

Ver 3.1

# SEWOO MOTOR

## CATALOG

LINEAR STAGE  
LINEAR MOTOR  
BLDC MOTOR  
BLDC DRIVER  
DC MOTOR



# 세우산전(주) 회사연혁

- 1995.04.15 세우산전(주) 법인설립
- 1995.08 산업용 DC MOTOR 생산
- 1997.08 FAN 용 BLDC MOTOR 생산
- 1999.05 DC 및 AC MOTOR 의 GEAR BOX 생산
- 2000.11 부천 테크노파크입주(소형정밀모터기술개발단지)
- 2000.11 부품소재 기술개발 사업 육성 업체선정(산자부)
- 2001.02 벤처기업 인증(중기청)
- 2001.03 산업용 BLDC MOTOR DRIVER 개발완료
- 2001.03 세우산전 부설 연구소 설립
- 2001.12 BLDC MOTOR(BD60-N024030) & DRIVER(SBDM-05) CE 인증(TUV KOREA)
- 2002.02 "소형 모터류 및 선형모터 설계, 제조 및 부가서비스에 관한 ISO 9001 인증"
- 2002.12 편축식 리니어모터 특허등록(특허청)
- 2003.07 코어리스 모터용 고정자 특허등록(특허청)
- 2003.11 BLDC MOTOR UL 인증(UL KOREA)
- 2003.12 LINEAR MOTOR 개발 완료
- 2004.01 초고속 원통형 LINEAR MOTOR 개발
- 2004.04 냉각시스템을 구비한 리니어모터 특허등록(특허청)
- 2005.01 양축식 리니어모터의 체결구조 특허등록(특허청)
- 2005.06 이노비즈인증(중소기업청)
- 2005.07 우량기술기업선정(기술신용보증기금)
- 2007.12 원통형 리니어모터 및 지그제조방법(특허청)
- 2008.03 BLDC MOTOR(BD90-N024200) & DRIVER(SBDM-25) CE 인증(TUV KOREA)
- 2009.03 Linear MOTOR(SWL-PM10C, PM20C, PM30C, PM40C ) CE 인증(TUV KOREA)
- 2009.04 경영혁신형 중소기업 인증 취득(중소기업청)
- 2010.06 모터코일 및 자동권선 장치용 권선지그 특허등록 (특허청)
- 2010.10 밀폐형 BLDC MOTOR 60각, 80각, 90각 개발 완료
- 2011.05 LINEAR MOTOR(SWL-PL10C, 20C, 30C, 40C) UL 인증
- 2011.07 부천벤처기업육성촉진지구 최우수제품 선정(부천시)
- 2011.11 LINEAR MOTOR(SWL-PL10C, 20C, 30C, 40C)CE 인증
- 2012.10 LINEAR MOTOR(SWL-PS10C, 20C, 30C, 40C)CE 인증
- 2014.11 경기도 안산 시화공단(MTV 단지) 신사옥 준공하여 이전
- 2015.12 LINEAR MOTOR e-Series 개발
- 2016.03 SLIM, LINEAR STAGE 2종 개발
- 2016.11 LINEAR 단축 로봇 3종 개발
- 2016.11 LMS용 ANALOG HALLSENSOR (HSS24, HSS42) CE 인증
- 2017.12 IRONCORE LINEAR MOTOR(SWL-ePM10C, ePM20C, ePM30C, ePM40C) CE 인증 (TUV NORD)
- 2018.11 LINEAR MOTOR(SWL-PMI10C, PMI20C, PMI30C, PMI40C) CE 인증 (TUV NORD)
- 2018.12 대용량 LINEAR MOTOR 개발(SWL-DU20, 30, 40)
- 2019.07 수직형 LINEAR SLIM STAGE 개발
- 2019.11 대용량 LINEAR MOTOR 개발(SWL-ePE50C, ePE62C)
- 2019.12 IRONCORE LINEAR MOTOR(SWL-ePL20C , ePL30C, ePL40C) CE 인증 (KST)
- 2020.08 LINEAR MOTOR(SWL-DS20, DS30, DS40, DS50) CE 인증 (KST)
- 2020.10 LINEAR MOTOR(SWL- PM10C, PM20C, PM30C, PM40C) UL 인증 (UL KOREA)



# Certificate of approval

제 R090501-01458 호

### 경영혁신형 중소기업(Main-Biz) 확인서

업 체 명 : 세우산전(주)  
 대 표 자 명 : 장중수  
 주 소 : 경기 안산시 단원구 평리보이12로22번길 17  
 시외전화번호: 031-326-306  
 유효기간 : 2018.04.27 ~ 2021.04.26

위 업체는 경영혁신형 중소기업 육성사업에 의해 선정된 경영혁신형 중소기업(Main-Biz)임을 확인합니다.

2018년 04월 23일

중소벤처기업부장 



제 20170300029 호

### 벤처기업확인서

업 체 명 : 세우산전(주)  
 대 표 자 : 장중수  
 소 재 지 : 경기도 안산시 단원구 평리보이12로22번길 (보곡동)  
 확 인 유 형 : 벤처투자기업(창투자금이 자본금 10%이상 투자)  
 확 인 기 관 : 한국벤처투자진흥회  
 유효 기 간 : 2017년 12월16일 ~ 2019년12월15일

위 업체는 벤처기업육성에관한특별조치법 제25조의 규정에 의하여 벤처기업임을 확인합니다.

2017년 12월 16일

 한국벤처캐피탈협회 


제 15363호

### 소재·부품전문기업확인서

기 업 명 : 세우산전(주) (130-81-45971)  
 대 표 자 : 장중수  
 소 재 지 : 경기도 안산시 단원구 평리보이12로22번길 17  
 (성곡동)  
 유효기간 : 2016.09.29 - 2019.09.28

위 기업은 「소재·부품전문기업 등의 육성에 관한 특별조치법」 제6조의2제2항 및 같은 법 시행규칙 제18조제2항에 따라 소재·부품 전문기업임을 확인합니다.

2016년 09월 29일

산업통상자원부 

제 R5061 - 0082 호

### 기술혁신형 중소기업(Inno-Biz) 확인서

업 체 명 : 세우산전(주)  
 대 표 자 : 장중수  
 주 소 : 경기 안산시 단원구 평리보이12,322번길 17 (성곡동)  
 등 급 : A  
 유효기간 : 2017. 5. 25 ~ 2020. 5. 24

위 업체는 기술혁신형 중소기업 육성사업에 의해 선정된 기술혁신형 중소기업(Inno-Biz)임을 확인합니다.

2017년 4월 11일

중 소 기 업 청 

제 0366566 호

### 특 허 증

특 허 제 0366566 호


발명자명칭: 한우사 피니어 코퍼

특 허 권 자: 세우산전(주) (194511-0548113)  
 경기도 부천시 원미구 학내동 192 구본테크노파크 302-405

발 명 자: 장중수 (800610-1011211)  
 경기도부천시원미구학내동192번지구본테크노파크302동405호

위의 발명은 특허법에 의하여 특허등록원부에 등록되었음을 증명합니다.

2020년 12월 18일

특 허 청 

특 허 증  
 CERTIFICATE OF PATENT

특 허 제 0518436 호

발명자명칭 OFFICE OF THE DIRECTOR  
 피니어사피니어 코퍼

특 허 권 자 (PATENTEE)  
 세우산전(주) (194511-0548113)  
 경기도 부천시 원미구 학내동 192 구본테크노파크 302-405

발 명 자 (INVENTOR)  
 장중수 (800610-1011211)  
 경기도부천시원미구학내동192동405호

위의 발명은 「특허법」에 의하여 특허등록원부에 등록되었음을 증명합니다.

