Wireless Glove Integrity Tester

Groyne Tech

be in vision

Specialized in Design of Containment System

Presented by GroyneTech

Contents to be cover

- What is GroyneTech Wireless glove integrity tester?
- Benefits of G-WGIT.
- Specification
- Configuration Diagram
- Working procedure.
- Components
    - PLC-HMI
    - Pressure transmitter
    - Temperature transmitter
    - RFID Reader
    - PUMP
    - Li-lon Battery
    - Wi Fi

What is G-WGIT?

The **"GroyneTech Wireless Glove Integrity Tester"** is the testing, measuring equipment use for Leak testing purpose of Gloves/Sleeve assembly, with its gauntlet placed in barrier system without using external cables or tubes and external pressure.

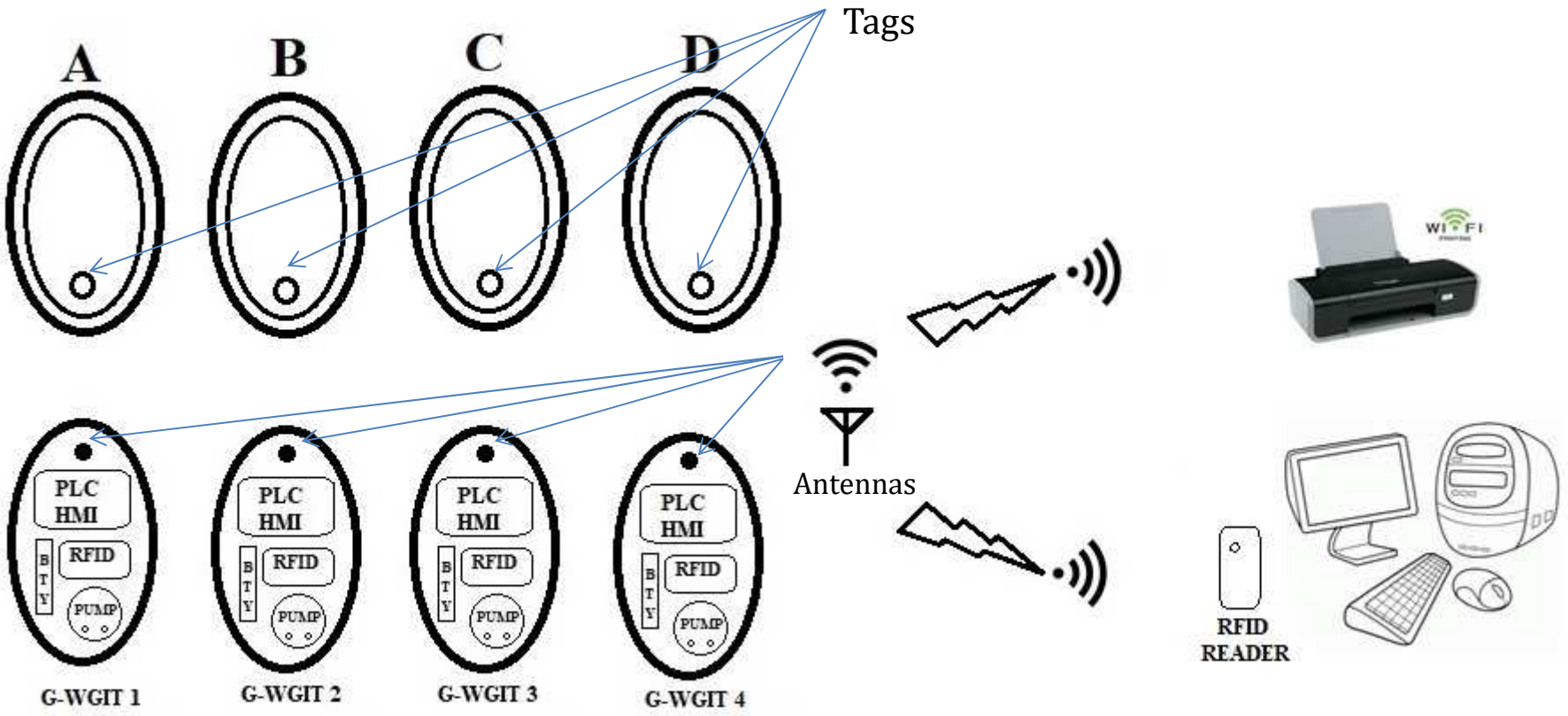
Benefits of G-WGIT

- No cables or tubes are required.
- Integrated pump for filling the pneumatic seal and the glove (no external source of compressed air required)
- High precision pressure transmitter for reading the internal glove pressure.
- High precision temperature sensor for reading the internal glove Temperature.
- Data transfers from the glove ports to a laptop using Wi-Fi technology.
- Automatic glove port identification using RFID technology.
- Li-Ion battery, globally recognised and transferable high capacity standard battery.
- Data storing and printing.
- User management according to its levels.

