

EA022 PROCESS CONTROL CALIBRATION ADAPTER

OPERATION MANUAL



EA022

Process Control Calibration Adapter

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Guarantee and service

Transmille Ltd. guarantees this instrument to be free from defects under normal use and service for a period of 1 years from purchase. This guarantee applies only to the original purchaser and does not cover fuses, or any instrument which, in Transmille's opinion, has been modified, misused or subjected to abnormal handling or operating conditions.

Transmille's obligation under this guarantee is limited to replacement or repair of an instrument which is returned to Transmille within the warranty period. If Transmille determines that the fault has been caused by the purchaser, Transmille will contact the purchaser before proceeding with any repair.

To obtain repair under this guarantee the purchaser must send the instrument in its original packaging (carriage prepaid) and a description of the fault to Transmille at the address shown below. The instrument will be repaired at the factory and returned to the purchaser, carriage prepaid.

Note :

TRANSMILLE ASSUMES NO RESPONSIBILITY FOR DAMAGE IN TRANSIT

THIS GUARANTEE IS THE PURCHASER'S SOLE AND EXCLUSIVE GUARANTEE AND IS IN LEIU OF ANY OTHER GUARANTEE, EXPRESSED OR IMPLIED. TRANSMILLE SHALL NOT BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS.



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EA022 Process Control Calibration Adapter



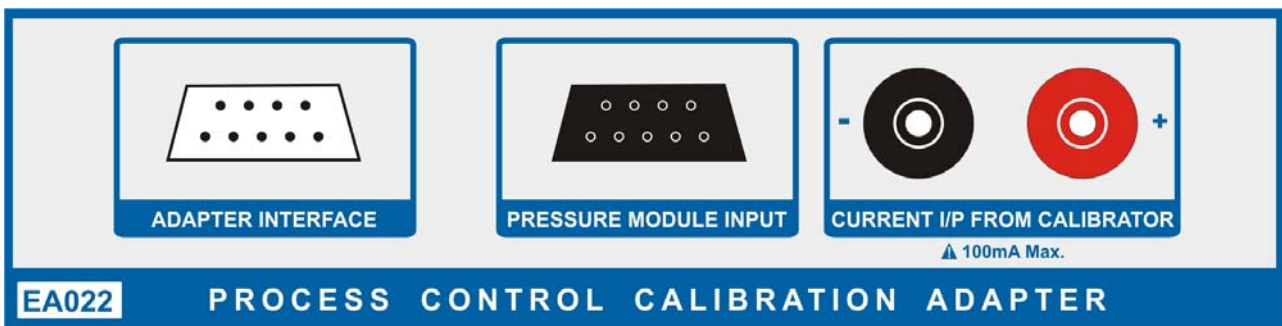
- **External Unit**
- **Adds Voltage, Current and Pressure Measurement Capabilities to the 1000 Series**
 - mV Measurement to 30V
 - mA Measurement to 30mA
 - Resistance Measurement to 50kOhms
 - 24V Loop supply for Transducers
 - Pressure module input for pressure monitoring
- **Built-In 24V Loop Supply**
- **Direct Control from the 1000 Series Front Panel**
- **Compatible With ProCal Calibration Software**

Main Features

Dedicated External Adapter For Expanded Functionality

The EA022 adapter expands the functionality of the 1000 series calibrator to enable the calibration of process control calibrators & pressure transducers. This compact adapter also features a 24V loop supply and is the ideal addition to expand workload capabilities for the 1000 Series ultra portable calibrator.

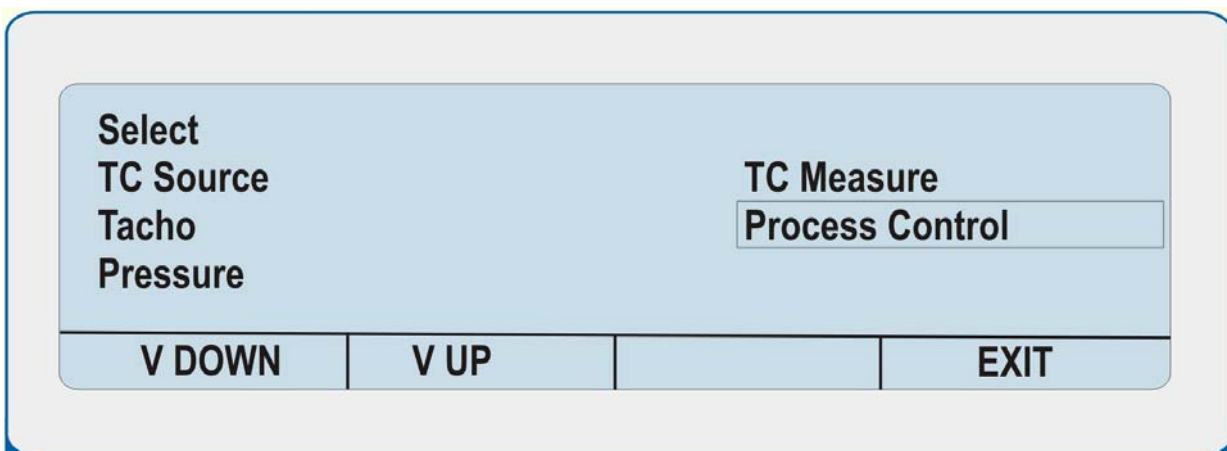
A dedicated pressure module input on the rear of the adapter also allows pressure monitoring for transducer calibration.