2020년 09월 30일

 특 허 청 

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## LINEAR MOTOR(P.24-61)

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## BLDC(P.62-91)

MOTOR

DRIVER



## DC MOTOR(P.92-103)



# LINEAR STAGE

## SL Series

SEWOO LINEAR SERVO ROBOT SYSTEM



# SEWOO LINEAR SERVO ROBOT SYSTEM

## 제품 특징

자체 기술로 제작된 리니어모터의 원천 기술력을 바탕으로 최적의 솔루션을 제공하고 유사시 빠른 A/S 대응이 가능

MOTOR와 MAGNET이 비접촉 형식의 간단한 구조로 직선운동하기 때문에 마모와 소음이 적어 초고속 운전 및 이송거리가 긴 장비에 적용이 가능

Linear Robot에 Dual 및 여러 개의 SLIDE를 장착 할 수 있으며, 각각의 Slide는 독립 제어가 가능하며 System설계의 유연성 극대화 실현

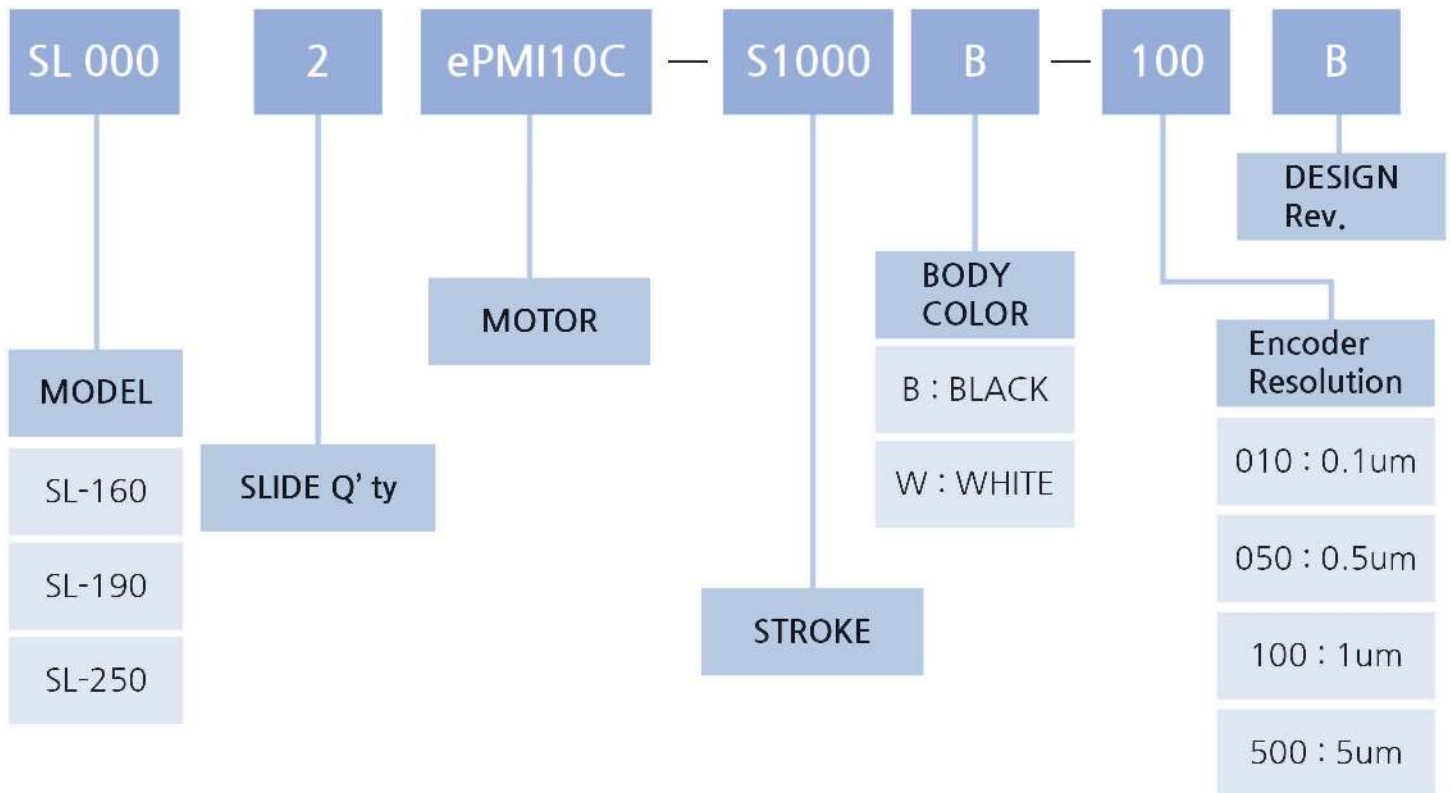
리니어 엔코더의 Full Closed-loop 제어에 의해 높은 위치결정도를 실현하여 초정밀 부품이송, 검사장비 등에 적용이 가능

무부하시 최대 4.5G의 가속도로 10m/s 속도의 고속화 실현

리테이너형 LM Guide 적용으로 볼 사이의 마찰이 없어 LM 수명이 길고 저소음에 저발진을 실현

다양한 종류의 Linear Motor 구비로 최적의 시스템 대응이 가능함

# SL SERIES CODING SYSTEM



MODEL	MOTOR	Continuous Force	MOTOR	Continuous Force
SL-160	ePMI10C	20N	PMI10C	18N
	ePMI20C	40N	PMI20C	38N
	ePMI30C	60N	PMI30C	56N
	ePMI40C	80N	PMI40C	75N
	ePS10C	55N	PS10C	42N
	ePS20C	110N	PS20C	84N
	ePS30C	160N	PS30C	125N
	ePS40C	215N	PS40C	166N
SL-190	ePM10C	80N	PM10C	78N
	ePM20C	155N	PM20C	157N
	ePM30C	235N	PM30C	236N
	ePM40C	315N	PM40C	315N
SL-250	ePL20C	360N	PL10C	162N
			PL20C	319N
	ePL30C	530N	PL30C	480N
	ePL40C	700N	PL40C	639N



# SL-160 (ePMI)

- ◆ Base 폭이 160mm인 소형 정밀 위치제어용 스테이지입니다.
- ◆ Iron Core Type 리니어모터와 광학식 엔코더를 조합하여 위치와 정밀도를 정밀하게 제어가능 합니다.

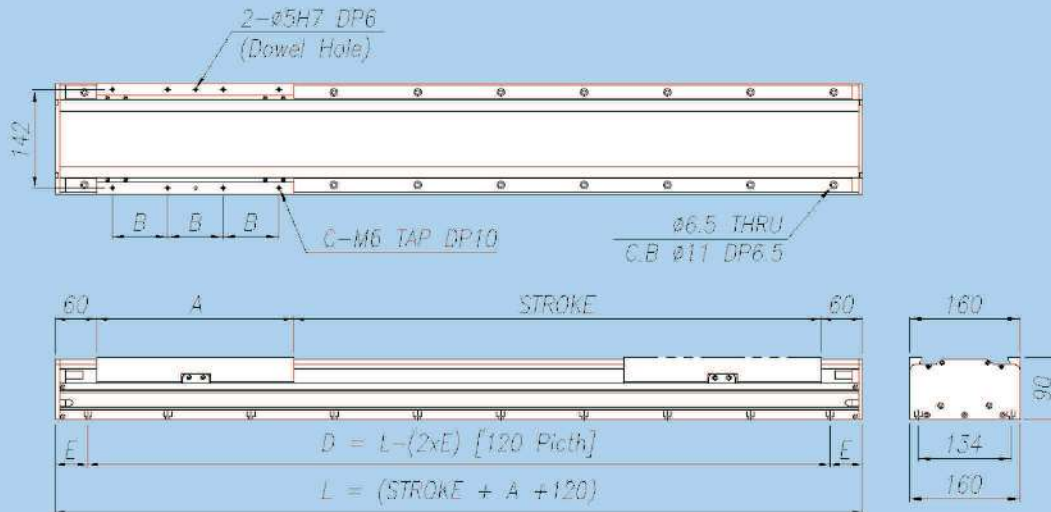
## Performance Specifications

MOTOR		ePMI10C	ePMI20C	ePMI30C	ePMI40C
Driver	Output	Power 200W			
Force	Continuous	20N	40N	60N	80N
	Max	55N	105N	155N	205N
Max. Speed		4.0m/s			
Pay load		4Kg	7Kg	11Kg	14Kg
Accuracy		±10 $\mu$ m / 300mm			
Repeatability		±1 $\mu$ m (Resolution 1 $\mu$ m)			
Straightness / Flatness		±10 $\mu$ m / 300mm			



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 분해능 및 기타 기구조건에 따라 변경됩니다.
2. Pay load : V = 1m/s, A = 0.5G, STR = 500mm 조건에서 반송될 수 있는 질량.
3. 상기 사양은 필드 수치이며 사용 온도, 방열 구조 등 사용 환경에 따라 변동됩니다.



