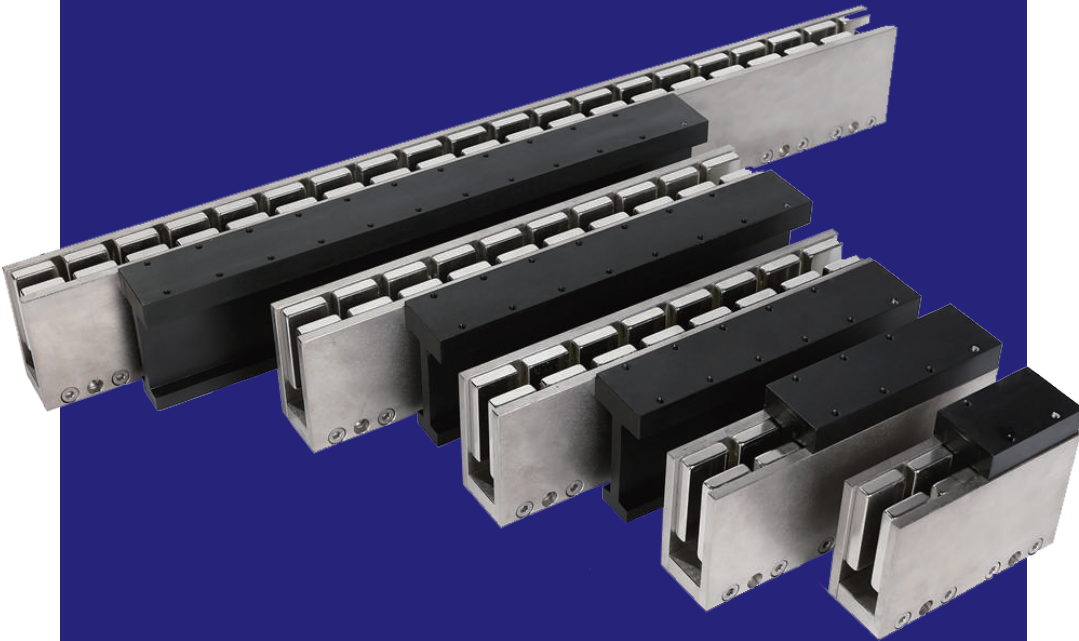




AUM Series



Ironless technology



Zero cogging force



Patented technology



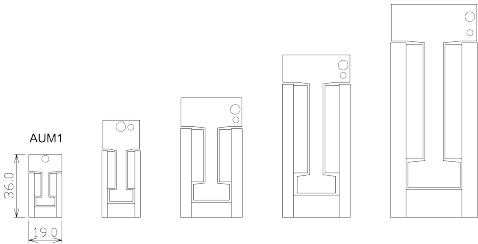
Small size electrical
and mechanical constant



