

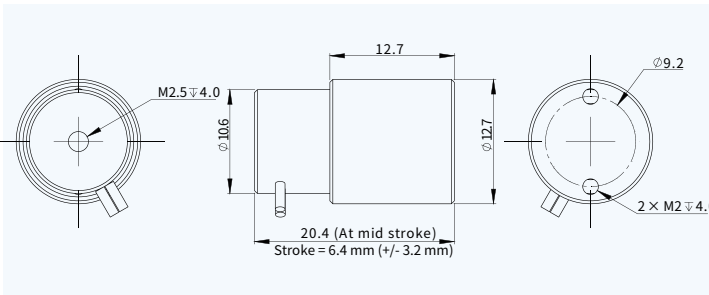
AVM SERIES

- ▶ Direct drive, zero cogging, zero backlash voice coil motors
- ▶ Low coil mass with very fast response and bandwidth
- ▶ No contact between coil and core movement (no wear and tear)
- ▶ Smooth motion at low speeds with limitless resolution (depends on feedback device)

AVM12-6.4

Performance Parameters		Symbol	Unit	AVM12-6.4
Stroke		S	mm	6.4
Continuous Force @100°C ^{1 2}		F _C	N	0.91
Peak Force ²		F _{pk}	N	3.53
Force Constant ±10% ³		K _f	N/A	0.57
Back EMF Constant ±10% ³		K _e	V/(m/s)	0.57
Motor Constant @25°C ²		K _m	N/Sqrt(W)	0.53
Resistance @25°C ±10% ³		R ₂₅	Ω	1.17
Inductance ±20% ³		L	mH	0.10
Electrical Time Constant		τ _e	ms	0.09
Continuous Current @100°C ¹		I _c	A	1.6
Peak Current		I _{pk}	A	6.2
Continuous Power Dissipation @100°C ¹		P _t	W	3.9
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant ¹		K _{th}	W/°C	0.051
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	5
Core Mass		m _{core}	g	7.3
Running Clearance		L _{gap}	mm	0.35
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

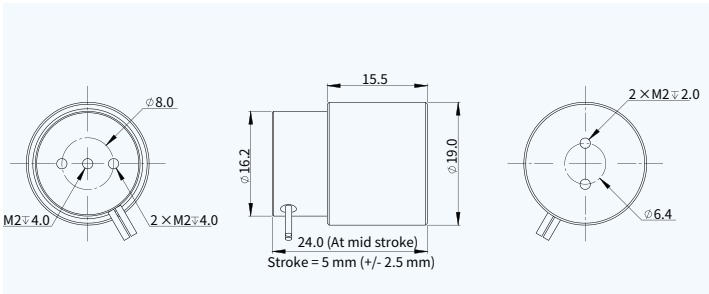


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM19-5

Performance Parameters		Symbol	Unit	AVM19-5
Stroke		S	mm	5.0
Continuous Force @100°C ①②		F _C	N	1.75
Peak Force ②		F _{pk}	N	7.88
Force Constant ±10%③		K _f	N/A	1.75
Back EMF Constant ±10%③		K _e	V/(m/s)	1.75
Motor Constant @25°C②		K _m	N/Sqrt(W)	1.17
Resistance @25°C ±10%③		R ₂₅	Ω	2.24
Inductance ±20%③		L	mH	0.29
Electrical Time Constant		τ _e	ms	0.13
Continuous Current @100°C①		I _c	A	1.0
Peak Current		I _{pk}	A	4.5
Continuous Power Dissipation @100°C①		P _t	W	2.9
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant①		K _{th}	W/°C	0.038
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	9.0
Core Mass		m _{core}	g	23.8
Running Clearance		L _{gap}	mm	0.4
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension



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 - ② The values are at mid stroke.
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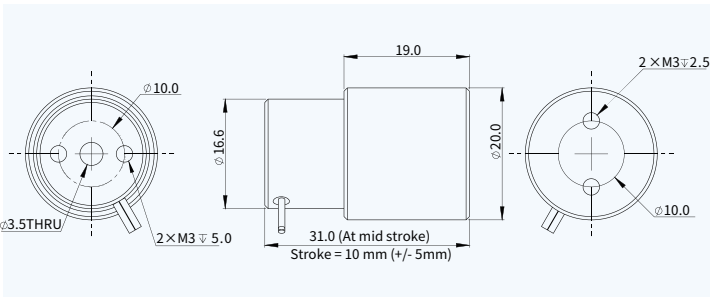


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AVM20-10

Performance Parameters		Symbol	Unit	AVM20-10
Stroke		S	mm	10.0
Continuous Force @100°C		F _c	N	1.56
Peak Force		F _{pk}	N	7.6
Force Constant ±10%		K _f	N/A	2.0
Back EMF Constant ±10%		K _e	V/(m/s)	2.0
Motor Constant @25°C		K _m	N/Sqrt(W)	1.06
Resistance @25°C ±10%		R ₂₅	Ω	3.59
Inductance ±20%		L	mH	0.55
Electrical Time Constant		τ _e	ms	0.15
Continuous Current @100°C		I _c	A	0.78
Peak Current		I _{pk}	A	3.8
Continuous Power Dissipation @100°C		P _t	W	2.8
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.038
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	11
Core Mass		m _{core}	g	45.1
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

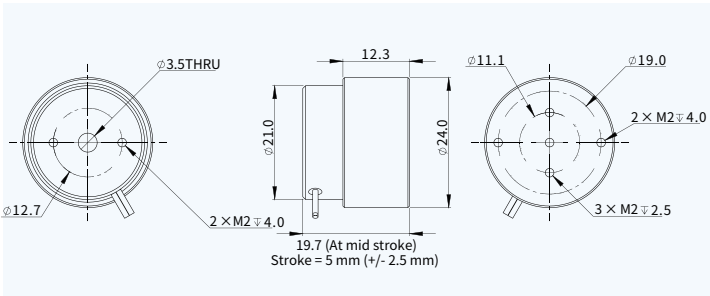


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
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 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
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AVM24-5

Performance Parameters		Symbol	Unit	AVM24-5
Stroke		S	mm	5.0
Continuous Force @100°C		F _c	N	2.1
Peak Force		F _{pk}	N	11.4
Force Constant ±10%		K _f	N/A	3.0
Back EMF Constant ±10%		K _e	V/(m/s)	3.0
Motor Constant @25°C		K _m	N/Sqrt(W)	1.69
Resistance @25°C ±10%		R ₂₅	Ω	3.15
Inductance ±20%		L	mH	0.55
Electrical Time Constant		τ _e	ms	0.17
Continuous Current @100°C		I _c	A	0.7
Peak Current		I _{pk}	A	3.8
Continuous Power Dissipation @100°C		P _t	W	2.0
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.027
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	12
Core Mass		m _{core}	g	29.7
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

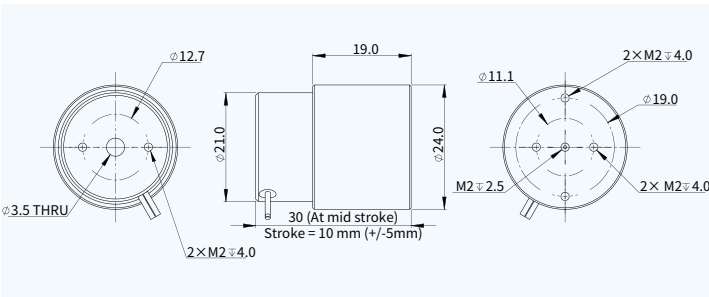


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
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 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
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AVM24-10

Performance Parameters		Symbol	Unit	AVM24-10
Stroke		S	mm	10.0
Continuous Force @100°C		F _c	N	2.65
Peak Force		F _{pk}	N	14.82
Force Constant ±10%		K _f	N/A	3.9
Back EMF Constant ±10%		K _e	V/(m/s)	3.9
Motor Constant @25°C		K _m	N/Sqrt(W)	1.61
Resistance @25°C ±10%		R ₂₅	Ω	5.86
Inductance ±20%		L	mH	1.34
Electrical Time Constant		τ _e	ms	0.23
Continuous Current @100°C		I _c	A	0.68
Peak Current		I _{pk}	A	3.8
Continuous Power Dissipation @100°C		P _t	W	3.5
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.047
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	16.5
Core Mass		m _{core}	g	45
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

