

APNX

1 FP1-RQ 120mm ARGB FAN

Serial Number 4711099478682

Lab ID AP12000191

Certification ID FN25191

Test Result Report ID: 26FN191A

Certificate Issue Date: Jul 17, 2025

Scheme: PHI

No PHI level awarded

At 25 dB(A) this fan delivers 30.56 CFM and 0.52 mmAq, below the minimum required for the lowest PHI level (Bronze). The measured values are shown in Section C.



Aristeidis Bitziopoulos, Certification Body General Manager

SECTION A: Noise Testing Equipment

Test Environment	Hemi-Anechoic Chamber with 6 dB(A) noise floor
Conditions	25(±2) degrees Celsius, 40-50% humidity
Sound Analyzer	Bruel & Kjaer 2270-S G4 & 2250-L G4
Microphone	Bruel & Kjaer Type 4955-A
Mic Calibrator	Bruel & Kjaer Type 4231
Data Logger	Picoscope TC-08
Testing Methodology	Cybenetics Phi Fan Performance Standard

SECTION B: Fan Testing Instrument Technical Specifications

Manufacturer	Long Win Science & Technology Corporation
Model Number	LW-9266
Air Flow Rate	2.4 - 250 CFM
Accuracy of Air Flow Rate	< 3.5% INFS
Repeatability error	< 2%
Static pressure	0-20mmAq (100mmAq with the high static pressure throttle device)
Overall Dimensions	0.7 (W) x 2.2 (L) x 1.6 (H) m
Power Source	220VAC, 5A, Single Phase, 50/60Hz
Based on Standards	ISO 5801-2007, AMCA 210-0, ASHRAE 51-2007, IEC 61591-2005, GB/T 1236-200

SECTION C: PHI Performance Levels

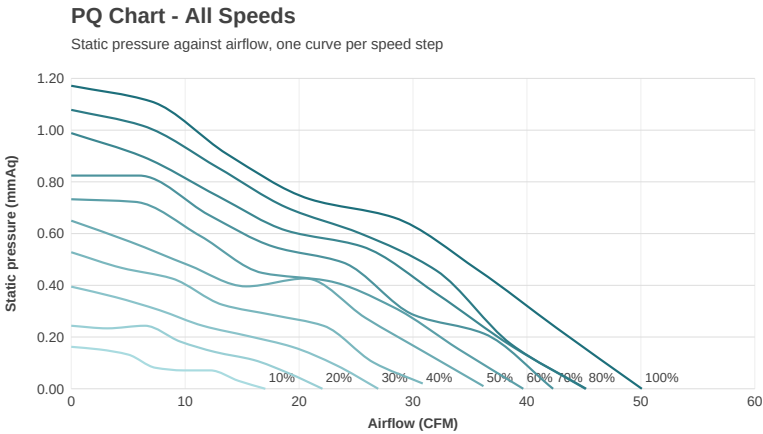
Pressure at 25 dB(A)	P (mmAq)	0.52
Airflow at 25 dB(A)	Q (CFM)	30.56

SECTION D: Information about DUT

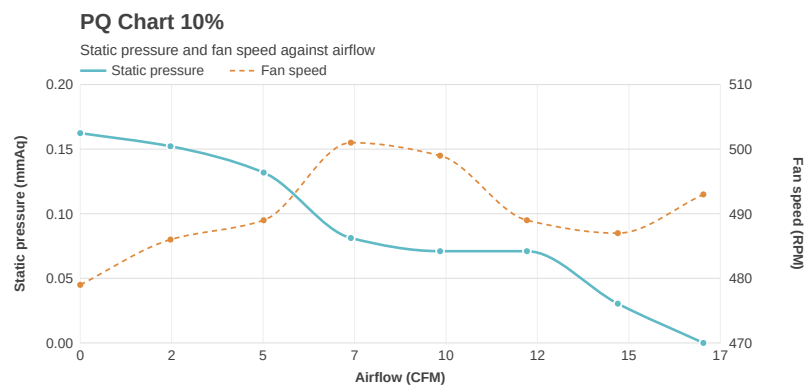
Product Identification Details	
Brand	1
Model	FP1-RQ 120mm ARGB FAN
Serial Number	4711099478682
Product Specifications	
Manufacturer-Provided Information	
Bearing	Hydro Dynamic
Connector	PWM
Cable length (mm)	450
Daisy-chain	Cable
RGB Connector	None