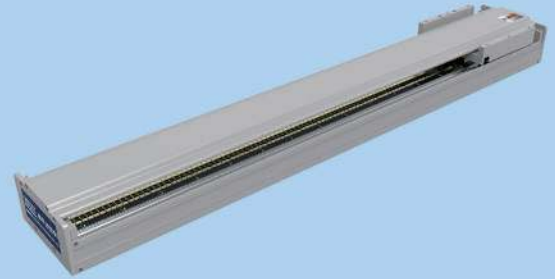
No.	ePMI10C	ePMI20C	ePMI30C	ePMI40C
A (Shoe)	76	112	148	184
B	50	90	40	50
C	4	4	8	8
표면처리	백색 / 흑색 아노다이징 (반광)			

# SL-160 (PMI)

- ◆ Base 폭이 160mm인 소형 정밀 위치제어용 스테이지 입니다.
- ◆ Iron Core Type 리니어모터와 광학식 엔코더를 조합하여 위치와 정밀도를 정밀하게 제어가능 합니다.

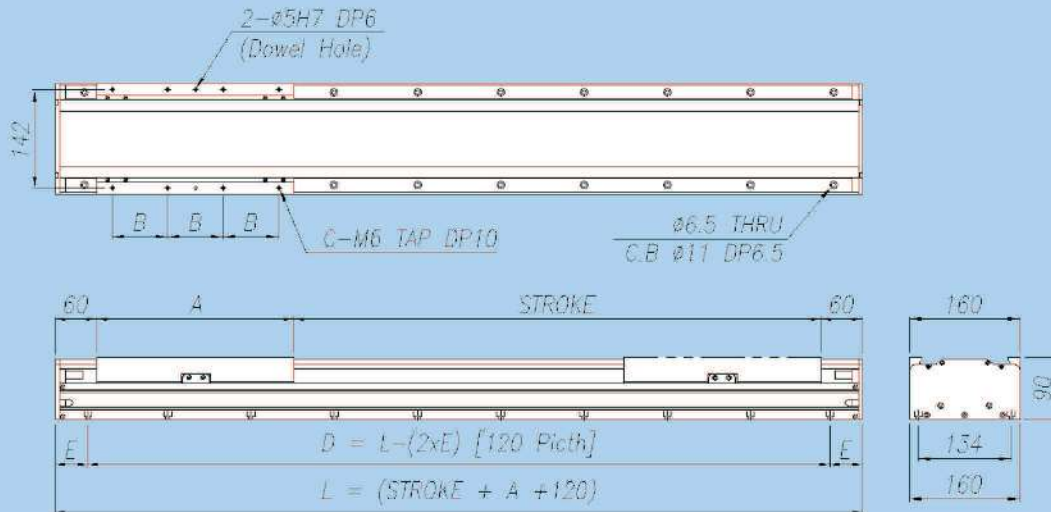
## Performance Specifications

MOTOR		PMI10C	PMI20C	PMI30C	PMI40C
Driver	Output	Power 200W			
Force	Continuous	18N	38N	56N	75N
	Max	56N	114N	170N	225N
Max. Speed		4.0m/s			
Pay load		3Kg	6Kg	9Kg	12Kg
Accuracy		±10 $\mu$ m / 300mm			
Repeatability		±1 $\mu$ m (Resolution 1 $\mu$ m)			
Straightness / Flatness		±10 $\mu$ m / 300mm			



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 분해능 및 기타 기구조건에 따라 변경됩니다.
2. Pay load : V = 1m/s, A = 0.5G, STR = 500mm 조건에서 반송할 수 있는 질량.
3. 상기 사양은 참고 수치이며 사용 온도, 방향, 구조 등 사용환경에 따라 변동됩니다.



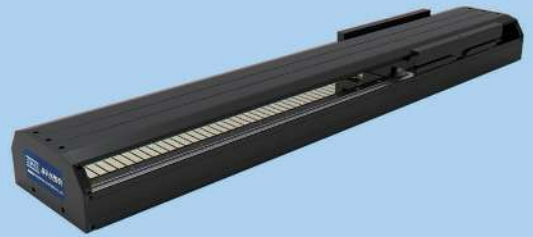
No.	PMI10C	PMI20C	PMI30C	PMI40C
A (Shoe)	94	128	164	200
B	70	100	45	50
C	4	4	8	8
표면처리	백색 / 흑색 아노다이징 (반광)			

# SL-160 (ePS)

- ◆ Base 폭이 160mm인 소형 정밀 위치제어용 스테이지 입니다.
- ◆ Iron Core Type 리니어모터와 광학식 엔코더를 조합하여 위치와 정밀도를 정밀하게 제어가능 합니다.

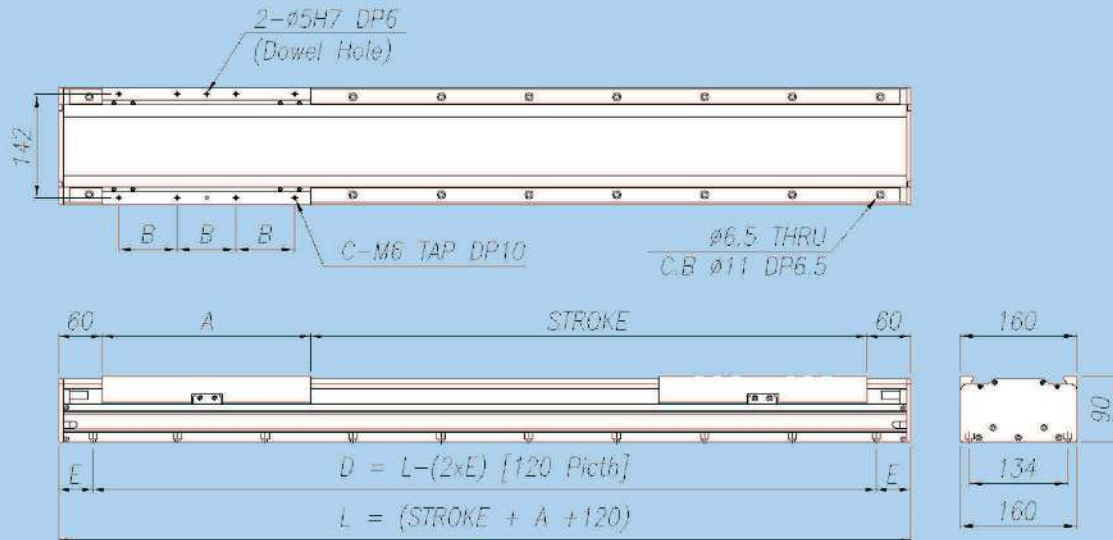
## Performance Specifications

MOTOR		ePS10C	ePS20C	ePS30C	ePS40C
Driver	Output	Power 400W			
Force	Continuous	55N	110N	160N	215N
	Max	150N	295N	440N	580N
Max. Speed		4.0m/s			
Pay load		10Kg	20Kg	29Kg	39Kg
Accuracy		±10 $\mu$ m / 300mm			
Repeatability		±1 $\mu$ m (Resolution 1 $\mu$ m)			
Straightness / Flatness		±10 $\mu$ m / 300mm			



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 분해능 및 기타 기구조건에 따라 변경됩니다.
2. Pay load : V = 1m/s, A = 0.5G, STR = 500mm 조건에서 반송될 수 있는 질량.
3. 상기 사양은 필름 수치이며 사용 온도, 방열 구조 등 사용 환경에 따라 변동됩니다.



No.	ePS10C	ePS20C	ePS30C	ePS40C
A (Shoe)	104	164	224	284
B	80	120	60	80
C	4	4	8	8
표면처리	백색 / 흑색 아노다이징 (반광)			

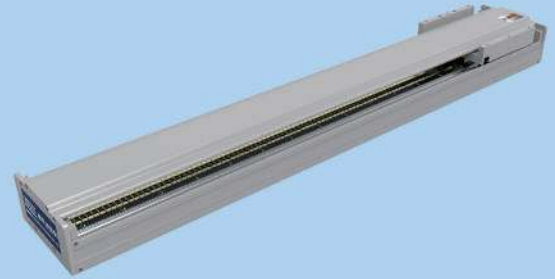


# SL-160 (PS)

- ◆ Base 폭이 160mm인 소형 정밀 위치제어용 스테이지 입니다.
- ◆ Iron Core Type 리니어모터와 광학식 엔코더를 조합하여 위치와 정밀도를 정밀하게 제어가능 합니다.

