

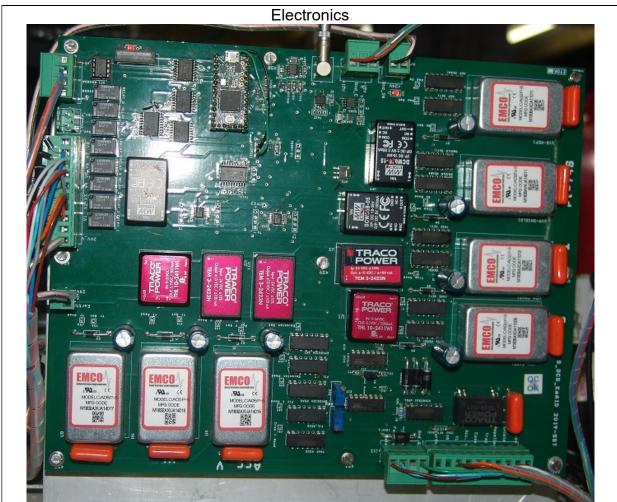
The instrument is primarily useful for the vacuum leak testing of UHV components, chambers, enclosures, vacuum sealings, large experimental facilities etc.

SALIENT FEATURES

- Measurement range : 10(-4) torr-I/s to 10(-10) torr-I/s & 10(-7) torr-I/s(sniffer).
- Response time: ~ 1sec.
- Modes of operation: Vacuum, Sniffer.
- Fully automatic operation.

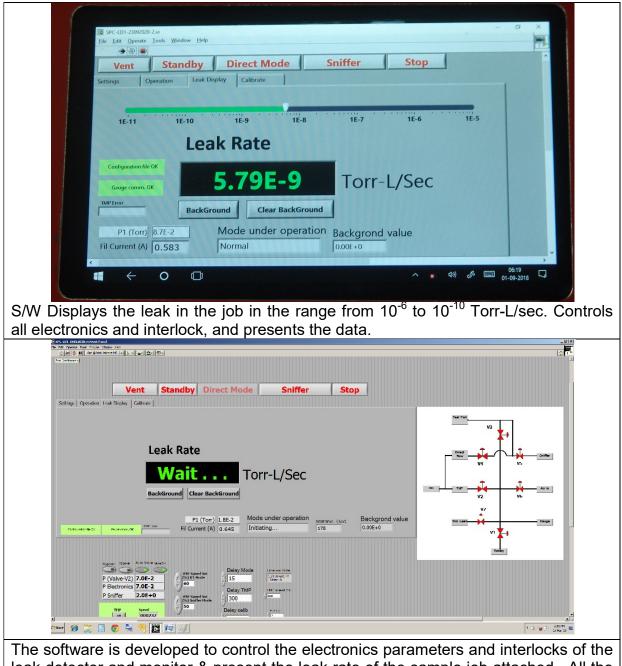
APPLICATIONS

For leak measurement of vacuum components used in accelerators, analytical instruments, various plants using gaseous system, pressure chambers etc.



An electronics card developed to control & interlock all electronics parameters of Helium Leak Detector (HeLD) and to monitor the data & present it to the control software (PC) over a serial bus.

Microcontroller based control card is developed to control the floating electronics (isolation > 500 V) of the ion source of the HeLD and the interlock valves to operate it in different modes, collects the leak information and communicates to control software in the computer over serial bus in Modbus protocol.



The software is developed to control the electronics parameters and interlocks of the leak detector and monitor & present the leak rate of the sample job attached. All the electronics supplies, interlock valves are configurable through software. Software communicates with electronics card, TMP and gauges over serial bus and operates the interlocks as per the logic. There are multiple modes of operation viz. indirect or counter-flow mode, direct mode and sniffer mode. Provided calibration facility for the instrument with the standard leak. The human-man-interaction (HMI) is through a 7" touch screen.

Date of completion: Oct 2020 (continuous further improvements)

Technology of Leak Detector has been transferred to the industry.