RGB Daisy-chain	None
Cybenetics Measurements	
Max Speed (RPM)	1358
Max Airflow (CFM)	50.08
Max Static Pressure (mmAq)	1.17
Max Fan Noise Level (dBA)	36.50
Fan Max Current (A)	0.19
Fan Weight (gr)	147
Dimensions (W x H x D)	120mm x 120mm x 30mm
Cybenetics Testing Information	
Lab ID	AP12000191
Date of receipt	May 10, 2025
Testing Date	Jul 17, 2025
Report Issued Date	Jul 17, 2025
Engineer Name	Georgios Theodoros Sarimpalas

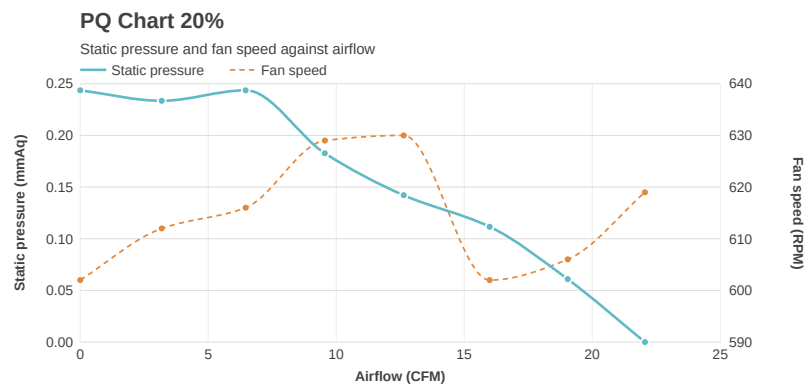
SECTION E: Long Win LW-9266 - Pressure and Airflow



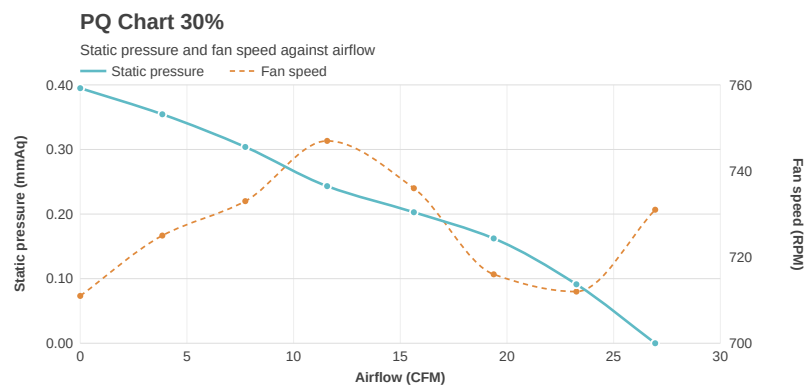
Speed Setting	Max Airflow (CFM)	Max Static Pressure (mmAq)	Fan Speed (RPM)	Max Power (W)
10%	17.04	0.16	479 - 501	0.30
20%	22.06	0.24	602 - 630	0.40
30%	26.95	0.39	711 - 747	0.55
40%	30.85	0.53	792 - 854	0.73
50%	36.19	0.65	883 - 958	0.92
60%	39.68	0.73	950 - 1061	1.16
70%	42.30	0.82	1022 - 1134	1.40
80%	45.13	0.99	1076 - 1201	1.69
90%	45.20	1.08	1141 - 1236	1.98
100%	50.08	1.17	1179 - 1322	2.28



