please also ensure that the correct procedure is being followed for your firmware version

2. About the ISS configuration software

2.1 Application

The ISS configuration software is written specifically to configure and test PSM Instrumentation ICT 1000 level transmitters. It will also test their associated RS485 Modbus interconnection network if the transmitters are used in a digital operation mode.

The ISS software is not to be used with any other product from PSM or other manufacturers otherwise incorrect operation or damage may occur.

2.2 Notes about this manual

Incorrect function or damage to associated equipment may occur if ISS is not used in accordance with this manual. The information in this manual may be highlighted by the following symbols indicating that special care should be taken when performing these associated actions.

A hazard indicates actions or procedures which if not performed correctly may invalidate safety certification.

A caution indicates actions or procedures if not performed correctly may cause incorrect functionality, loss of information or damage to the equipment.

A note indicates that further information or functionality is available.

2.3 Scope of this manual

This document describes the mechanical, electrical connection and user operator for the ISS configuration software only.



Refer to MAN 049 for installation and operation of the ICT 1000 level transmitters and other associated components such as power supplies, RFM ISR network safety barrier modules and RFM 1 & RFM 4 network connection modules.

2.4 Refer to MAN 053 for the full communications address map

Safety instructions

To prevent any damage to the device or any injury to the user it is essential that you read the information in this document and observe applicable national standards and safety requirements.

This document is provided to help facilitate the safe and efficient operation of the product.

2.5 Product liability and warranty

All ICT transmitters are carefully assembled and fully tested before shipment and are sent out in perfect order and condition. We, therefore, give the following Guarantee which takes the place of any Guarantee by Statute, common law or otherwise. If within 12 months from date of despatch, any defect or fault is discovered in any component of our manufacture, due to faulty material or bad workmanship, we undertake to make good the defect without charge, provided that notice is given to us immediately on the discovery of the defect and the defective components or parts thereof, are forwarded to us carriage paid for inspection. This guarantee does not apply to defects caused by ordinary wear and tear, misuse, neglect, or by circumstances over which we have no control.

Full terms and conditions are available from our website: *www.psmmarine.com/about-us*

2.6 Scope of delivery

Not applicable for software products.

2.7 Storage

Not applicable for software products.

2.8 **Product identification**

For software products version number is identified under: Help > About

2.9 **Operations and maintenance**

Not applicable for software products.

2.10 Instrument return

Not applicable for software products.

2.11 EC Declaration of Conformity

The products detailed within this manual meet the legal requirements of the applicable EC Directives.

3. Installation of the ISS software

3.1 Download the ISS software AND Generic Comms file

Location of software download

https://www.psmmarine.com/documentation.

Select the ICT 1000 transmitter product option from the dropdown document Java must be installed on the Laptop / PC for the software to run.

This can be downloaded from https://www.java.com/en/download/

TECHNICAL DOCUMENTATION	> Lat
Please search documents by category ICT 1000 Level & Pressure Transmitter	> Sig > Ge > En
ICT 1000 Level & Pressure Transmitter Here is a library of technical documentation relating to your selection. Datasheets can be downloaded immediately, other downloads may require a one-time registration.	
Datasheets GA Drawings Manuals	
Software	
GenericComms ISS Config Tool For lct 1000 Level Transmitters	



The software does not "Auto install" - create a folder on the Laptop / PC The location is not important.

3.2 Save both to the Laptop / PC

♥ 📜 Program Files	 Intel Internet Explore ISS 	er		
Name	Date r	modified	Туре	Size
GenericComms.dll	30/11 30/11	/2015 09:38 /2015 09:44	Application extension Application	40 KB 1,834 KB

Both the ISS application (.exe) and Generic Comms extension (.dll) must be saved in the same directory.

The ISS software can be run directly from this folder or a desktop shortcut (right click > Send To > Desktop) can also be created,

An additional file named *Settings.ini* will be created once the software is used for the first time.

4. Electrical connection

4.1 System overview



A complete configuration system

[1] Laptop / PC.

[2] ICT 1000 level transmitter.