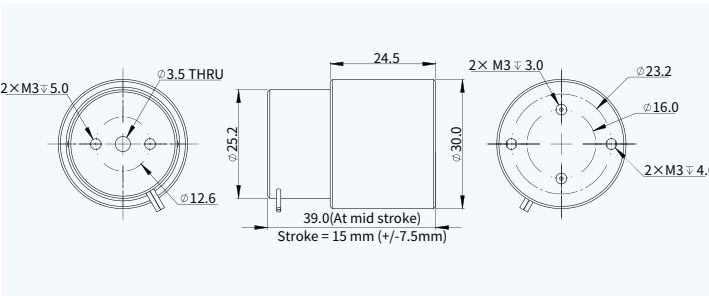


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
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 - 4 Inductance is measured by current frequency of 1 kHz.
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AVM30-15

Performance Parameters		Symbol	Unit	AVM30-15
Stroke		S	mm	15.0
Continuous Force @100°C		F _c	N	4.63
Peak Force		F _{pk}	N	29.4
Force Constant ±10%		K _f	N/A	7.35
Back EMF Constant ±10%		K _e	V/(m/s)	7.35
Motor Constant @25°C		K _m	N/Sqrt(W)	2.30
Resistance @25°C ±10%		R ₂₅	Ω	10.24
Inductance ±20%		L	mH	2.82
Electrical Time Constant		τ _e	ms	0.28
Continuous Current @100°C		I _c	A	0.63
Peak Current		I _{pk}	A	4
Continuous Power Dissipation @100°C		P _t	W	5.2
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.070
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	36
Core Mass		m _{core}	g	95.6
Running Clearance		L _{gap}	mm	0.6
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

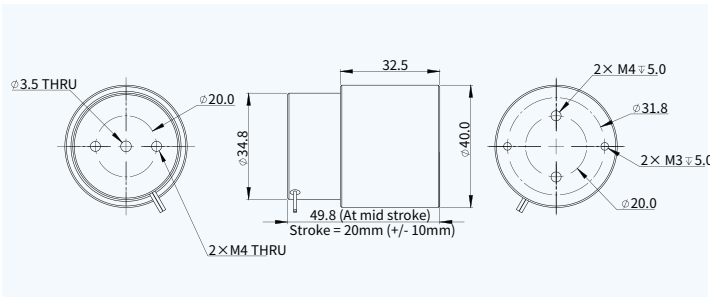


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 - 4 Inductance is measured by current frequency of 1 kHz.
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AVM40-20

Performance Parameters		Symbol	Unit	AVM40-20
Stroke		S	mm	20.0
Continuous Force @100°C		F _c	N	9.93
Peak Force		F _{pk}	N	58.05
Force Constant ±10%		K _f	N/A	12.9
Back EMF Constant ±10%		K _e	V/(m/s)	12.9
Motor Constant @25°C		K _m	N/Sqrt(W)	3.84
Resistance @25°C ±10%		R ₂₅	Ω	11.26
Inductance ±20%		L	mH	4.77
Electrical Time Constant		τ _e	ms	0.42
Continuous Current @100°C		I _c	A	0.77
Peak Current		I _{pk}	A	4.5
Continuous Power Dissipation @100°C		P _t	W	8.6
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.115
Max.Voltage		U _{max}	V _{dc}	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	67.0
Core Mass		m _{core}	g	226.2
Running Clearance		L _{gap}	mm	0.6
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

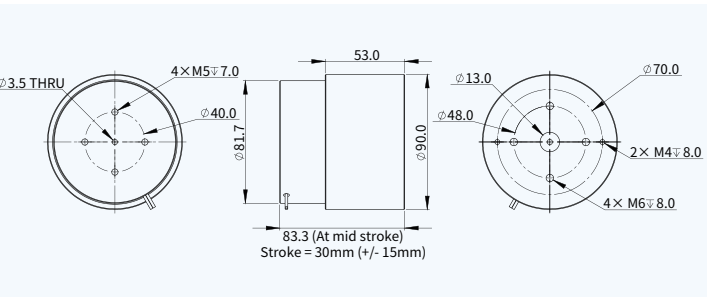


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AVM90-30

Performance Parameters		Symbol	Unit	AVM90-30
Stroke		S	mm	30.0
Continuous Force @100°C		F _c	N	89.1
Peak Force		F _{pk}	N	315
Force Constant ±10%		K _f	N/A	22.5
Back EMF Constant ±10%		K _e	V/(m/s)	22.5
Motor Constant @25°C		K _m	N/Sqrt(W)	13.97
Resistance @25°C ±10%		R ₂₅	Ω	2.60
Inductance ±20%		L	mH	3.26
Electrical Time Constant		τ _e	ms	1.25
Continuous Current @100°C		I _c	A	3.96
Peak Current		I _{pk}	A	14.0
Continuous Power Dissipation @100°C		P _t	W	52.4
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.699
Max.Voltage		U _{max}	V _{dc}	120
Mechanical Parameters				
Coil Mass		m _{coil}	g	820
Core Mass		m _{core}	g	1750
Running Clearance		L _{gap}	mm	0.7
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

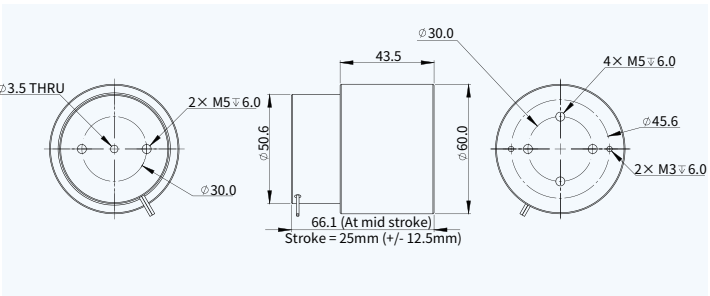


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 - ④ Inductance is measured by current frequency of 1 kHz.
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AVM60-25

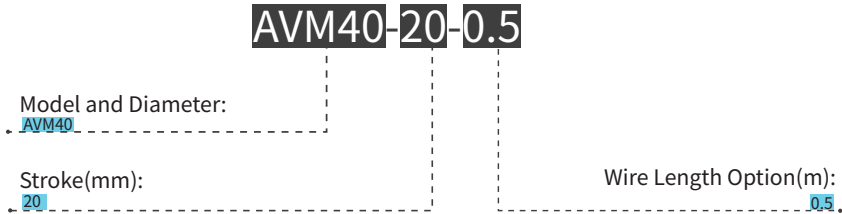
Performance Parameters		Symbol	Unit	AVM60-25
Stroke		S	mm	25.0
Continuous Force @100°C		F _c	N	26.35
Peak Force		F _{pk}	N	119
Force Constant ±10%		K _f	N/A	17.0
Back EMF Constant ±10%		K _e	V/(m/s)	17.0
Motor Constant @25°C		K _m	N/Sqrt(W)	7.35
Resistance @25°C ±10%		R ₂₅	Ω	5.35
Inductance ±20%		L	mH	3.82
Electrical Time Constant		τ _e	ms	0.71
Continuous Current @100°C		I _c	A	1.55
Peak Current		I _{pk}	A	7
Continuous Power Dissipation @100°C		P _t	W	16.6
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.221
Max.Voltage		U _{max}	V _{dc}	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	215
Core Mass		m _{core}	g	692.9
Running Clearance		L _{gap}	mm	0.7
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension



- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
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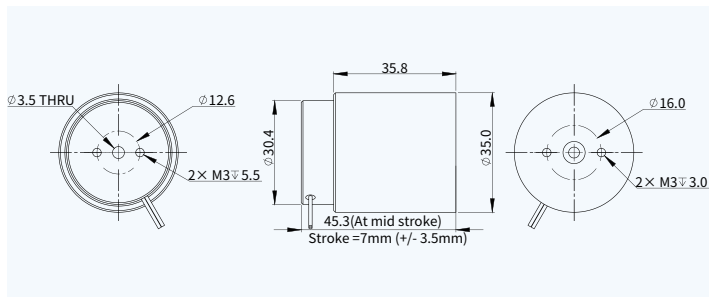
Part Numbering