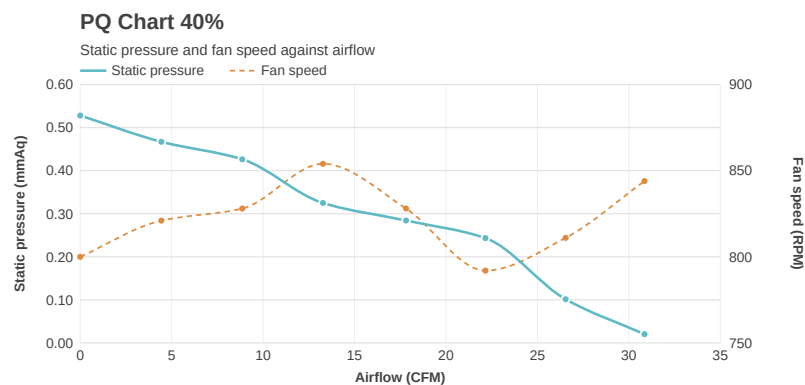
Airflow (CFM)	Static Pressure (mmAq)	Fan Speed (RPM)	Current (A)	Power (W)
0.00	0.16	479	0.025	0.30
2.47	0.15	486	0.025	0.30
5.02	0.13	489	0.025	0.30
7.40	0.08	501	0.025	0.30
9.84	0.07	499	0.025	0.30
12.21	0.07	489	0.025	0.30
14.70	0.03	487	0.025	0.30
17.04	-0.01	493	0.024	0.29



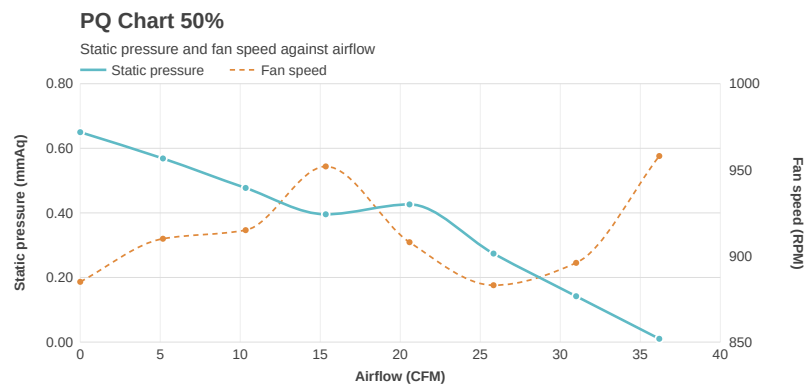
Airflow (CFM)	Static Pressure (mmAq)	Fan Speed (RPM)	Current (A)	Power (W)
0.00	0.24	602	0.033	0.40
3.18	0.23	612	0.033	0.40
6.46	0.24	616	0.032	0.38
9.55	0.18	629	0.032	0.38
12.63	0.14	630	0.032	0.38
15.99	0.11	602	0.032	0.38
19.04	0.06	606	0.032	0.38
22.06	-0.01	619	0.032	0.38



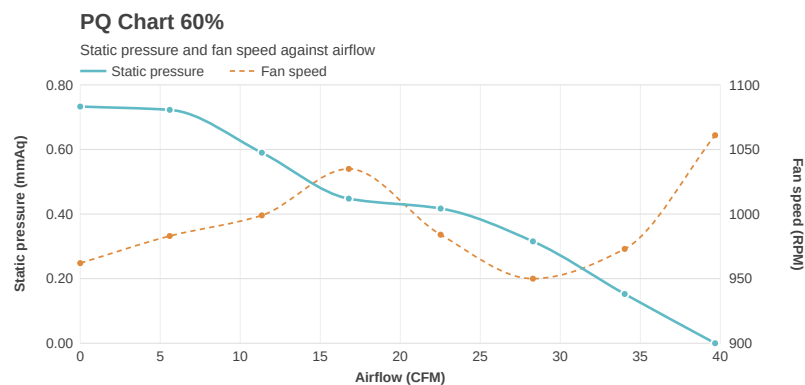
Airflow (CFM)	Static Pressure (mmAq)	Fan Speed (RPM)	Current (A)	Power (W)
0.00	0.39	711	0.046	0.55
3.85	0.35	725	0.046	0.55
7.74	0.30	733	0.046	0.55
11.57	0.24	747	0.045	0.54
15.64	0.20	736	0.046	0.55
19.38	0.16	716	0.046	0.55
23.25	0.09	712	0.046	0.55
26.95	0.00	731	0.046	0.55