[3] RS 485 <> USB adaptor—Converts the PC USB output to RS485 used by ICT [4] 24 V dc power supply.—An ISOLATED power supply should be used



PSM has tested and can recommend the EasySYNC model ES-U-2101-M adapter: *www.easysync-ltd.com/product/543/es-u-2101-m.html* Ensure that the adaptor dip switches are set according to the drawing.

5. Configuration of the PC / Laptop Comms Ports

5.1 Use Device Manager to identify connected devices

Open the Device Manager tool on the PC / Laptop

Identify the devices that are connected to the Comms Ports.

Depending on the Windows version and installed drivers, the RS 485 <> USB adapter may show as a generic device or with its specific device name.



If the a different USB port is subsequently used to connect the adaptor, then this process may need to be repeated as the Port assignment may change.



5.2 Set ISS software to the correct Port

ISS : PSM Instrumentation Ltd : ICT Configuration Tool V2.610 Settings Network Display Tools Help		×
Port Settings × COM port selection & setup ICT COM port: COM 3 Node Number: 1 Update / Restore Ports 2		

5.2.1 Configure the ISS software to use the correct Port

Run the ISS software from the saved folder location [3.2].

Open the Port Settings tab: Settings > Port Settings.

[1] Set ICT Comm Port option to match the identified connected Port [5.1.1].

[2] Save the configuration with the Update / Restore Ports button.

A confirmation message "COM Ports have been updated and reopened" will be then be shown if the process was successful.

If known, the Node Number (Modbus network address) of the ICT 1000 transmitter to be configured. It can also be set with this function [7.3.1].

Node Number 254 can be used as a default and will always connect to a single ICT 1000 level transmitter irrespective of its actual programmed Node Number.

6. Overview of ISS software

6.1 Function groups

ISS : PSM Instrumentation Ltd : ICT Configuration Tool V2.610

Settings Network Display Tools Help

The ISS software is organised in five functional groups (tabs) 6.1.1

Settings configures:

- The PC / Laptop Comms Port and assign the Modbus address (Node Number) to communicate a specific ICT 1000 transmitter.
- mA Settings: Enable/Disable 4-20mA, define operating range
- Alarms: Low, High, Deviation & Control function.
- Unit Details: duty / application name / tag, Modbus address.
- Tank Profile: height <> volume table data.
- Overview: calculation chain for pressure <> product physical properties).

Network allows:

- Modbus Scanner: sequentially checks Modbus addresses for connected ICT 1000 transmitters.
- Network Test: repeatedly polls addresses to check connection integrity.

Display shows:

- Meter Display: real-time measurement and details of a single ICT 1000 transmitter.
- Dual Meter: real-time measurement for any two ICT 1000 transmitters plus trending.
- Multiple Unit Viewer: real-time measurement for a number of ICT 1000 transmitters plus trending.

Tools allows:

- ICT Memory Cloning: copy to file or write from file an ICT 1000 transmitter configuration.
- Datalogger: creates .xls log file on host PC / Laptop of measurements)
- ICT Test: simple test of comms and transmitter response).
- Zero Calibration: create and write a new zero measurement point for the ICT 1000 transmitter.
- Status: displays good / bad & active / inactive condition for ICT 1000 transmitter functions.

Help shows:

- About: software version and PSM Instrumentation contact details.
- Documentation: web address for the latest version of this manual.

6.2 Closing function group tabs

Port Settings ×	
	COM port selection & setup ICT COM port: COM 3 Node Number: 1 Update / Restore Ports

6.2.1 Management of tabs

Multiple tabs can be opened in the same instance. These can be made active by clicking on them and closed by selecting the X.

7. Settings (key functions)

7.1 mA Loop Settings

The ICT provides a standard 4-20mA current output, the output value can be modified by any Zero and Span parameter settings, and also subject to the Force Zero and Force Span parameters.

Zero and Span applies when the Analogue Output Source is set to scaled pressure only.

In cases where the Output Source is set to Percentage Level or Volume, the Zero and Range Offset parameters apply.



7.1.1 Configure zero (4mA) & span (20 mA)

[1] Enable the mA Mode: switches on the analogue output.

[2] Assign the mA Output to Scaled Pressure (mm H20 hydrostatic level). It can also be set over % Volume and % Level.

