



Ingress Protection

IP68 / IP67 / 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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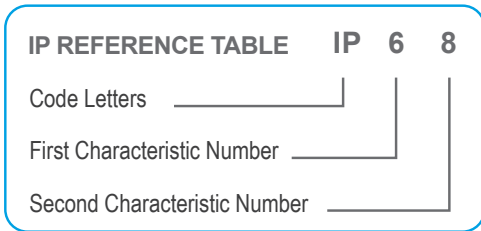
Ingress Protection (IP) Technology

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.

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	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 mmH2O)	Operating Temperature(°C)
TFA0412CNP8	40x40x28	7.0 - 13.8	12	Ball	0.5	6	16500	54	22.24	1.566	-10~+70
QFR0624EHP6	60x60x25.4	16.0 - 26.4	24	Ball	0.1	2.4	6000	39.5	27.5	0.349	-10~+70
QFR0624GHP6	60x60x25.4	16.0 - 26.4	24	Ball	0.16	3.84	7600	47	34.78	0.547	-10~+70
QFR0624UHP6	60x60x25.4	16.0 - 26.4	24	Ball	0.26	6.24	9000	50	41.3	0.742	-10~+70
PFC0648SE-00P8	60x60x38	36.0 - 60.0	48	Ball	0.52	24.96	17000	69	65.35	3.503	-25~+70
QFR0824HHP6	80x80x25	14.0 - 26.4	24	Ball	0.08	1.92	3300	36.4	38.5	0.193	-10~+70
QFR0824SHP6	80x80x25	14.0 - 26.4	24	Ball	0.15	3.6	4300	44.2	50.3	0.318	-10~+70
QFR0824UHP6	80x80x25	14.0 - 26.4	24	Ball	0.23	5.52	5300	49.6	62.18	0.475	-10~+70
QFR0812GJ-00P6	80x80x25.4	7.0 - 13.8	12	Ball	0.66	7.92	7000	50	78.8	6.347	-10~+70
QFR0812LJ-00P6	80x80x25.4	10.8 - 13.8	12	Ball	0.13	1.56	3150	31.5	33.5	0.141	-10~+70
QFR0812MJ-00P6	80x80x25.4	10.8 - 13.8	12	Ball	0.24	2.88	4500	43.5	49.1	0.283	-10~+70
PFB0824GHEP6	80x80x38	14.0 - 26.4	24	Ball	0.45	10.8	6100	55.5	86.44	0.898	-10~+70
PFB0824UHEP6	80x80x38	14.0 - 26.4	24	Ball	0.68	16.32	7000	57.9	96.78	1.148	-10~+70
THD0924HEP6	92x92x38	21.6 - 26.4	24	Ball	1.15	27.6	10700	64	145.54	2.334	-10~+70
TFD0948HE-00P8	92x92x38	36.0 - 60.0	48	Ball	0.75	36	9000	65.5	144.58	2.429	-25~+70
PFB0924EHEP6	92x92x38	21.6 - 26.4	24	Ball	0.33	7.92	4800	54	103.67	0.691	-10~+70
PFB0924DHEP6	92x92x38	21.6 - 26.4	24	Ball	1.1	26.4	7200	63.7	151.5	1.395	-10~+70
PFB0924GHEP6	92x92x38	21.6 - 26.4	24	Ball	0.65	15.6	6000	60.5	124.19	1.004	-10~+70
PFB1224GHEP6	120x120x38	21.6 - 26.4	24	Ball	1.35	32.4	4800	64	212.21	1.04	-10~+70
PFB1224HE-00P6	120x120x38	14.0 - 28.0	24	Ball	1	24	5800	65	201.41	1.48	-10~+70
PFB1224LE-00P6	120x120x38	14.0 - 27.6	24	Ball	0.45	10.08	4000	57	140.87	0.766	-10~+70
PFB1224SE-00P6	120x120x38	14.0 - 27.6	24	Ball	2.07	50.4	7500	70	265.43	2.07	-10~+70
PFB1224EHEP6	120x120x38	21.6 - 26.4	24	Ball	0.9	21.6	4000	59	252.85	1.412	-10~+70
THB1748BGP6	Round 170	36.0 - 60.0	48	Ball	3.4	163.2	8000	77.5	607.07	3.828	-10~+70
EFB1524SHGP6	Round/Rect 172	21.6 - 26.4	24	Ball	1.55	37.2	4500	62	322.39	1.265	-10~+70
EFB1524HHGP6	Round/Rect 172	21.6 - 26.4	24	Ball	0.9	21.6	3700	62	265.79	0.814	-10~+70
EFB1524LGP6	Round/Rect 172	21.6 - 26.4	24	Ball	0.5	12	2800	59	195.8	0.496	-10~+70
EFB1524SHGP5	Round/Rect 172	21.6 - 26.4	24	Ball	1.55	37.2	4500	52.3	322.39	1.265	-10~+70
THD2348MU-00P8	Round 225	36.0 - 60.0	48	Ball	3.75	180	5000	70	915	2.291	-25~+70