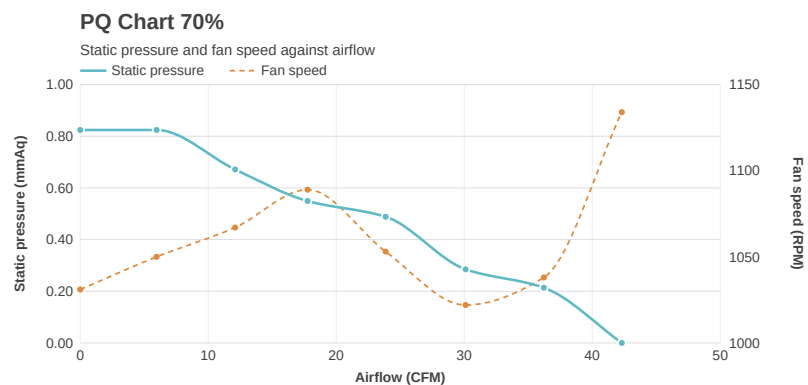
Airflow (CFM)	Static Pressure (mmAq)	Fan Speed (RPM)	Current (A)	Power (W)
0.00	0.53	800	0.061	0.73
4.44	0.47	821	0.060	0.72
8.86	0.43	828	0.060	0.72
13.27	0.32	854	0.059	0.71
17.81	0.28	828	0.060	0.72
22.16	0.24	792	0.060	0.72
26.54	0.10	811	0.060	0.72
30.85	0.02	844	0.060	0.72



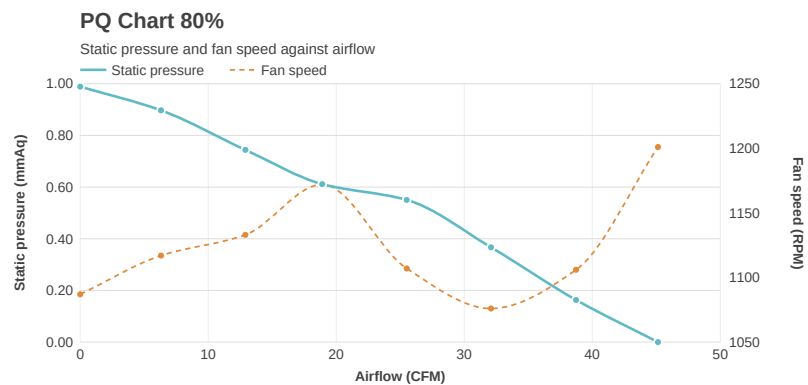
Airflow (CFM)	Static Pressure (mmAq)	Fan Speed (RPM)	Current (A)	Power (W)
0.00	0.65	885	0.077	0.92
5.17	0.57	910	0.076	0.91
10.34	0.48	915	0.076	0.91
15.34	0.40	952	0.075	0.90
20.57	0.43	908	0.076	0.91
25.83	0.27	883	0.077	0.92
30.99	0.14	896	0.077	0.92
36.19	0.01	958	0.075	0.90



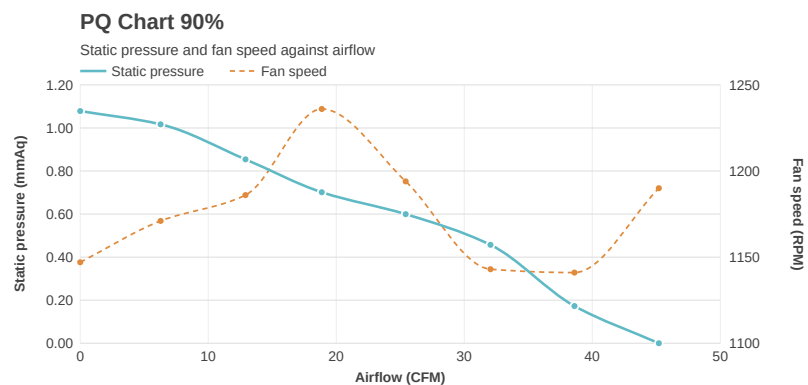
Airflow (CFM)	Static Pressure (mmAq)	Fan Speed (RPM)	Current (A)	Power (W)
0.00	0.73	962	0.096	1.15
5.59	0.72	983	0.095	1.14
11.35	0.59	999	0.095	1.14
16.78	0.45	1035	0.094	1.13
22.52	0.42	984	0.096	1.15
28.29	0.32	950	0.097	1.16
34.02	0.15	973	0.096	1.15
39.68	0.00	1061	0.093	1.12