Intuitive Operation & Control

Easy selection of measurement modes

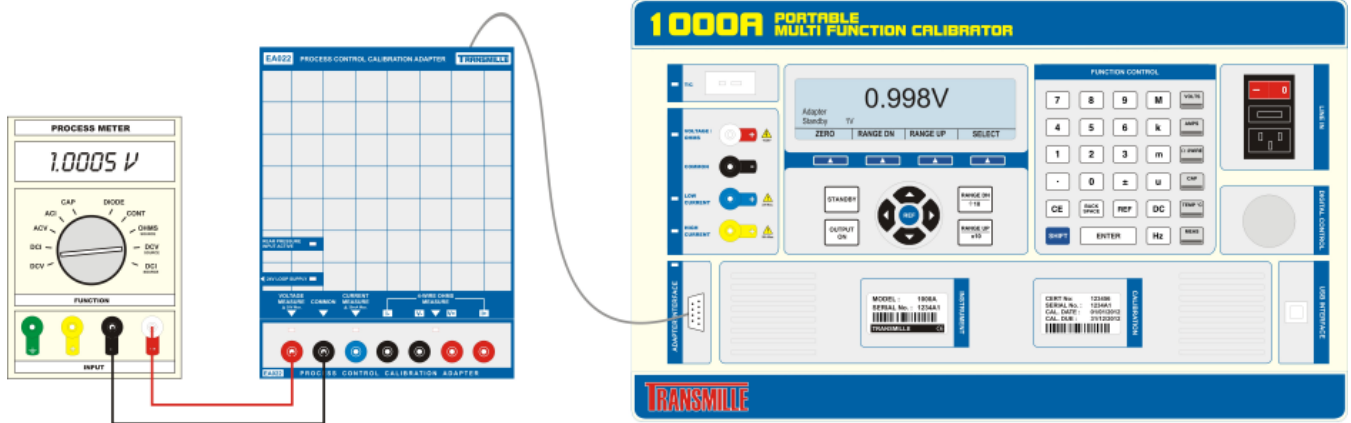
Quick and easy to use, simply plug in the process control calibration adapter into the 1000 Series calibrator, select EA022 and select a measurement function.



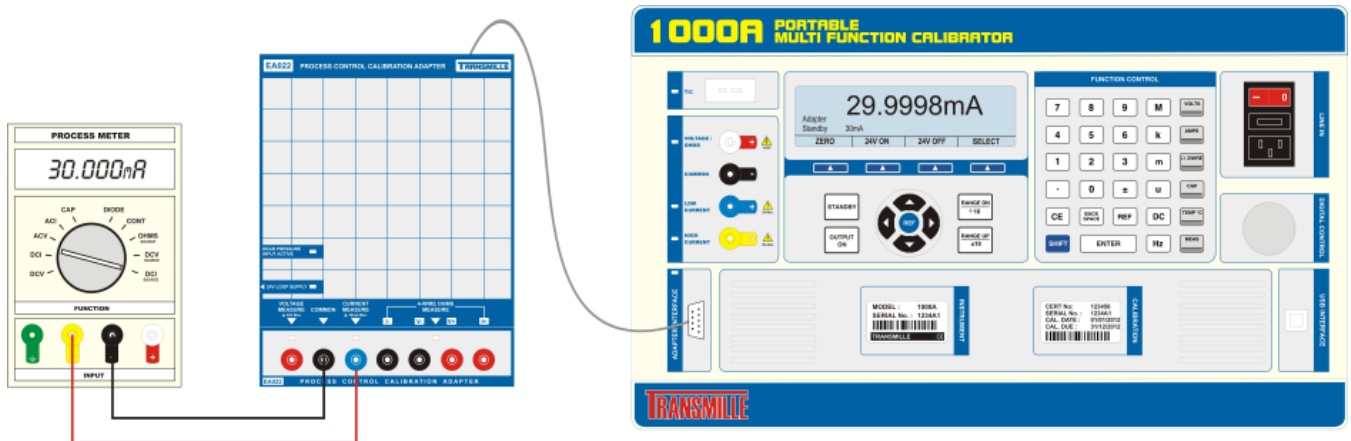
Connections Overview

Using the supplied adapter connection lead (9 way 'D' type to 9 way 'D' type), connect the process control calibration adapter to the adapter interface connection on the front panel of the 1000 series calibrator.


