

THERMAL VALIDATION SYSTEMS

for the Pharmaceutical / Biotechnology Industry

Real Time Data Logger

XpertLog® GMP - RF



Access point



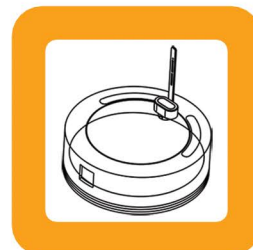
Temperature



Humidity



Pressure



XpertLog® GMP - RF elevates thermal validation process to a whole new level:
 Highly efficient: increase production efficiency by cutting down validation time
 Highly reliable: never loses data during the cycle runs
 Real time: sequential readings from unlimited number of loggers
 simultaneous readings from up to 20 loggers
 Impressive accuracy: ±0.1 °C from -90°C to +140°C
 Data integrity: FDA 21 CFR Part 11

- + Network ready: multiple users may simultaneously share the same database
- + Loggers calibration on users site
- + Remote activation, SCADA connectable

Technical Specifications:

Suitable applications:

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

Logger type	Temperature	Humidity & Temperature	Pressure & Temperature
Sensor element - flexible - rigid - customized	4 wires PT-100 - PTFE / SS 480 mm (19") - 20 mm (0.8") / 150 mm (6") - up to 1000 mm (39")	capacitive / 4 wires PT-100 - 20 mm (0.8") - 480 mm (19")	absolute pressure / 4 wires PT-100 - 20 mm (0.8") - 480 mm (19")
Operating range - standard: - extended:	-90 °C to +140 °C -90 °C to +350 °C *	0 to 100 % RH non condensing -40 °C to 100 °C	0.01 to 5 BarA -40 °C to 140 °C
Accuracy	±0.1 °C from -90 to 140°C	±2.0 % RH, 0% to 100% non condensing at 20 to 45°C **	±10 mbar ≤ 3 BarA @ 130°C ±30 mbar > 3 BarA @ 130°C ±20 mbar ≤ 3 BarA @ 23°C ±50 mbar > 3 BarA @ 23°C ±0.1 °C from - 40 to 140°C
Memory capacity	32,000 data points	±0.1 °C from -40 °C to 100 °C 16,000 rh / 16,000 temp	16,000 p / 16,000 temp
Sampling rate	1 sec to 24 hours	1 sec to 24 hours	1 sec to 24 hours
Internal clock drift	4 sec / 24 h @ 23 °C	4 sec / 24 h @ 23 °C	4 sec / 24 h @ 23 °C
Mechanical			
Material	Peek 1000 - FDA compliant	Peek 1000 - FDA compliant	Peek 1000 - FDA compliant
Enclosure	IP-68	IP-51 & IP-68	IP-68
Weight	115 g (4.06 oz)	95 g (3.35 oz)	142 g (5.01 oz)
Diameter	65 mm (2.56")	65 mm (2.56")	65 mm (2.56")
Height	55 mm (2.17")	62 mm (2.45")	87 mm (3.43")
Power	2 x Lithium batteries, 0.35 g/each Lithium content, classified UN3091 under IATA DGR section 3.9.2.6, compliant with ICAO/IATA packing instructions 970		
Battery lifetime	Up to 6 months, based on usage		
Wireless range	400 feet (121 m) line of sight		
Radio frequency	2.4 GHz ISM band		
Access point	USB to computer		
Calibrations	Factory: traceable NIST / COFRAC - ITS-90 coefficients stored in the internal memory User: close loop calibration, using XpertLog® software		
Certification	FMC: EN 60601-1-2 / 2007 RF: EN 300440-2 v1.3.1 (2009-03) Health Safety: EN 60950-1/2006		

* With thermal shield; ** Custom points available at request

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Real Time Data Logger

XpertLog® GMP - RF
Available Models



GMPL RF

Temperature logger with customizable rigid sensor



GMPF RF

Temperature logger with flexible sensor



GMPF LP RF

Low profile temperature logger



GMPF P RF

Pressure and temperature logger with flexible temperature sensor



GMP Bio RF

Temperature logger with flexible sensor



GMP Bio SS RF

Temperature logger with flexible stainless steel memory form sensor



GMP Mini RF

Temperature logger designed to measure temperature inside vials *



Custom RF logger

Custom designed wireless data logger for the freeze-drying process

* restrictions apply to vials diameter and battery life