Large continuous force
and peak force

Specifications

AUM1

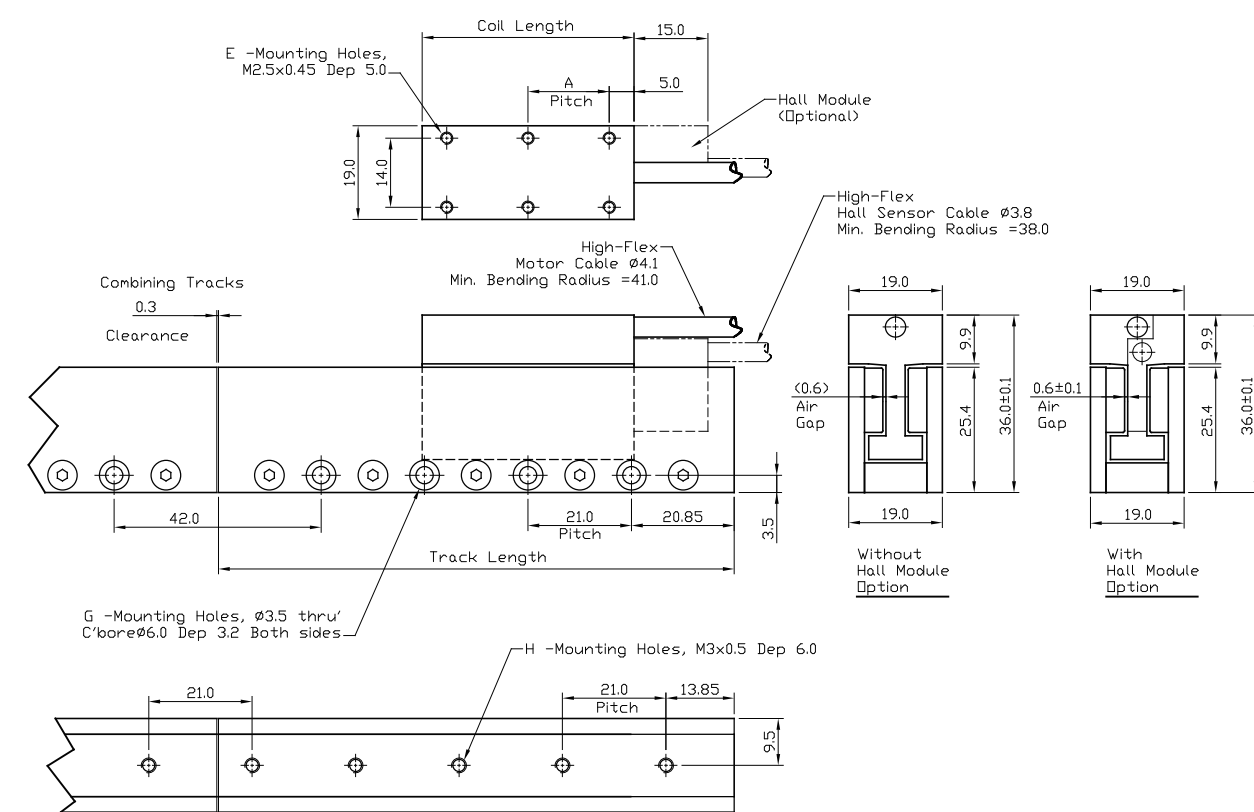


AUM1		AUM1-S1	AUM1-S2	AUM1-S3	AUM1-S4	AUM1-S5
Performance Parameters	Unit	Series	Series	Series	Series	Series
Continuous Force, coil @100°C	N	3.0	6.0	8.9	11.9	14.9
Peak Force	N	11.9	23.8	35.7	47.6	59.5
Motor Constant	N/Sqrt(W)	1.67	2.42	2.98	3.46	3.87
Continuous Power	W	3.2	6.1	9.0	11.8	14.7
Peak Power	W	50.9	97.1	143.3	189.6	235.8
Electrical Cycle	mm	21	21	21	21	21.0
Max Coil Temperature	°C	125	125	125	125	125.0
Thermal Dissipation Constant	W/°C	0.04	0.08	0.12	0.16	0.20
Continuous current	Arms	1.7	1.7	1.7	1.7	1.7
Peak current	Arms	6.8	6.8	6.8	6.8	6.8
Max bus Voltage	Vdc	60.0	60.0	60.0	60.0	60.0
Force Constant	N/Arms	1.75	3.50	5.25	7.00	8.8
Back EMF Constant	Vpeak/(m/s)	1.4	2.9	4.3	5.7	7.14
Inductance	mH	0.11	0.22	0.31	0.41	0.5
Terminal Resistance @25°C	ohms	1.10	2.10	3.10	4.10	5.1
Electrical Time Constant	ms	0.10	0.10	0.10	0.10	0.1
Mechanical Parameters						
Coil Mass	g	25.0	50.0	75.0	100.0	125.00
Coil Length	mm	22	43	64	85	106.0
Track Mass (per 63 mm)	g	149				
Magnetic Attraction	N	0				

Note: Continuous current is measured with coil mounted to an Aluminum plate with same length as coil, 2X width, and thickness 12 mm

AUM1

■ Dimensions



Motor Coil			
Model No:	Coil Length	E	A
AUM1-S1	22.0	4	12.0
AUM1-S2	43.0	6	16.5
AUM1-S3	64.0	8	18.0
AUM1-S4	85.0	8	25.0

Motor Track			
Model No:	Track Length	G	H
AUM1-TL63	62.7	2	3
AUM1-TL84	83.7	3	4
AUM1-TL105	104.7	4	5

AUM1

■ Part Numbering



Motor Coil

AUM1-S-S2-H9D-0.3-NFB

Model

AUM1

Connection

S = Series

Size

S1-S4

Ferrite Bead Options

Blank⁴ / NFB⁵

Cable Length (m)

0.3 (300mm) / 1.0 (1000mm)

Hall Options

Blank¹ / H9D² / NH³



Motor Track

AUM1-TL63

Model

AUM1

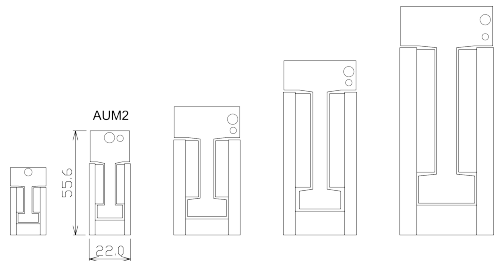
Track Length

TL63/ TL84/ TL105

- Blank = comes with hall module & hall cable terminated in flying leads. (standard)
- H9D = comes with hall module & hall cable terminated with 9-Pins D-Sub connector.
- NH = comes without hall module.
- Blank = motor cable terminated in flying leads. (standard)
- NFB = motor cable terminated in flying leads.