Voltage Measurement Function Connection

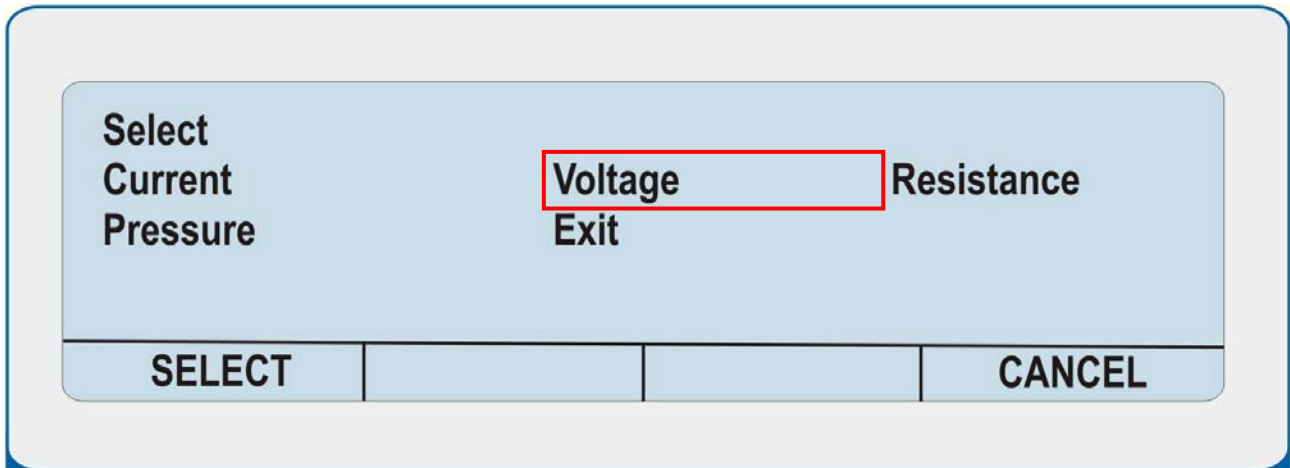


Current Measurement Function Connection

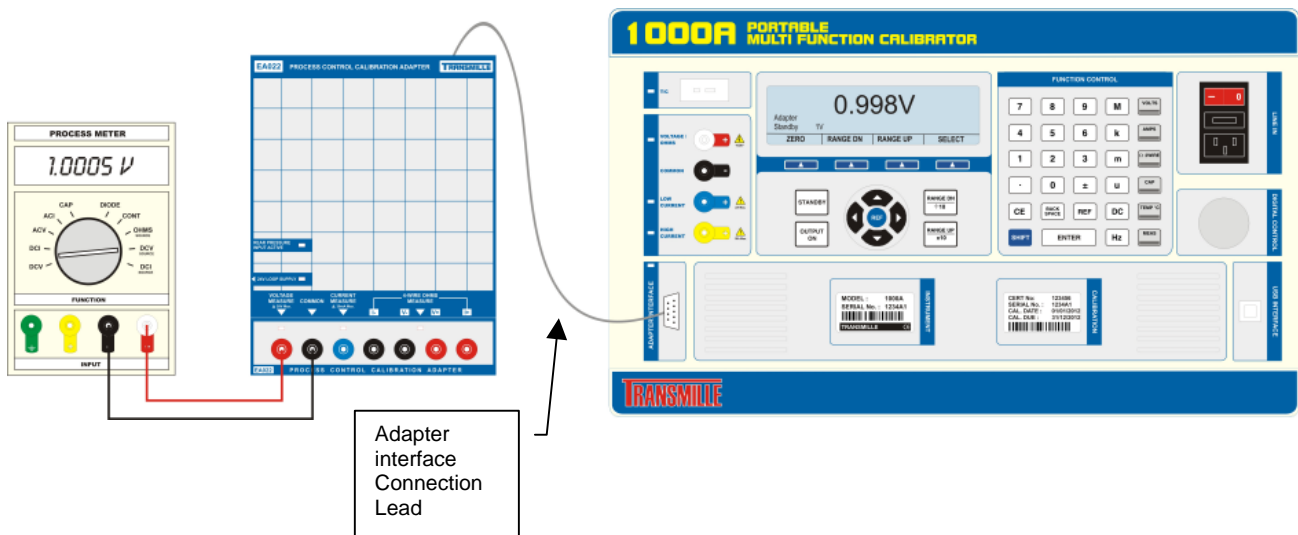


Using the Voltage Measurement Function

To use the voltage measurement function, press the  key and select the following :

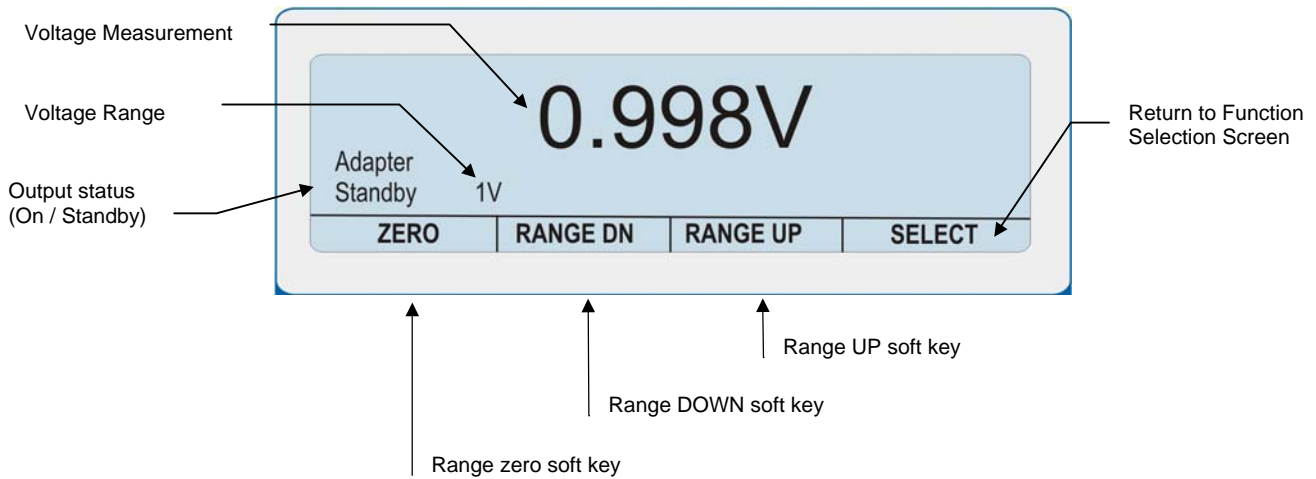


Connecting the UUT



Using the Voltage Measurement Menu


On entering voltage measurement mode the display below will be shown indicating the currently selected range and output status :