AVM35-HF-7

Performance Parameters		Symbol	Unit	AVM35-HF-7
Stroke		S	mm	7.0
Continuous Force @100°C		F _c	N	14.4
Peak Force		F _{pk}	N	72.0
Force Constant ±10%		K _f	N/A	16.0
Back EMF Constant ±10%		K _e	V/(m/s)	16.0
Motor Constant @25°C		K _m	N/Sqrt(W)	5.25
Resistance @25°C ±10%		R ₂₅	Ω	9.28
Inductance ±20%		L	mH	3.55
Electrical Time Constant		T _e	ms	0.38
Continuous Current @100°C		I _c	A	0.9
Peak Current		I _{pk}	A	4.5
Continuous Power Dissipation @100°C		P _t	W	9.7
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.129
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	53.0
Core Mass		m _{core}	g	146.8
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

■ Dimension

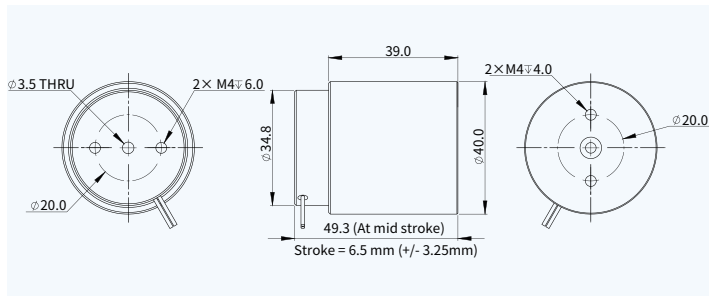


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 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
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AVM40-HF-6.5

Performance Parameters		Symbol	Unit	AVM40-HF-6.5
Stroke		S	mm	6.5
Continuous Force @100°C		F _c	N	16.6
Peak Force		F _{pk}	N	93.2
Force Constant ±10%		K _f	N/A	20.7
Back EMF Constant ±10%		K _e	V/(m/s)	20.7
Motor Constant @25°C		K _m	N/Sqrt(W)	6.39
Resistance @25°C ±10%		R ₂₅	Ω	10.51
Inductance ±20%		L	mH	4.2
Electrical Time Constant		τ _e	ms	0.40
Continuous Current @100°C		I _c	A	0.8
Peak Current		I _{pk}	A	4.5
Continuous Power Dissipation @100°C		P _t	W	8.7
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.116
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	68.0
Core Mass		m _{core}	g	218.7
Running Clearance		L _{gap}	mm	0.6
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

■ Dimension

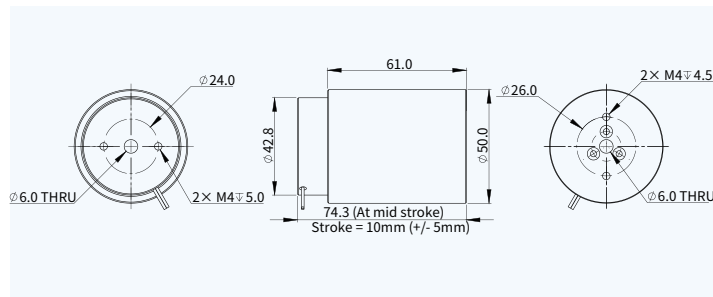


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 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
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AVM50-HF-10

Performance Parameters		Symbol	Unit	AVM50-HF-10
Stroke		S	mm	10.0
Continuous Force @100°C		F _c	N	33.6
Peak Force		F _{pk}	N	140.0
Force Constant ±10%		K _f	N/A	28.0
Back EMF Constant ±10%		K _e	V/(m/s)	28.0
Motor Constant @25°C		K _m	N/Sqrt(W)	9.6
Resistance @25°C ±10%		R ₂₅	Ω	8.5
Inductance ±20%		L	mH	5.20
Electrical Time Constant		τ _e	ms	0.61
Continuous Current @100°C		I _c	A	1.2
Peak Current		I _{pk}	A	5.0
Continuous Power Dissipation @100°C		P _t	W	15.8
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.210
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	148
Core Mass		m _{core}	g	553
Running Clearance		L _{gap}	mm	0.6
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

■ Dimension

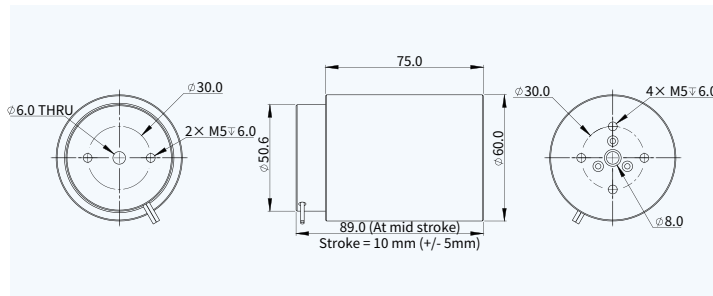


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM60-HF-10

Performance Parameters		Symbol	Unit	AVM60-HF-10
Stroke		S	mm	10.0
Continuous Force @100°C ^{①②}		F _c	N	51.2
Peak Force ^②		F _{pk}	N	224
Force Constant ±10% ^②		K _f	N/A	32.0
Back EMF Constant ±10% ^②		K _e	V/(m/s)	32.0
Motor Constant @25°C ^②		K _m	N/Sqrt(W)	13.56
Resistance @25°C ±10% ^②		R ₂₅	Ω	5.57
Inductance ±20% ^②		L	mH	3.83
Electrical Time Constant		τ _e	ms	0.69
Continuous Current @100°C ^①		I _c	A	1.6
Peak Current		I _{pk}	A	7
Continuous Power Dissipation @100°C ^①		P _t	W	18.4
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant ^①		K _{th}	W/°C	0.245
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	236.5
Core Mass		m _{core}	g	997
Running Clearance		L _{gap}	mm	0.7
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

■ Dimension

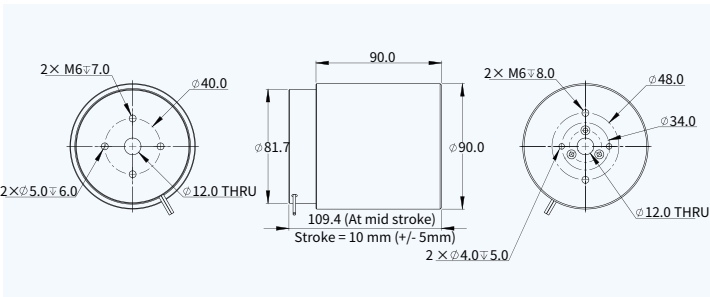


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM90-HF-10

Performance Parameters				Symbol	Unit	AVM90-HF-10
Stroke				S	mm	10.0
Continuous Force @100°C				F _c	N	152.7
Peak Force				F _{pk}	N	610.7
Force Constant ±10%				K _f	N/A	43.6
Back EMF Constant ±10%				K _e	V/(m/s)	43.6
Motor Constant @25°C				K _m	N/Sqrt(W)	25.27
Resistance @25°C ±10%				R ₂₅	Ω	2.98
Inductance ±20%				L	mH	4.02
Electrical Time Constant				τ _e	ms	1.35
Continuous Current @100°C				I _c	A	3.5
Peak Current				I _{pk}	A	14.0
Continuous Power Dissipation @100°C				P _c	W	47.0
Max. Coil Temperature				t _{max}	°C	100
Thermal Dissipation Constant				K _{th}	W/°C	0.627
Max.Voltage				U _{max}	Vdc	120
Mechanical Parameters						
Coil Mass		m _{coil}	g			960
Core Mass		m _{core}	g			2400
Running Clearance		L _{gap}	mm			0.65
Other Information						
Insulation Class		Class A (105°C)				
Protection Grade		IP00				
Compliance with Global Standards		RoHS				
Ambient Temperature	Operation	0°C to 40°C (non-freezing)				
	Storage	-15°C to 70°C (non-freezing)				
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)				
	Storage	10%RH to 90%RH (non-condensing)				
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.				