Delta IP68 Blower 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 mmH2O)	Operating Temperature(°C)
TCA1748ATP8	Round 176.5	36.0 - 60.0	48	Ball	1.2	57.6	4000	70.8	382.04	2.114	-10~+70
TCA1748BT-00P8	Round 176.5	36.0 - 60.0	48	Ball	2.8	134.4	5400	78	540	3.799	-25~+75

Delta IP67 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 mmH2O)	Operating Temperature(°C)
TFC0424EN-01EGG	40x40x28	22.0 - 26.0	24	Ball	0.25	6.00	18300	55.0	21.11	1.979	-10~+70

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 mmH2O)	Operating Temperature(°C)
AFB0612H-EP	60x60x25	5.0 - 13.8	12	Ball	0.14	1.68	4250	34	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
FFC0948BY7T	92x92x25.40	36.0 - 75.0	48	Ball	0.17	8.16	3900	49.5	86.4	0.355	-10~+70
PFB1248UHE-EP	120x120x38	30.0 - 60.0	48	Ball	0.88	42.24	5300	66	243.66	1.311	-40~+75
AFB1224EHE-EP	120x120x38	21.6 - 26.4	24	Ball	0.85	20.4	4600	58.5	212.573	0.844	-10~+70
FFB1424VHG-EP	139.7x139.7x50.8	18.0 - 26.4	24	Ball	1.00	24	3200	58.5	252.11	0.644	-10~+70
AFB1548VH-CD8G	172x150x25.4	42.0 - 60.0	48	Ball	0.65	31.2	5000	65	305.043	1.198	-40~+70
EFB1524VHG-EP	172x150x50.8	20.4 - 27.6	24	Ball	1.02	24.48	4000	60	302.29	0.937	-10~+70