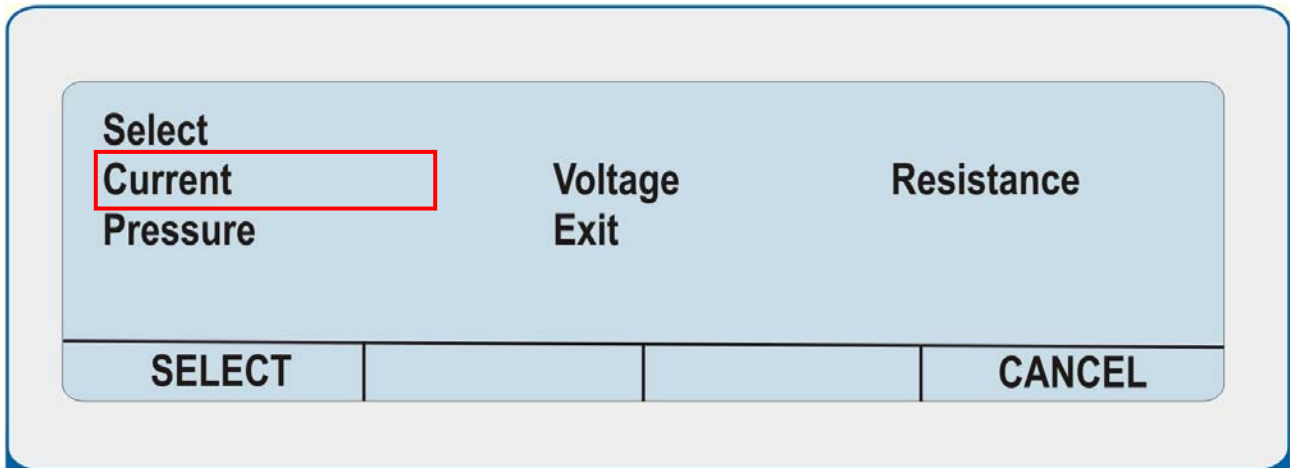


Once in voltage measurement mode, the menus available at the bottom of the screen will change to reflect the valid options for this function :

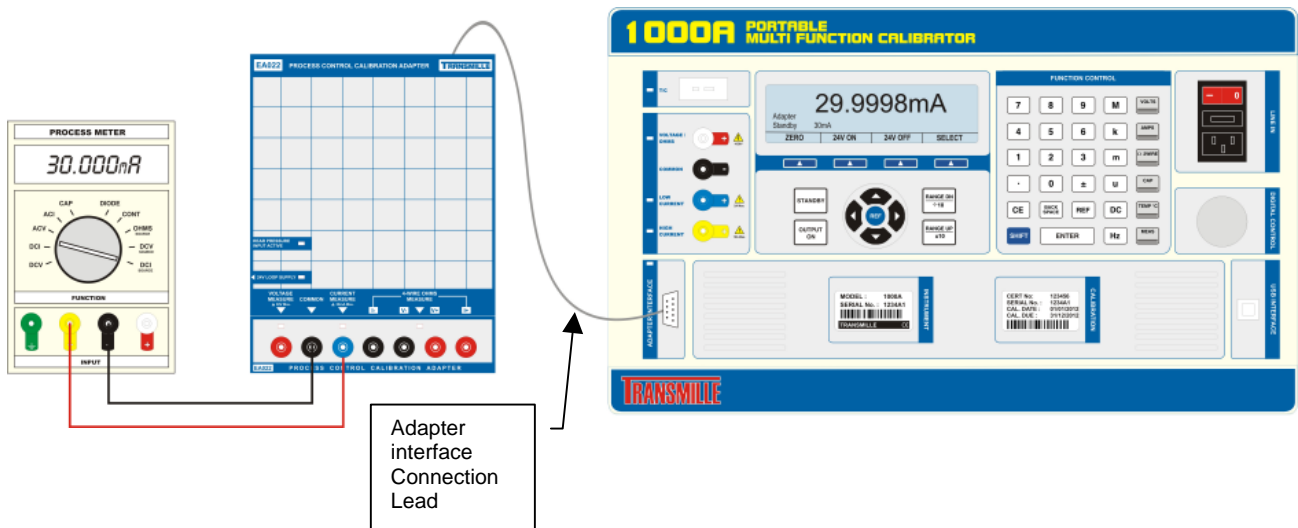
- ZERO** Allows the residual voltage to be zeroed (nulled) prior to measurement
- RANGE DN** Selects the next range down (10V -> 1V -> 100mV)
- RANGE UP** Selects the next range up (100mV -> 1V ->10V)
- SELECT** Return to the function selection screen

Using the Current Measurement Function

To use the current measurement function, press the  key and select the following :