[3] Set the Zero & Span pressure points (Note that the Span is limited by the maximum pressure range of the ICT 1000 transmitter construction [7.2.2].[4] Set Zero and Span Limit Clamping: mA output will move and hold to 4 or 20 mA if the measurement is with the % programmed limit band for either.

[5] Write to ICT: configures the ICT 1000 transmitter.

[6] Set mA Test Mode: manually step the analogue output to specific % measurement range or specific mA values (for loop testing).

[7] Select the tick box for either High (22mÅ) or Low (3.5mÅ) as the indication that any of the selected alarm conditions have been met.

7. Settings (key functions)

7.2 Alarms

ttings Network Display Tool	s Help	
arms ×		
	Customer S/Nº: 0015020301 Modbus ID: 002	Refresh ALL Alarm Parameters from ICT
	Comms Ac	ttivity: 🔘
	Absolute Alarms	
	Alarm 1	Alarm 2
1	Enabled	Enabled
	Type Low 👻	Type Low 👻
	Source % Volume v	Source % Volume 👻
	Setpoint 0.0000 Volume (%)	Setpoint 0.0000 Volume (%)
	Hysteresis 0.0000 Same units as 'Setpoint'	Hysteresis 0.0000 Same units as 'Setpoint'
	Debounce 0 Whole Seconds (0-300)	Debounce 0 Whole Seconds (0-300)
	Current Status	O Current Status
	Latched Status Clear	Clear
	Write Settings to ICT (will also clear latch)	Write Settings to ICT (will also clear latch)
	Deviation Alarms	
	Pressure Alarm	Temperature Alarm
	Enabled (see 'Period' setting)	Enabled (see 'Period' setting)
	Period 0 Whole Minutes (1-240, 0=Off)	Period 0 Whole Minutes (1-240, 0=Off)
	Limit 0 Percent of Span	Limit 0 Percent of Span
2	Status Clear	Status Clear
	Write Settings to ICT (will also clear status)	Write Settings to ICT (will also clear status)

7.2.1 Two types of Alarm are provided; Rate of Change and Absolute

(1) Two Absolute Alarms are provided that may be configured. These can be set to operate with respect to either:

- Percentage Tank Volume
- Percentage Tank Level
- Temperature
- Scaled Pressure
- Non-scaled Pressure

Each Alarm may be set to operate as either a Rising or as a Falling Alarm. Rising Alarms trigger when their Source Value is greater than thei Set-point and Falling Alarms trigger when their Source Value is less than the Set-point. Each Alarm is provided with a definable Hysteresis value, which will prevent the Alarm de-activating until the Source Value has crossed a suitable threshold in the safe direction.

In addition, each Alarm is provided with a Debounce Timeout, which prevents the Alarm from triggering until the Alarm's limit has been active continuously for more than a certain number of seconds. This timeout is also applied to the Alarm's deactivation. (2) Two Rate of Change Alarms are provided. One uses the Pressure Value and the other uses the Temperature Value as its input. Both Alarms can be set to trigger if the rate of change exceeds a defined limit within a defined time period. Once one of these Alarms has triggered, its status will be saved into non-volatile memory, so that any intervening power-downs will not remove the alarm condition. The relevant alarm condition may be cleared via the Digital Communications facility only.

7. Settings (key functions)

7.3 Unit Details

ISS : PSM Instrumentation Ltd : ICT Configuration Tool V2.610	2 <u></u> 2	×
Settings Network Display Tools Help		
Unit Details 🗙		
Duty Name Application / tank name / tag # Set new Duty Name Input Filter Time 0.00 (Seconds) Set new Filter Time 3 ModBus Ident ModBus ID: 1 Set new ID 3 READ ONLY Information Sensor Type: Gauge Customer Serial Number: 0015020301 4 Factory Serial Number: 0000005274 4 PCB GRN: 0778107743 Firmware Version: 2.58 2 Calibrated Range (mmH2O): 10000 10000 10000		

7.3.1 Configure ICT 1000 transmitter unit details (identification)

[1] Set a Name for the ICT 1000 related to the application or tank function.
[2] Configure the unique Modbus address identity (range 1 > 253)
For an ICT 1000 transmitter which will be used in a mA analogue mode then this Ident can be set to 1 for the purposes of connection [5.2.1], configuration [7.2.1] and testing [10.1] functionality.