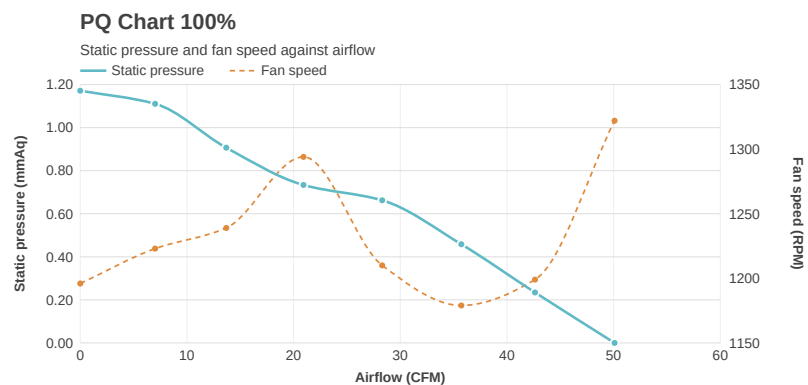
Airflow (CFM)	Static Pressure (mmAq)	Fan Speed (RPM)	Current (A)	Power (W)
0.00	0.82	1031	0.117	1.40
5.97	0.82	1050	0.116	1.39
12.10	0.67	1067	0.115	1.38
17.76	0.55	1089	0.115	1.38
23.86	0.49	1053	0.116	1.39
30.10	0.28	1022	0.117	1.40
36.21	0.21	1038	0.117	1.40
42.30	0.00	1134	0.113	1.36



Airflow (CFM)	Static Pressure (mmAq)	Fan Speed (RPM)	Current (A)	Power (W)
0.00	0.99	1087	0.140	1.68
6.31	0.90	1117	0.139	1.67
12.90	0.74	1133	0.138	1.66
18.90	0.61	1172	0.137	1.64
25.50	0.55	1107	0.140	1.68
32.08	0.37	1076	0.141	1.69
38.73	0.16	1106	0.140	1.68
45.13	-0.01	1201	0.137	1.64



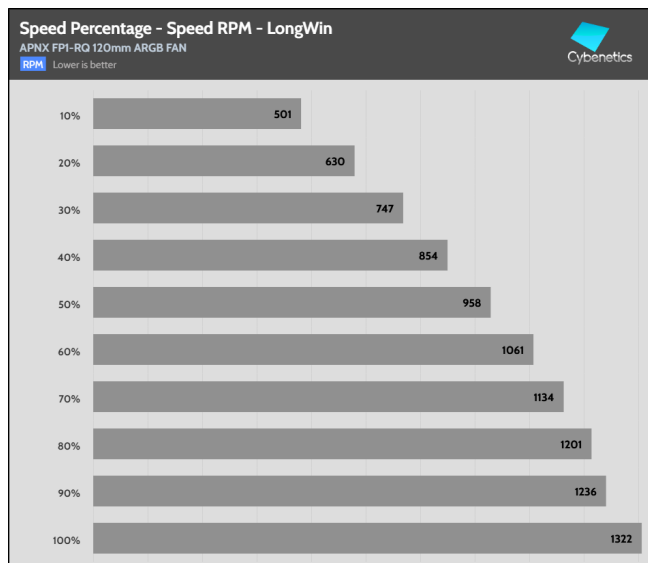
Airflow (CFM)	Static Pressure (mmAq)	Fan Speed (RPM)	Current (A)	Power (W)
0.00	1.08	1147	0.164	1.97
6.28	1.02	1171	0.163	1.96
12.91	0.85	1186	0.162	1.94
18.86	0.70	1236	0.161	1.93
25.42	0.60	1194	0.162	1.94
32.05	0.46	1143	0.165	1.98
38.61	0.17	1141	0.165	1.98
45.20	0.00	1190	0.163	1.96



