



THERMAL VALIDATION SYSTEMS

for the Pharmaceutical / Biotechnology Industry

Real Time Datalogger

XpertLog® GMP - RF



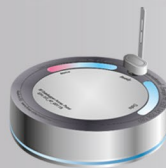
Humidity



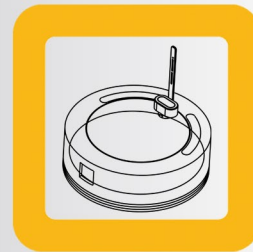
Temperature



Pressure



Access point



Suitable applications:

- Autoclaves / SIP
- Sterilization tunnels
- Freeze-dryers (lyo cabinets)
- Cold room / ICH stability rooms
- Ovens / Freezers / Refrigerators
- Incubators / Warehouses, etc...

XpertLog® GMP - RF elevates thermal validation process to a whole new level:
 Highly efficient: increase production efficiency by cutting down validation time
 Highly reliable: real time data during validation process
 Impressive accuracy: ±0.1°C from -90 to 140 °C
 Data integrity: FDA 21 CFR Part 11

- + Network ready: multiple users may simultaneously share the same data base
- + Remote factory calibration on users site

Technical specifications:

Logger type	Temperature	Humidity	Pressure
Sensor - type	4 wires PT-100	4 wires PT-100 capacitive	4 wires PT-100 absolute pressure
- flexible	PTFE / SS 19" (480 mm)		
- rigid	1"(25 mm) / 6"(150 mm)	1"(25 mm)	1"(25 mm)
- customized	up to 39" (1000 mm)	19" (480 mm)	19" (480 mm)
Range	- 90 °C to 140 °C	- 35 °C to 100 °C ; 10 - 95 % RH	- 40 °C to 140 °C ; 0.01 to 5 bar abs.
Accuracy	± 0.1 °C from -90 to 140°C	± 0.1 °C from - 35 °C to 100 °C ; ± 1.2 % RH @ 23°C ; ± 2.0 % RH over range 20 to 45°C* ;	± 0.1 °C from -40 to 140°C ± 10 mbar @ 0.01; 1& 2 bar abs. ± 15 mbar @ 0.1; 0.2 & 3 bar abs.
Wireless range	400 feet (121 m) line of sight	400 feet (121 m) line of sight	400 feet (121 m) line of sight
Weight	85 g battery included	105 g battery included	155 g battery included
Antenna	internal	internal	internal
Battery	2 lithium batteries, (user replaceable)	2 lithium batteries (user replaceable)	2 lithium batteries (user replaceable)
Size - diameter	60 mm	60 mm	60 mm
- height	30 mm	76 mm	85 mm
Sampling rate	1 sec to 24 hours	1 sec to 24 hours	1 sec to 24 hours
Logger Update Rate	5 sec to 24 hours - user configurable	5 sec to 24 hours - user configurable	5 sec to 24 hours - user configurable
Memory capacity	32,000 data points	16,000 rh / 16,000 temp.	16,000 p / 16,000 temp.
Battery lifetime	Up to 6 month - based on user usage		
Internal clock drift	4 sec / 24 h @ 23 °C		
Access point	USB to computer		
Material	Ketron peek - FDA compliant		
Radio frequency	2.4 GHz ISM band		
Enclosure	IP-68		
Calibrations	Factory: traceable NIST / COFRAC - ITS-90 coefficients reside in internal memory User: Close loop user calibration, on user site, using provided validation software XpertLog.		
Certification	EMC : EN 60601-1-2 / 2007 RF : EN 300440-2 v1.3.1 (2009-03) Health Safety : EN 60950-1/2006 * Temperature compensated between 20 to 45°C - can be extended to higher temperatures		



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