



Ingress Protection

IP68 / IP56 / IP55 / IP54 / IP53 / IP51

- Protect fans from applications in hazardous environments and improve overall performance, durability and reliability
- Dust and water ingress protection
- Meet IEC 60529 IP criteria

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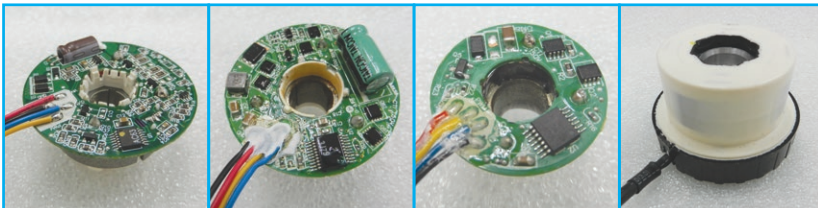


Ingress Protection (IP) Technology

Advanced Cooling Solutions – Durable, Reliable, Weatherproof

Ingress Protection (IP) withstands harsh environments and hazards

Outdoor environment applications expose fans to water, dust particles, unexpected corrosion, and high humidity, which can cause electrical devices to work improperly. Delta's environment proof (IP fan) fans are designed to withstand these elements for a longer life and higher performance. IP fans undergo the most rigorous testing against harsh environments, including: rain and flooding, salt fog and moisture, and severe dust and dirt exposure.



NONE (IP50)

GLUE (IP52)

DEPOSITION (IP55)

POTTING (IP56)

IP Test	None	Glue	Deposition	Potting
IP50	PASS	PASS	PASS	PASS
IP51		PASS	PASS	PASS
IP52		PASS	PASS	PASS
IP53			PASS	PASS
IP54			PASS	PASS
IP55			PASS	PASS
IP56				PASS

IP REFERENCE TABLE

IP 6 8

Code Letters

First Characteristic Number

Second Characteristic Number

IEC 60529 of Access to Hazardous Parts and Protection Against Water Ingress

Characteristic Numeral	First Characteristic Numeral Protection rating against dust	Second Characteristic Numeral Protection rating against water jets
0	Not protected.	Not protected.
1	Protected against access to hazardous parts with the back of a hand.	Protected against vertically falling water drops.
2	Protected against access to hazardous parts with a finger.	Protected against vertically falling water drops when enclosure is tilted up to 15°.
3	Protected against access to hazardous parts with a tool.	Protected against spraying water.
4	Protected against access to hazardous parts with a wire.	Protected against splashing water.
5	Dust-protected (Dust shall not penetrate in quantity to interfere with satisfactory operation of the apparatus or to impair safety).	Protected against water jets.
6	Dust-tight (No ingress of dust).	Protected against powerful water jets.
7		Protected against the effects of temporary immersion in water.
8		Protected against the effects of temporary immersion in water.

Delta IP68 Axial Fans

Part Number	Dimension (mm)	Operating Voltage Range (VDC)	Voltage (VDC)	Bearing Type	Current (A)	Power (W)	Speed (RPM)	Noise (dB-A)	Air Flow (CFM)	Air Pressure (in H2O)	Operating Temperature (°C)
TFA0412CNP8	40x40x28	7.0~13.8	12	ball	0.50	6.00	16500	54.0	22.25	1.566	-10~+70
PFC0648SE-00P8	60x60x38	36.0~60.0	48	ball	0.52	24.96	17000	69.0	65.35	3.503	-25~+70
TFD0948HE-00P8	92x92x38	36.0~60.0	48	ball	0.75	36.00	9000	65.5	144.58	2.429	-25~+70
THC1248ME	120x120x38	36.0~60.0	48	ball	0.80	38.40	7750	68.0	191.33	2.114	-10~+70
THC1548MGDJJ	Round-172	36.0~60.0	48	ball	0.60	28.80	4100	64.5	294.20	1.06	-10~+70
THC1748MGCGP	Round-172	36.0~60.0	48	ball	0.60	28.80	4100	64.5	294.20	1.06	-10~+70
TCA1748ATP8	Round-176.5	36.0~60.0	48	ball	1.20	57.60	4000	70.8	382.04	2.114	-10~+70
TCA1748BT-00P8	Round-176.5	36.0~60.0	48	ball	2.80	134.40	5400	78.0	540.00	3.799	-25~+75
THD2348MU-00P8	Round- 225	36.0~60.0	48	ball	3.75	180.00	5000	70.0	915.00	2.291	-25~+75