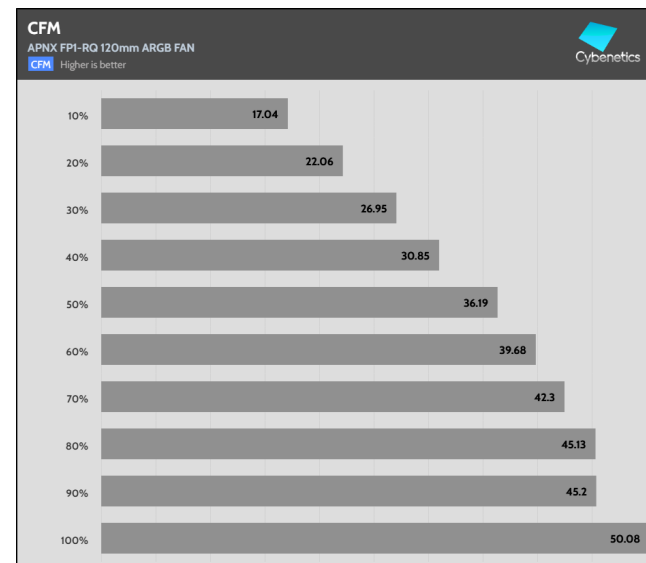
Airflow (CFM)	Static Pressure (mmAq)	Fan Speed (RPM)	Current (A)	Power (W)
0.00	1.17	1196	0.188	2.26
7.02	1.11	1223	0.187	2.24
13.68	0.91	1239	0.187	2.24
20.92	0.73	1294	0.185	2.22
28.30	0.66	1210	0.189	2.27
35.72	0.46	1179	0.190	2.28
42.62	0.23	1199	0.190	2.28
50.08	-0.01	1322	0.185	2.22