Dimension

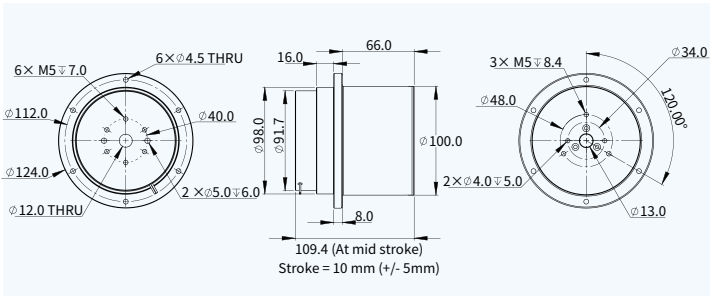


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - 2 The values are at mid stroke.
 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM100-HF-10

Performance Parameters				Symbol	Unit	AVM100-HF-10
Stroke				S	mm	10.0
Continuous Force @100°C				F _c	N	192.5
Peak Force				F _{pk}	N	770
Force Constant ±10%				K _f	N/A	55.0
Back EMF Constant ±10%				K _e	V/(m/s)	55.0
Motor Constant @25°C				K _m	N/Sqrt(W)	29.85
Resistance @25°C ±10%				R ₂₅	Ω	3.40
Inductance ±20%				L	mH	4.43
Electrical Time Constant				τ _e	ms	1.30
Continuous Current @100°C				I _c	A	3.5
Peak Current				I _{pk}	A	14
Continuous Power Dissipation @100°C				P _c	W	53.6
Max. Coil Temperature				t _{max}	°C	100
Thermal Dissipation Constant				K _{th}	W/°C	0.715
Max.Voltage				U _{max}	Vdc	120
Mechanical Parameters						
Coil Mass		m _{coil}	g			1117
Core Mass		m _{core}	g			3300
Running Clearance		L _{gap}	mm			0.65
Other Information						
Insulation Class		Class A (105°C)				
Protection Grade		IP00				
Compliance with Global Standards		RoHS				
Ambient Temperature	Operation	0°C to 40°C (non-freezing)				
	Storage	-15°C to 70°C (non-freezing)				
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)				
	Storage	10%RH to 90%RH (non-condensing)				
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.				

Dimension

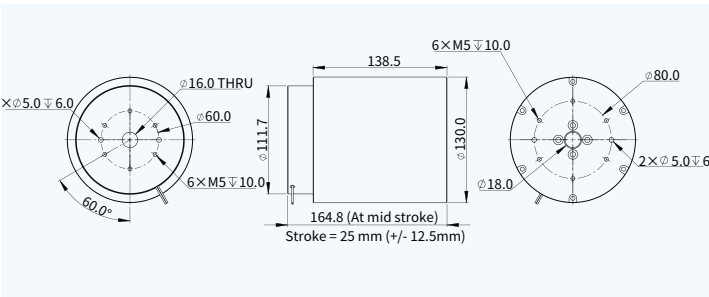


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - 2 The values are at mid stroke.
 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM130-HF-25

Performance Parameters				Symbol	Unit	AVM130-HF-25
Stroke				S	mm	25.0
Continuous Force @100°C				F _c	N	360.4
Peak Force				F _{pk}	N	764.4
Force Constant ±10%				K _f	N/A	54.6
Back EMF Constant ±10%				K _e	V/(m/s)	54.6
Motor Constant @25°C				K _m	N/Sqrt(W)	48.17
Resistance @25°C ±10%				R ₂₅	Ω	1.29
Inductance ±20%				L	mH	1.59
Electrical Time Constant				τ _e	ms	1.24
Continuous Current @100°C				I _c	A	6.6
Peak Current				I _{pk}	A	14
Continuous Power Dissipation @100°C				P _c	W	72.1
Max. Coil Temperature				t _{max}	°C	100
Thermal Dissipation Constant				K _{th}	W/°C	0.962
Max.Voltage				U _{max}	Vdc	120
Mechanical Parameters						
Coil Mass		m _{coil}	g			1550
Core Mass		m _{core}	g			9300
Running Clearance		L _{gap}	mm			0.55
Other Information						
Insulation Class		Class A (105°C)				
Protection Grade		IP00				
Compliance with Global Standards		RoHS				
Ambient Temperature	Operation	0°C to 40°C (non-freezing)				
	Storage	-15°C to 70°C (non-freezing)				
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)				
	Storage	10%RH to 90%RH (non-condensing)				
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.				

Dimension

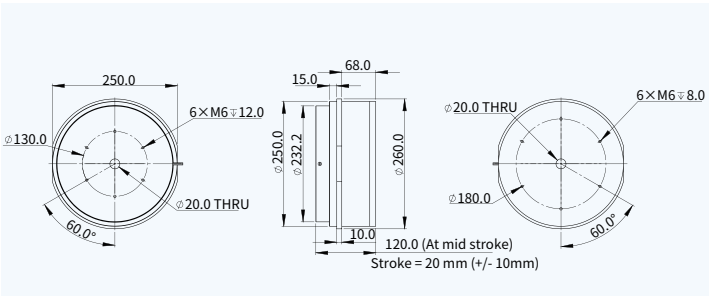


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - 2 The values are at mid stroke.
 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM250-HF-20

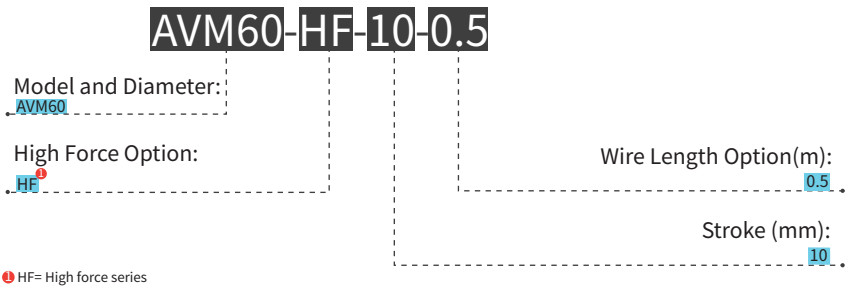
Performance Parameters				Symbol	Unit	AVM250-HF-20
Stroke				S	mm	20.0
Continuous Force @100°C				F _c	N	1111.4
Peak Force				F _{pk}	N	4715.2
Force Constant ±10%				K _f	N/Arms	168.4
Back EMF Constant ±10%				K _e	Vpeak/(m/s)	168.4
Motor Constant @25°C				K _m	N/Sqrt(W)	87.55
Resistance @25°C ±10%				R ₂₅	Ω	3.7
Inductance ±20%				L	mH	5
Electrical Time Constant				τ _e	ms	1.35
Continuous Current @100°C				I _c	Arms	6.6
Peak Current				I _{pk}	Arms	28
Continuous Power Dissipation @100°C				P _c	W	207.7
Max. Coil Temperature				t _{max}	°C	100
Thermal Dissipation Constant				K _{th}	W/°C	2.769
Max.Voltage				U _{max}	Vdc	120
Mechanical Parameters						
Coil Mass		m _{coil}	g			5900
Core Mass		m _{core}	g			27200
Running Clearance		L _{gap}	mm			0.9
Other Information						
Insulation Class		Class A (105°C)				
Protection Grade		IP00				
Compliance with Global Standards		RoHS				
Ambient Temperature	Operation	0°C to 40°C (non-freezing)				
	Storage	-15°C to 70°C (non-freezing)				
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)				
	Storage	10%RH to 90%RH (non-condensing)				
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.				