[3] Set the Input Filter Time (over a range of 0 ... 10 secs) : This variable acts to "dampen" the measurement and mA output response as the level measurement changes. The longer the Time, the greater the effect.

7.3.2 Read-only ICT 1000 transmitter unit details

[4] Information that is unique to each specific ICT 1000 transmitter manufactured and is programmed during assembly. It cannot be changed by the ISS software.

7. Settings (key functions)

7.4 Tank Profile

Default when tab opened

Profile X Customer S/N*: 0015020301 Modbus ID: 002 Tank Table No. % Level % Volume 00.0000 10.0000 10.0000 10.0000 10.0000 10.0000 0.0000 10.0000 0.0000 10.0000 0.000 0.0000 0.0000 0.000 0.000 0.000 0.0000 0.000 0	Customer S/№: 001502	10301 Modbus ID: 002	Tank Table	
Customer S/N*: 0015020301 Modbus ID: 002 Tark Table Introls 00.0000 0.0000 0.0000 10.0000 0.0000 Tark Data Specific Controls 20.0000 0.0000 0.0000 0.0000 Load Table from ICT Write Table to ICT Save Data to file Load Data from file 50.0000 0.0000 70.0000 0.0000 0.0000 0.0000 0.0000 0.0000 70.0000 10.0000 0.0000 10.0000 0.0000 120.0000 0.0000 120.0000 0.0000 150.0000 0.0000 150.0000 0.0000 150.0000 0.0000 150.0000 0.0000 150.0000 0.0000 150.0000 0.0000 150.0000 0.0000 150.0000 0.0	Customer S/Nº: 001502	0301 Modbus ID: 002	Tank Table	
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No Data No Data 190.0000 0.0000 20 0.0000 0.0000 210.0000 0.0000 22 0.0000 0.0000 220.0000 0.0000 22 0.0000 0.0000 220.0000 0.0000 22 0.0000 0.0000 220.0000 0.0000 24 0.0000 0.0000 240.0000 0.0000			18 0.0000	0.0000
No Data No Data 20 0.0000 0.0000 21 0.0000 0.0000 22 0.0000 0.0000 22 0.0000 0.0000 22 0.0000 0.0000 22 0.0000 0.0000 24 0.0000 0.0000 24 0.0000 0.0000 0.0000 0.0000			19 0.0000	0.0000
No Data No Data 210.0000 0.0000 220.0000 0.0000 220.0000 0.0000 230.0000 0.0000 240.0000 0.0000			20 0.0000	0.0000
No Data No Data 220.0000 0.0000 230.0000 0.0000 240.0000 0.0000 240.0000 0.0000			21 0.0000	0.0000
No Data No Data 230.0000 0.0000 240.0000 0.0000			22 0.0000	0.0000
240.0000 0.0000	No Data	No Data	23 0.0000	0.0000
Default Table to Linear			24 0.0000	0.0000
	No Data	No Data	210.0000 220.0000 230.0000 240.0000 Defat	0.000 0.000 0.000 0.000 0.000

7.4.1 Used to configure the tank shape

The table is used to enter %Level Vs %Volume values.

Each column must contain equal or incrementing values, decrementing values are not acceptable.

The "Number of Points Used" field should be set to the number of rows used to define the tank profile.

The buttons on this tab can be used to read the current information from the ICT as well as write any changes to it.

There are also buttons for reading / writing the data to / from file.

The "Symmetrical Tank Visualisation" area will display a 2 dimensional, symmetrical representation of the tank as configured in the profile table when the "Update Tank Visualisation" button is pressed. This can be used to check the settings within the profile table for sanity.



7. Settings (key functions)

7.5 Overview

Shows the chain of calculations being made by the ICT, in real time, as well as the results

The fields with a white background are editable whereas the fields with grey background are not.