Specifications

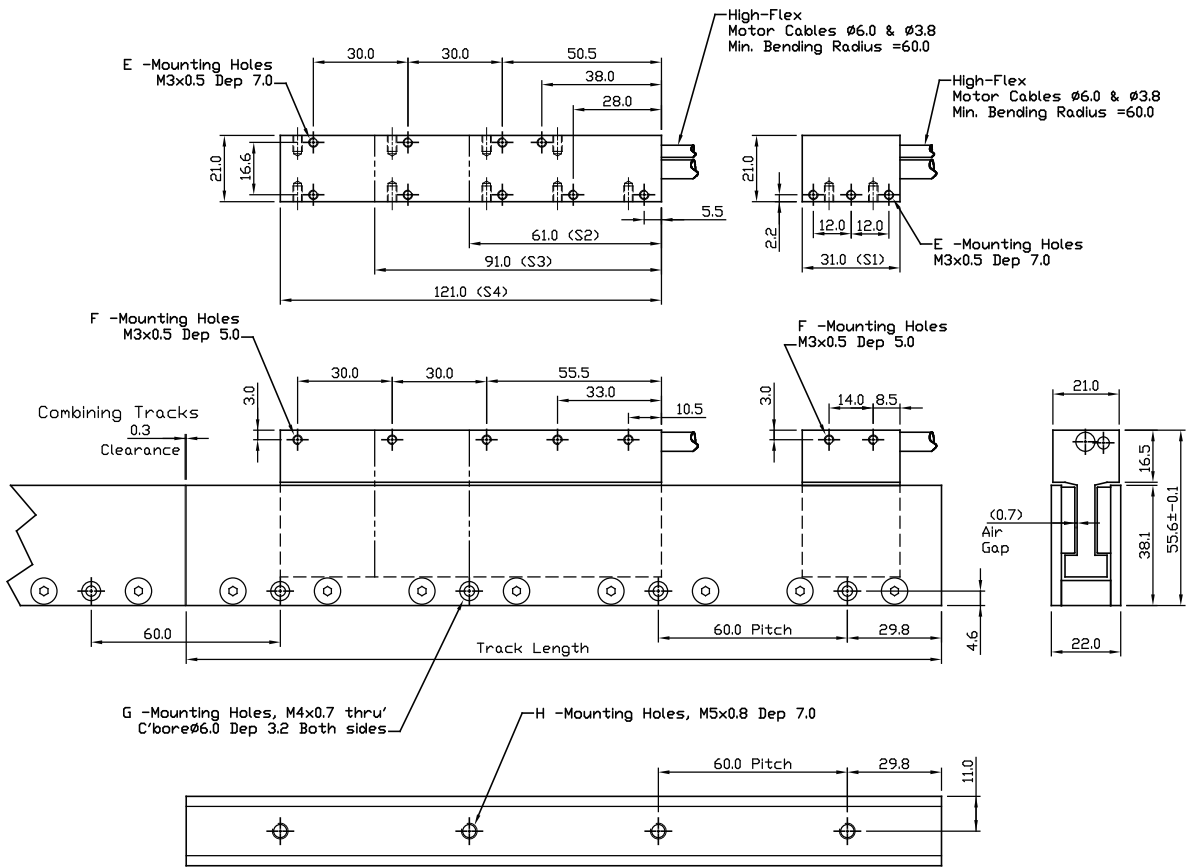
AUM2



AUM2		AUM2-S1	AUM2-S2		AUM2-S3		AUM2-S4		AUM2-S8	
Performance Parameters	Unit	Series	Series	Parallel	Series	Parallel	Series	Parallel	Series	Parallel
Continuous Force, coil @100°C	N	8.8	17.6		26.4		35.2		70.4	
Peak Force	N	44.0	88.0		132.0		176.0		352.0	
Motor Constant	N/Sqrt(W)	3.05	4.31		5.28		6.10		8.63	
Continuous Power	W	8.3	16.6		25.0		33.3		66.6	
Peak Power	W	208	416		624		832		1,664	
Electrical Cycle	mm	30	30		30		30		30	
Max Coil Temperature	°C	125	125		125		125		125	
Thermal Dissipation Constant	W/°C	0.11	0.22		0.33		0.44		0.89	
Continuous current	Arms	1.6	1.6	3.2	1.6	3.2	1.6	3.2	1.6	3.2
Peak current	Arms	8.0	8.0	16.0	8.0	16.0	8.0	16.0	8.0	16.0
Max bus Voltage	Vdc	330.0	330.0	330.0	330.0	330.0	330	330		
Force Constant	N/Arms	5.5	11.0	5.5	16.5	8.3	22.0	11.0	44.0	22.0
Back EMF Constant	Vpeak/(m/s)	4.5	9.0	4.5	13.5	6.7	18.0	9.0	35.9	18.0
Inductance	mH	0.75	1.50	0.38	2.25	0.56	3.00	0.75	6.00	1.50
Terminal Resistance @25°C	ohms	3.25	6.50	1.63	9.75	2.44	13.00	3.25	26.00	6.50
Electrical Time Constant	ms	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Mechanical Parameters										
Coil Mass	kg	0.059	0.118		0.177		0.236		0.472	
Coil Length	mm	31	61		91		121		241	
Track Mass (per 120 mm)	kg	0.468								
Magnetic Attraction	N	0								

Dimensions

AUM2



Motor Coil			
Model No:	Coil Length	E	F
AUM2-S1	31.0	3	2
AUM2-S2	61.0	5	5
AUM2-S3	91.0	7	7
AUM2-S4	121.0	9	9

Motor Track			
Model No:	Track Length	G	H
AUM2-TL120	119.7	2	2
AUM2-TL180	179.7	3	3
AUM2-TL240	239.7	4	4
AUM2-TL300	299.7	5	5

Note: Continuous current is measured with coil mounted to an aluminum plate with same length as coil, 2X width, and thickness 12 mm

AUM2

Part Numbering



Motor Coil

AUM2-S-S2-K-H9D-3.0-NFB

Model

AUM2

Connection

S = Series / P = Parallel¹

Size

S1-S4,S8

Ferrite Bead Options

Blank⁵ / NFB⁶

Cable Length (m)

3.0

Hall Options

Blank³ / H9D⁴

Thermal Sensor

K = PT100 (RTD)²



Motor Track

AUM2-TL120

Model

AUM2

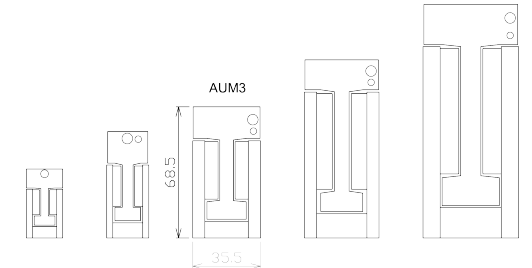
Track Length

TL120/ TL180/ TL240/ TL300

- ¹ Parallel connection is not applicable to S1 motor coil.
- ² K = PT100 (RTD) is standard for AUM2, Thermostat is not available.
- ³ Blank = comes with built-in hall sensor & hall cable terminated in flying leads. (standard)
- ⁴ H9D = comes with built-in hall sensor & hall cable terminated with 9-Pins D-Sub connector.
- ⁵ Blank = motor cable terminated with ferrite bead. (standard)
- ⁶ NFB = motor cable terminated in flying leads.