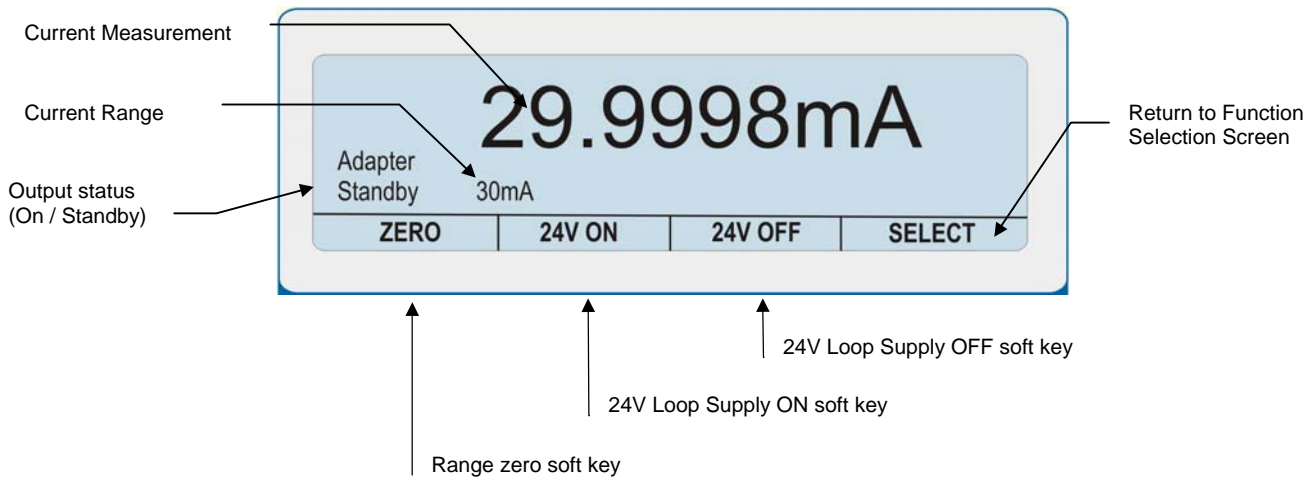


Connecting the UUT



Using the Current Measurement Menu

On entering voltage measurement mode the display below will be shown indicating the currently selected range and output status :




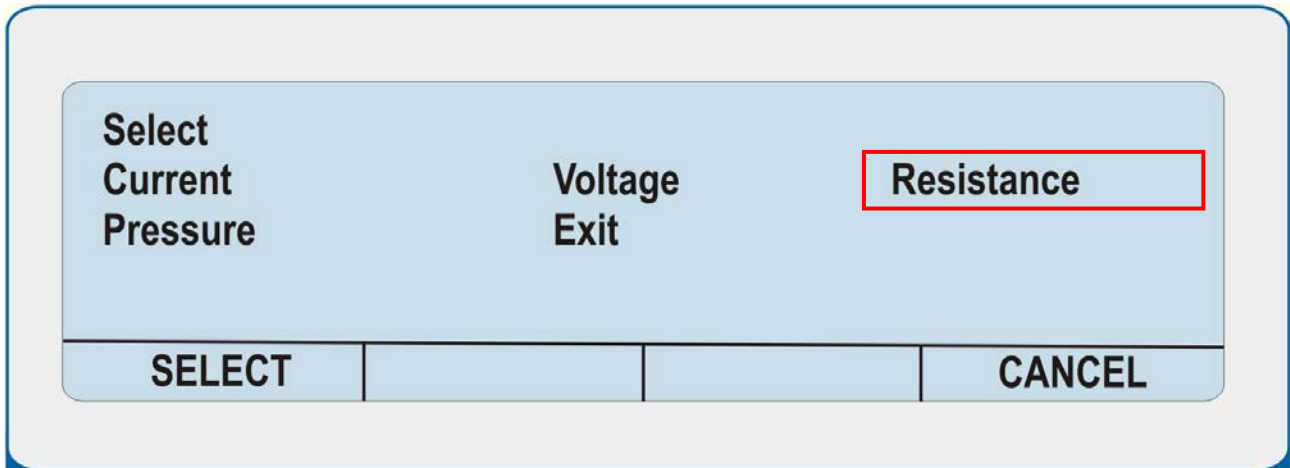
Once in current measurement mode, the menus available at the bottom of the screen will change to reflect the valid options for this function :

- | | |
|----------------|--|
| ZERO | Allows the residual current to be zeroed (nulled) prior to measurement |
| 24V ON | Switches ON the 24V Loop supply if required |
| 24V OFF | Switches OFF the 24V Loop supply |
| SELECT | Return to the function selection screen |

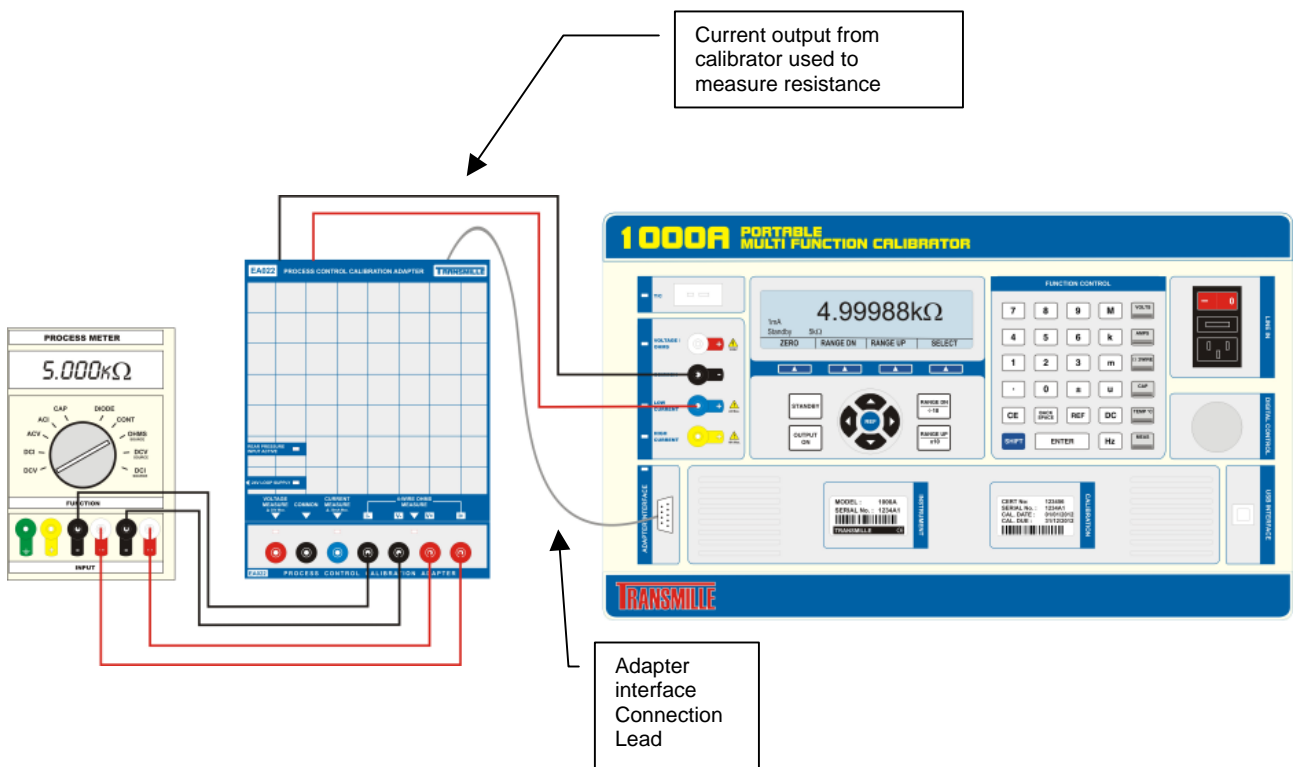
The 24V Loop supply can be used to energise the transducer under test, without the need for an externally sourced voltage supply.