Once a field has been edited the contents will turn red until the changes are written and will turn black once the write is complete

The highlighted green box, displays where in the chain the mA output is being calculated .

gs Network Displ	ay Tools Help					
/iew ×						
			Customer S/Nº: 0015020301	Modbus ID: 002		
Toternal calculation	functions and res	ulter TD 254 SN-00150203	01			
Notes:	-	uits, 10234 314-00130203	01			
1) Non	-Editable paramete	rs are read from the ICT (each time the comms indicator	lashes		
2) Use	r editable paramete	rs have white background	ds, edited parameters will be sl	own in Red, changes will not be r	eflected by ICT until values 'written' to ICT	
3) mA	Output field will be	highlighted with a Green b	sackground. Current mA outpu	t shown at the bottom		
			Comms Act	ivity: 🔘		
Refresh Screen / L	Jpdate ICT Controls					
			Defect where fee tot.			
			Refresh settings from ICT	Write changes to ICT		
ICT Calculations /	Settinas					
Dre	coure Toput (mmH2)) Specific Cr	avity Level from 9	encor (mm) Sencor o	ffrat (mm) Level in Tank (mm)	
409	7 1	1 0000	4087 1	ensor (min) Sensor o	4087 0	
(rez	ad from ICT)	(0.5 to 3.0		• Ľ		
×						
		Total Tank Height (mm)	% Tank Level		% Tank Volume	
	- 6	20000	20,4350	[%LEV <-> %VOL]	20,4349	
	÷ 1	(depth of tank)	(absolute)	X User Profile Table	(absolute)	
				Coce Tank Data tab above	2	
	Tank Capacity	User Units	Actual Volume	Specific Gravity	Mass of tank Contents (User Units)	
	100.0	NotSet	20.4	1.0000	20.4	
X		(max 8 chars)	(units defined by user)	K (editable above)		
mA Output (source	e highlighted in Gree	en above)				
		,				
			7.240mA	1 20 20/		
			7.240IIIA	1 20.0 %		

7.5.1 ICT Parameters

Pressure Input

This is the value the ICT is measuring in mmH2O

Specific Gravity

Enter the specific gravity value of the contents being measured

Level from Sensor (mm)

ICT is measurement in mmH2O with the SG factor applied

Sensor Offset (mm)

Enter the fitting height of the instrument from the bottom of the tank.

Level in Tank (mm)

ICT is measurement in mm, taking account of location in the tank

Total Tank Height (mm)

This field is used to enter the total height of the tank

% Tank Level

ICT is measurement in percent, taking account of the total tank height

Tank Table

The 4-20mA output can be linear or corrected for non-linear shaped tanks using the programmable look up table to provide a volumetric output

% Tank Volume

This is the value the ICT is measuring in percent, taking account of the tank table.

% Tank Capacity

This field is used to enter the total capacity of the tank.

User Units

This field is used to enter the units of measure. Maximum 8 characters.

Actual Volume

This is the volumetric value the ICT is measuring, taking account of the tank capacity.

Mass of Tank Contents

This is the value the ICT is measuring in mass.

Duty Name

This field is used to enter the user defined name of the instrument location. Maximum 32 characters.

8. Network

8.1 Modbus Scanner

ISS : PSM Instrumentation Ltd : ICT Configuration Tool V2.610		\times
Settings Network Display Tools Help		
Modbus Scanner 🗙		
Standard ModBus 🗸		
Start at ModBus address: 0		
End on ModBus address: 255		
Start Scan Stop Scan		
Timeout: 500 mS		
Scan Activities		
Scanning address:		
Idle		
· · · · · · · · · · · · · · · · · · ·		

8.1.1 The Modbus Scanner is used to identify the Modbus node addresses of ICT 1000 transmitters connected on the network [1] If the addresses are unknown, then set the scan range to the complete possible range of 0 > 255.