AUM3

Specifications



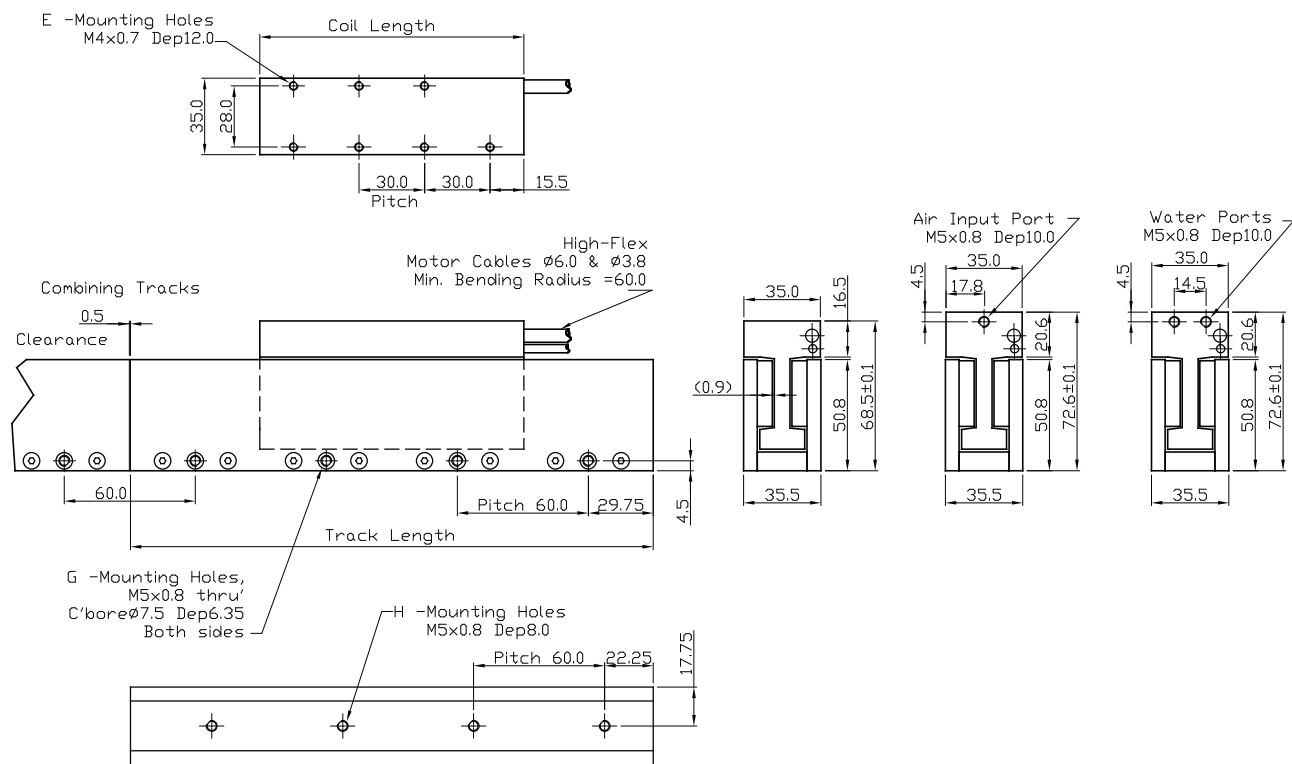
AUM3		AUM3-S1	AUM3-S2		AUM3-S3		AUM3-S4		AUM3-S6	
Performance Parameters	Unit	Series	Series	Parallel	Series	Parallel	Series	Parallel	Series	Parallel
Continuous Force, coil @100°C	N	28	57		85		113		170	
Continuous Force, AC, coil @100°C	N	34	68		102		136		203	
Continuous Force, WC, coil @100°C	N	37	73		110		147		220	
Peak Force	N	144	289		433		578		867	
Motor Constant	N/Sqrt(W)	7.2	10.2		12.5		14.5		17.7	
Continuous Power	W	15.2	30.5		45.7		60.9		91.4	
Peak Power	W	398	796		1,193		1,591		2,387	
Electrical Cycle	mm	60	60		60		60		60	
Max Coil Temperature	°C	125	125		125		125		125	
Thermal Dissipation Constant	W/°C	0.20	0.41		0.61		0.81		1.22	
Continuous current	Arms	1.8	1.8	3.6	1.8	3.6	1.8	3.6	1.8	3.6
Continuous current, AC	Arms	2.2	2.2	4.3	2.2	4.3	2.2	4.3	2.2	4.3
Continuous current, WC	Arms	2.3	2.3	4.7	2.3	4.7	2.3	4.7	2.3	4.7
Peak current	Arms	9.2	9.2	18.4	9.2	18.4	9.2	18.4	9.2	18.4
Max bus Voltage	Vdc	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
Force Constant	N/Arms	15.7	31.4	15.7	47.1	23.6	62.8	31.4	94.2	47.1
Back EMF Constant	Vpeak/(m/s)	12.8	25.6	12.8	38.5	19.2	51.3	25.6	76.9	38.5
Inductance	mH	3.13	6.26	1.57	9.39	2.35	12.52	3.13	18.78	4.70
Terminal Resistance @25°C	ohms	4.70	9.40	2.35	14.10	3.53	18.80	4.70	28.20	7.05
Electrical Time Constant	ms	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Mechanical Parameters										
Coil Mass	Kg	0.22	0.45		0.68		0.91		1.37	
Coil Length	mm	61	121		181		241		361	
Track Mass (per 120 mm)	Kg	1.00								
Magnetic Attraction	N	0								