Using the Resistance Measurement Function

To use the resistance measurement function, press the  key and select the following :

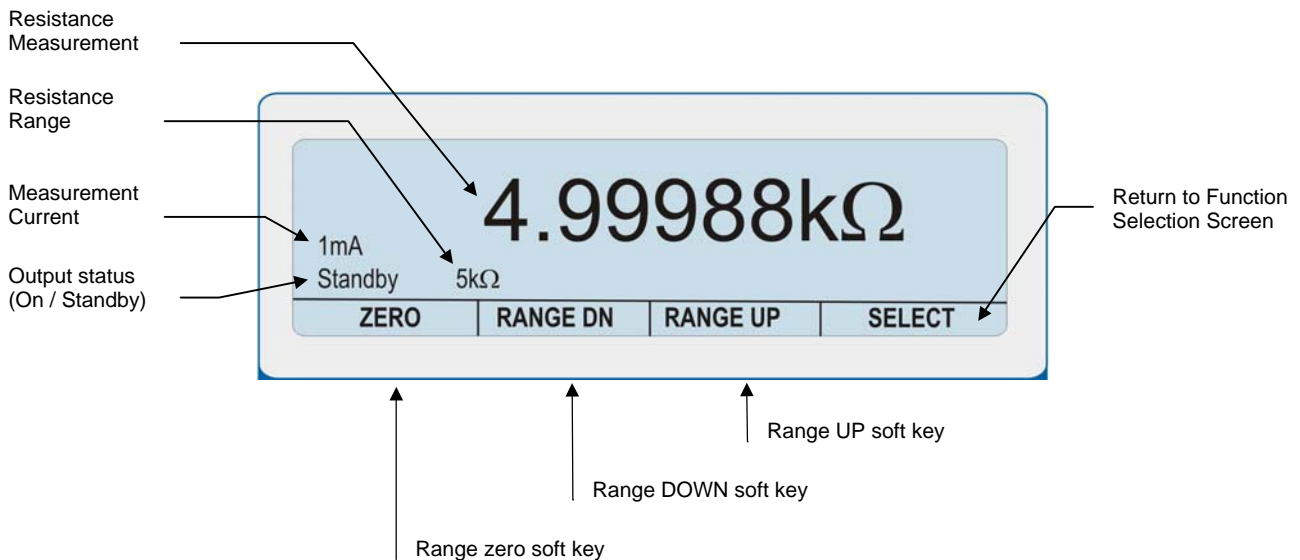


Connecting the UUT



Using the Resistance Measurement Menu


On entering voltage measurement mode the display below will be shown indicating the currently selected range and output status :

