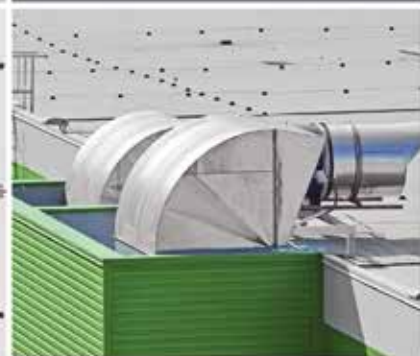
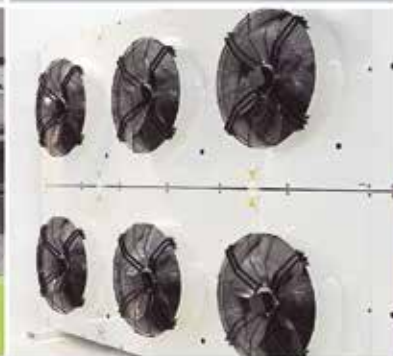


## Catalog

### ASFN DC Fans / ASEN AC Fans



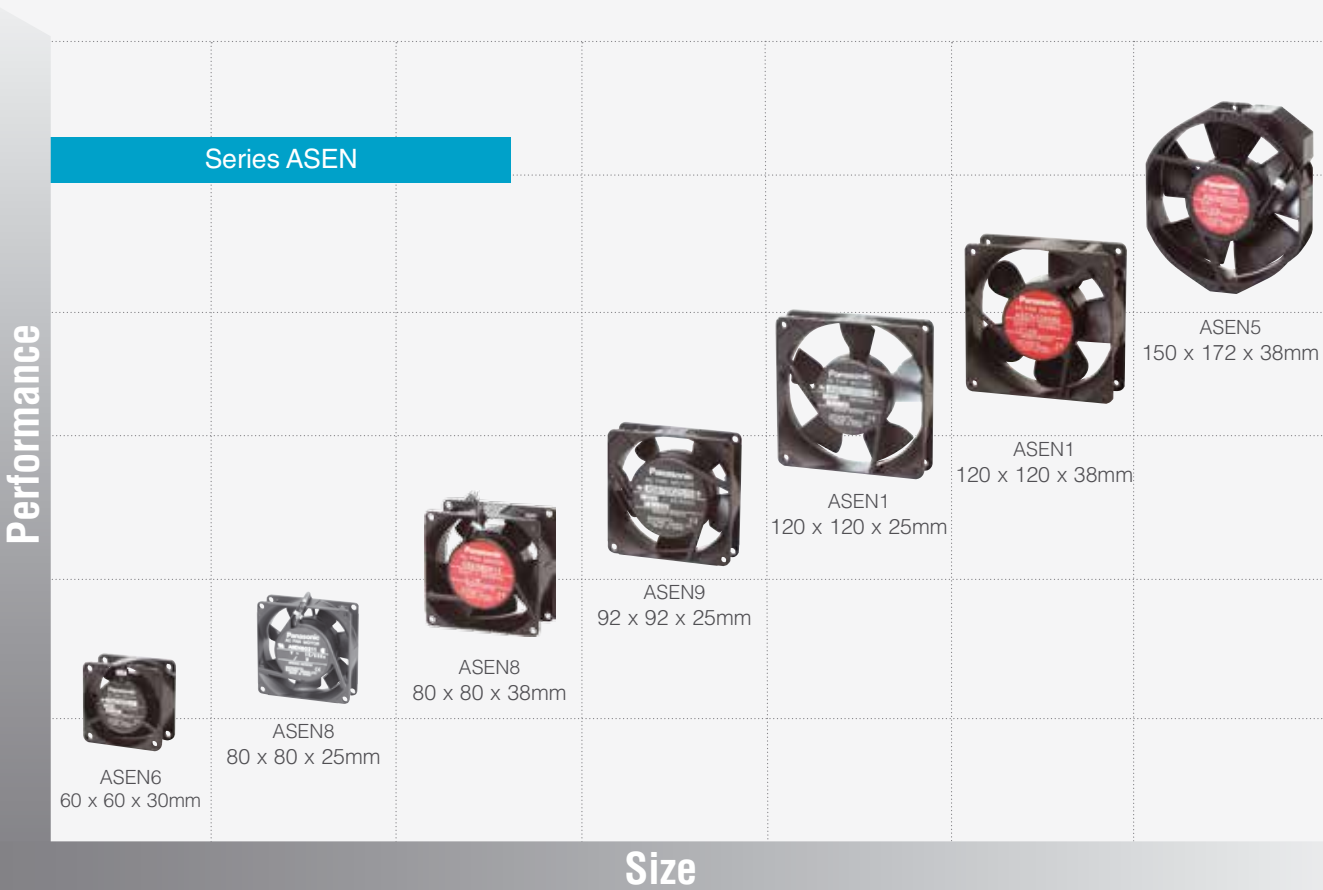
**DC Fans**

ASFN4	DC Fans 40x40x10 mm. . . . .	4
ASFN6	DC Fans 60x60x25 mm. . . . .	5
ASFN8	DC Fans 80x80x25 mm. . . . .	6
ASFN9	DC Fans 92x92x25 mm. . . . .	7
ASFN1	DC Fans 120x120x25 mm . . . . .	8
ASFN1*B	DC Fans 120x120x38 mm . . . . .	9

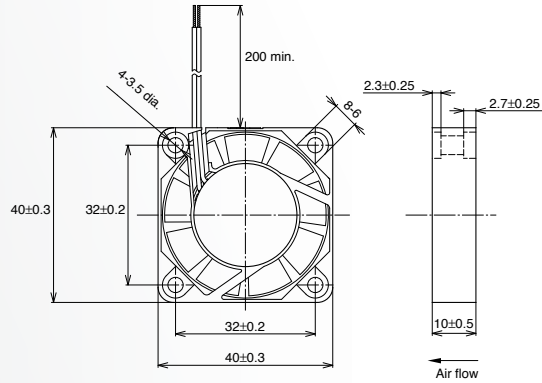
**AC Fans**

ASEN6	AC Fans 60x60x30 mm. . . . .	.10
ASEN8	AC Fans 80x80x25 mm. . . . .	.11
ASEN8	AC Fans 80x80x38 mm. . . . .	.12
ASEN9	AC Fans 92x92x25 mm. . . . .	.13
ASEN1	AC Fans 120x120x25 mm . . . . .	.14
ASEN1	AC Fans 120x120x38 mm . . . . .	.15
ASEN5	AC Fans 150x172x38 mm . . . . .	.16

Accessories . . . . .	.17
Fan lock sensor. . . . .	.18
Mounting hole dimensions . . . . .	.19



# ASFN4

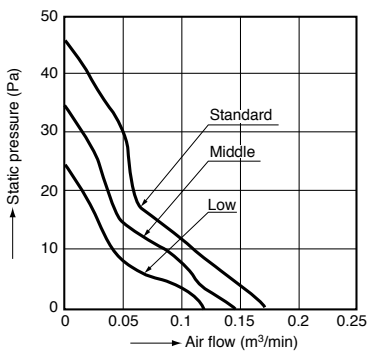


## Features

- › Dimensions: 40 x 40 x 10mm
- › Rated voltages: 5VDC, 12VDC
- › Several rotation speeds per model
- › Blockage protection with automatic restart
- › Reverse polarity and overvoltage protection
- › Optional: Lock sensor output (alarm is triggered if fan is blocked)
- › RoHS-compliant