Delta IP56 Axial Fans

Part Number	Dimension (mm)	Operating Voltage Range (VDC)	Voltage (VDC)	Bearing Type	Current (A)	Power (W)	Speed (RPM)	Noise (dB-A)	Air Flow (CFM)	Air Pressure (in H2O)	Operating Temperature (°C)
AFB0612H-EP	60x60x25	5.0~13.8	12	ball	0.14	1.68	4250	34.0	22.63	0.211	-10~+70
PFB0812UHE-EP	80x80x38	10.2~13.8	12	ball	0.99	11.88	6550	57.5	91.87	0.974	-25~+60
PFB0948GHED6W	92x92x38	36.0~60.0	48	ball	0.35	16.80	6000	60.5	123.58	1.015	-10~+70
FFC0948BY7T	92x92x38	36.0~75.0	48	ball	0.17	8.16	3900	49.5	86.40	0.355	-25~+70
AFB1224EHE-EP	120x120x38	21.6~26.4	24	ball	0.85	20.40	4600	58.5	212.573	0.844	-10~+70
PFB1248UHE-EP	120x120x38	30.0~60.0	48	ball	0.88	42.24	5300	66.0	243.66	1.311	-40~+75
EFB1324SHE-EP	127x127x38	18.0~28.0	24	ball	0.75	18.00	4600	58.5	200.00	0.757	-10~+70
FFB1424VHG-EP	140x140x51	18.0~26.4	24	ball	1.00	24.00	3200	58.5	252.11	0.644	-10~+70
AFB1548VH-CD8G	172x150x25	42.0~60.0	48	ball	0.65	31.20	5000	65.0	305.043	1.198	-40~+70
EFB1524VHG-EP	172x150x51	20.4~27.6	24	ball	1.02	24.48	4000	60.0	302.29	0.937	-10~+70
EFB1548VHGD8N	172x150x51	36.0~72.0	48	ball	0.56	26.88	4000	60.0	302.29	0.937	-20~+65
KFB2348HHU-EP	225x225x99	36.0~60.0	48	ball	2.20	105.60	2600	71.0	735.08	1.990	-25~+70