SECTION F: General Performance

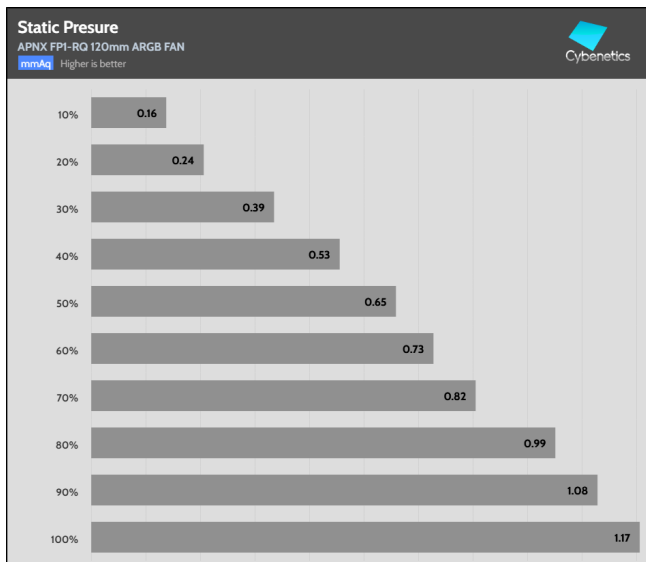
Fan Percentage RPM LongWin



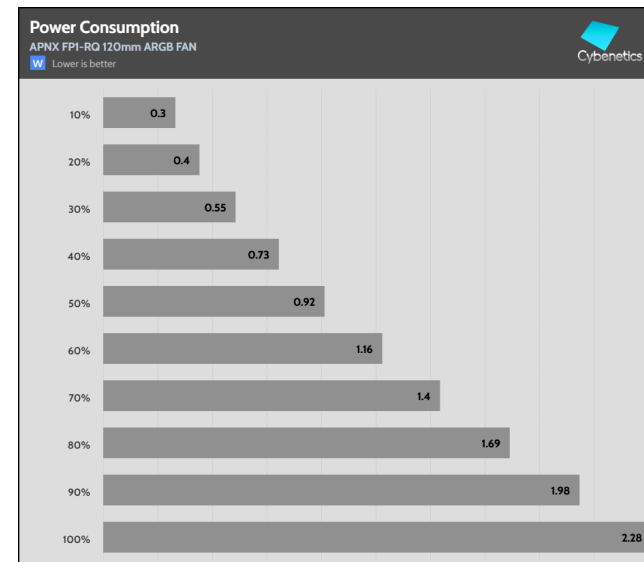
Fan Percentage CFM



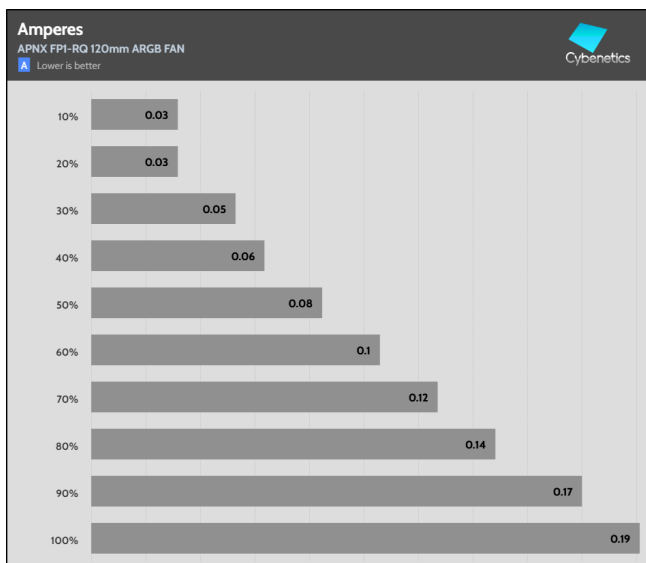
Fan Percentage Pressure



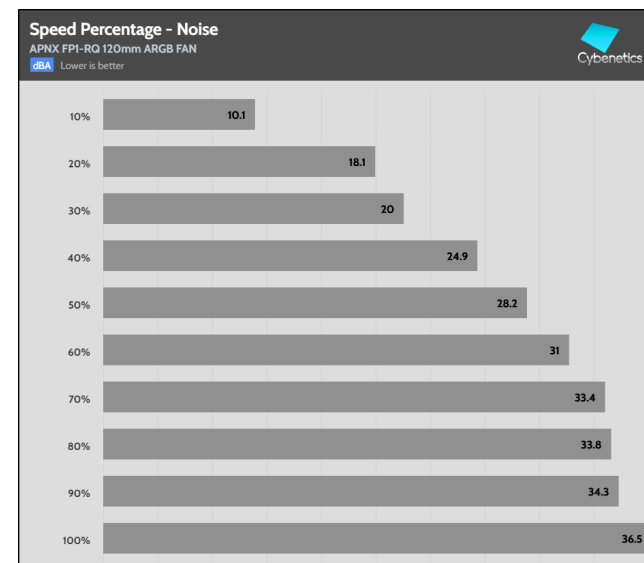
Fan Percentage Power



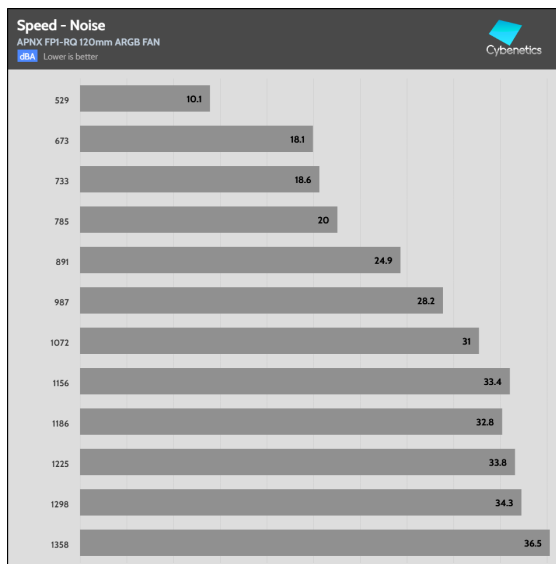
Fan Percentage Amps



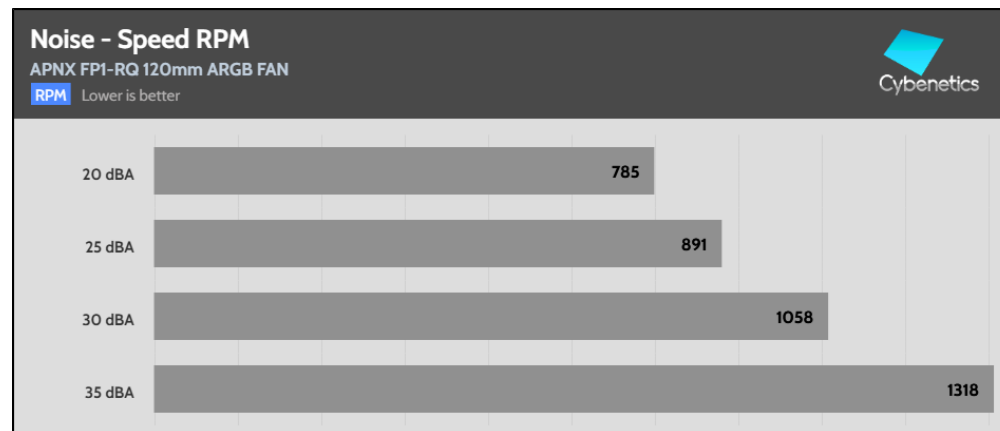
Fan Percentage Noise



Fan Speed Noise



Fan Noise Speed



SECTION G: Uncertainty

Fan Performance Uncertainty Estimation

General Statement

Measurement uncertainty associated with the reported results was evaluated and estimated in accordance with JCGM 100:2008 (Guide to the Expression of Uncertainty in Measurement — GUM) and ISO/IEC 17025:2017, Clauses 7.6 and 7.2.

The uncertainty budget accounts for all significant identified contributors arising from the measurement process, instrumentation, test conditions, and operator interaction.

The reported expanded uncertainty U is obtained by multiplying the combined standard uncertainty u_c by a coverage factor $k = 2$, corresponding to a confidence level of approximately 95 %, assuming a normal probability distribution.

Unless otherwise stated, the reported uncertainty applies only to the specific measurements performed and does not include long-term drift, aging effects, or future environmental changes.