ASFN4 Series 40 x 40 x 10mm		Rated voltage	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight	Characteristic curve (see diagram)
Without lock sensor	With lock sensor	VDC	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg	
ASFN44770	ASFN44790	5	0.50	100	4,500	0.12	24.00	22.0	0.015	Low
ASFN44771	ASFN44791	12	1.08	90						Low
ASFN42770	ASFN42790	5	0.80	160	5,500	0.15	34.00	25.0		Middle
ASFN42771	ASFN42791	12	1.20	100						Middle
ASFN40770	ASFN40790	5	1.05	210	6,500	0.17	46.00	29.0		Standard
ASFN40771	ASFN40791	12	1.20	100						Standard
Accessories	ASFN48001	Fan guard 40x40mm, 2 rings, UL/CSA								

## Diagram



## Materials used

**Frame:** Plastic  
**Fan blades:** Plastic  
**Bearings:** Ball bearings  
**Lead wires:** UL1061 and AWG26

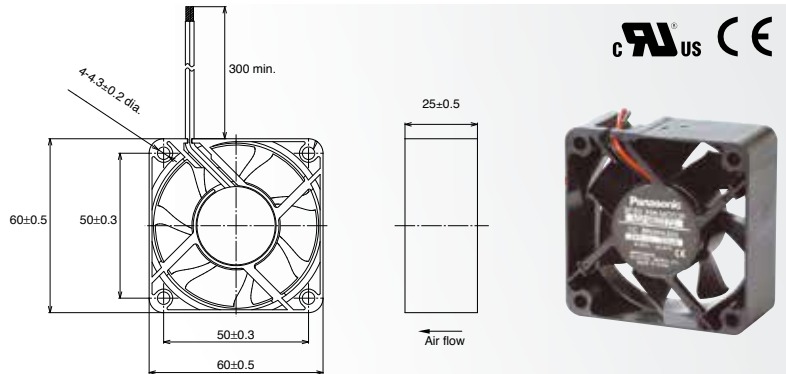
## Specifications

Operating voltage:	At 5V: 4.5–5.5V; at 12V: 10.2 ~13.8V
Ambient temperature:	-10°C to +60°C
Ambient humidity:	Max. 95% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	500VAC for 1min (between lead wires and frame)
Insulation resistance:	Min. 10MΩ (at 500VDC)
Lead wire tensile strength:	9.8N at 15s
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Fan blockage:	No coil burnout after 72-hour blockage at nominal voltage
Reverse polarity protection:	No damage after brief reverse polarity connection at nominal voltage
Lifetime:	60,000 hours

# ASFN6

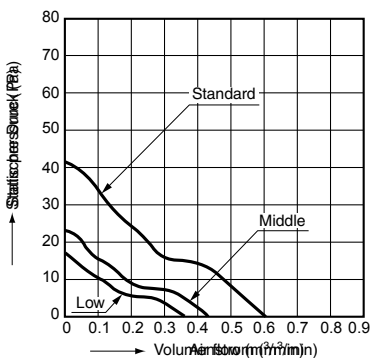
## Features

- › Dimensions: 60 x 60 x 25mm
- › Rated voltages: 12VDC, 24VDC
- › Several rotation speeds per model
- › Blockage protection with automatic restart
- › Reverse polarity and overvoltage protection
- › Optional: Lock sensor output (alarm is triggered if fan is blocked)
- › RoHS-compliant



ASFN6 Series 60x60x25mm		Rated voltage	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight	Characteristic curve (see diagram)
Without lock sensor	With lock sensor	VDC	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg	
ASFN64371	ASFN64391	12	0.84	70	2,550	0.37	17.20	19.0	0.065	Low
ASFN64372	ASFN64392	24	1.20	50						Low
ASFN62371	ASFN62391	12	1.20	100	3,000	0.44	23.40	22.5		Middle
ASFN62372	ASFN62392	24	1.44	60						Middle
ASFN60371	ASFN60391	12	1.92	160	4,050	0.61	41.70	30.5		Standard
ASFN60372	ASFN60392	24	2.40	100						Standard
ASFN66371	ASFN66391	12	3.12	260	4,900	0.75	60.30	36.5		On request
ASFN66372	ASFN66392	24	2.88	120						On request
Accessories	ASFN68001	Fan guard 60x60mm, 4 rings, UL/CSA								
	ASEN68002	Fan cover with filter								

## Diagram



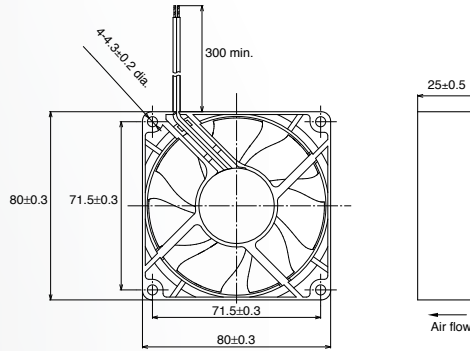
## Materials used

- Frame:** Plastic
- Fan blades:** Plastic
- Bearings:** Ball bearings
- Lead wires:** UL1007 and AWG24

## Specifications

Operating voltage:	At 12V: 6–13.8V; at 24V: 10–27.6V
Ambient temperature:	-10°C to +60°C
Ambient humidity:	Max. 95% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	500VAC for 1min (between lead wires and frame)
Insulation resistance:	Min. 10MΩ (at 500VDC)
Lead wire tensile strength:	9.8N at 15s
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Fan blockage:	No coil burnout after 72-hour blockage at nominal voltage
Reverse polarity protection:	No damage after brief reverse polarity connection at nominal voltage
Lifetime:	70,000 hours

# ASFN8

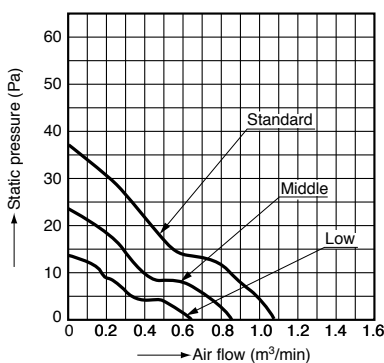


## Features

- › Dimensions: 80 x 80 x 25mm
- › Rated voltages: 12VDC, 24VDC
- › Several rotation speeds per model
- › Blockage protection with automatic restart
- › Reverse polarity and overvoltage protection
- › Optional: Lock sensor output (alarm is triggered if fan is blocked)
- › RoHS-compliant

ASFN8 Series 80 x 80 x 25mm		Rated voltage	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight	Characteristic curve (see diagram)
Without lock sensor	With lock sensor	VDC	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg	
ASFN84371	ASFN84391	12	1.20	100	1,900	0.68	14.20	22.0	0.08	Low
ASFN84372	ASFN84392	24	1.44	60						Low
ASFN82371	ASFN82391	12	2.04	170	2,400	0.88	24.30	27.0		Middle
ASFN82372	ASFN82392	24	2.16	90						Middle
ASFN80371	ASFN80391	12	3.96	330	2,950	1.09	36.60	32.5		Standard
ASFN80372	ASFN80392	24	4.32	180						Standard
ASFN86371	ASFN86391	12	5.28	440	3,250	1.20	44.70	35.0		On request
ASFN86372	ASFN86392	24	5.04	210						On request
Accessories	ASFN88001	Fan guard 80x80mm, 5 rings, UL/CSA								
	ASEN88001	Fan guard 80x80mm, 5 rings								
	ASEN88002	Fan cover with filter								

## Diagram



## Materials used

- Frame:** Plastic
- Fan blades:** Plastic
- Bearings:** Ball bearings
- Lead wires:** UL1007 and AWG24