Delta IP55 Axial Fans

Part Number	Dimension (mm)	Operating Voltage Range (VDC)	Voltage (VDC)	Bearing Type	Current (A)	Power (W)	Speed (RPM)	Noise (dB-A)	Air Flow (CFM)	Air Pressure (in H2O)	Operating Temperature (°C)
AFB0412HHA-TA5F	40x40x10	7.0~13.8	12	ball	0.05	0.60	7000	31.5	8.15	0.190	-10~+70
AFB0412SHB-T500	40x40x15	7.0~13.8	12	ball	0.25	3.00	11000	41.5	14.83	0.601	-10~+70
THA0412AD-TZW3	40x40x20	7.0~15.0	12	ball	0.43	5.16	15600	52.0	20.56	1.385	-25~+70
EFB0424VHD-TZW2	40x40x20	14.0~27.6	24	ball	0.09	2.16	9000	32.5	10.10	0.416	-10~+70
FFB0412UHN-TYYK	40x40x28	5.5~13.2	12	ball	0.65	7.80	18500	58.5	27.05	2.111	-10~+70
AFB0524VHD-TZW5	50x50x20	14.0~27.6	24	ball	0.10	2.40	7000	40.5	20.30	0.303	-10~+70
AFB0624SH-TYTH	60x60x25	14.0~27.6	24	ball	0.17	4.08	6000	44.5	34.15	0.422	-10~+70
AFB0624EH-TA50	60x60x25	14.0~27.6	24	ball	0.24	5.76	6800	46.5	38.35	0.544	-10~+70
AFB0612SH-TA50	60x60x25	4.0~13.8	12	ball	0.27	3.24	6000	44.5	34.15	0.422	-10~+70
AFB0612DH-TZUT	60x60x25	7.0~13.2	12	ball	0.84	10.08	9000	55.0	50.40	0.926	-10~+70
QFR0612UHE-PM00	60x60x38	7.0~13.2	12	ball	1.10	13.20	13000	61.5	56.45	2.194	-10~+70
PFB0624SHE-TZNY	60x60x38	14.0~26.4	24	ball	0.28	6.72	8000	50.5	43.57	0.918	-10~+60
PFB0624GHE-TD88	60x60x38	14.0~26.4	24	ball	0.43	10.32	10000	57.5	55.63	1.444	-10~+60
PFB0612UHE-T50F	60x60x38	7.0~13.2	12	ball	1.40	16.80	12000	61.5	67.85	2.129	-10~+60
PFB0612SHE-TZM8	60x60x38	7.0~13.2	12	ball	0.48	5.76	8000	50.5	43.57	0.918	-10~+60
PFB0612GHE-T500	60x60x38	7.0~13.2	12	ball	0.85	10.20	10000	57.5	55.63	1.444	-10~+60
AFB0612HHE-T500	60x60x38	7.0~13.8	12	ball	0.68	8.16	8000	50.0	46.17	0.793	-10~+70
FFB0824SH-TZW1	80x80x25	20.4~26.4	24	ball	0.24	5.76	4500	48.6	67.02	0.392	-10~+70
FFB0812VH-T500	80x80x25	14.0~13.2	12	ball	0.34	4.08	4000	45.4	54.56	0.291	-10~+60
AFB0824HH-T500	80x80x25	14.0~27.6	24	ball	0.09	2.16	3250	34.0	37.43	0.181	-10~+70
AFB0812HH-T500	80x80x25	7.0~13.8	12	ball	0.20	2.40	3250	34.0	37.43	0.181	-10~+70
PFB0824UHE-T500	80x80x38	14.0~26.4	24	ball	0.77	18.48	7500	61.0	107.30	1.368	-10~+60
PFB0824DHE-T50F	80x80x38	14.0~26.4	24	ball	1.35	32.40	9000	65.0	132.56	2.030	-10~+60
PFB0812UHE-T500	80x80x38	7.0~13.2	12	ball	1.55	18.60	7500	61.0	107.30	1.368	-10~+60
PFB0812DHE-TYNT	80x80x38	10.8~13.2	12	ball	2.75	33.00	9000	66.0	132.60	2.030	-10~+60
PFB0812DHE-T500	80x80x38	5.5~13.2	12	ball	2.75	33.00	9000	65.0	132.60	2.030	-10~+60
AFB0924SH-TZUH	92x92x25	14.0~26.4	24	ball	0.40	9.60	4800	53.0	102.59	0.526	-10~+70
AFB0912SH-TZUG	92x92x25	5.0~12.6	12	ball	0.75	9.00	4800	53.0	102.59	0.526	-10~+70
AFB0912H-TA50	92x92x25	5.0~13.8	12	ball	0.21	2.52	2800	37.0	59.89	0.191	-10~+70
PFB0924DHE-T500	92x92x38	14.0~26.4	24	ball	1.45	34.80	8000	66.5	175.03	1.819	-10~+60
PFB0912EHE-T500	92x92x38	7.0~13.2	12	ball	0.68	8.16	4800	54.0	103.67	0.691	-10~+60
PFB0912DHE-T500	92x92x38	7.0~13.2	12	ball	3.10	37.20	8000	66.5	175.03	1.819	-10~+60
FFB0948SHE-T500	92x92x38	28.0~56.0	48	ball	0.20	9.60	4400	52.5	100.29	0.572	-10~+60
FFB0924EHE-T500	92x92x38	14.0~27.6	24	ball	0.50	12.00	4800	55.0	110.18	0.665	-10~+60
AFB0912GHE-TA50	92x92x38	7.0~13.8	12	ball	1.85	22.20	5400	60.0	143.87	0.802	-10~+70
THB1224B-PM00	120x120x25	18.0~27.5	24	ball	0.95	22.80	8300	65.0	174.73	2.139	-10~+70
FFB1224HH-T500	120x120x25	14.0~26.4	24	ball	0.28	6.72	3100	49.7	114.73	0.288	-10~+60
FFB1212EH-TZUJ	120x120x25	7.0~13.2	12	ball	1.45	17.40	4000	56.4	150.33	0.489	-10~+60
AFB1224SH-T500	120x120x25	14.0~27.6	24	ball	0.28	6.72	3400	46.5	113.11	0.430	-10~+60
AFB1212VH-T500	120x120x25	7.0~13.8	12	ball	0.40	4.80	3100	44.5	103.75	0.371	-10~+60
AFB1212SH-T500	120x120x25	7.0~13.8	12	ball	0.53	6.36	3400	46.5	113.11	0.430	-10~+60
PFB1224UHE-T50F	120x120x38	14.0~26.5	24	ball	2.00	48.00	5500	66.5	252.85	1.412	-10~+60
PFB1212UHE-T50F	120x120x38	8.0~13.2	12	ball	4.00	48.00	5500	66.5	252.85	1.412	-10~+60
PFB1212GHE-T50F	120x120x38	8.0~13.2	12	ball	2.70	32.40	4800	64.0	217.79	1.075	-10~+60
FFB1224XHE-TM50	120x120x38	14.0~26.4	24	ball	3.25	78.00	6300	73.5	264.62	1.705	-10~+60
AFB1248VHE-T9LN	120x120x38	34.0~56.0	48	ball	0.31	14.88	4100	55.5	190.48	0.694	-40~+70
AFB1248SHE-TC50	120x120x38	20.0~56.0	48	ball	0.31	14.88	4100	55.5	190.48	0.694	-10~+70