Expanded Measurement Uncertainty by Measurement Type

Measurement	Expanded Uncertainty U ($k=2$, norm)
Fan Air Flow	± 1.23176 % of reading ($k=2$) — e.g. ± 3.69 CFM at 25 CFM, ± 4.29 at 92 CFM, ± 7.15 at 250 CFM

Fan Static Pressure	±0.6727 Pa
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Air flow uncertainty is relative to the reading: $U(Q) = 2 \cdot \sqrt{[(1.8200)^2 + (0.0123176 \cdot Q)^2]}$ CFM, valid over the declared measuring range 2.4 – 250 CFM.

The reported static pressure uncertainty applies over the 0 – 20 mmAq (0 – 196.1 Pa) measuring range of the Long Win LW-9266 apparatus. The apparatus can be extended to 100 mmAq (981 Pa) with the high static pressure throttle device; the uncertainty of that extended range has not been separately verified and the value stated above does not apply to it.

1 FP1-RQ 120mm ARGB FAN



Front



Rear

Cybenetics bietet freiwillige Zertifizierungsprogramme für Netzteile – ETA für Effizienz, LAMBDA für Lautstärke und SAFE für Sicherheit und korrekten Betrieb – sowie für Kühlprodukte mit DELTA für die Schalldämmung von Gehäusen und PHI für Luftstrom und statischen Druck von Lüftern

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