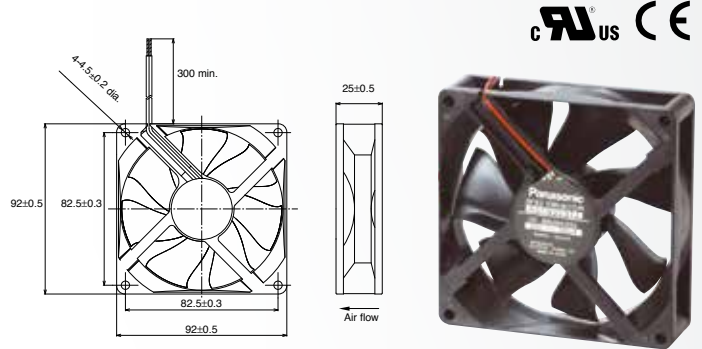
## Specifications

Operating voltage:	At 12V: 6–13.8V; at 24V: 10–27.6V
Ambient temperature:	-10°C to +60°C
Ambient humidity:	Max. 95% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	500VAC for 1min (between lead wires and frame)
Insulation resistance:	Min. 10MΩ (at 500VDC)
Lead wire tensile strength:	9.8N at 15s
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Fan blockage:	No coil burnout after 72-hour blockage at nominal voltage
Reverse polarity protection:	No damage after brief reverse polarity connection at nominal voltage
Lifetime:	60,000 hours

# ASFN9

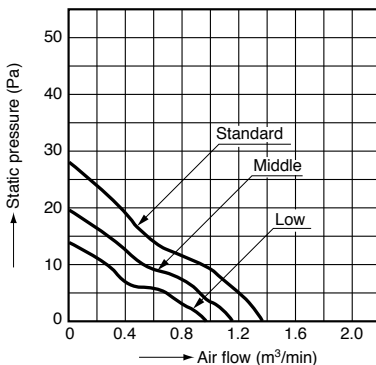
## Features

- › Dimensions: 92 x 92 x 25mm
- › Rated voltages: 12VDC, 24VDC
- › Several rotation speeds per model
- › Blockage protection with automatic restart
- › Reverse polarity and overvoltage protection
- › Optional: Lock sensor output (alarm is triggered if fan is blocked)
- › RoHS-compliant



ASFN9 Series 92 x 92 x 25mm		Rated voltage	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight	Characteristic curve (see diagram)
Without lock sensor	With lock sensor	VDC	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg	
ASFN94371	ASFN94391	12	1.44	120	1,700	0.98	14.40	22.0	0.085	Low
ASFN94372	ASFN94392	24	1.68	70						Low
ASFN92371	ASFN92391	12	2.16	180	2,000	1.17	20.00	27.0		Middle
ASFN92372	ASFN92392	24	2.16	90						Middle
ASFN90371	ASFN90391	12	3.00	250	2,350	1.38	27.60	32.0		Standard
ASFN90372	ASFN90392	24	3.12	130						Standard
ASFN96371	ASFN96391	12	4.20	350	2,750	1.61	37.50	35.5		On request
ASFN96372	ASFN96392	24	5.28	220						On request
Accessories	ASFN98001	Fan guard 92x92mm, 6 rings, UL/CSA								
	ASEN98001	Fan guard 92x92mm, 7 rings								
	ASEN88002	Fan cover with filter								

## Diagram



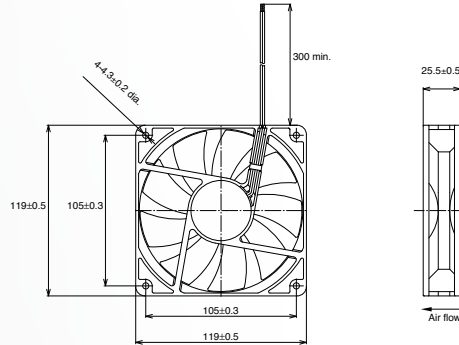
## Materials used

- Frame:** Plastic
- Fan blades:** Plastic
- Bearings:** Ball bearings
- Lead wires:** UL1007 and AWG24

## Specifications

Operating voltage:	At 12V: 6–13.8V; at 24V: 10–27.6V
Ambient temperature:	-10°C to +60°C
Ambient humidity:	Max. 95% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	500VAC for 1min (between lead wires and frame)
Insulation resistance:	Min. 10MΩ (at 500VDC)
Lead wire tensile strength:	9.8N at 15s
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Fan blockage:	No coil burnout after 72-hour blockage at nominal voltage
Reverse polarity protection:	No damage after brief reverse polarity connection at nominal voltage
Lifetime:	60,000 hours

# ASFN1

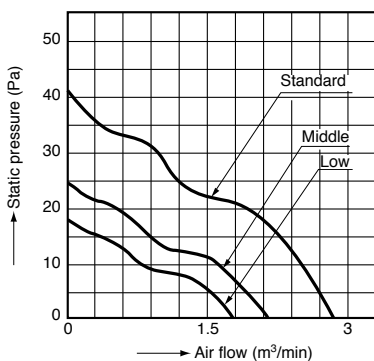


## Features

- › Dimensions: 120 x 120 x 25mm
- › Rated voltages: 12VDC, 24VDC
- › Several rotation speeds per model
- › Blockage protection with automatic restart
- › Reverse polarity and overvoltage protection
- › Optional: Lock sensor output (alarm is triggered if fan is blocked)
- › RoHS-compliant

ASFN1 Series 120 x 120 x 25mm		Rated voltage	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight	Characteristic curve (see diagram)
Without lock sensor	With lock sensor	VDC	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg	
ASFN14371	ASFN14391	12	1.92	160	1,600	1.80	17.90	27.0	0.18	Low
ASFN14372	ASFN14392	24	2.40	100						Low
ASFN12371	ASFN12391	12	3.00	250	1,900	2.15	24.80	31.0		Middle
ASFN12372	ASFN12392	24	3.12	130						Middle
ASFN10371	ASFN10391	12	6.24	520	2,500	2.85	40.90	38.5		Standard
ASFN10372	ASFN10392	24	6.96	290						Standard
ASFN16371	ASFN16391	12	8.64	720	2,800	3.25	50.50	41.5		On request
ASFN16372	ASFN16392	24	9.12	380						On request
Accessories	ASFN18001	Fan guard 120x120mm, 6 rings, UL/CSA								
	ASEN18001	Fan guard 120x120mm, 7 rings								
	ASEN18002	Fan cover with filter								

## Diagram



## Materials used

- Frame:** Plastic
- Fan blades:** Plastic
- Bearings:** Ball bearings
- Lead wires:** UL1007 and AWG24

## Specifications

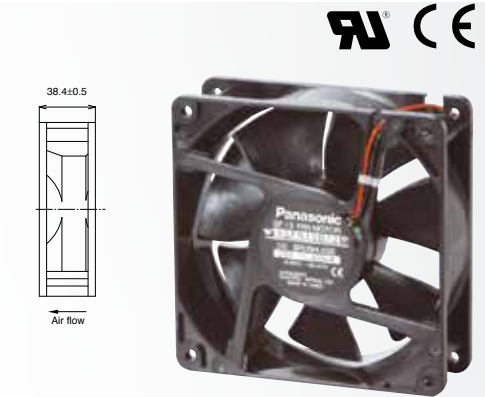
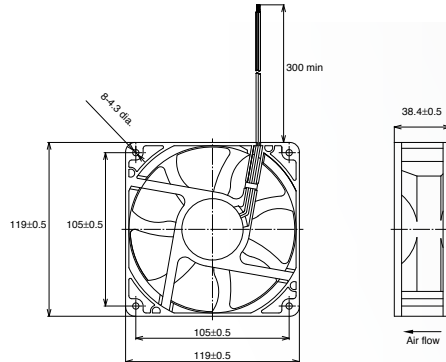
Operating voltage:	At 12V: 6–13V; at 24V: 10–27.6V
Ambient temperature:	-10°C to +60°C
Ambient humidity:	Max. 95% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	500VAC for 1min (between lead wires and frame)
Insulation resistance:	Min. 10MΩ (at 500VDC)
Lead wire tensile strength:	9.8N at 15s
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Fan blockage:	No coil burnout after 72-hour blockage at nominal voltage
Reverse polarity protection:	No damage after brief reverse polarity connection at nominal voltage
Lifetime:	100,000 hours