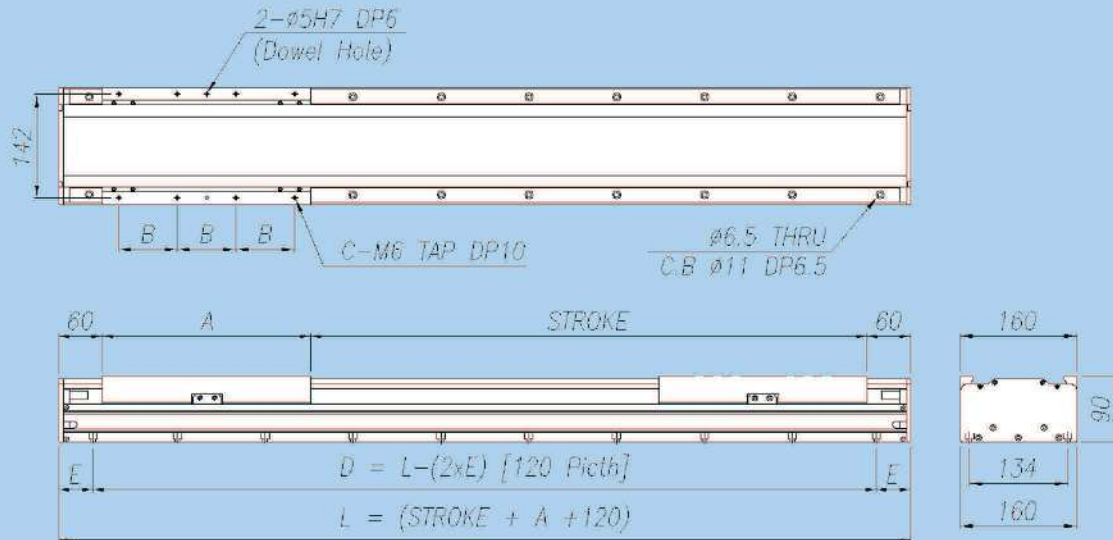
## Performance Specifications

MOTOR		PS10C	PS20C	PS30C	PS40C
Driver	Output	Power 400W			
Force	Continuous	42N	84N	125N	166N
	Max	126N	253N	375N	500N
Max. Speed		4.0m/s			
Pay load		7Kg	14Kg	20Kg	27Kg
Accuracy		±10 $\mu$ m / 300mm			
Repeatability		±1 $\mu$ m (Resolution 1 $\mu$ m)			
Straightness / Flatness		±10 $\mu$ m / 300mm			



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 분해능 및 기타 기구조건에 따라 변경됩니다.
2. Pay load : V = 1m/s, A = 0.5G, STR = 500mm 조건에서 반송할 수 있는 질량.
3. 상기 사양은 참고 수치이며 사용 온도, 방향, 구조 등 사용환경에 따라 변동됩니다.



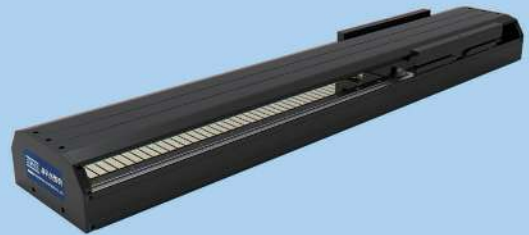
No.	PS10C	PS20C	PS30C	PS40C
A (Shoe)	106	154	202	250
B	80	110	50	70
C	4	4	8	8
표면처리	백색 / 흑색 아노다이징 (반광)			

# SL-190 (ePM)

- ◆ Base 폭이 190mm인 소형 정밀 위치제어용 스테이지 입니다.
- ◆ Iron Core Type 리니어모터와 광학식 엔코더를 조합하여 위치와 정밀도를 정밀하게 제어가능 합니다.

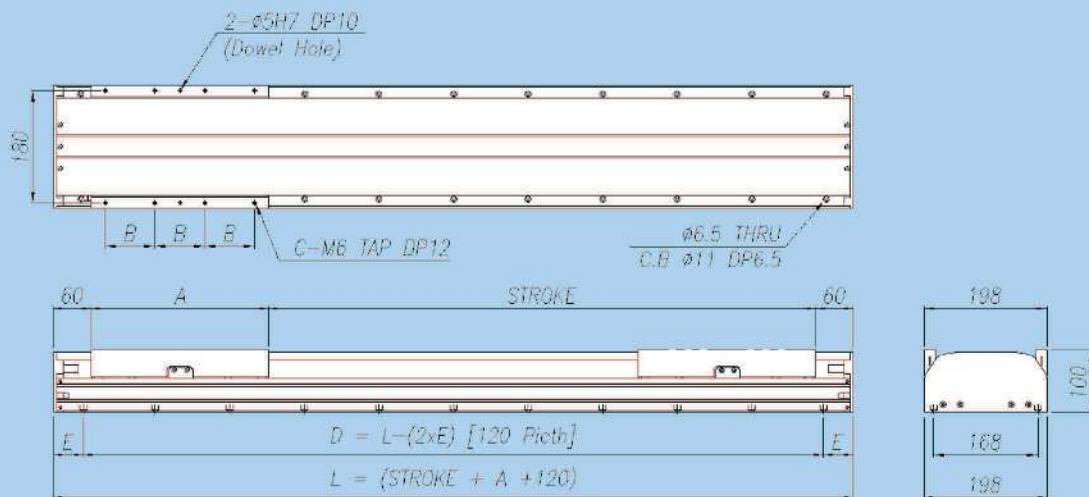
## Performance Specifications

MOTOR		ePM10C	ePM20C	ePM30C	ePM40C
Driver	Output	Power 750W			
Force	Continuous	80N	155N	235N	315N
	Max	230N	445N	675N	885N
Max. Speed		3.5m/s			
Pay load		14Kg	28Kg	42Kg	56Kg
Accuracy		±10 $\mu$ m / 300mm			
Repeatability		±1 $\mu$ m (Resolution 1 $\mu$ m)			
Straightness / Flatness		±10 $\mu$ m / 300mm			



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 분해능 및 기타 기구조건에 따라 변경됩니다.
2. Pay load : V = 1m/s, A = 0.5G, STR = 500mm 조건에서 반송될 수 있는 질량.
3. 상기 사양은 필름 수치이며 사용 온도, 방열 구조 등 사용환경에 따라 변경됩니다.



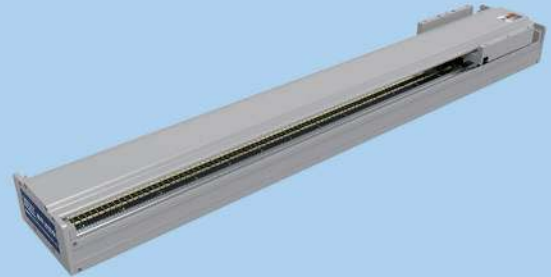
No.	ePM10C	ePM20C	ePM30C	ePM40C
A (Shoe)	106	166	226	286
B	80	40	60	80
C	4	8	8	8
표면처리	백색 / 흑색 아노다이징 (반광)			

# SL-190 (PM)

- ◆ Base 폭이 190mm인 소형 정밀 위치제어용 스테이지 입니다.
- ◆ Iron Core Type 리니어모터와 광학식 엔코더를 조합하여 위치와 정밀도를 정밀하게 제어가능 합니다.