Note: AC– Air Cool, WC–Water Cool

Continuous current is measured with coil mounted to an aluminum plate with same length as coil, 2X width, and thickness 12 mm

AUM3

■ Dimensions



Motor Coil		
Model No:	Coil Length	E
AUM3-S1	61.0	3
AUM3-S2	121.0	7
AUM3-S3	181.0	11
AUM3-S4	241.0	15

* For air or water cooled models, Coil Length and E are the same as the standard model

Motor Track			
Model No:	Track Length	G	H
AUM3-TL120	119.5	2	2
AUM3-TL180	179.5	3	3
AUM3-TL240	239.5	4	4
AUM3-TL300	299.5	5	5
AUM3-TL600	599.5	10	10

AUM3

■ Part Numbering



Motor Coil

AUM3-A-S-S2-J-H9D-3.0-NFB

Model

AUM3

Cooling Options

Blank = Natural Convection
A = Air Cooled
W = Water Cooled

Connection

S = Series / P = Parallel¹

Size

S1-S4,S6

Ferrite Bead Options

Blank⁴ / NFB⁵

Cable Length (m)

3.0

Hall Options

Blank² / H9D³

Thermal Sensor

J = Thermostat (standard)
K = PT100 (RTD)



Motor Track

AUM3-TL600

Model

AUM3

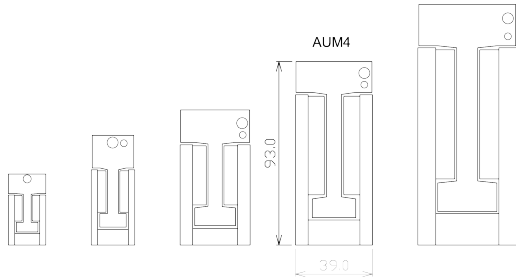
Track Length

TL120/ TL180/ TL240/ TL300/ TL600

- 1 Parallel connection is not applicable to S1 motor coil.
- 2 Blank = comes with built-in hall sensor & hall cable terminated in flying leads. (standard)
- 3 H9D = comes with built-in hall sensor & hall cable terminated with 9-Pins D-Sub connector.
- 4 Blank = motor cable terminated with ferrite bead. (standard)
- 5 NFB = motor cable terminated in flying leads.

Specifications

AUM4



AUM4		AUM4-S1		AUM4-S2		AUM4-S3		AUM4-S4	
Performance Parameters	Unit	Series	Series	Parallel	Series	Parallel	Series	Parallel	
Continuous Force, coil @100°C	N	55	110		166		221		
Continuous Force, AC, coil @100°C	N	66	132		199		265		
Continuous Force, WC, coil @100°C	N	77	154		230		307		
Peak Force	N	312	624		936		1,248		
Motor Constant	N/Sqrt(W)	11.2	15.8		19.4		22.4		
Continuous Power	W	24.3	48.7		73.0		97.3		
Peak Power	W	777	1,555		2,332		3,110		
Electrical Cycle	mm	60	60		60		60		
Max Coil Temperature	°C	125	125		125		125		
Thermal Dissipation Constant	W/°C	0.32	0.65		0.97		1.30		
Continuous current	Arms	2.3	2.3	4.6	2.3	4.6	2.3	4.6	
Continuous current, AC	Arms	2.8	2.8	5.5	2.8	5.5	2.8	5.5	
Continuous current, WC	Arms	3.2	3.2	6.4	3.2	6.4	3.2	6.4	
Peak current	Arms	13.0	13.0	26.0	13.0	26.0	13.0	26.0	
Max bus Voltage	Vdc	330.0	330.0	330.0	330.0	330.0	330.0	330.0	
Force Constant	N/Arms	24.0	48.0	24.0	72.0	36.0	96.0	48.0	
Back EMF Constant	Vpeak/(m/s)	19.6	39.2	19.6	58.8	29.4	78.4	39.2	
Inductance	mH	3.50	7.00	1.75	10.50	2.63	14.00	3.50	
Terminal Resistance @25°C	ohms	4.60	9.20	2.30	13.80	3.45	18.40	4.60	
Electrical Time Constant	ms	0.76	0.76	0.76	0.76	0.76	0.76	0.76	
Mechanical Parameters									
Coil Mass	Kg	0.28	0.56		0.89		1.19		
Coil Length	mm	61	121		181		241		
Track Mass (per 120 mm)	Kg	1.77							
Magnetic Attraction	N	0							

Note: AC– Air Cool, WC–Water Cool
Continuous current is measured with coil mounted to an aluminum plate with same length as coil, 2X width, and thickness 12 mm