# ASFN1\*B

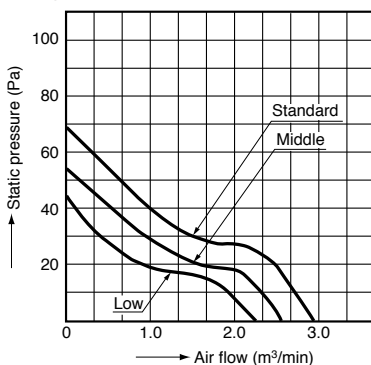
## Features

- › Dimensions: 120 x 120 x 38mm
- › Rated voltages: 12VDC, 24VDC
- › Special variant: 48VDC (on request)
- › Several rotation speeds per model
- › Blockage protection with automatic restart
- › Reverse polarity and overvoltage protection
- › Optional: Lock sensor output (alarm is triggered if fan is blocked)
- › RoHS-compliant



ASFN1*B Series 120x120x38mm		Rated voltage	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight	Characteristic curve (see diagram)
Without lock sensor	With lock sensor	VDC	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg	
ASFN14B71	ASFN14B91	12	4.20	350	2,300	2.27	44.10	37.0	0.26	Low
ASFN14B72	ASFN14B92	24	4.80	200						Low
ASFN12B71	ASFN12B91	12	6.24	520	2,650	2.75	55.90	41.0		Middle
ASFN12B72	ASFN12B92	24	6.72	280						Middle
ASFN10B71	ASFN10B91	12	8.64	720	2,950	3.07	68.10	42.5		Standard
ASFN10B72	ASFN10B92	24	9.60	400						Standard
ASFN16B71	ASFN16B91	12	10.80	900	3,200	3.34	81.40	46.5		On request
ASFN16B72	ASFN16B92	24	11.04	460						On request
Accessories	ASFN18001	Fan guard 120x120mm, 6 rings, UL/CSA								
	ASEN18001	Fan guard 120x120mm, 7 rings								
	ASEN18002	Fan cover with filter								

## Diagram



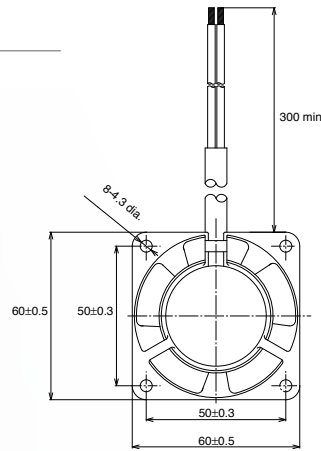
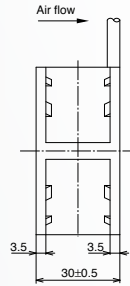
## Materials used

- Frame:** Plastic
- Fan blades:** Plastic
- Bearings:** Ball bearings
- Lead wires:** Cables UL1061 and AWG26

## Specifications

Operating voltage:	At 12V: 6–13.8V; at 24V: 10–27.6V
Ambient temperature:	-10°C to +60°C
Ambient humidity:	Max. 95% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	500VAC for 1min (between lead wires and frame)
Insulation resistance:	Min. 10MΩ (at 500VDC)
Lead wire tensile strength:	9.8N at 15s
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Fan blockage:	No coil burnout after 72-hour blockage at nominal voltage
Reverse polarity protection:	No damage after brief reverse polarity connection at nominal voltage
Lifetime:	50,000 hours

# ASEN6

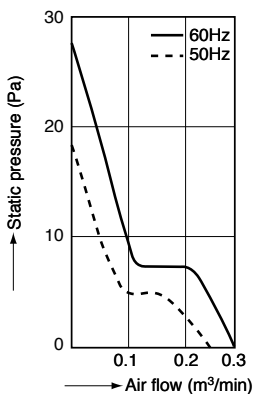


## Features

- › Dimensions: 60 x 60 x 30mm
- › Rated voltages: 100VAC, 115VAC
- › Frame: die-cast aluminum
- › Propeller: reinforced plastic
- › RoHS-compliant

ASEN6 Series 60 x 60 x 30mm	Rated voltage	Frequency	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight
	VAC	Hz	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg
ASEN60511	100	50/60	6/5	80/70	2,000/2,600	0.2/0.26	13.7/22.6	28/29	0.14
ASEN60512	115	50/60	4.5/4	70/60					
Accessories									
ASFN68001	Fan guard 60x60mm, 4 rings, UL/CSA								
ASEN68002	Fan cover with filter								

## Diagram



## Materials used

**Frame:** Aluminum alloy

**Fan blades:** Fiberglass-reinforced plastic

**Bearings:** Ball bearings

**Lead wires:** UL3266 and AWG22

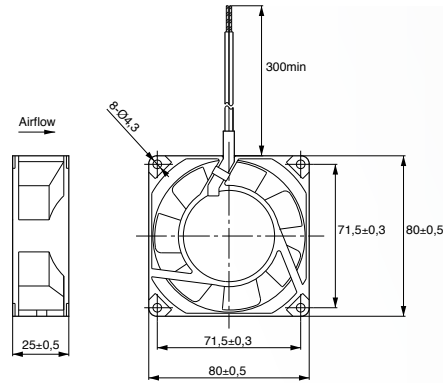
## Specifications

Operating voltage:	±10% of rated voltage
Ambient temperature:	Storage: -20°C to +70°C; operation: -10°C to +60°C
Ambient humidity:	Max. 85% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	1,500VAC for 1min
Insulation resistance:	Min. 100MΩ (at 500VDC)
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Fan blockage:	No coil burnout after 72-hour blockage at nominal voltage
Protection:	Impedance protected
Lifetime:	50,000 hours

# ASEN8

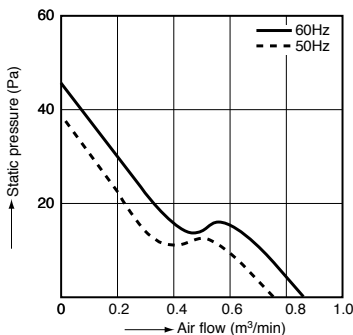
## Features

- › Dimensions: 80 x 80 x 25mm
- › Rated voltages: 100VAC, 115VAC
- › Frame: die-cast aluminum
- › Propeller: reinforced plastic
- › RoHS-compliant



ASEN8 Series 80 x 80 x 25mm	Rated voltage	Frequency	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight
	VAC	Hz	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg
ASEN80211	100	50/60	6/5	90/80	2,400/2,750	44.4/51.0	37.5/43.0	28/33	0.22
ASEN80212	115			80/70					
ASEN80214	200		7/6	60/50	2,500/3,000	34.2/40.8	39.0/55.0	24/31	
ASEN80215	220		7.6/6.5	55/45					
ASEN80216	230			50/45					
ASEN80217	240		50/45						
Accessories									
ASFN88001	Fan guard 80x80mm, 5 rings, UL/CSA								
ASEN88001	Fan guard 80x80mm, 5 rings								
ASEN88002	Fan cover with filter								