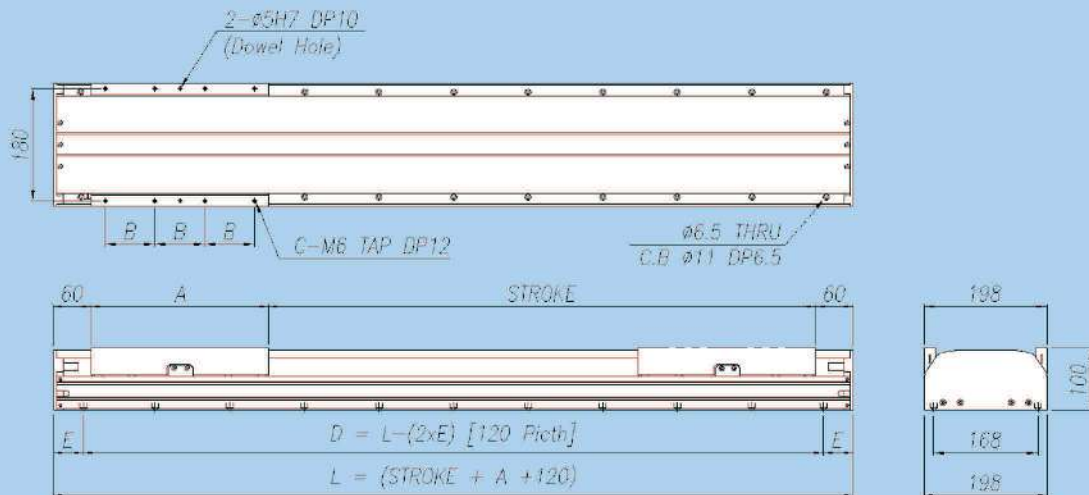
## Performance Specifications

MOTOR		PM10C	PM20C	PM30C	PM40C
Driver	Output	Power 750W			
Force	Continuous	78N	157N	236N	315N
	Max	235N	472N	708N	945N
Max. Speed		3.5m/s			
Pay load		13Kg	25Kg	38Kg	50Kg
Accuracy		±10 $\mu$ m / 300mm			
Repeatability		±1 $\mu$ m (Resolution 1 $\mu$ m)			
Straightness / Flatness		±10 $\mu$ m / 300mm			



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 분해능 및 기타 기구조건에 따라 변경됩니다.
2. Pay load : V = 1m/s, A = 0.5G, STR = 500mm 조건에서 반송될 수 있는 질량.
3. 상기 사양은 참고 수치이며 사용 온도, 방열 구조 등 사용환경에 따라 변동됩니다.



No.	PM10C	PM20C	PM30C	PM40C
A (Shoe)	118	178	238	298
B	90	50	70	80
C	4	8	8	8
표면처리	백색 / 흑색 아노다이징 (반광)			

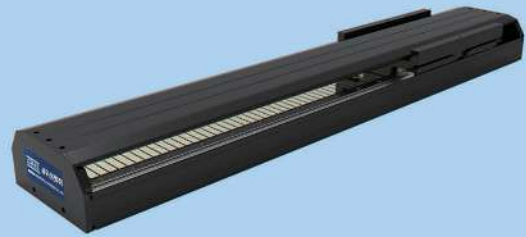


# SL-250 (ePL)

- ◆ Base 폭이 250mm인 소형 정밀 위치제어용 스테이지 입니다.
- ◆ Iron Core Type 리니어모터와 광학식 엔코더를 조합하여 위치와 정밀도를 정밀하게 제어가능 합니다.

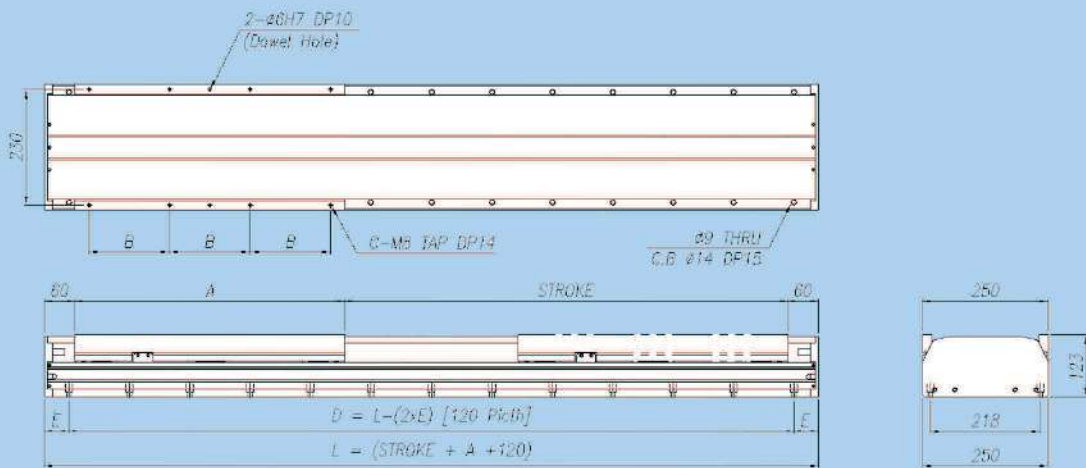
## Performance Specifications

MOTOR		ePL20C	ePL30C	ePL40C
Driver	Output	Power 1.5Kw		
Force	Continuous	360N	530N	700N
	Max	1015N	1500N	2000N
Max. Speed		3.0m/s		
Pay load		62Kg	92Kg	120Kg
Accuracy		±10 $\mu$ m / 300mm		
Repeatability		±1 $\mu$ m (Resolution 1 $\mu$ m)		
Straightness / Flatness		±10 $\mu$ m / 300mm		



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 분해능 및 기타 기구조건에 따라 변경됩니다.
2. Pay load : V = 1m/s, A = 0.5G, STR = 500mm 조건에서 반송될 수 있는 질량.
3. 상기 사안은 필름 수치이며 사용 온도, 방열 구조 등 사용 환경에 따라 변동됩니다.



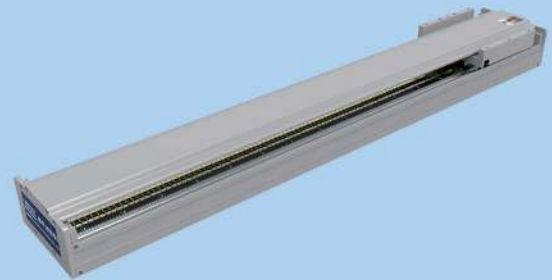
No.	ePL20C	ePL30C	ePL40C
A (Shoe)	296	416	536
B	80	120	160
C	8	8	8
표면처리	백색 / 흑색 아노다이징 (반광)		

# SL-250 (PL)

- ◆ Base 폭이 250mm인 소형 정밀 위치제어용 스테이지 입니다.
- ◆ Iron Core Type 리니어모터와 광학식 엔코더를 조합하여 위치와 정밀도를 정밀하게 제어가능 합니다.

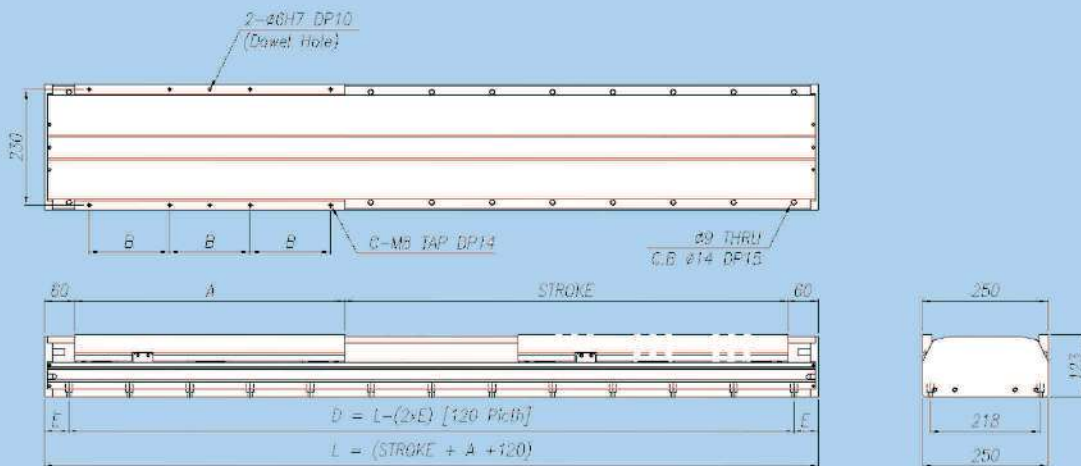
## Performance Specifications

MOTOR		PL10C	PL20C	PL30C	PL40C
Driver	Output	Power 1.5Kw			
Force	Continuous	162N	319N	480N	639N
	Max	487N	958N	1444N	1917N
Max. Speed		3.0m/s			
Pay load		25Kg	50Kg	75Kg	100Kg
Accuracy		±10 $\mu$ m / 300mm			
Repeatability		±1 $\mu$ m (Resolution 1 $\mu$ m)			
Straightness / Flatness		±10 $\mu$ m / 300mm			



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 분해능 및 기타 기구조건에 따라 변경됩니다.
2. Pay load : V=1m/s, A=0.5G, STR=500mm 조건에서 반송될 수 있는 질량.
3. 상기 사양은 참고 수치이며 사용 온도, 방열 구조 등 사용환경에 따라 변동됩니다.