Use this function to identify the Modbus address (Node Number) of the ICT 1000 transmitter to be configured [5.2.1]

8.2 Network Test

ings Network [Display To	ools Help					
Test ×							
			Instructio 1. This ut 2. This ut 3. Enter t 4. Use the 5. Results 6. >90.0' 7. For val	hity allows the to lity should be ru he ModBus ID o e test start / sto are shown 'per % = Excellent, : id results, the to	esting of ICT ModBus c in on the PC / compute if each unit to be tested po button to initiate a n Node' as well as the o >75.0% = Good, >50. est should be left to rui	ommunications over a netwo r used as network master. d seperated by a comma intr ew test or halt the current t verall network reliability. 0% = Poor, < 50.0% = Una n until each unit has had at l	ork. o the ModBus ID's field. test. acceptable least 100 tes
3	Network Start A	Address 4	Register Cou	ModBus	ID's: 1,9,10 Inter-message delay (r	nS) 500 Timeout(m	1 2 5) 500 Retries 3 V ICT N/W Scan
					Sta	op Test	
	Unit ID	Test Count	Comms Errors	% Health	Status	mmH20	
	1	2	0	100.00	Excellent	-4.1	23.3
	9	2	0	100.00	Excellent	2.4	22.8
	10	1	0	100.00	Excellent	2.3	23.3
					Network Scar	n Progress (66%)	
	Networ	rk results			nethork bear	in regress (or rey	
					Total tes	t mesages: 5	
				,	Average (good) messag	ge turnaround time: 112mS	
				Netw	Total ork general health:	errors: 0	lient) 4
					Last network scan tim	e (total): 2.367 Seconds	

8.2.1 The Network Test function is used to check and report the health (connectivity & reliability) of the Modbus network

[1] Set the complete range of Modbus address nodes to include all the connected ICT 1000 level transmitters.

[2] This box MUST be ticked for scanning the ICT network

[3] The following settings should be used

Inter message delay (ms)	500
Timeout (ms)	500
Retries	3

[4] If the results fall below the 90% threshold, then check the wiring integrity of the network.

9. Display

9.1 Meter Display

ISS : PSM Instrumentation Ltd : ICT Configuration Tool V2.610	_		\times
Settings Network Display Tools Help			
Meter Display 🗙			
Primary Reading, Sensor type : GAUGE			
Customer S/N°: 0015020301 Modbus ID: 001			
-9.0 111111120.			
Unit Converter, show as: -9.8 mmH2O@20°C V			
Secondary Readings			7
4.0 mA 2 24.0 V 3 20.2°C / 68.4°F		4	
ICT History Readings			
Maximum Pressure: 7500.0 mmH2O Maximum Temperature: 27.3 °C Minimum Temperature:	<mark>15.0 °(</mark>	<mark>c</mark> į	5
Pressure Conversion Calculator			
Convert: 1 mmH2O@20°C v to mmH2O@20°C v Calculate = 1 mmH2O@20°C			
Multiplier = 1			
Open Pressure Conversion Calculator in separate window			

9.1.1 This page is used to display the measurement information from one ICT 1000 transmitter

- [1] The pressure measurement updated in real time
- [2] The mA output loop
- [3] The supply voltage
- [4] The process temperature (at the measurement cell)

[5] Maximum and minimum measurements recorded since the ICT transmitter was first connected.

These cannot be reset using the ISS software

9. Display

9.2 Dual Meter Display



9.2.1 This page is used to display two ICT transmitters at once and compare trends

The top display will default to the Modbus address set in port settings

[1] Untick auto scale to scale over actual tank height or transmitter nominal range in mmH20

[2] Select the amount of readings that will be displayed on the trend graph

[3] The graph can be saved to file

[4] Enter the Modbus address of the second ICT transmitter you would like to view

9. Display

9.3 Multiple unit Viewer



9.3.1 This page is used to display multiple ICT transmitters at once

- [1] Select Add units
- [2] Follow the on screen instructions
- [3] Select the amount of readings that will be displayed on the trend graph

[4] provides a numeric value of the reading and Highest measurement recorded, Lowest measurement recorded, Measurement average.