## Diagram



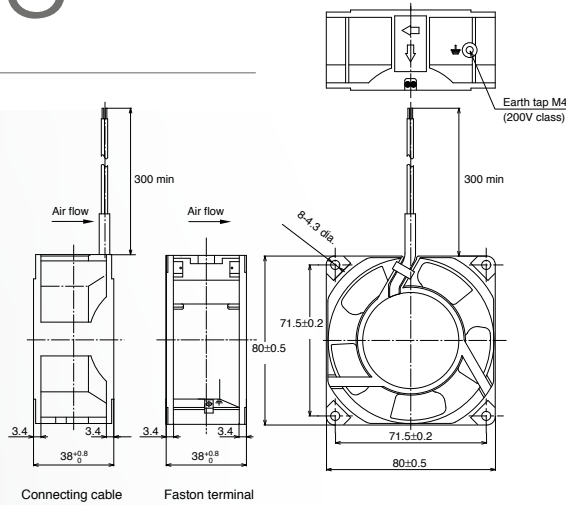
## Materials used

- Frame: Aluminum alloy
- Fan blades: Fiberglass-reinforced plastic
- Bearings: Ball bearings
- Lead wires: UL3266 and AWG22

## Specifications

Operating voltage:	±10% of rated voltage
Ambient temperature:	Storage: -20°C to +70°C; operation: -10°C to +60°C
Ambient humidity:	Max. 85% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	1,500VAC for 1min
Insulation resistance:	Min. 100MΩ (at 500VDC)
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Protection:	Impedance protected
Lifetime:	50,000 hours

# ASEN8

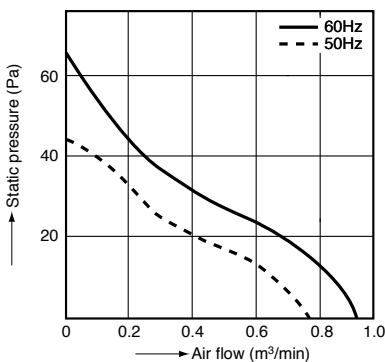


## Features

- › Dimensions: 80 x 80 x 38mm
- › 6 rated voltages: 100VAC to 240VAC
- › Frame: die-cast aluminum
- › Propeller: reinforced plastic
- › RoHS-compliant

ASEN8 Series 80 x 80 x 38mm		Rated voltage	Frequency	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight	
Lead wire type	Faston terminal type	VAC	Hz	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg	
ASEN80411	ASEN804519	100	50/60	9.0/7.0	170/120	2,700/ 3,200	0.75/0.90	44.2/62.8	33/38	0.3	
ASEN80412	ASEN804529	115			140/110						
ASEN80414	ASEN804549	200			80/65						
ASEN80415	ASEN804559	220			70/60						
ASEN80416	ASEN804569	230			10.0/8.0						70/55
ASEN80417	ASEN804579	240			12.0/9.0						75/60
Accessories	ASFN88001	Fan guard 80x80mm, 5 rings, UL/CSA									
	ASEN88001	Fan guard 80x80mm, 5 rings									
	ASEN88002	Fan cover with filter									

## Diagram



## Materials used

- Frame:** Aluminum alloy
- Fan blades:** Fiberglass-reinforced plastic
- Bearings:** Ball bearings
- Lead wires:** UL3266 and AWG22
- Faston terminal:** Faston #110

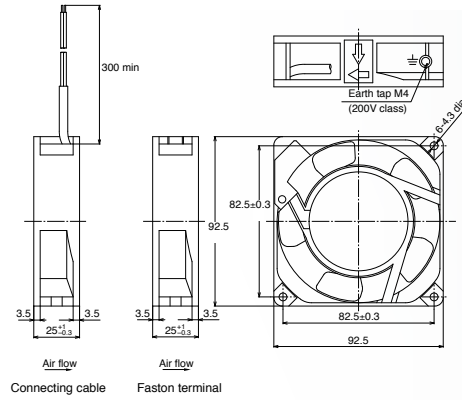
## Specifications

Operating voltage:	±10% of rated voltage
Ambient temperature:	Storage: -20°C to +70°C; operation: -10°C to +60°C
Ambient humidity:	Max. 85% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	1,500VAC for 1min
Insulation resistance:	Min. 100MΩ (at 500VDC)
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Protection:	Impedance protected
Lifetime:	50,000 hours

# ASEN9

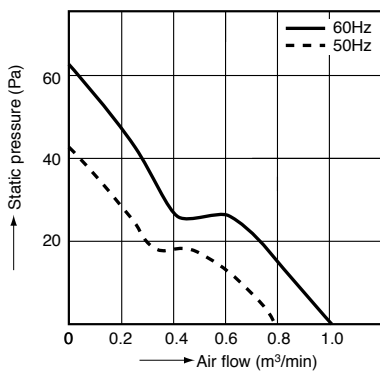
## Features

- › Dimensions: 92 x 92 x 25mm
- › 6 rated voltages: 100VAC to 240VAC
- › Frame: die-cast aluminum
- › Propeller: reinforced plastic
- › RoHS-compliant



ASEN9 Series 92 x 92 x 25mm		Rated voltage	Frequency	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight
Lead wire type	Faston terminal type	VAC	Hz	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg
ASEN90211	ASEN902519	100	50/60	13.0/10.0	190/150	2,600/ 3,100	0.80/0.98	43.2/60.9	34/39	0.3
ASEN90212	ASEN902529	115		12.0/9.0	170/130					
ASEN90214	ASEN902549	200		100/80	100/80					
ASEN90215	ASEN902559	220		100/80	90/70					
ASEN90216	ASEN902569	230		85/65						
ASEN90217	ASEN902579	240								
Accessories	ASFN98001	Fan guard 92x92mm, 6 rings, UL/CSA								
	ASEN98001	Fan guard 92x92mm, 7 rings								
	ASEN98002	Fan cover with filter								

## Diagram



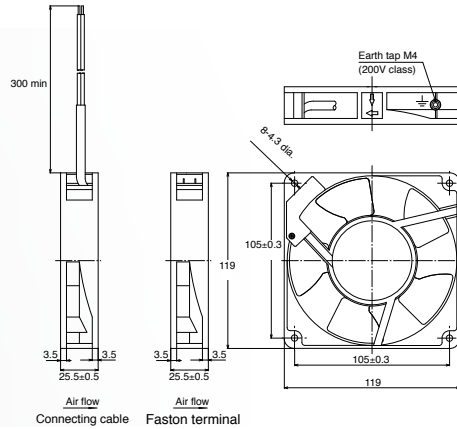
## Materials used

- Frame: Aluminum alloy
- Fan blades: Fiberglass-reinforced plastic
- Bearings: Ball bearings
- Lead wires: UL3266 and AWG22
- Faston terminal: Faston #110

## Specifications

Operating voltage:	±10% of rated voltage
Ambient temperature:	Storage: -20°C to +70°C; operation: -10°C to +60°C
Ambient humidity:	Max. 85% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	1,500VAC for 1min
Insulation resistance:	Min. 100MΩ (at 500VDC)
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Protection:	Impedance protected
Lifetime:	50,000 hours

# ASEN1

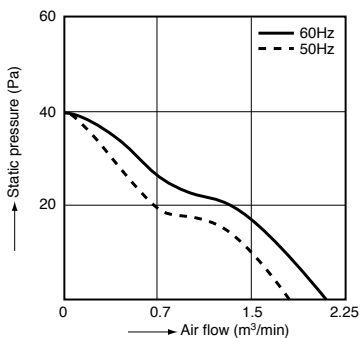


## Features

- › Dimensions: 120 x 120 x 25mm
- › 6 rated voltages: 100VAC to 240V AC
- › Frame: die-cast aluminum
- › Propeller: reinforced plastic
- › RoHS-compliant