Specifications

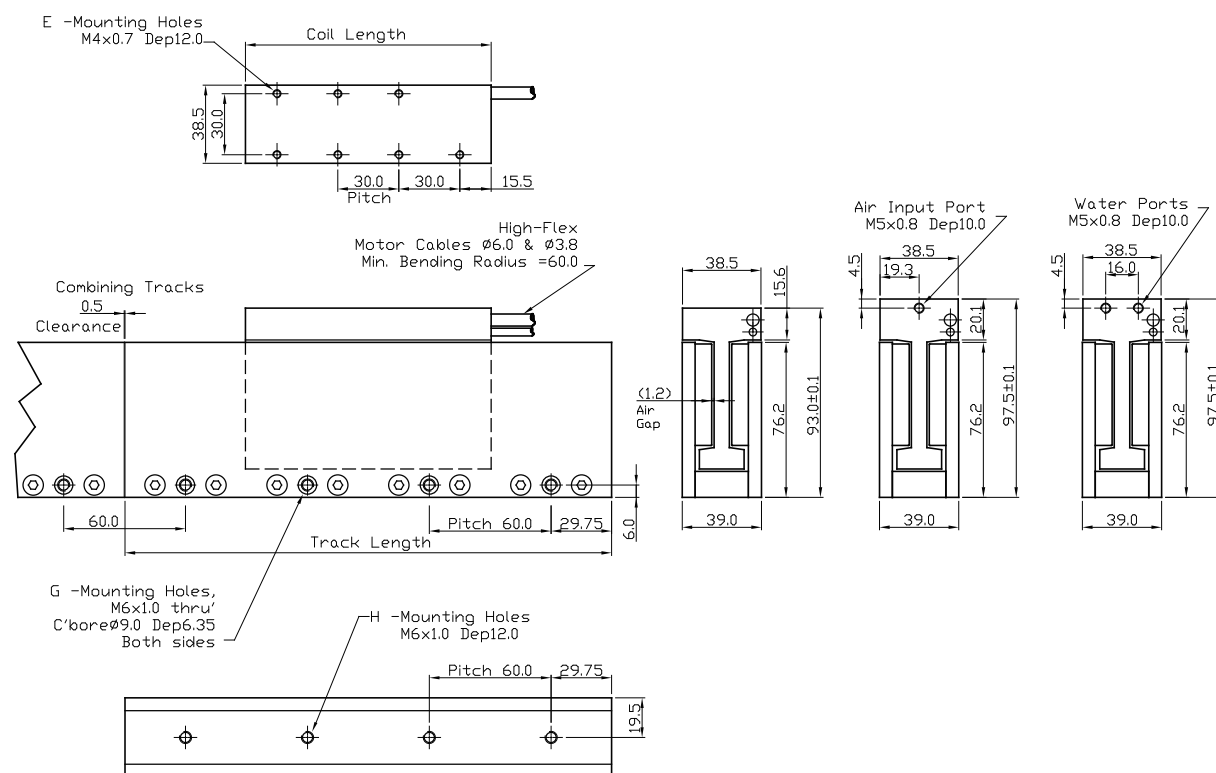
AUM4

AUM4		AUM4-S5		AUM4-S6		AUM4-S8	
Performance Parameters	Unit	Series	Parallel	Series	Parallel	Series	Parallel
Continuous Force, coil @100°C	N	276		331		442	
Continuous Force, AC, coil @100°C	N	331		397		530	
Continuous Force, WC, coil @100°C	N	384		461		614	
Peak Force	N	1,560		1,872		2,496	
Motor Constant	N/Sqrt(W)	25.0		27.4		31.7	
Continuous Power	W	121.7		146.0		194.7	
Peak Power	W	3,887		4,664		6,219	
Electrical Cycle	mm	60		60		60	
Max Coil Temperature	°C	125		125		125	
Thermal Dissipation Constant	W/°C	1.62		1.95		2.60	
Continuous current	Arms	2.3	4.6	2.3	4.6	2.3	4.6
Continuous current, AC	Arms	2.8	5.5	2.8	5.5	2.8	5.5
Continuous current, WC	Arms	3.2	6.4	3.2	6.4	3.2	6.4
Peak current	Arms	13.0	26.0	13.0	26.0	13.0	26.0
Max bus Voltage	Vdc	330.0	330.0	330.0	330.0	330.0	330.0
Force Constant	N/Arms	120.0	60.0	144.0	72.0	192.0	96.0
Back EMF Constant	Vpeak/(m/s)	98.0	49.0	117.6	58.8	156.8	78.4
Inductance	mH	17.50	4.38	21.00	5.25	28.00	7.00
Terminal Resistance @25°C	ohms	23.00	5.75	27.60	6.90	36.80	9.20
Electrical Time Constant	ms	0.76	0.76	0.76	0.76	0.76	0.76
Mechanical Parameters							
Coil Mass	Kg	1.49		1.78		2.37	
Coil Length	mm	301		361		481	
Track Mass (per 120 mm)	Kg	1.77					
Magnetic Attraction	N	0					

Note: AC– Air Cool, WC–Water Cool
Continuous current is measured with coil mounted to an aluminum plate with same length as coil, 2X width, and thickness 12 mm

Dimensions

AUM4



Motor Coil		
Model No:	Coil Length	E
AUM4-S1	61.0	3
AUM4-S2	121.0	7
AUM4-S3	181.0	11
AUM4-S4	241.0	15
AUM4-S5	301.0	19
AUM4-S6	361.0	23

Motor Track			
Model No:	Track Length	G	H
AUM4-TL120	119.5	2	2
AUM4-TL180	179.5	3	3
AUM4-TL240	239.5	4	4
AUM4-TL300	299.5	5	5
AUM4-TL600	599.5	10	10

* For air or water cooled models,
Coil Length and E are the same as the standard model