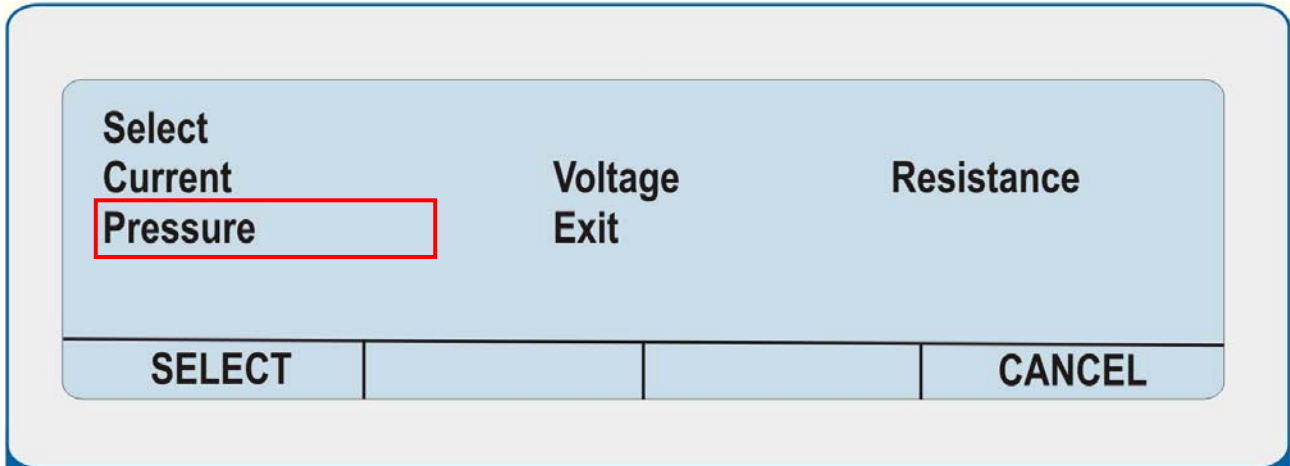


Once in current measurement mode, the menus available at the bottom of the screen will change to reflect the valid options for this function :

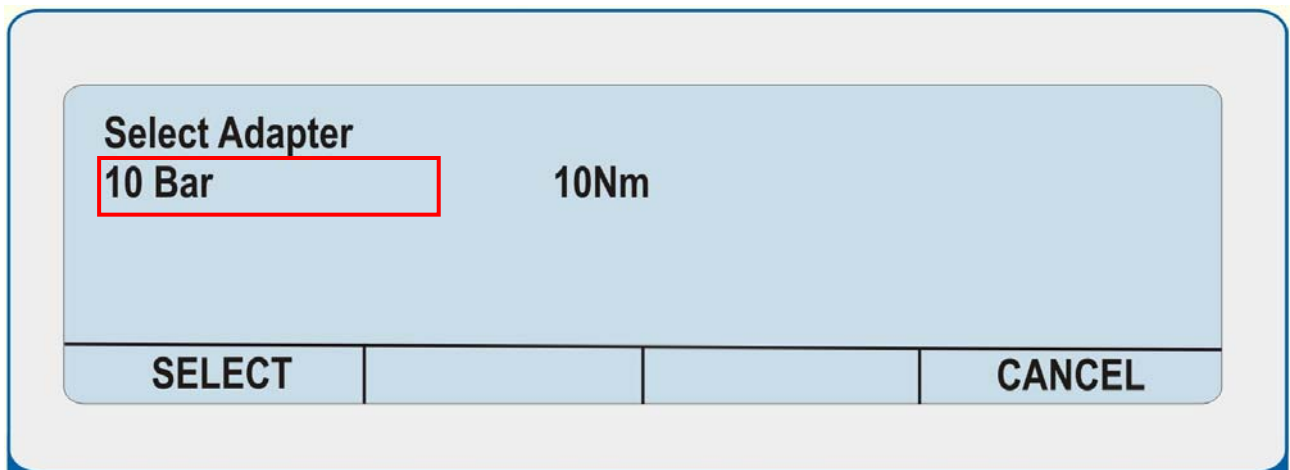
- | | |
|-----------------|---|
| ZERO | Allows the residual resistance to be zeroed (nulled) prior to measurement |
| RANGE DN | Selects the next range down (50kΩ -> 5kΩ -> 500Ω -> 50Ω) |
| RANGE UP | Selects the next range up (50Ω -> 500Ω -> 5kΩ -> 50kΩ) |
| SELECT | Return to the function selection screen |

Using the Pressure Measurement Function Using TPMxx Pressure Modules

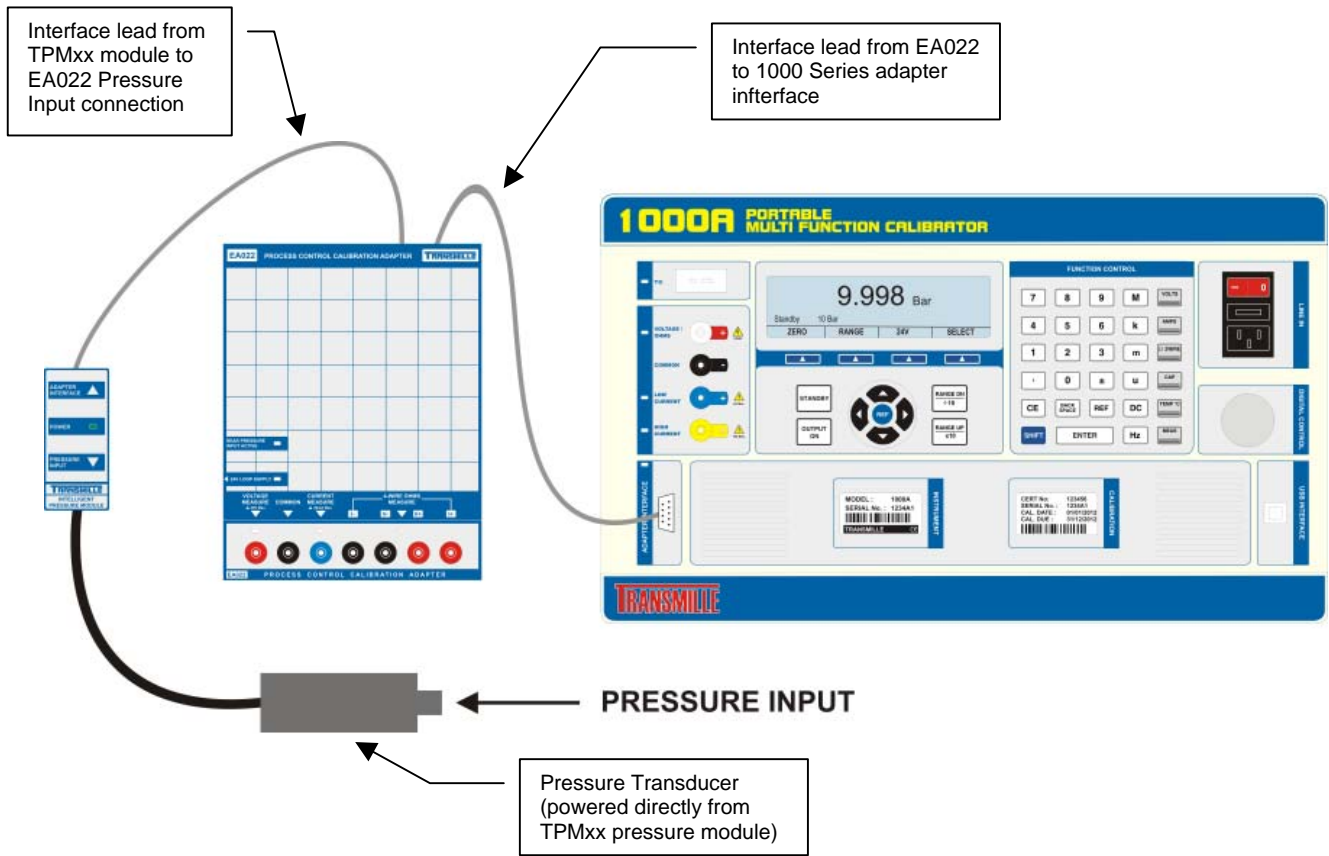
To use the pressure measurement function, press the  key and select the following :