No.	PL10C	PL20C	PL30C	PL40C
A (Shoe)	148	232	316	400
B	100	60	90	100
C	4	8	8	8
표면처리	백색 / 흑색 아노다이징 (반광)			

# LINEAR STAGE

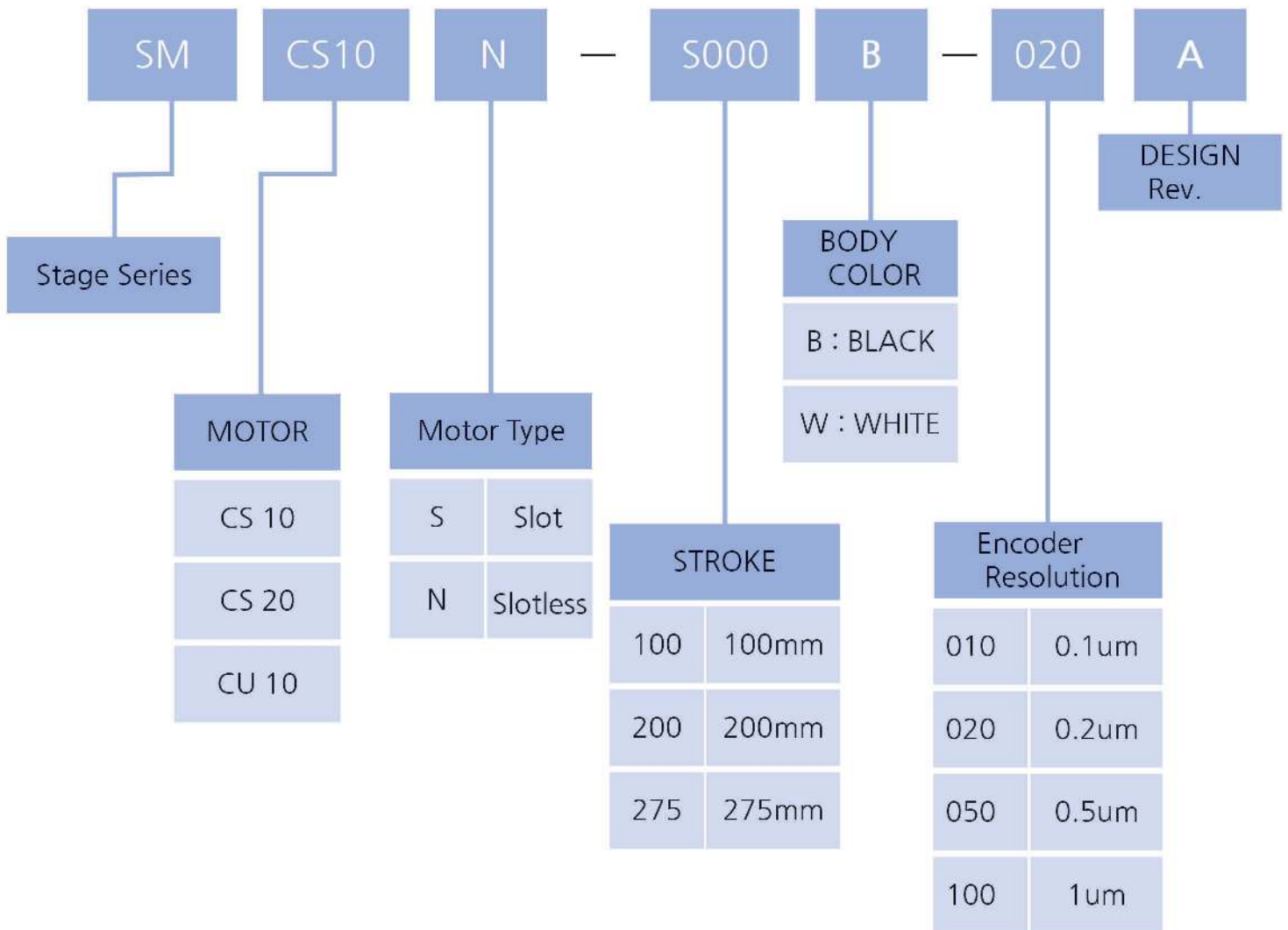
## SM SERIES

SEWOO LINEAR SERVO ROBOT SYSTEM





# SM SERIES CODING SYSTEM



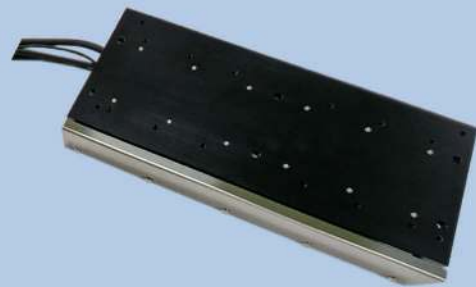
No.	MOTOR	Continuous Force	Stroke
Slim Stage	CS10N	10N	100mm
	CS10N	10N	200mm
	CS20N	20N	200mm
	CS20N	20N	275mm
	CS10S	26N	100mm
	CS10S	26N	200mm
	CU10N	1.4N	40mm
	CU10S	1.7N	40mm

# CS10□-S100

- ◆ 슬림한 디자인에 설치공간에 대한 효율적 설계로 최적화된 스테이지입니다.
- ◆ 당사에서 개발된 Slotless 리니어모터를 적용시 코킹 및 속도리플이 적고, 부드러운 운전이 가능하며, 고객의 다양한 요구 사양에 대응이 가능합니다.
- ◆ 반도체, 광학 부품 제조 설비에 응용 가능합니다.

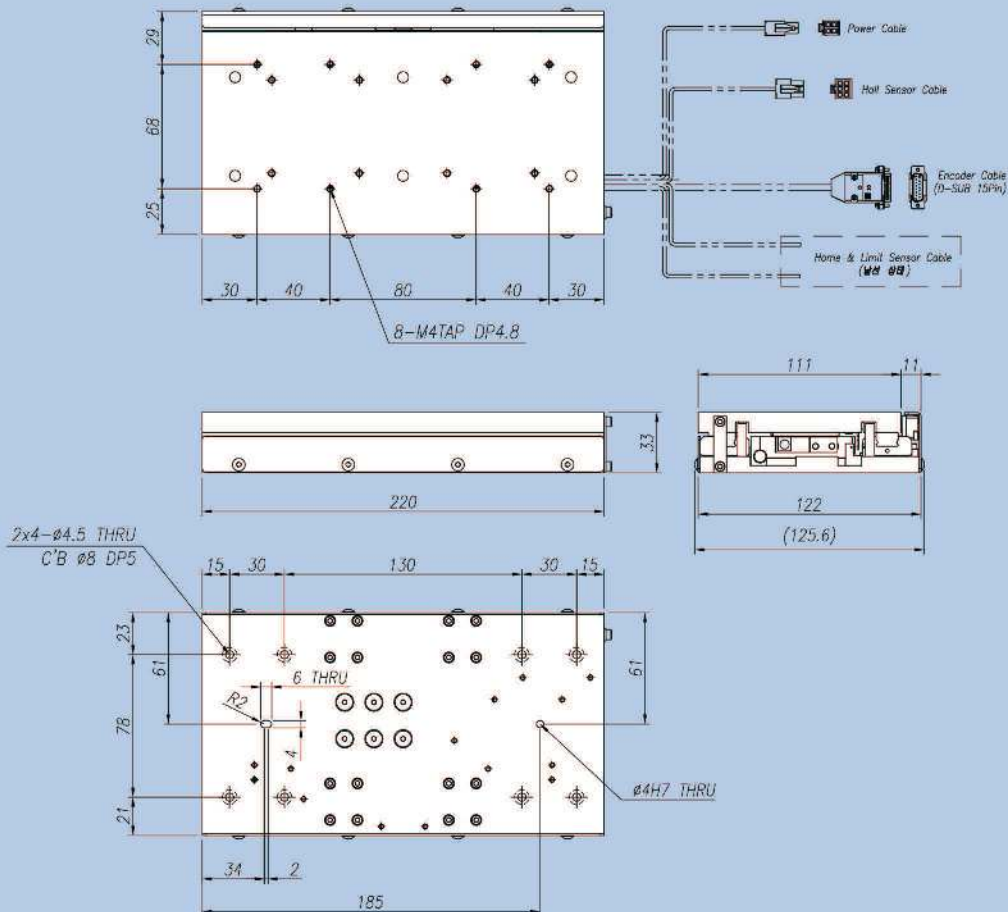
## Performance Specifications

Stage Serie		CS10N-S100B	CS10S-S100B
Driver	Output	Power 400W	
Force	Continuous	10N	26N
	Max	28N	76N
Max. Speed		0.5m/s	
Max. Pay load		5kg	
Accuracy		±10 $\mu$ m	
Repeatability		±1 $\mu$ m	
Straightness / Flatness		±2 $\mu$ m	



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 부하능 및 기타 기구조건에 따라 변경됩니다.
2. 상기 사양은 링크 수치이며 사용온도, 방열구조 등 사용환경에 따라 변동됩니다.