ASEN1 Series 120 x 120 x 25mm		Rated voltage	Frequency	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight
Lead wire type	Faston terminal type	VAC	Hz	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg
ASEN10211	ASEN102519	100	50/60	14.0/11.0	220/180	2,300/ 2,700	1.8/2.0	41.2/41.2	34/38	0.36
ASEN10212	ASEN102529	115			190/160					
ASEN10214	ASEN102549	200			110/90					
ASEN10215	ASEN102559	220			100/80					
ASEN10216	ASEN102569	230			100/90					
ASEN10217	ASEN102579	240		15.0/13.0	100/80					
Accessories	ASFN18001	Fan guard 120x120mm, 6 rings, UL/CSA								
	ASEN18001	Fan guard 120x120mm, 7 rings								
	ASEN18002	Fan cover with filter								

## Diagram



## Materials used

- Frame:** Aluminum alloy
- Fan blades:** Fiberglass-reinforced plastic
- Bearings:** Ball bearings
- Lead wires:** UL3266 and AWG22
- Faston terminal:** Faston #110

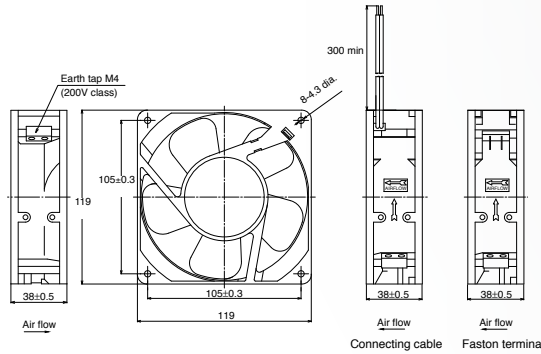
## Specifications

Operating voltage:	±10% of rated voltage
Ambient temperature:	Storage: -20°C to +70°C; operation: -10°C to +60°C
Ambient humidity:	Max. 85% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	1,500VAC for 1min
Insulation resistance:	Min. 100MΩ (at 500VDC)
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Protection:	Impedance protected
Lifetime:	50,000 hours

# ASEN1

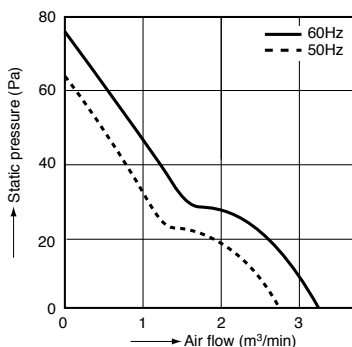
## Features

- › Dimensions: 120 x 120 x 38mm
- › 6 rated voltages: 100V AC to 240V AC
- › Frame: die-cast aluminum
- › Propeller: reinforced plastic
- › RoHS-compliant



ASEN1 Series 120 x 120 x 38mm		Rated voltage	Frequency	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight
Lead wire type	Faston terminal type	VAC	Hz	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg
ASEN10411	ASEN104519	100	50/60	15.0/14.0	270/230	2,600/ 2,900	2.5/2.9	64.7/76.4	37/41	0.55
ASEN10412	ASEN104529	115		15.5/14.5	250/210					
ASEN10414	ASEN104549	200		15.0/13.0	140/120					
ASEN10415	ASEN104559	220		14.0/13.0	120/100					
ASEN10416	ASEN104569	230		15.0/14.0	120/100					
ASEN10417	ASEN104579	240		14.0/13.0	110/100					
Accessories	ASFN18001	Fan guard 120x120mm, 6 rings, UL/CSA								
	ASEN18001	Fan guard 120x120mm, 7 rings								
	ASEN18002	Fan cover with filter								

## Diagram



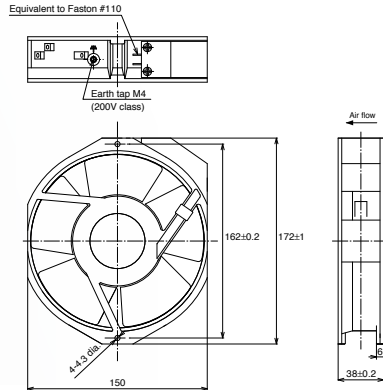
## Materials used

- Frame:** Aluminum alloy
- Fan blades:** Fiberglass-reinforced plastic
- Bearings:** Ball bearings
- Lead wires:** UL3266 and AWG22
- Faston terminal:** Faston #110

## Specifications

Operating voltage:	±10% of rated voltage
Ambient temperature:	Storage: -20°C to +70°C; operation: -10°C to +60°C
Ambient humidity:	Max. 85% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	1,500VAC for 1min
Insulation resistance:	Min. 100MΩ (at 500VDC)
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Protection:	Impedance protected
Lifetime:	50,000 hours

# ASEN5

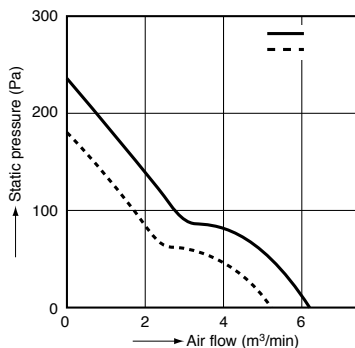


## Features

- › Dimensions: 150 x 172 x 38mm
- › 6 rated voltages: 100V AC to 240V AC
- › Frame: die-cast aluminum
- › Propeller: reinforced plastic
- › RoHS-compliant

ASEN5 Series 150x172x38mm	Rated voltage	Frequency	Input power	Rated current	Rotation speed	Air flow	Static pressure	Noise	Weight
Faston terminal type	VAC	Hz	W	mA	rpm	m <sup>3</sup> /min	Pa	dB(A)	kg
ASEN50751	100	50/60	37.0/33.0	470/440	2,700/3,200	5.0/6.0	157.0/215.8	52/56	0.8
ASEN50752	115		35.0/32.0	380/360					
ASEN50754	200		34.0/33.0	230/210					
ASEN50755	220		40.0/38.0	210/180					
ASEN50756	230		35.0/35.0	190/180					
ASEN50757	240		34.0/34.0	180/170					
Accessories									
ASEN58001	Fan guard 150x150mm, 9 rings, UL/CSA								

## Diagram



## Materials used

- Frame:** Aluminum alloy
- Fan blades:** Fiberglass-reinforced plastic
- Bearings:** Ball bearings
- Lead wires:** UL3266 and AWG22
- Faston terminal:** Faston #110

## Specifications

Operating voltage:	±10% of rated voltage
Ambient temperature:	Storage: -20°C to +70°C; operation: -10°C to +60°C
Ambient humidity:	Max. 85% (RH)
Temperature rise:	Coil: max. 50°C; surface: max. 20°C
Breakdown voltage:	1,500VAC for 1min
Insulation resistance:	Min. 100MΩ (at 500VDC)
Vibration resistance:	10 to 55Hz; amplitude 0.75mm; applied for 10min in 3 directions
Protection:	Impedance protected
Lifetime:	50,000 hours



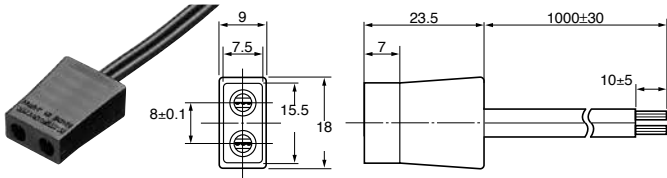
## Dimensions (mm)