Part Numbering

AUM4



Motor Coil

AUM4-A-S-S2-J-H9D-3.0-NFB

Model

AUM4

Cooling Options

Blank = Natural Convection

A = Air Cooled

W = Water Cooled

Connection

S = Series / P = Parallel¹

Size

S1–S6,S8

Ferrite Bead Options

Blank⁴ / NFB⁵

Cable Length (m)

3.0

Hall Options

Blank² / H9D³

Thermal Sensor

J = Thermostat (standard) / K = PT100 (RTD)



Motor Track

AUM4-TL600

Model

AUM4

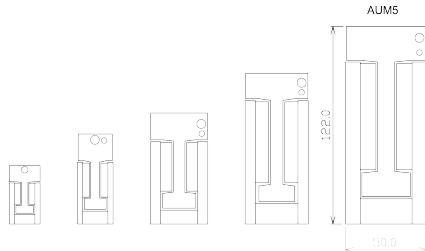
Track Length

TL120/ TL180/ TL240/ TL300/ TL600

- ① Parallel connection is not applicable to S1 motor coil.
- ② Blank = comes with built-in hall sensor & hall cable terminated in flying leads. (standard)
- ③ H9D = comes with built-in hall sensor & hall cable terminated with 9-Pins D-Sub connector.
- ④ Blank = motor cable terminated with ferrite bead. (standard)
- ⑤ NFB = motor cable terminated in flying leads.

Specifications

AUM5



AUM5		AUM5-S1	AUM5-S2		AUM5-S3		AUM5-S4	
Performance Parameters	Unit	Series	Series	Parallel	Series	Parallel	Series	Parallel
Continuous Force, coil @100°C	N	98	197		295		393	
Continuous Force, AC, coil @100°C	N	118	236		354		472	
Continuous Force, WC, coil @100°C	N	128	255		383		511	
Peak Force	N	707	1,415		2,122		2,830	
Motor Constant	N/Sqrt(W)	19.2	27.1		33.2		38.4	
Continuous Power	W	26.3	52.5		78.8		105.0	
Peak Power	W	1,361	2,722		4,082		5,443	
Electrical Cycle	mm	84.0	84.0		84.0		84	
Max Coil Temperature	°C	125	125		125		125	
Thermal Dissipation Constant	W/°C	0.35	0.70		1.05		1.4	
Continuous current	Arms	2.5	2.5	5.0	2.5	5.0	2.5	5.0
Continuous current, AC	Arms	3.0	3.0	6.0	3.0	6.0	3.0	6.0
Continuous current, WC	Arms	3.3	3.3	6.5	3.3	6.5	3.3	6.5
Peak current	Arms	18.0	18.0	36.0	18.0	36.0	18.0	36.0
Max bus Voltage	Vdc	330.0	330.0	330.0	330.0	330.0	330.0	330.0
Force Constant	N/Arms	39.3	78.6	39.3	117.9	59.0	157.2	78.6
Back EMF Constant	Vpeak/(m/s)	32.1	64.2	32.1	96.3	48.1	128.4	64.2
Inductance	mH	6.50	13.00	3.25	19.50	4.88	26.00	6.50
Terminal Resistance @25°C	ohms	4.20	8.40	2.10	12.60	3.15	16.80	4.20
Electrical Time Constant	ms	1.55	1.55	1.55	1.55	1.55	1.55	1.55
Mechanical Parameters								
Coil Mass	kg	0.73	1.45		2.16		2.88	
Coil Length	mm	85.0	169.0		253.0		337.0	
Track Mass (per 168 mm)	kg	4.26						
Magnetic Attraction	N	0						

Note: AC– Air Cool, WC–Water Cool
Continuous current is measured with coil mounted to an aluminum plate with same length as coil, 2X width, and thickness 12 mm