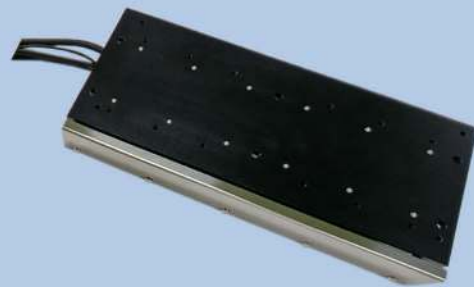


# CS10□-S200

- ◆ 슬림한 디자인에 설치공간에 대한 효율적 설계로 최적화된 스테이지입니다.
- ◆ 당사에서 개발된 Slotless 리니어모터를 적용시 코킹 및 속도리플이 적고, 부드러운 운전이 가능하며, 고객의 다양한 요구 사양에 대응이 가능합니다.
- ◆ 반도체, 광학 부품 제조 설비에 응용 가능합니다.

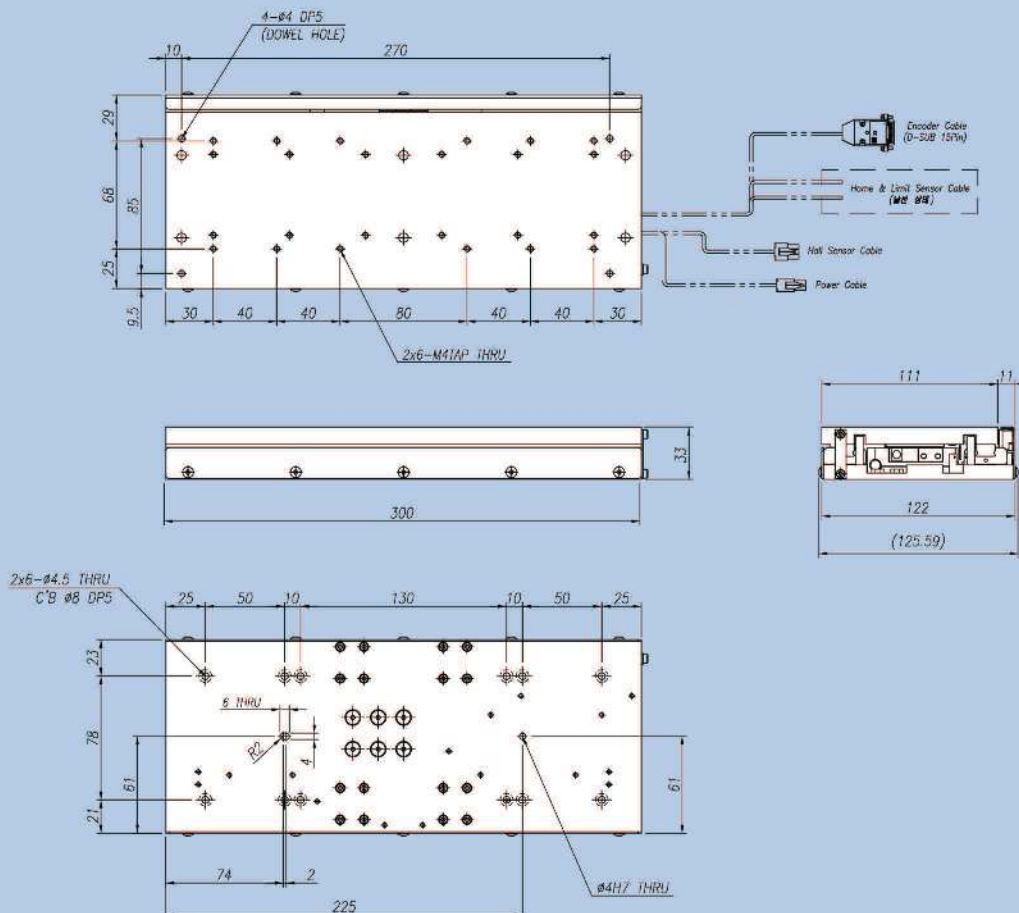
## Performance Specifications

Stage Serie		CS10N-S200B	CS10S-S200B
Driver	Output	Power 400W	
Force	Continuous	10N	26N
	Max	28N	76N
Max. Speed		0.5m/s	
Max. Pay load		5kg	
Accuracy		±10 $\mu$ m	
Repeatability		±1 $\mu$ m	
Straightness / Flatness		±2 $\mu$ m	



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 부하능 및 기구기구 구조에 따라 변경됩니다.
2. 상기 사양은 길이 수치이며 사용 온도, 방열 구조 등 사용 환경에 따라 변경됩니다.

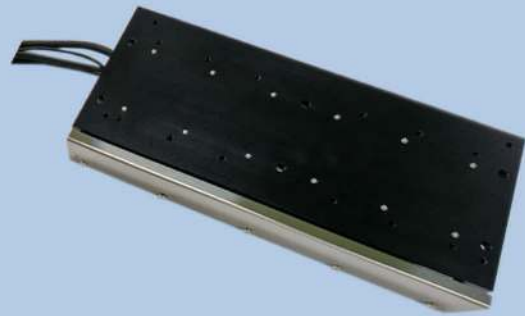




- ◆ 슬림한 디자인에 설치공간에 대한 효율적 설계로 최적화된 스테이지입니다.
- ◆ 당사에서 개발된 Slotless 리니어모터를 적용시 코킹 및 속도리플이 적고, 부드러운 운전이 가능하며, 고객의 다양한 요구 사양에 대응이 가능합니다.
- ◆ 반도체, 광학 부품 제조 설비에 응용 가능합니다.

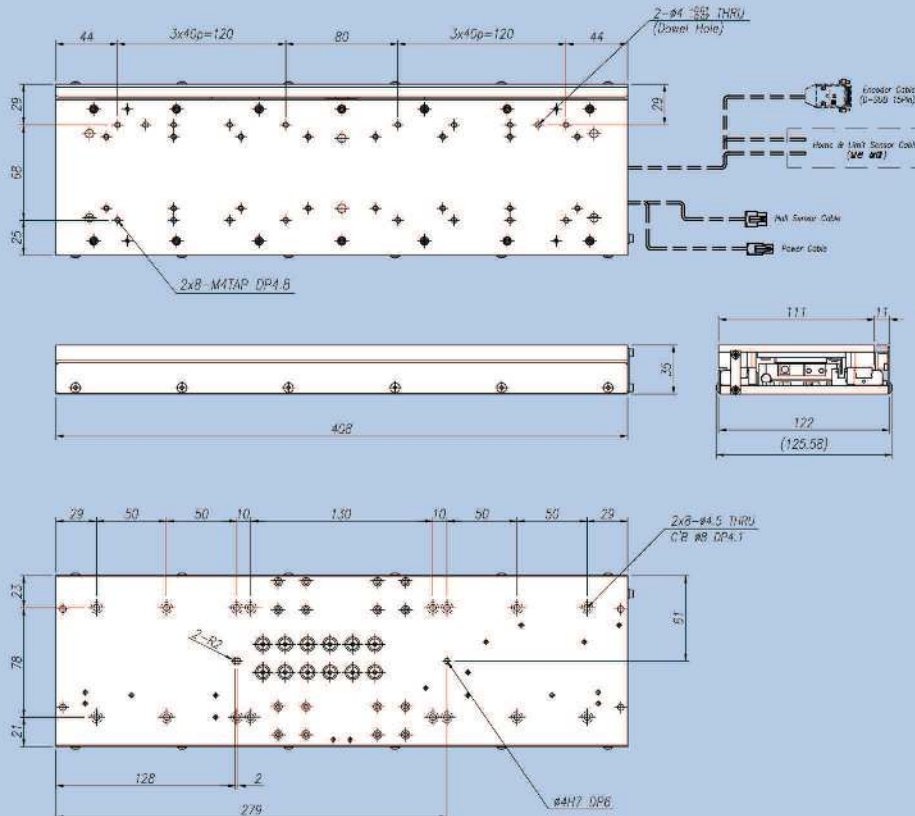
## Performance Specifications

Stage Serie		CS20N-S275B
Driver	Output	Power 400W
Force	Continuous	20N
	Max	55N
Max. Speed		0.5m/s
Max. Pay load		10kg
Accuracy		$\pm 10 \mu\text{m}$
Repeatability		$\pm 1 \mu\text{m}$
Straightness / Flatness		$\pm 2 \mu\text{m}$



## DIMENSIONS(Unit : mm)

1. 최대 속도는 엔코더 분해능 및 기타 기구조건에 따라 변경됩니다.
2. 상기 사양은 링크 수치이며 사용 온도, 방열 구조 등 사용환경에 따라 변동됩니다.