### 1. Connector cable for AC fans

ASE51100

#### Fan connector cable 1m

Two-core, injection-molded plastic twin cables (20/0.18) with center-fed, double-pole Faston terminal

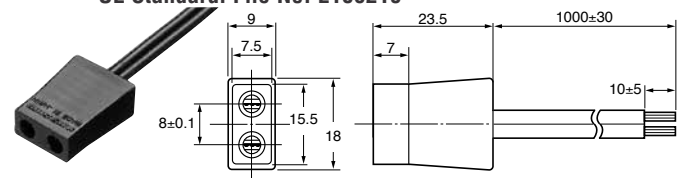


ASE51109

#### Fan connector cable 1m

Two-core, injection-molded plastic twin cables with center-fed, double-pole Faston terminal

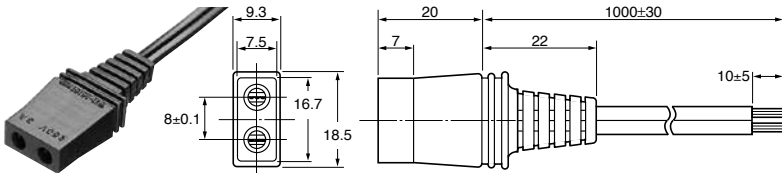
UL Standard: File No. E106219



ASE51107

#### Fan connector cable 1m

Two-core, injection-molded plastic twin cables (30/0.18) with center-fed, double-pole Faston terminal

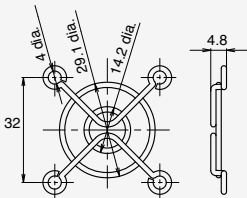


### 2. Fan guard (for DC and AC fans)

ASFN48001

For 40 x 40; 2 rings; UL/CSA

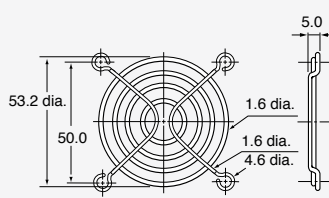
Material: steel, d=1.6mm



ASFN68001

For 60 x 60; 4 rings; UL/CSA

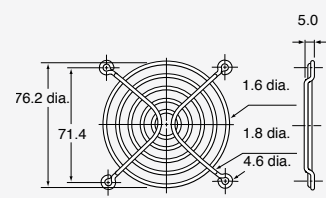
Material: steel, d=1.6mm



ASFN88001

For 80 x 80; 5 rings; UL/CSA

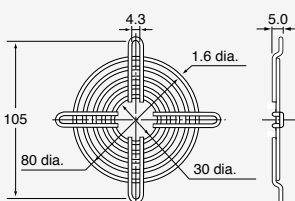
Material: steel, d=1.6mm



ASEN88001

For 80 x 80; 5 rings

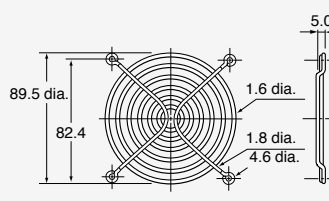
Material: steel, d=1.6mm



ASFN98001

For 92 x 92; 6 rings; UL/CSA

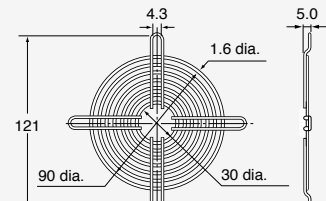
Material: steel, d=1.6mm



ASEN98001

For 92 x 92; 7 rings

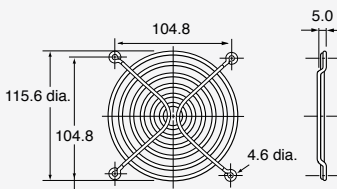
Material: steel, d=1.6mm



ASFN18001

For 120 x 120; 6 rings; UL/CSA

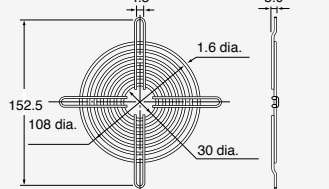
Material: steel, d=1.6mm



ASEN18001

For 120 x 120; 7 rings

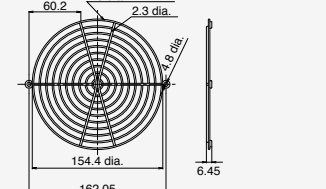
Material: steel, d=1.6mm



ASEN58001

For 150 x 150; 9 rings; UL/CSA

Material: steel, d=1.6mm

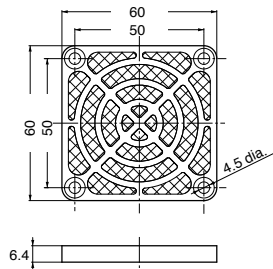


### 3. Fan cover with filter insert (for DC and AC fans)

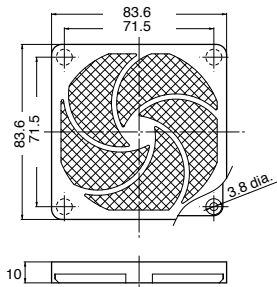


ASEN18002

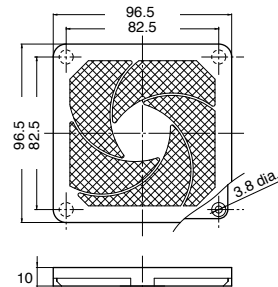
ASEN68002  
For 60 x 60 Series



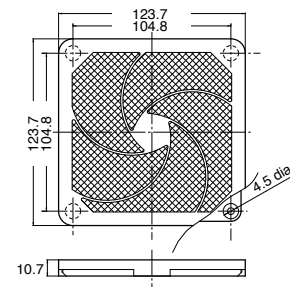
ASEN88002  
For 80 x 80 Series



ASEN98002  
For 90 x 90 Series



ASEN18002  
For 120 x 120 Series

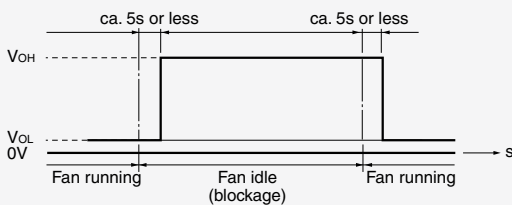


## Fan lock sensor: operation details

### DC Fan sensor output

In the ASFN series, the models designated "with lock sensor" have an additional output. If the fan propeller is blocked, a rectangular alarm signal is triggered at the sensor output. This signal can be used with an external circuit in order to monitor the fan - for example, to keep it from overheating.

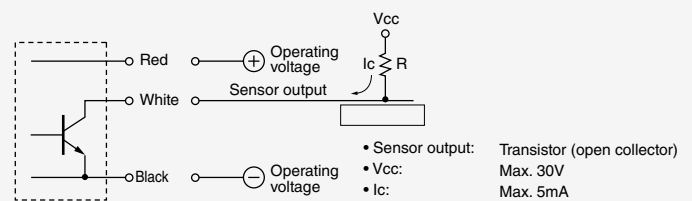
#### › 1. Sensor output switch action



#### Notes:

- 1.) Output may be high for approximately 0.5s when power is turned on.
- 2.) In case of fan blockage, the sensor signal is at a constant high.

#### › 2. External circuit



#### Fan

#### External circuit

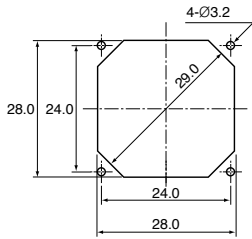
#### Notes:

- 1.) Set the resistance (R) at a value which ensures that the sensor circuit current (Ic) does not exceed 5mA.
- 2.) If the sensor output is operating at the TTL level, the sensor circuit current (Ic) should be approximately 2mA.