Specifications

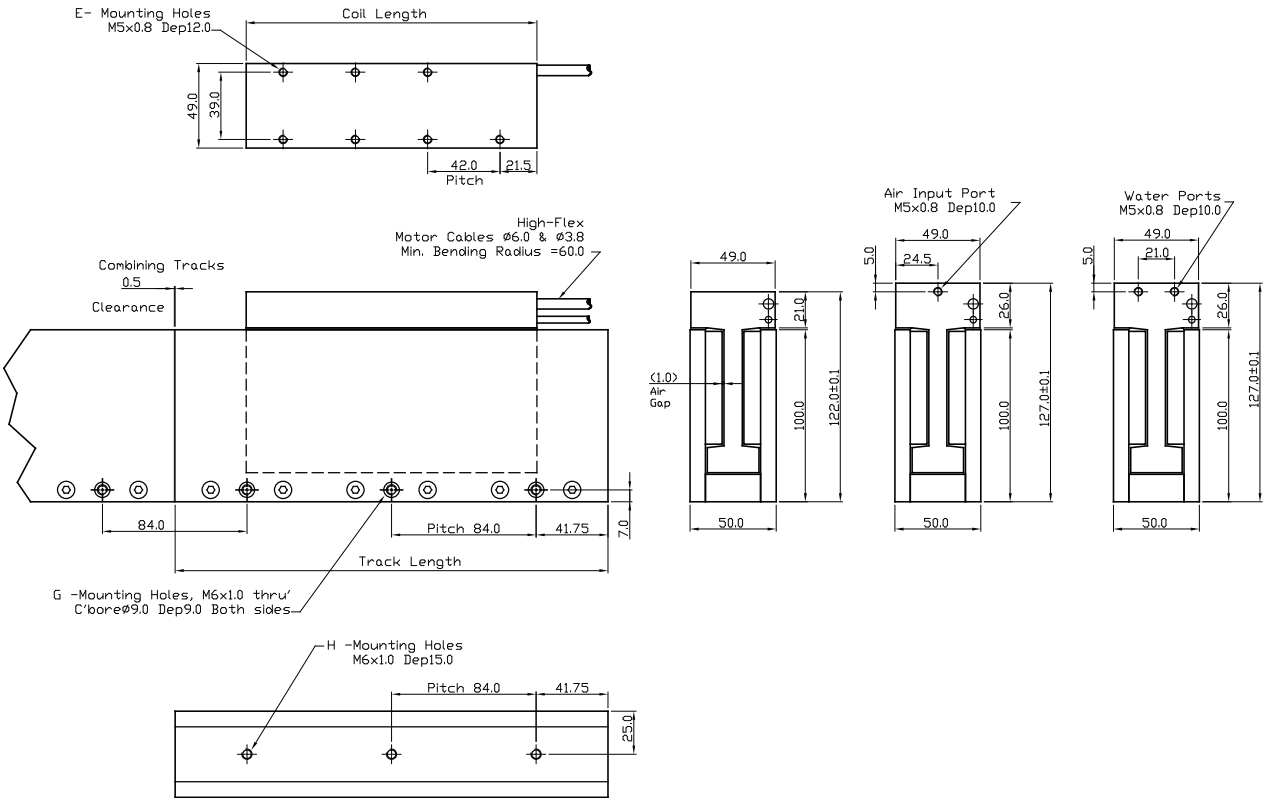
AUM5

AUM5		AUM5-S5		AUM5-S6		AUM5-S8		AUM5-S9	
Performance Parameters	Unit	Series	Parallel	Series	Parallel	Series	Parallel	Series	Parallel
Continuous Force, coil @100°C	N	491		590		786		884	
Continuous Force, AC, coil @100°C	N	590		707		943		1,061	
Continuous Force, WC, coil @100°C	N	639		766		1,022		1,150	
Peak Force	N	3,537		4,244		5,659		6,367	
Motor Constant	N/Sqrt(W)	42.9		47.0		54.2		57.5	
Continuous Power	W	131.3		157.5		210.0		236.3	
Peak Power	W	6,804		8,165		10,886		12,247	
Electrical Cycle	mm	84		84		84		84.0	
Max Coil Temperature	°C	125		125		125		125	
Thermal Dissipation Constant	W/°C	1.8		2.1		2.8		3.15	
Continuous current	Arms	2.5	5.0	2.5	5.0	2.5	5.0	2.5	5.0
Continuous current, AC	Arms	3.0	6.0	3.0	6.0	3.0	6.0	3.0	6.0
Continuous current, WC	Arms	3.3	6.5	3.3	6.5	3.3	6.5	3.3	6.5
Peak current	Arms	18.0	36.0	18.0	36.0	18.0	36.0	18.0	36.0
Max bus Voltage	Vdc	330.0	330.0	330.0	330.0	330.0	330.0	330.0	330.0
Force Constant	N/Arms	196.5	98.3	235.8	117.9	314.4	157.2	353.7	176.9
Back EMF Constant	Vpeak/(m/s)	160.4	80.2	192.5	96.3	256.7	128.4	288.8	144.4
Inductance	mH	32.50	8.13	39.00	9.75	52.00	13.00	58.50	14.63
Terminal Resistance @25°C	ohms	21.00	5.25	25.20	6.30	33.60	8.40	37.80	9.45
Electrical Time Constant	ms	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
Mechanical Parameters									
Coil Mass	kg	3.60		4.32		5.76		6.48	
Coil Length	mm	421.0		505.0		673.0		757.0	
Track Mass (per 168 mm)	kg	4.26							
Magnetic Attraction	N	0							

Note: AC– Air Cool, WC–Water Cool
Continuous current is measured with coil mounted to an aluminum plate with same length as coil, 2X width, and thickness 12 mm

AUM5

Dimensions



Motor Coil		
Model No:	Coil Length	E
AUM5-S2	169.0	7
AUM5-S3	253.0	11
AUM5-S4	337.0	15
AUM5-S5	421.0	19
AUM5-S6	505.0	23

Motor Track				
Model No:	Track Length	G	H	
AUM5-TL168	167.5	2	2	
AUM5-TL252	251.5	3	3	
AUM5-TL420	419.5	5	5	

* For air or water cooled models,
Coil Length and E are the same as the standard model

AUM5

Part Numbering



Motor Coil

AUM5-A-S-S2-J-H9D-3.0-NFB

Model

AUM5

Cooling Options

Blank = Natural Convection
A = Air Cooled
W = Water Cooled

Connection

S = Series / P = Parallel¹

Size

S1-S6, S8-S9

Ferrite Bead Options

Blank⁴ / NFB⁵

Cable Length (m)

3.0

Hall Options

Blank² / H9D³

Thermal Sensor

J = Thermostat (standard) / K = PT100 (RTD)



Motor Track

AUM5-TL420

Model

AUM5

Track Length

TL168/ TL252/ TL420

- 1 Parallel connection is not applicable to S1 motor coil.
- 2 Blank = comes with built-in hall sensor & hall cable terminated in flying leads. (standard)
- 3 H9D = comes with built-in hall sensor & hall cable terminated with 9-Pins D-Sub connector.
- 4 Blank = motor cable terminated with ferrite bead. (standard)
- 5 NFB = motor cable terminated in flying leads.

Torque-Speed-Curve

Linear Motors

Linear Motors