Specification

Power	24dcV
Make	GroyneTech
Battery	Rechargeable li-ion battery
Testing Method	Pressure Decay (As per ISO 10648 – Part II)
Operating System	HMI-PLC
Display	Color touch 3.5”
Report data saving and Security	Yes
Authorised levels access	Yes
Capacity	One station multiple G-WGIT
Model	GroyneTech Wireless Glove Integrity Tester (G-WGIT)

Configuration Diagram



Working Procedure

- When G-WGIT placed over the glove port , the RFID antenna read the respective tag gives the signal to the reader , After successfully matching of glove port and G-WGIT ,then **Test cycle** start.

- **Test cycle**

  There are following test parameters are then defined in here
  - Inflection time
  - Stabilization Time
  - cycle Time

- After ending of test procedure , the results are show in HMI screen & also in PC. The report results can be stored and print.

Components

- PLC-HMI
- Pressure transmitter
- RFID Reader
- Temperature sensor
- MINI - PUMP
- Li-Ion Battery

PLC-HMI

HMI	Size:3.5” High quality colour touchscreen Built in alarm
PLC	I/O options include digital , analog ,high speed ,Temp. Auto-tune PID , up to 24 independent loops. Micro SD card –log , backup ,clone. Function block.
Communication	1mini USB. 1 RS485/RS232
Protocols	MODBUS TCP SNMP v1 CANopen,UniCAN,CANlayer2
Power	24DCV

Pressure Transmitter

STANDARD FEATURES

- Signal output : 4-20 mA, 2-wire
- Supply voltage : 10-30 VDC
- Electrical connection : DIN 43650 with plug connector.
- Accuracy (non-linearity, hysteresis & non-repeatability) : <±0.5% span.
- Stability (1 year) : ±0.25% span

Temperature Sensor

Standard specification

Element	Pt-100, 3-wire
Accuracy	Class A / Class AA / Higher
Range	-50 to 250°C
Wetted parts MOC	SS316L (1.4404)
Sheath diameter	6mm (standard) / 8mm / 10mm / 12mm
Sheath length	Upto 300mm
Termination	W.P die-cast aluminum head with threaded cap & chain, single cable entry
Cable gland	½" BSP, Single compression
Process connection	Threaded, fixed fitting

RFID

Name	Reusable plastic UHF RFID Tag
Type	Passive , Read/write
Size	75*33mm
Frequency	860-960MHz
Chip protocol	UHF EPC GEN class-1
Read Range	10cm to 7m(Depending on reader/antenna)
EPC Memory	96 bits
Data rate upward	40-160Kbps

Antenna

RFID Reader

Tags

MINI - PUMP

- The pump body is sealed to prevent incidental moisture and dust from entering. Able to operate in a wet environment. Self priming function allows it to be mounted above water tank.
- The pump in combination with a low backpressure water system can exceed all expectations.
- Sealed switches and electro coating to anti-corrosion. Soft rubber mounting tabs to reduce vibrations. When installed correctly.
- The patented design delivers smooth & consistent flow at all ranges of operation, while drawing low current.
- High quality, durable and sturdy with long time to use.

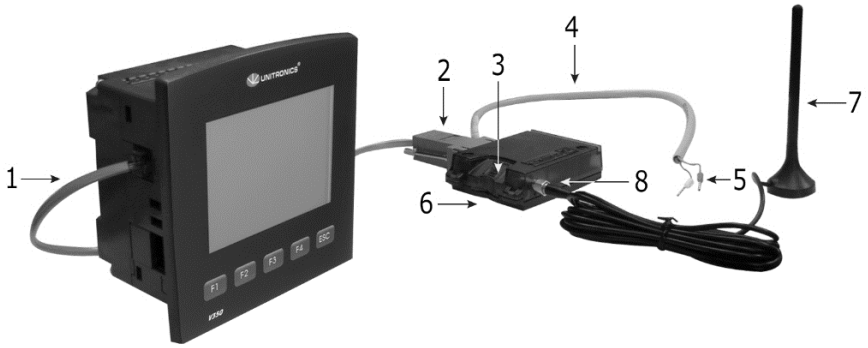
Battery

- 24 volts 7.8 ah lithium ion battery with BMS
- high quality battery casing.
- Very Small in size and weight compared
- Full Charge in 40 to 90 minutes.
- Long life with full capacity for up to 1000 charge cycles
- 30X Li-ion 3.7V 2200mAh cells.
- Inbuilt charge protection circuit
- Low maintenance

WIFI

Specification

Modem



- Power voltage range 8 - 30VDC
- Status indication Green/Yellow LED
- SIM card 3V and 1.8V SIM card
- GSM frequency 850/900/1800/1900 MHz
- Weight 130g (4.58 oz.)
- Dimensions 115 x 86 x 26mm (4.52” x 3.38” x 1.02”)
- Operational temperature -30 to 65°C (-22 to 149°F)
- Storage temperature -40 to 90°C (-40 to 194°F)
- Antenna connector type SMA female

Antenna

- Antenna frequency- Quad band GSM:850/900/1800/1900/2100 MHz

THANKS FOR YOUR ATTENTION

For more information
contact GroyneTech