Delta IP56 Blower 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 mmH2O)	Operating Temperature(°C)
KFB2348HHU-EP	Round-225	36.0 - 60.0	48	Ball	2.20	105.6	2600	71	735.08	1.99	-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 mmH2O)	Operating Temperature(°C)
AFB0412HHA-TA5F	40x40x10	7.0 - 13.8	12	Ball	0.05	0.6	7000	31.5	8.15	0.19	-10~+70
AFB0412SHB-T500	40x40x15	7.0 - 13.8	12	Ball	0.25	3	11000	41.5	14.83	0.601	-10~+70
EFB0424VHD-TZW2	40x40x20	14.0 - 27.6	24	Ball	0.09	2.16	9000	32.5	10.1	0.416	-10~+70
THA0412AD-TZW3	40x40x20	7.0 - 15.0	12	Ball	0.43	5.16	15600	52	20.56	1.385	-25~+70
EFB0424HD-CP5	40x40x20	14.0 - 26.4	24	Ball	0.05	1.2	7600	31	7.5	0.251	-10~+70
EFB0424LD-CP5	40x40x20	14.0 - 26.4	24	Ball	0.03	1.2	5500	31	5.154	0.121	-10~+70
EFB0424VHD-CP5	40x40x20	14.0 - 26.4	24	Ball	0.06	1.44	9000	37.3	9.398	0.368	-10~+70
FFB0412UHN-TYYK	40x40x28	5.5 - 13.2	12	Ball	0.65	7.8	18500	58.5	27.05	2.111	-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	50.4	0.926	-10~+70
QFR0624DHP5	60x60x25.4	16.0 - 26.4	24	Ball	0.35	8.4	10600	55	49.5	1.043	-10~+70
PFB0612GHE-T500	60x60x38	7.0 - 13.2	12	Ball	0.85	10.2	10000	57.5	55.63	1.444	-10~+60
PFB0624GHE-TD88	60x60x38	14.0 - 26.4	24	Ball	0.43	10.32	10000	57.5	55.63	1.444	-10~+60
PFB0624SHE-TZNY	60x60x38	14.0 - 26.4	24	Ball	0.28	6.72	8000	50.5	43.57	0.918	-10~+60
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	37.43	0.181	-10~+70
AFB0812HH-T500	80x80x25	7.0 - 13.8	12	Ball	0.2	2.4	3250	34	37.43	0.181	-10~+70
QFR0824HHP5	80x80x25	14.0 - 27.6	24	Ball	0.1	2.4	3300	36.4	39.6	0.206	-10~+70
QFR0824SHP5	80x80x25	14.0 - 27.6	24	Ball	0.15	3.6	4300	44.2	52.38	0.324	-10~+70
QFR0824UHP5	80x80x25	14.0 - 27.6	24	Ball	0.23	5.52	5400	50	65.55	0.488	-10~+70
PFB0812DHE-T500	80x80x38	5.5 - 13.2	12	Ball	2.75	33	9000	65	132.6	2.03	-10~+60
PFB0812DHE-TYNT	80x80x38	10.8 - 13.2	12	Ball	2.75	33	9000	66	132.6	2.03	-10~+60
PFB0824DHE-T50F	80x80x38	14.0 - 26.4	24	Ball	1.35	32.4	9000	65	132.56	2.03	-10~+60
PFB0824UHE-T500	80x80x38	14.0 - 26.4	24	Ball	0.77	18.48	7500	61	107.3	1.368	-10~+60
PFB0824UHEP5	80x80x38	14.0 - 26.4	24	Ball	1.26	30.24	9000	65	107.3	1.368	-10~+70
PFB0824DHEP5	80x80x38	14.0 - 26.4	24	Ball	1.26	30.24	9000	65	132.56	2.03	-10~+70
AFB0924SH-TZUH	92x92x25	14.0 - 26.4	24	Ball	0.4	9.6	4800	53	102.59	0.526	-10~+70
AFB0912SH-TZUG	92x92x25	5.0 - 12.6	12	Ball	0.75	9	4800	53	102.59	0.526	-10~+70
FFB0924EHE-T500	92x92x38	14.0 - 27.6	24	Ball	0.5	12	4800	55	110.18	0.665	-10~+60
PFB0912EHE-T500	92x92x38	7.0 - 13.2	12	Ball	0.68	8.16	4800	54	103.67	0.691	-10~+60
PFB0924DHE-T500	92x92x38	14.0 - 26.4	24	Ball	1.45	34.8	8000	66.5	175.03	1.819	-10~+60
PFB0924DHEP5	92x92x38	21.6 - 26.4	24	Ball	1.45	34.8	8000	66.5	175.03	1.819	-10~+70
PFB0924EHEP5	92x92x38	21.6 - 26.4	24	Ball	0.42	7.92	4800	54	103.67	0.691	-10~+70
PFB0924GHEP5	92x92x38	21.6 - 26.4	24	Ball	0.65	15.6	6000	60.5	124.19	1.004	-10~+70
THD0924HEP5	92x92x38	21.6 - 26.4	24	Ball	1.15	27.6	10700	64	145.54	2.334	-10~+70

Delta IP55 Axial Fans (Cont.)