10.1 ICT Memory Cloning

ISS : PSM Instrumentation Ltd : ICT Co	onfiguration Tool V2.610
Settings Network Display Tools Help	
ICT Memory Cloning ×	
	Load / Save memory to / from file Save CloneFile Restore From CloneFile
	Activities / Status Terminate any action Clear Text
	Idle ************************************
	Active Instrument Identity Customer S/N®: Error Modbus ID: Error

10.1.1 Restore or Save the unit configuration

A full back up of the ICT configuration can be saved to file

If required the file can be restored to the unit

If incorrect changes are made to the unit during service, the original data can be requested from PSM Instrumentation and reloaded into the ICT

10.2 Data Logger

ettings Netwo	rk Display Tools Help	
atalogger ×		
	Last line logged	
	Comms Activity	
	Information Logged (temp, mmWater, etc)	
	Idle	
	Last data logged at	
6	Logging control Log File N 2 Log Sampling interval (ms) 250 Record sample: Every time 3 Include ms in TimeStamp Log comms errors Include ms in TimeStamp Log comms errors Log Multiple ModBus addresses Enter ModBus Addresses to log, separated by a comma Test Units Respond OK 5 Mensor Ramp Control Run Mensor Sloge Ubg & Down (off = up only) Min Max mm/s Inc Hyst Check Stop log when done	
	ICT Parameters to log ICT Parameters to log ICT Parameters to log ICT Parameters to log ICT Parameters to log ICT Parameters to log ICT Parameters to log ICT Parameters to log ICT Parameters to log ICT Parameters to log ICT Parameters to log ICT Parameters to log ICT Parameters ICT P	
8	Other Parameters to log Cother Parameters to log Log mA from Adams unit Cog pressure from Druck Cog pressure from Mensor	
	9 Start Logging	

10.2.1 Log a single or multiple ICT transmitters

- [1] Press the button to select where to save the excel file and name it
- [2] Define in millseconds the duration of each sample to be taken
- [3] Define when the sample is to be taken
- [4] Tick and enter Modbus address if more than one is required to be logged
- [5] Press to confirm a response from all units before logging starts
- [6] Only applicable if a mensor pressure source is connected
- [7] Tick which parameters you require to be logged
- [8] Only applicable if connected
- [9] Start the log and required press to again to stop logging

10.3 ICT Communications Test



10.3.1 Test the comms ports and ICT communication

- [1] Press to check if the port is available
- [2] Checks port settings
- [3] Confirms if communication with the ICT can be achieved

10.4 Zero Calibration

	×						
	Instruction 1) ICT Unit Note: Once	ns must be connected e started this proces	and powered, use of s must not be interru	ther tabs to confirm o pted! (may result in a	ommunications are ok. In unusable unit - hence	the forced backup)	
Cor	ntrols	1	Commence Calibrat	ion Restore fr	om backup		
Pro	ogress						
		Current action	Calibration adjustm	ents completed - che	ck before use.		
				0%	1		
		Acqu	ired current calibratio	on	4		
		Save	d Current Calibration				
		🖂 Acqu	ired current reading				
		Calib	ration				
		Vrot	e new calibration to u	unit			
		Store	ed new calibration in f	VVOL			
		- L T - L - L - L - L - L - L - L - L -					

10.4.1 Adjust zero (pressure input) calibration of the ICT 1000 transmitter

The ICT 1000 transmitter is factory calibrated during manufacture. Following installation the zero pressure reading of the units should be checked to ensure it is accurate and to remove any influences caused by the installation.



Ensure the transmitter powered on for 30 minutes and temperature stabilised to the operating environment.

[1] Will start the procedure. Ensure that the checks highlighted in the pop up dialogue box are made correctly or a Zero Calibration offset may be introduced. The user will be prompted to backup the original factory configured settings as a failsafe before the new calibration is performed.

NOTE

- For a Gauge transmitter enter 0 as the current pressure in mmH2O
- For an Absolute transmitter enter the actual barometric (atmospheric) pressure in mmH2O

Following calibration ensure that the Meter Display [9.1.1] is now reading zero.

10.5 Status



An overview of the programming and functional status of the 10.5.1 ICT 1000 transmitter

Provides an overview of any active alarms of fault conditions within the ICT

lf

- (6) Pressure Input Fail
- (7) Temp Input Fail
- (8) Loop Current Fail
- (9) Possible Loop Fault
- (10) EEPROM Config Block Fail
- (11) EEPROM Setup Block Fail
- (12) EEPROM Identity Block Fail
- (13) EEPROM Diag Block Fail

Are active contact PSM Instrumentation for further assistance

END OF MANUAL