Select the required adapter from the list (dependant on modules registered)
then press the blue ENTER key on the 1000 Series front panel.

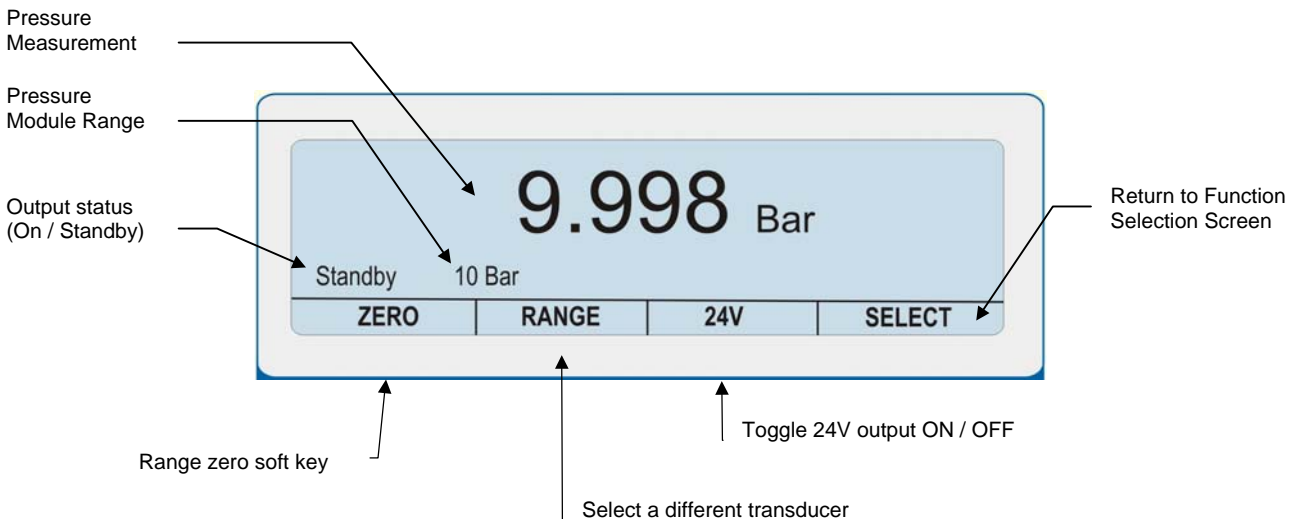


Connecting the UUT



Using the Resistance Measurement Menu

On entering voltage measurement mode the display below will be shown indicating the currently selected range and output status :



Once in pressure measurement mode, the menus available at the bottom of the screen will change to reflect the valid options for this function :

ZERO

Allows the residual pressure to be zeroed (nulled) prior to measurement

RANGE

Select a different transducer

24V

Toggle 24V Loop Supply ON / OFF

SELECT

Return to the function selection screen

Automated Calibration using ProCal

Calibration times using the process control calibration adapter to calibrate process control instrumentation can be significantly reduced by using the ProCal calibration software available from Transmille which allows a pre-defined sequence of tests (known as a procedure) to be set up. This allows the computer to automatically step through these tests, control the calibrator, set the correct outputs and record the amount of deviation in relation to the instrument's specifications.

Care & Maintenance

The only maintenance instructions for the adapter is periodic cleaning.
See below for details on the cleaning procedure and precautions for handling.

Cleaning the Adapter

To keep the external enclosure of the adapter in good condition, clean the outer case with a soft cloth. Do not use any liquids in cleaning the enclosure – removal of surface dust is all that is recommended.



Do not use cleaning fluids or solvents for cleaning as these may damage the enclosure and affect the plastic materials used in the adapter.

Handling Precautions

The adapter is designed for mechanical stability, but should not be subjected to excessive shock or be dropped. Transportation is recommended using the original packaging with avoidance of extreme changes of temperature.

Servicing Information

The adapter is provided certified from the factory, and uses precision components and are not user repairable. If the adapter is damaged it should be returned to the factory for repair and recalibration.