## For DC Fans

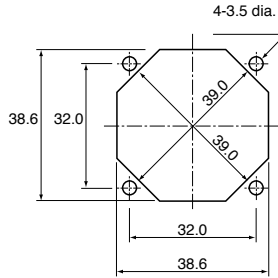
### 1. 30 x 30 Series

Discharge side / Suction side



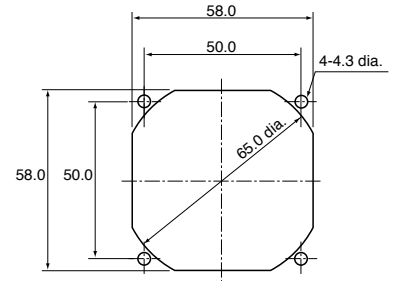
### 2. 40 x 40 Series

Discharge side / Suction side



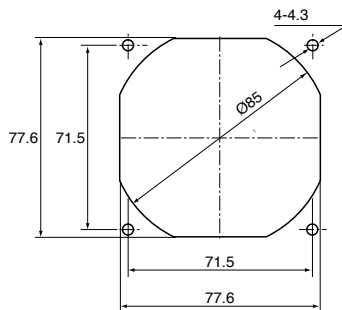
### 3. 60 x 60 Series

Discharge side / Suction side



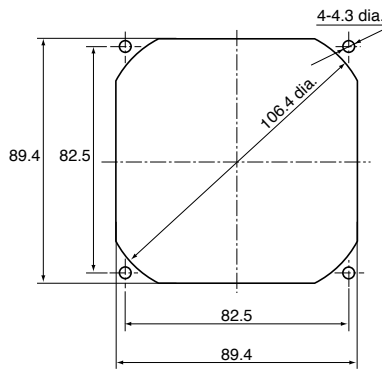
### 4. 80 x 80 Series

Discharge side / Suction side



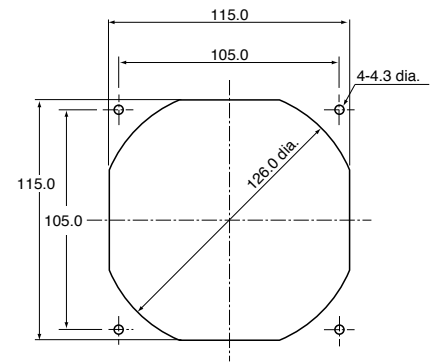
### 5. 92 x 92 Series

Discharge side / Suction side



### 6. 120 x 120 Series

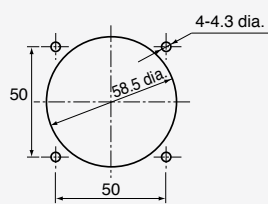
Discharge side / Suction side



## For AC Fans

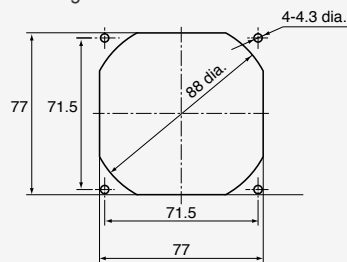
### 1. 60 x 60 Series

Discharge side / Suction side



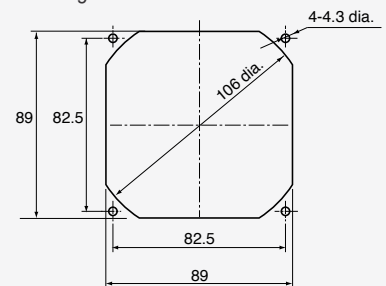
### 2. 80 x 80 Series

Discharge side / Suction side



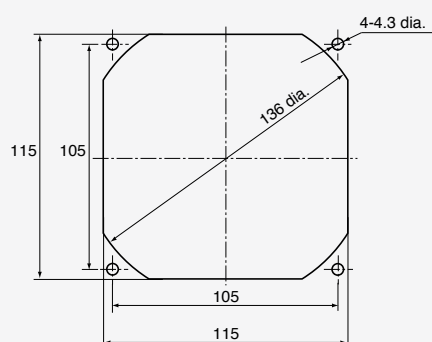
### 3. 92 x 92 Series

Discharge side / Suction side



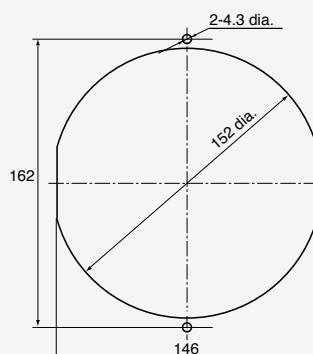
### 4. 120 x 120 Series

Discharge side / Suction side



### 5. 152 x 172 Series

Discharge side / Suction side





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▶ <b>Poland</b>	<b>Panasonic Electric Works Polska sp. z o.o</b>	ul. Wołoska 9A, 02-583 Warszawa, Tel. +48 22 338-11-33, Fax +48 22 338-12-00, <a href="http://www.panasonic-electric-works.pl">www.panasonic-electric-works.pl</a>
▶ <b>Spain</b>	<b>Panasonic Electric Works España S.A.</b>	Barajas Park, San Severo 20, 28042 Madrid, Tel. +34 913293875, Fax +34 913292976, <a href="http://www.panasonic-electric-works.es">www.panasonic-electric-works.es</a>
▶ <b>Switzerland</b>	<b>Panasonic Electric Works Schweiz AG</b>	Grundstrasse 8, 6343 Rotkreuz, Tel. +41 (0) 41 7997050, Fax +41 (0) 41 7997055, <a href="http://www.panasonic-electric-works.ch">www.panasonic-electric-works.ch</a>
▶ <b>United Kingdom</b>	<b>Panasonic Electric Works UK Ltd.</b>	Sunrise Parkway, Linford Wood, Milton Keynes, MK14 6LF, Tel. +44 (0) 1908 231555, Fax +44 (0) 1908 231599, <a href="http://www.panasonic-electric-works.co.uk">www.panasonic-electric-works.co.uk</a>
North & South America		
▶ <b>USA</b>	<b>Panasonic Industrial Devices Sales Company of America</b>	629 Central Avenue, New Providence, N.J. 07974, Tel. 1-908-464-3550, Fax 1-908-464-8513, <a href="http://www.pewa.panasonic.com">www.pewa.panasonic.com</a>
Asia Pacific/China/Japan		
▶ <b>China</b>	<b>Panasonic Electric Works Sales (China) Co. Ltd.</b>	Level 2, Tower W3, The Towers Oriental Plaza, No. 2, East Chang An Ave., Dong Cheng District, Beijing 100738, Tel. +86-10-5925-5988, Fax +86-10-5925-5973
▶ <b>Hong Kong</b>	<b>Panasonic Industrial Devices Automation Controls Sales (Hong Kong) Co., Ltd.</b>	RM1205-9, 12/F, Tower 2, The Gateway, 25 Canton Road, Tsimshatsui, Kowloon, Hong Kong, Tel. +852-2956-3118, Fax +852-2956-0398
▶ <b>Japan</b>	<b>Panasonic Corporation</b>	1048 Kadoma, Kadoma-shi, Osaka 571-8686, Japan, Tel. +81-6-6908-1050, Fax +81-6-6908-5781, <a href="http://www.panasonic.net">www.panasonic.net</a>
▶ <b>Singapore</b>	<b>Panasonic Industrial Devices Automation Controls Sales Asia Pacific</b>	300 Beach Road, #16-01 The Concourse, Singapore 199555, Tel. +65-6390-3811, Fax +65-6390-3810

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