

Pace Scientific XR450 Pocket Logger: Logger Configuration vs Battery Life

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All sensors in these examples are 100% powered by the XR450's U9VL internal battery.
Using a standard 9V Alkaline battery will reduce Battery Life time by about 50%.

Configuration 1: One channel ON: any 1 sensor/signal: temperature probe, resistance or DC voltage.

Sample Rate	1 hour	15 min	5 minutes	1 min	10 sec	2 secs
Battery Life	4.7 years	4.6 years	4.5 years	4.2 years	2.8 years	1.1 years
Max Log Time	9.8 years	2.5 years	9.8 months	60 days	10 days	2.4 days

All configurations below use all 4 channels (each configuration logs four physical parameters)

Configuration 2: Mix & match any combination of 4: temperature probes, resistances or DC voltages.

Sample Rate	1 hour	15 minutes	5 minutes	1 minute	10 seconds	2 seconds
Battery Life	4.7 years	4.6 years	4.5 years	4.2 years	2.8 years	1.1 years
Max Log Time	2.5 years	7.4 months	2.5 months	14.9 days	2.5 days	14 hours

Configuration 3: Any one: P350 or P600 Series Pressure Sensor, plus

any combination of 3: temperature probe, resistive or DC voltages (E terminal: 2 mA).

Sample Rate	1 hour	15 minutes	5 minutes	1 minute	10 seconds	2 seconds
Battery Life	4.6 years	4.6 years	4.5 years	3.6 years	1.7 years	6 months

Configuration 4: Mix & match any combination of 4: P350 or P600 Pressure Sensors (E term: 8 mA).

Sample Rate	1 hour	15 minutes	5 minutes	1 minute	10 seconds	2 seconds
Battery Life	4.6 years	4.5 years	4.4 years	3.6 years	1.7 years	6 months

Configuration 5: Any comb. of 4: P400, P450, P1600 or P1650 Pressure Sensors (E term: 14 mA).

Sample Rate	1 hour	15 minutes	5 minutes	1 minute	10 seconds	2 seconds
Battery Life	4.6 years	4.5 years	4.3 years	3.3 years	1.4 years	4.3 months

Configuration 6: Any combination of 2: P400, P450, P1600 or P1650 Pressure Sensors, plus

any combination of 2: temperature probe, resistive sensor, voltage signal (E terminal: 7 mA).

Sample Rate	1 hour	15 minutes	5 minutes	1 minute	10 seconds	2 seconds
Battery Life	4.6 years	4.5 years	4.4 years	3.7 years	1.8 years	6.5 months

Configuration 7: One Barometric Pressure Sensor plus

any combination of 3: temperature probe, resistive sensor or voltage signal (E terminal: 6 mA).

Sample Rate	1 hour	15 minutes	5 minutes	1 minute	10 seconds	2 seconds
Battery Life	4.6 years	4.6 years	4.4 years	3.8 years	1.9 years	6.9 months

Configuration 8: Two TRH-100 Temperature Humidity Probes (E terminal: 0.8 mA for 0.1 seconds).

Sample Rate	1 hour	15 minutes	5 minutes	1 minute	10 seconds	2 seconds
Battery Life	4.6 years	4.5 years	4.4 years	3.5 years	1.6 years	5.2 months

Notes:

- 1) Refer to Configurations 1 & 2: Reducing ON channels increases log time, but not battery life.
- 2) Max Log Time shown for Configuration 2 is the same for Configurations 3 – 8 (Four channels ON).
- 3) Using Real Time Mode 24/7 or Average mode results in battery life similar to 2 second Sample Rate.
- 4) Communication & data transfers have little effect on battery life as the USB interface supplies power.