Dimension



- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - 2 The values are at mid stroke.
 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

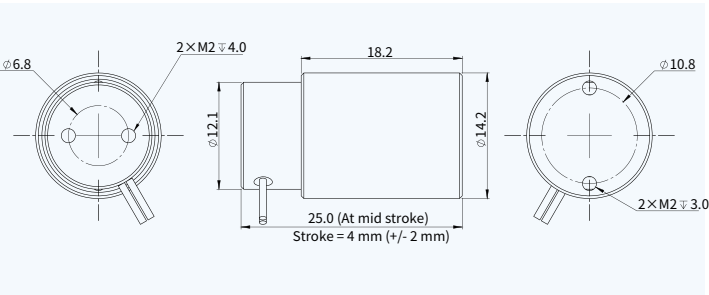
Part Numbering



AVM14-HF-4-C19

Performance Parameters		Symbol	Unit	AVM14-HF-4-C19
Stroke		S	mm	4.0
Continuous Force @100°C ^{1 2}		F _C	N	2.44
Peak Force ²		F _{pk}	N	7.33
Force Constant ±10% ²		K _f	N/A	1.88
Back EMF Constant ±10% ²		K _e	V/(m/s)	1.88
Motor Constant @25°C ²		K _m	N/Sqrt(W)	1.35
Resistance @25°C ±10% ²		R ₂₅	Ω	1.93
Inductance ±20% ²		L	mH	0.14
Electrical Time Constant		τ _e	ms	0.073
Continuous Current @100°C ¹		I _c	A	1.3
Peak Current		I _{pk}	A	3.9
Continuous Power Dissipation @100°C ¹		P _c	W	4.2
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant ¹		K _{th}	W/°C	0.06
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	7.0
Core Mass		m _{core}	g	13.7
Running Clearance		L _{gap}	mm	0.35
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

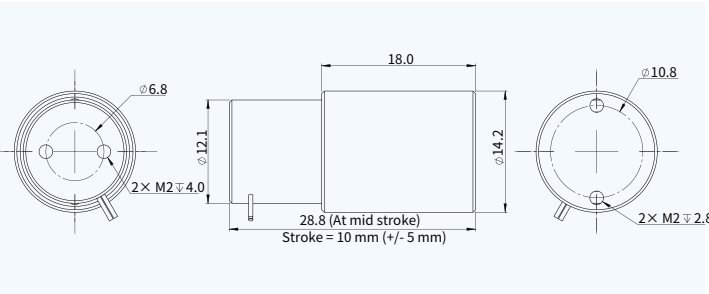


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - 2 The values are at mid stroke.
 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM14-10-C56

Performance Parameters		Symbol	Unit	AVM14-10-C56
Stroke		S	mm	10.0
Continuous Force @100°C ^{(1) (2)}		F _c	N	0.98
Peak Force ⁽²⁾		F _{pk}	N	2.95
Force Constant ±10% ⁽²⁾		K _f	N/A	0.82
Back EMF Constant ±10% ⁽²⁾		K _e	V/(m/s)	0.82
Motor Constant @25°C ⁽²⁾		K _m	N/Sqrt(W)	0.55
Resistance @25°C ±10% ⁽²⁾		R ₂₅	Ω	2.22
Inductance ±20% ⁽²⁾		L	mH	0.24
Electrical Time Constant		τ _e	ms	0.108
Continuous Current @100°C ⁽¹⁾		I _c	A	1.20
Peak Current		I _{pk}	A	3.60
Continuous Power Dissipation @100°C ⁽¹⁾		P _t	W	4.11
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant ⁽¹⁾		K _{th}	W/°C	0.05
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	3.0
Core Mass		m _{core}	g	13.6
Running Clearance		L _{gap}	mm	0.35
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

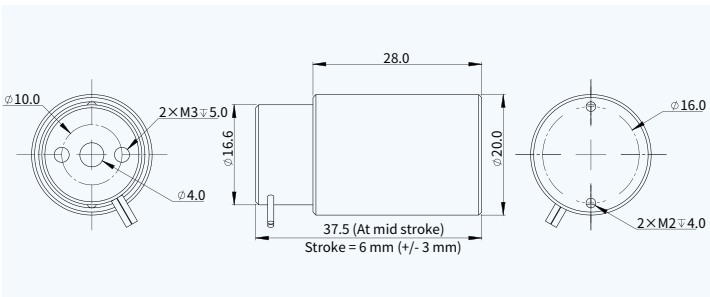


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - 2 The values are at mid stroke.
 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM20-HF-6-C28

Performance Parameters		Symbol	Unit	AVM20-HF-6-C28
Stroke		S	mm	6
Continuous Force @100°C		F _c	N	5.69
Peak Force		F _{pk}	N	17.06
Force Constant ±10%		K _f	N/A	4.74
Back EMF Constant ±10%		K _e	V/(m/s)	4.74
Motor Constant @25°C		K _m	N/Sqrt(W)	2.16
Resistance @25°C ±10%		R ₂₅	Ω	4.84
Inductance ±20%		L	mH	0.60
Electrical Time Constant		τ _e	ms	0.124
Continuous Current @100°C		I _c	A	1.20
Peak Current		I _{pk}	A	3.60
Continuous Power Dissipation @100°C		P _t	W	8.98
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.12
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	13.5
Core Mass		m _{core}	g	47.5
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

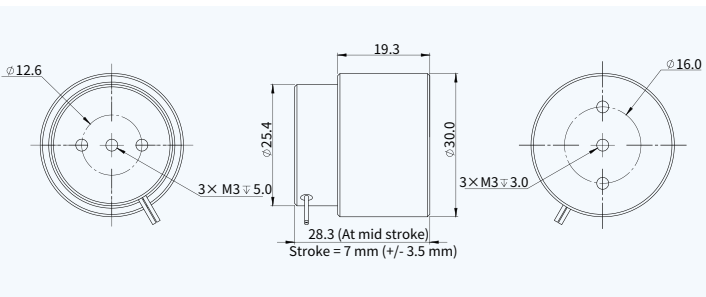


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM30-7-C60

Performance Parameters		Symbol	Unit	AVM30-7-C60
Stroke		S	mm	7
Continuous Force @100°C		F _c	N	5.64
Peak Force		F _{pk}	N	24.80
Force Constant ±10%		K _f	N/A	6.20
Back EMF Constant ±10%		K _e	V/(m/s)	6.20
Motor Constant @25°C		K _m	N/Sqrt(W)	2.49
Resistance @25°C ±10%		R ₂₅	Ω	6.21
Inductance ±20%		L	mH	1.41
Electrical Time Constant		τ _e	ms	0.226
Continuous Current @100°C		I _c	A	0.91
Peak Current		I _{pk}	A	4.00
Continuous Power Dissipation @100°C		P _t	W	6.62
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.09
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	15.3
Core Mass		m _{core}	g	86.2
Running Clearance		L _{gap}	mm	0.6
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

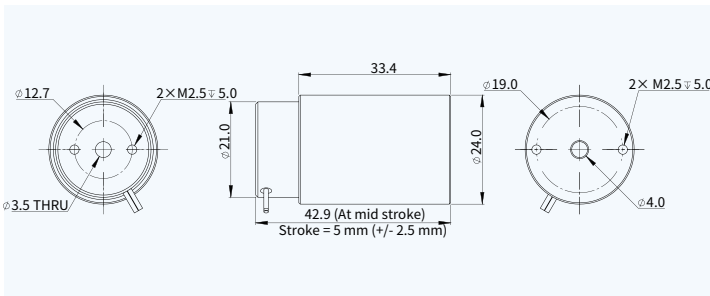


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM24-HF-5-C13

Performance Parameters		Symbol	Unit	AVM24-HF-5-C13
Stroke		S	mm	5
Continuous Force @100°C		F _c	N	5.88
Peak Force		F _{pk}	N	31.92
Force Constant ±10%		K _f	N/A	8.40
Back EMF Constant ±10%		K _e	V/(m/s)	8.40
Motor Constant @25°C		K _m	N/Sqrt(W)	2.91
Resistance @25°C ±10%		R ₂₅	Ω	8.35
Inductance ±20%		L	mH	1.68
Electrical Time Constant		τ _e	ms	0.201
Continuous Current @100°C		I _c	A	0.70
Peak Current		I _{pk}	A	3.80
Continuous Power Dissipation @100°C		P _t	W	5.27
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.07
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	21.5
Core Mass		m _{core}	g	82.0
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