Delta IP55 Axial Fans

Part Number	Dimension (mm)	Operating Voltage Range (VDC)	Voltage (VDC)	Bearing Type	Current (A)	Power (W)	Speed (RPM)	Noise (dB-A)	Air Flow (CFM)	Air Pressure (in H ₂ O)	Operating Temperature (°C)
AFB1248SHEDC4	120x120x38	36.0~59.0	48	ball	0.13	6.24	2300	40.0	103.24	0.255	-10~+70
AFB1248HE-T500	120x120x38	28.0~56.0	48	ball	0.12	5.76	2600	41.0	105.94	0.300	-10~+60
AFB1224VHE-TC5F	120x120x38	7.0~27.6	24	ball	0.36	13.68	4000	51.0	148.35	0.601	-10~+70
AFB1224SHE-T50F	120x120x38	7.0~27.6	24	ball	0.50	12.00	3700	53.0	151.85	0.571	-10~+60
AFB1224HHE-T500	120x120x38	7.0~27.6	24	ball	0.30	7.20	2900	44.0	120.07	0.354	-10~+60
AFB1212VHE-T50F	120x120x38	4.0~13.2	12	ball	0.60	7.20	3200	48.0	129.96	0.420	-10~+60
EHB1548SHG-C126	172x150x51	32.0~80.0	48	ball	0.88	42.24	4900	66.5	347.08	1.492	-40~+80
EFB1512HHG-T500	172x150x51	8.0~14.0	12	ball	1.79	21.48	3700	57.5	279.69	0.800	-10~+70
EFC1748DG-TYSG	172x172x51	28.0~53.0	48	ball	1.23	59.04	5500	63.4	415.66	1.771	-10~+70
EFB1724VHG-T500	172x172x51	12.0~28.0	24	ball	0.97	23.28	4000	57.0	302.29	0.937	-10~+70