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 mmH2O)	Operating Temperature(°C)
AFB1224SH-T500	120x120x25	14.0 - 27.6	24	Ball	0.28	6.72	3400	46.5	113.11	0.43	-10~+60
AFB1212VH-T500	120x120x25	7.0 - 13.8	12	Ball	0.4	4.8	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	0.43	-10~+60
FFB1212EH-TZUJ	120x120x25.4	7.0 - 13.2	12	Ball	1.45	17.4	4000	56.4	150.33	0.489	-10~+60
FFB1224HH-T500	120x120x25.4	14.6 - 26.4	24	Ball	0.28	6.72	3100	49.7	114.73	0.288	-10~+60
THB1224B-PM00	120x120x25.4	18.0 - 27.5	24	Ball	0.95	22.8	8300	65	174.73	2.139	-10~+70
AFB1248VHE-T9LN	120x120x38	34.0 - 56.0	48	Ball	0.31	14.88	4100	55.5	190.48	0.694	-40~+70
AFB1248SHEDC4	120x120x38	36.0 - 59.0	48	Ball	0.13	6.24	2300	40	103.24	0.255	-10~+70
AFB1248HE-T500	120x120x38	28.0 - 56.0	48	Ball	0.12	5.76	2600	41	105.94	0.3	-10~+60
AFB1224SHE-T50F	120x120x38	7.0 - 27.6	24	Ball	0.5	12	3700	53	151.85	0.571	-10~+60
AFB1224HHE-T500	120x120x38	7.0 - 27.6	24	Ball	0.3	7.2	2900	44	120.07	0.354	-10~+60
AFB1212VHE-T50F	120x120x38	4.0 - 13.2	12	Ball	0.6	7.2	3200	48	129.96	0.42	-10~+60
FFB1224XHE-TM50	120x120x38	14.0 - 26.4	24	Ball	3.25	78	6300	73.5	264.62	1.705	-10~+60
PFB1224UHE-T50F	120x120x38	14.0 - 26.5	24	Ball	2	48	5500	66.5	252.85	1.412	-10~+60
PFB1224GHEP5	120x120x38	21.6 - 26.4	24	Ball	1.35	32.4	4800	64	212.21	1.04	-10~+70
PFB1224SE-00P5	120x120x38	14.0 - 27.6	24	Ball	2.1	50.4	7500	70	265.43	2.07	-10~+70
EFB1324SHE-EP	127x127x38	18.0 - 28.0	24	Ball	0.75	18	4600	58.5	200	0.757	-10~+70
EFB1512HHG-T500	172x150x51	8.0 - 14.0	12	Ball	1.79	21.48	3700	57.5	279.69	0.8	-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	302.29	0.937	-10~+70
THB2048HG-01	Round 200	36.0 - 72.0	48	Ball	4.2	168	6400	75.5	787.75	3.665	-20~+75
THD2348MU-00	Round 225	36.0 - 60.0	48	Ball	3.75	180	5000	70	915	2.291	-25~+70

Delta IP55 Blower 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)
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 H2O)	Operating Temperature (°C)
PFB0912UHE-T500	92x92x38	7.0 - 13.2	12	ball	1.96	23.52	7000	64	153.52	0.564	-10~+60
EFB1548VHG-TP14	172x150x51	36.0 - 60.0	48	ball	0.49	23.52	4000	60	302.29	0.480	-10~+70

Delta IP53 Blower 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 H2O)	Operating Temperature (°C)
PFB0912UHE-T500	45x45x10	50.0 - 13.5	12	Ball	0.14	1.68	6100	36.0	3.6	0.598	-10~+70

Delta IP51 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)
TFA0412CN-CN	40x40x28	7.0 - 13.2	12	Ball	0.6	7.2	17600	55	25.29	1.868	-10~+70
THD0812VE-00	80x80x80	10.8 - 13.2	12	Ball	15	180	15000	78.5	195	7.48	-40~+70
THD0848VE-00	80x80x80	36.0 - 72.0	48	Ball	3.6	172.8	15000	78.5	195	7.28	-10~+70
EUB0912HF-03P1	92x92x32	10.8 - 13.2	12	Sleeve	0.13	1.44	3350	33.5	47	0.227	-40~+40
EUB1312HE-10P1	125x125x39	10.8 - 13.2	12	Sleeve	0.13	1.56	2200	32	79.867	0.184	-40~+40

Delta IP51 Blower 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 H2O)	Operating Temperature (°C)
KSB1212ME-03P1	Round 120	10.8 - 13.2	12	Sleeve	0.19	2.28	1800	36.2	44.91	0.3	-40~+40

Design and specifications are subject to change without notice.

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