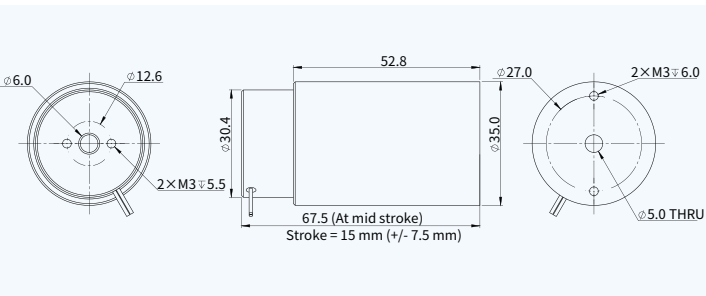


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM35-HF-15-C22

Performance Parameters		Symbol	Unit	AVM35-HF-15-C22
Stroke		S	mm	15
Continuous Force @100°C		F _c	N	19.76
Peak Force		F _{pk}	N	98.80
Force Constant ±10%		K _f	N/A	24.70
Back EMF Constant ±10%		K _e	V/(m/s)	24.70
Motor Constant @25°C		K _m	N/Sqrt(W)	6.24
Resistance @25°C ±10%		R ₂₅	Ω	15.66
Inductance ±20%		L	mH	7.0
Electrical Time Constant		τ _e	ms	0.447
Continuous Current @100°C		I _c	A	0.80
Peak Current		I _{pk}	A	4.00
Continuous Power Dissipation @100°C		P _t	W	12.91
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.17
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	80.7
Core Mass		m _{core}	g	261.0
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

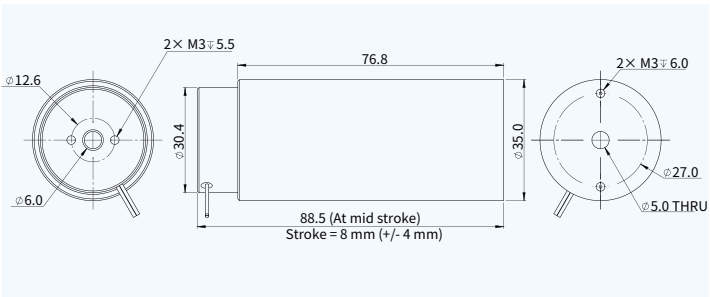


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM35-HF-8-C35

Performance Parameters		Symbol	Unit	AVM35-HF-8-C35
Stroke		S	mm	8
Continuous Force @100°C		F _c	N	27.43
Peak Force		F _{pk}	N	137.16
Force Constant ±10%		K _f	N/A	34.29
Back EMF Constant ±10%		K _e	V/(m/s)	34.29
Motor Constant @25°C		K _m	N/Sqrt(W)	8.32
Resistance @25°C ±10%		R ₂₅	Ω	16.98
Inductance ±20%		L	mH	7.15
Electrical Time Constant		τ _e	ms	0.421
Continuous Current @100°C		I _c	A	0.80
Peak Current		I _{pk}	A	4.00
Continuous Power Dissipation @100°C		P _c	W	14.01
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.19
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	85.2
Core Mass		m _{core}	g	371.4
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

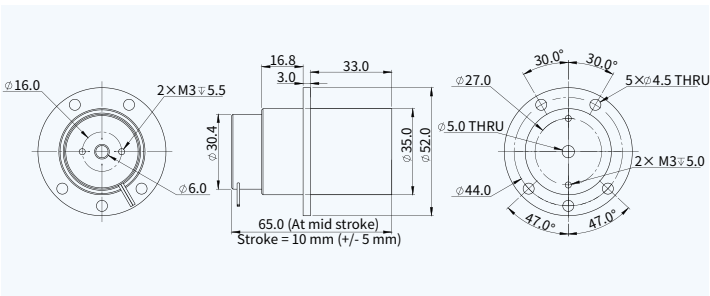


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM35-HF-10-C31

Performance Parameters		Symbol	Unit	AVM35-HF-10-C31
Stroke		S	mm	10
Continuous Force @100°C		F _c	N	16.72
Peak Force		F _{pk}	N	83.60
Force Constant ±10%		K _f	N/A	20.90
Back EMF Constant ±10%		K _e	V/(m/s)	20.90
Motor Constant @25°C		K _m	N/Sqrt(W)	5.98
Resistance @25°C ±10%		R ₂₅	Ω	12.23
Inductance ±20%		L	mH	5.22
Electrical Time Constant		τ _e	ms	0.427
Continuous Current @100°C		I _c	A	0.80
Peak Current		I _{pk}	A	4.00
Continuous Power Dissipation @100°C		P _c	W	10.09
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.13
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	78.0
Core Mass		m _{core}	g	285.7
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

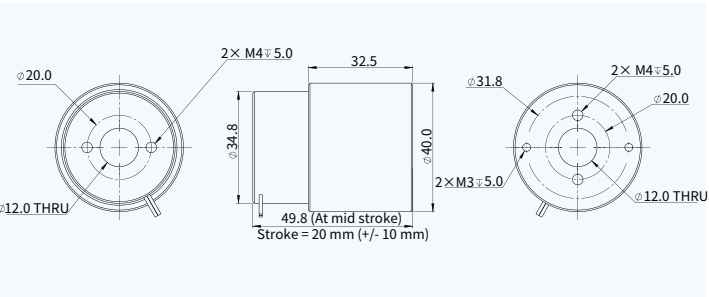


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM40-20-C18

Performance Parameters		Symbol	Unit	AVM40-20-C18
Stroke		S	mm	20
Continuous Force @100°C ^{1 2}		F _c	N	8.11
Peak Force ²		F _{pk}	N	47.39
Force Constant ±10% ³		K _f	N/A	10.53
Back EMF Constant ±10% ³		K _e	V/(m/s)	10.53
Motor Constant @25°C ²		K _m	N/Sqrt(W)	3.06
Resistance @25°C ±10% ³		R ₂₅	Ω	11.82
Inductance ±20% ³		L	mH	5.41
Electrical Time Constant		τ _e	ms	0.458
Continuous Current @100°C ¹		I _c	A	0.77
Peak Current		I _{pk}	A	4.50
Continuous Power Dissipation @100°C ¹		P _c	W	9.03
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant ¹		K _{th}	W/°C	0.12
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	65.0
Core Mass		m _{core}	g	205.0
Running Clearance		L _{gap}	mm	0.6
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

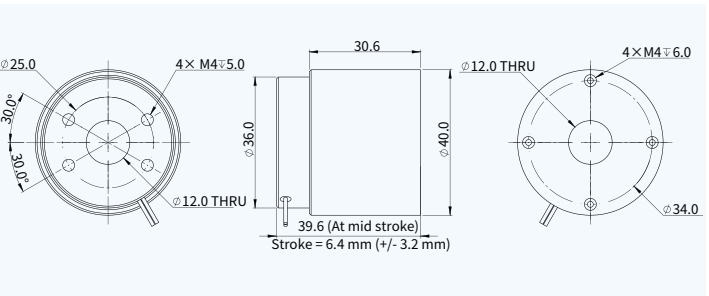


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM40-HF-6.4-C11A

Performance Parameters		Symbol	Unit	AVM40-HF-6.4-C11A
Stroke		S	mm	6.4
Continuous Force @100°C ^{1 2}		F _c	N	18.18
Peak Force ²		F _{pk}	N	99.40
Force Constant ±10% ³		K _f	N/A	14.20
Back EMF Constant ±10% ³		K _e	V/(m/s)	14.20
Motor Constant @25°C ³		K _m	N/Sqrt(W)	5.91
Resistance @25°C ±10% ³		R ₂₅	Ω	5.77
Inductance ±20% ³		L	mH	1.44
Electrical Time Constant		τ _e	ms	0.249
Continuous Current @100°C ¹		I _c	A	1.28
Peak Current		I _{pk}	A	7.00
Continuous Power Dissipation @100°C ¹		P _c	W	12.18
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant ¹		K _{th}	W/°C	0.16
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	49.0
Core Mass		m _{core}	g	195.0
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