Delta IP55 Blowers

Part Number	Dimension (mm)	Operating Voltage Range (VDC)	Voltage (VDC)	Bearing Type	Current (A)	Power (W)	Speed (RPM)	Noise (dB-A)	Air Flow (CFM)	Air Pressure (in H ₂ O)	Operating Temperature (°C)
BFB0405HHA-TZP4	40x40x10	4.0~5.5	5	ball	0.16	0.80	8500	34.5	3.00	0.564	-10~+70
BFB0512HH-T50F	51x51x15	10.0~13.8	12	ball	0.21	2.52	6500	45.0	4.59	0.866	-10~+70
BFB0724H-T500	75x75x30	14.0~27.6	24	ball	0.12	2.88	2900	38.0	11.30	0.480	-10~+70
BFB0712HHD77	76x76x25	9.0~16.0	12	ball	0.53	8.15	5500	50.0	14.70	1.41	-40~+85
BFB1012L-TA5R	97x94x33	4.0~13.2	12	ball	0.37	4.40	2700	49.5	23.17	0.585	-10~+60
BFB1012HD-04D4L	100x98x20	90.0~16.9	12	ball	0.58	6.96	4000	50.5	18.30	1.62	-40~+85
BFB1224H-T50R	120x120x32	7.0~27.6	24	ball	0.35	8.40	2500	51.0	29.00	0.827	-10~+60
BFB1224GH-TA50	120x120x32	14.0~27.6	24	ball	1.60	38.40	4400	65.0	60.39	4.094	-10~+60
BFB1212VH-TA50	120x120x32	5.5~13.8	12	ball	1.47	17.64	3100	57.0	42.47	1.848	-10~+60

Delta IP54 Axial Fans

Part Number	Dimension (mm)	Operating Voltage Range (VDC)	Voltage (VDC)	Bearing Type	Current (A)	Power (W)	Speed (RPM)	Noise (dB-A)	Air Flow (CFM)	Air Pressure (in H ₂ O)	Operating Temperature (°C)
PFB0912UHE-T500	92x92x38	7.0~13.2	12	ball	1.96	23.52	7000	64.0	153.52	1.449	-25~+70
EFB1548VHG-TP14	172x150x51	36.0~60.0	48	ball	0.49	23.52	4000	60.0	302.29	0.937	-10~+70

Delta IP54 Blowers

Part Number	Dimension (mm)	Operating Voltage Range (VDC)	Voltage (VDC)	Bearing Type	Current (A)	Power (W)	Speed (RPM)	Noise (dB-A)	Air Flow (CFM)	Air Pressure (in H ₂ O)	Operating Temperature (°C)
TCA1748ATXHD	175x175x69	36.0~60.0	48	ball	1.60	76.80	4000	70.8	428.00	1.96	-25~+70
KFB1748VHTAYP	175x175x69	26.0~57.0	48	ball	0.72	34.56	3100	66.0	334.02	1.315	-10~+70

Delta IP53 Blower

Part Number	Dimension (mm)	Operating Voltage Range (VDC)	Voltage (VDC)	Bearing Type	Current (A)	Power (W)	Speed (RPM)	Noise (dB-A)	Air Flow (CFM)	Air Pressure (in H ₂ O)	Operating Temperature (°C)
BFB04512HHA-CZ0T	45x45x10	50.0~13.5	12	ball	0.14	1.68	6100	36.0	3.60	0.598	-10~+70

Delta IP51 Axial Fan

Part Number	Dimension (mm)	Operating Voltage Range (VDC)	Voltage (VDC)	Bearing Type	Current (A)	Power (W)	Speed (RPM)	Noise (dB-A)	Air Flow (CFM)	Air Pressure (in H ₂ O)	Operating Temperature (°C)
TFA0412CN-CN	40x40x28	7.0~15.0	12	ball	0.60	7.20	17600	55.0	25.29	1.868	-10~+70

Design and specifications are subject to change without notice.

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