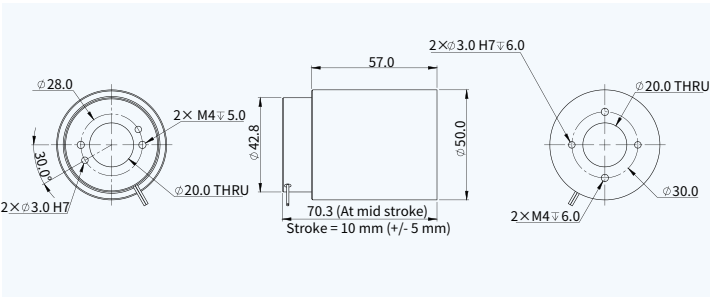


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM50-HF-10-C15A

Performance Parameters		Symbol	Unit	AVM50-HF-10-C15A
Stroke		S	mm	10.0
Continuous Force @100°C		F _c	N	25.20
Peak Force		F _{pk}	N	105.00
Force Constant ±10%		K _f	N/A	21.00
Back EMF Constant ±10%		K _e	V/(m/s)	21.00
Motor Constant @25°C		K _m	N/Sqrt(W)	7.10
Resistance @25°C ±10%		R ₂₅	Ω	8.75
Inductance ±20%		L	mH	4.93
Electrical Time Constant		τ _e	ms	0.563
Continuous Current @100°C		I _c	A	1.20
Peak Current		I _{pk}	A	5.00
Continuous Power Dissipation @100°C		P _ℓ	W	16.24
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.22
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	142
Core Mass		m _{core}	g	482
Running Clearance		L _{gap}	mm	0.6
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

■ Dimension

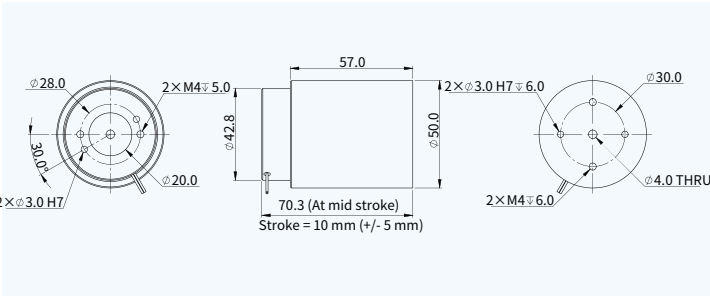


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM50-HF-10-C34A

Performance Parameters		Symbol	Unit	AVM50-HF-10-C34A
Stroke		S	mm	10.0
Continuous Force @100°C		F _c	N	37.57
Peak Force		F _{pk}	N	156.55
Force Constant ±10%		K _f	N/A	31.31
Back EMF Constant ±10%		K _e	V/(m/s)	31.31
Motor Constant @25°C		K _m	N/Sqrt(W)	11.21
Resistance @25°C ±10%		R ₂₅	Ω	7.80
Inductance ±20%		L	mH	5.30
Electrical Time Constant		τ _e	ms	0.679
Continuous Current @100°C		I _c	A	1.20
Peak Current		I _{pk}	A	5.00
Continuous Power Dissipation @100°C		P _ℓ	W	14.48
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.19
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	144
Core Mass		m _{core}	g	628
Running Clearance		L _{gap}	mm	0.6
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

■ Dimension

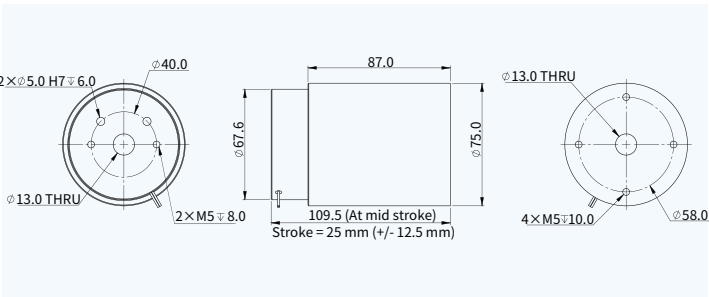


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM75-HF-25-C12

Performance Parameters		Symbol	Unit	AVM75-HF-25-C12
Stroke		S	mm	25.0
Continuous Force @100°C		F _c	N	124.69
Peak Force		F _{pk}	N	572.90
Force Constant ±10%		K _f	N/A	33.70
Back EMF Constant ±10%		K _e	V/(m/s)	33.70
Motor Constant @25°C		K _m	N/Sqrt(W)	20.05
Resistance @25°C ±10%		R ₂₅	Ω	2.83
Inductance ±20%		L	mH	2.76
Electrical Time Constant		τ _e	ms	0.977
Continuous Current @100°C		I _c	A	3.70
Peak Current		I _{pk}	A	17.00
Continuous Power Dissipation @100°C		P _ℓ	W	49.84
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.66
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	710
Core Mass		m _{core}	g	1940
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

■ Dimension

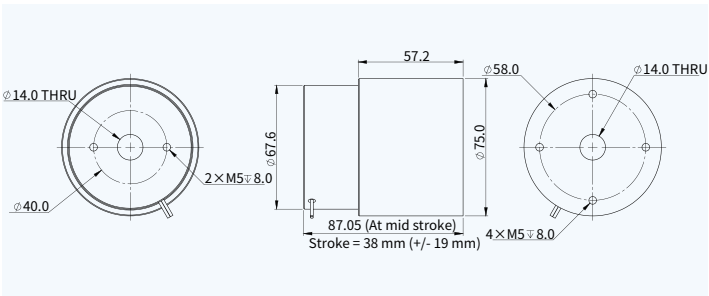


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM75-38-C39

Performance Parameters		Symbol	Unit	AVM75-38-C39
Stroke		S	mm	38.0
Continuous Force @100°C		F _c	N	45.26
Peak Force		F _{pk}	N	192.02
Force Constant ±10%		K _f	N/A	13.72
Back EMF Constant ±10%		K _e	V/(m/s)	13.72
Motor Constant @25°C		K _m	N/Sqrt(W)	9.66
Resistance @25°C ±10%		R ₂₅	Ω	2.02
Inductance ±20%		L	mH	1.82
Electrical Time Constant		τ _e	ms	0.903
Continuous Current @100°C		I _c	A	3.30
Peak Current		I _{pk}	A	14.00
Continuous Power Dissipation @100°C		P _ℓ	W	28.28
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.38
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	534
Core Mass		m _{core}	g	1277
Running Clearance		L _{gap}	mm	0.5
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

■ Dimension

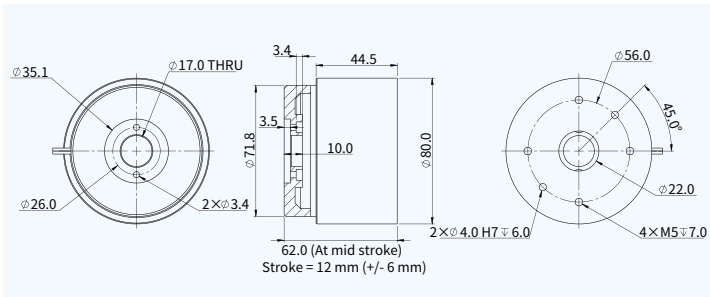


- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM80-12-C8

Performance Parameters		Symbol	Unit	AVM80-12-C8
Stroke		S	mm	12
Continuous Force @100°C		F _c	N	33.71
Peak Force		F _{pk}	N	192.60
Force Constant ±10%		K _f	N/A	21.34
Back EMF Constant ±10%		K _e	V/(m/s)	21.34
Motor Constant @25°C		K _m	N/Sqrt(W)	8.37
Resistance @25°C ±10%		R ₂₅	Ω	6.50
Inductance ±20%		L	mH	1.70
Electrical Time Constant		τ _e	ms	0.262
Continuous Current @100°C		I _c	A	1.58
Peak Current		I _{pk}	A	9.00
Continuous Power Dissipation @100°C		P _c	W	20.91
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.28
Max.Voltage		U _{max}	Vdc	60
Mechanical Parameters				
Coil Mass		m _{coil}	g	124
Core Mass		m _{core}	g	1262.4
Running Clearance		L _{gap}	mm	0.6
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

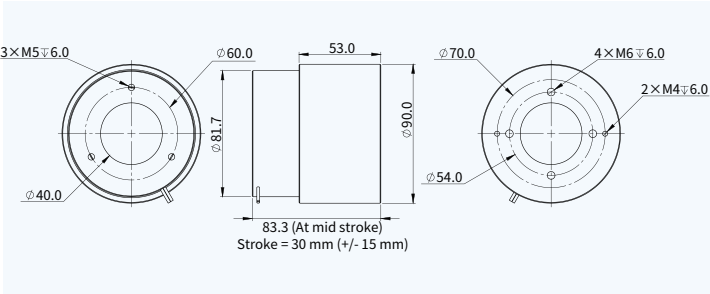


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - 2 The values are at mid stroke.
 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM90-30-C77

Performance Parameters		Symbol	Unit	AVM90-30-C77
Stroke		S	mm	30
Continuous Force @100°C		F _c	N	57.30
Peak Force		F _{pk}	N	202.60
Force Constant ±10%		K _f	N/A	14.33
Back EMF Constant ±10%		K _e	V/(m/s)	14.33
Motor Constant @25°C		K _m	N/Sqrt(W)	8.67
Resistance @25°C ±10%		R ₂₅	Ω	2.73
Inductance ±20%		L	mH	3.80
Electrical Time Constant		τ _e	ms	1.392
Continuous Current @100°C		I _c	A	4.00
Peak Current		I _{pk}	A	14.00
Continuous Power Dissipation @100°C		P _c	W	56.29
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.75
Max.Voltage		U _{max}	Vdc	120
Mechanical Parameters				
Coil Mass		m _{coil}	g	751.2
Core Mass		m _{core}	g	1135.1
Running Clearance		L _{gap}	mm	0.65
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

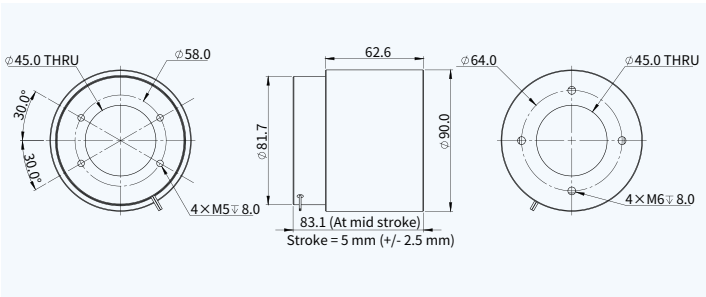


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - 2 The values are at mid stroke.
 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM90-HF-5-C40A

Performance Parameters		Symbol	Unit	AVM90-HF-5-C40A
Stroke		S	mm	5
Continuous Force @100°C		F _c	N	62.49
Peak Force		F _{pk}	N	220.92
Force Constant ±10%		K _f	N/A	15.78
Back EMF Constant ±10%		K _e	V/(m/s)	15.78
Motor Constant @25°C		K _m	N/Sqrt(W)	14.44
Resistance @25°C ±10%		R ₂₅	Ω	1.20
Inductance ±20%		L	mH	0.75
Electrical Time Constant		τ _e	ms	0.628
Continuous Current @100°C		I _c	A	3.96
Peak Current		I _{pk}	A	14.00
Continuous Power Dissipation @100°C		P _c	W	24.15
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.32
Max.Voltage		U _{max}	Vdc	120
Mechanical Parameters				
Coil Mass		m _{coil}	g	427.2
Core Mass		m _{core}	g	1514.6
Running Clearance		L _{gap}	mm	0.65
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

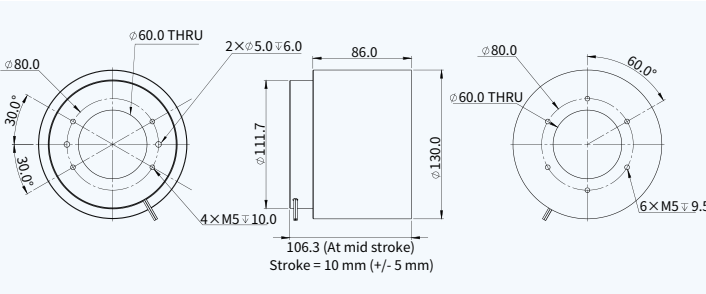


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - 2 The values are at mid stroke.
 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM130-HF-10-C29A

Performance Parameters		Symbol	Unit	AVM130-HF-10-C29A
Stroke		S	mm	10
Continuous Force @100°C		F _c	N	162.40
Peak Force		F _{pk}	N	487.20
Force Constant ±10%		K _f	N/A	46.40
Back EMF Constant ±10%		K _e	V/(m/s)	46.40
Motor Constant @25°C		K _m	N/Sqrt(W)	53.58
Resistance @25°C ±10%		R ₂₅	Ω	0.75
Inductance ±20%		L	mH	0.75
Electrical Time Constant		τ _e	ms	1.0
Continuous Current @100°C		I _c	A	3.50
Peak Current		I _{pk}	A	10.50
Continuous Power Dissipation @100°C		P _c	W	11.84
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant		K _{th}	W/°C	0.16
Max.Voltage		U _{max}	Vdc	120
Mechanical Parameters				
Coil Mass		m _{coil}	g	1080
Core Mass		m _{core}	g	5300
Running Clearance		L _{gap}	mm	0.55
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension

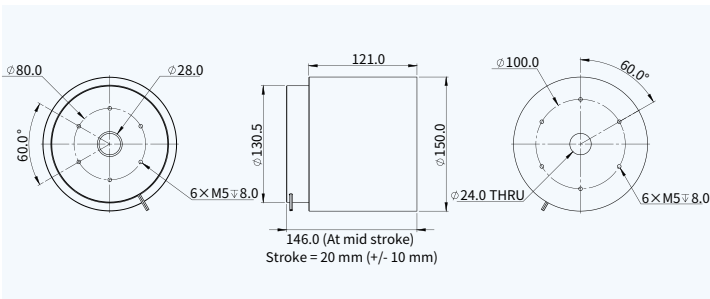


- 1 Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - 2 The values are at mid stroke.
 - 3 Resistance is measured by DC current with standard 0.5 m lead wire.
 - 4 Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

AVM150-HF-20-C53

Performance Parameters		Symbol	Unit	AVM150-HF-20-C53
Stroke		S	mm	20.0
Continuous Force @100°C ⁽¹⁾ ⁽²⁾		F _C	N	585.77
Peak Force ⁽³⁾		F _{pk}	N	1757.30
Force Constant ±10% ⁽³⁾		K _f	N/A	97.63
Back EMF Constant ±10% ⁽³⁾		K _e	V/(m/s)	97.63
Motor Constant @25°C ⁽²⁾		K _m	N/Sqrt(W)	46.54
Resistance @25°C ±10% ⁽³⁾		R ₂₅	Ω	4.40
Inductance ±20% ⁽³⁾		L	mH	2.60
Electrical Time Constant		τ _e	ms	0.591
Continuous Current @100°C ⁽¹⁾		I _c	A	6.00
Peak Current		I _{pk}	A	18.00
Continuous Power Dissipation @100°C ⁽¹⁾		P _c	W	204.14
Max. Coil Temperature		t _{max}	°C	100
Thermal Dissipation Constant ⁽¹⁾		K _{th}	W/°C	2.72
Max.Voltage		U _{max}	Vdc	120
Mechanical Parameters				
Coil Mass		m _{coil}	g	1500
Core Mass		m _{core}	g	12700
Running Clearance		L _{gap}	mm	0.75
Other Information				
Insulation Class		Class A (105°C)		
Protection Grade		IP00		
Compliance with Global Standards		RoHS		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

Dimension



- ① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 - ② The values are at mid stroke.
 - ③ Resistance is measured by DC current with standard 0.5 m lead wire.
 - ④ Inductance is measured by current frequency of 1 kHz.
- The contents of datasheet are subject to change without prior notice.

Part Numbering

AVM90-HF-5-0.5-C40A

Model and Diameter:
Example: AVM90

High Force Option:
HF / (blank)

Customization Number:
Example: C40A

Wire Length Option(m):
0.5

Stroke (mm):
5

① HF= High force series

② (blank)= Non high force series