# CU10□-S040

- ◆ 슬림한 디자인에 설치공간에 대한 효율적 설계로 최적화된 스테이지입니다.
- ◆ 당사에서 개발된 Slotless 리니어모터를 적용시 코킹 및 속도리플이 적고, 부드러운 운전이 가능하며, 고객의 다양한 요구 사양에 대응이 가능합니다.
- ◆ 반도체, 광학 부품 제조 설비에 응용 가능합니다.

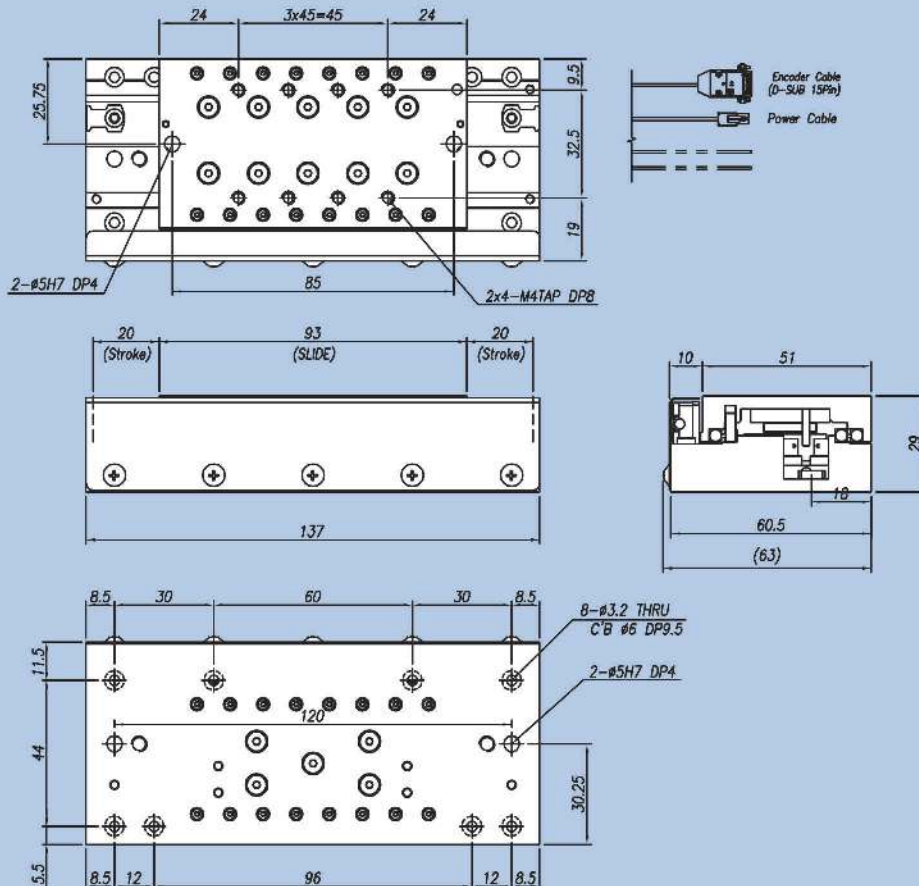
## Performance Specifications

Stage Serie		CU10N-S040B	CU10S-S040B
Driver	Output	Power 200W	
Force	Continuous	1.4N	1.7N
	Max	4N	5N
Max. Speed		0.5m/s	
Max. Pay load		1 kg	
Accuracy		±10 $\mu$ m	
Repeatability		±1 $\mu$ m	
Straightness / Flatness		±2 $\mu$ m	



## DIMENSIONS(Unit : mm)

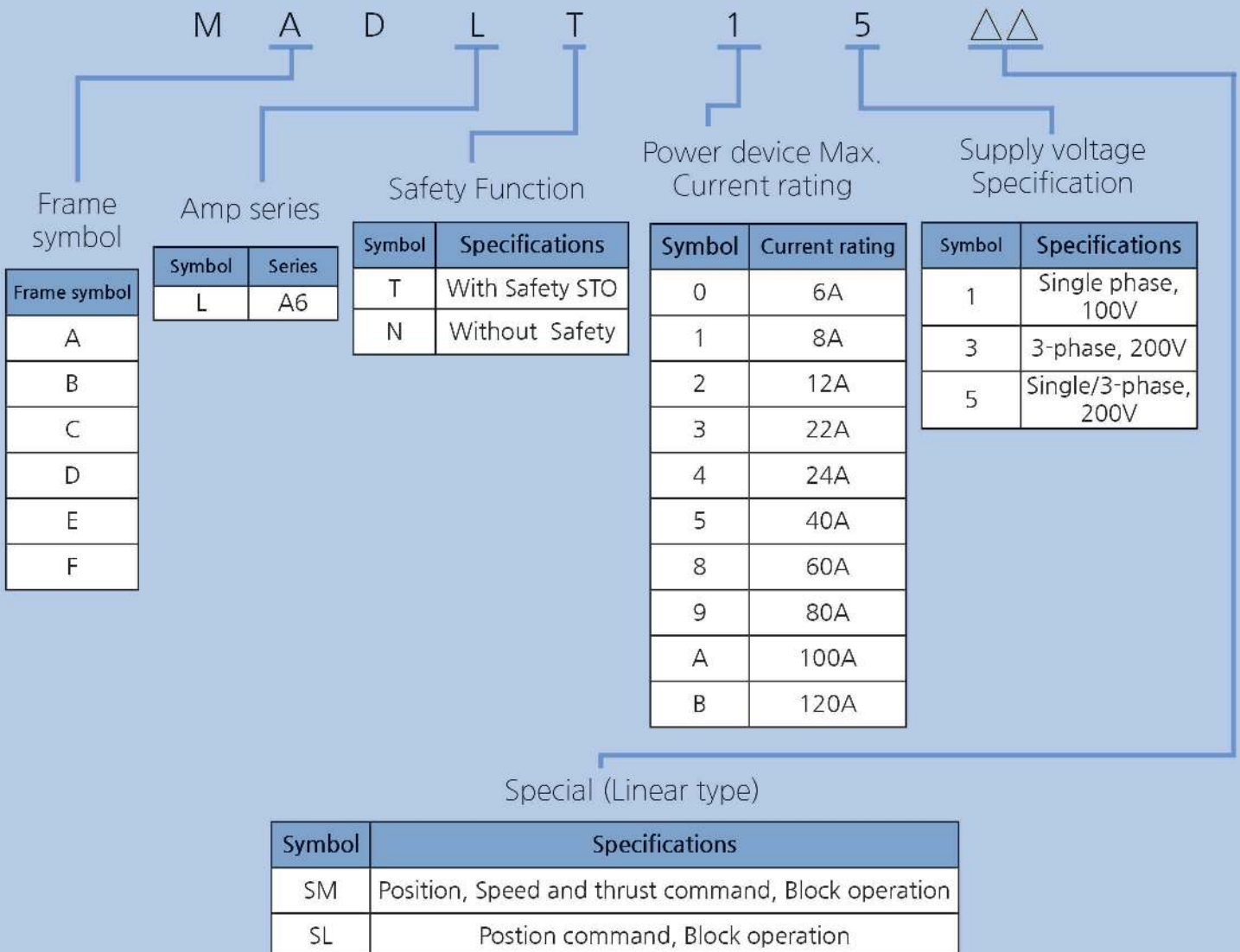
1. 최대 속도는 엔코더 분해능 및 기타 기구조건에 따라 변경됩니다.
2. 상기 사양은 링크 수치이며 사용 온도, 방열 구조 등 사용환경에 따라 변경됩니다.



# SEWOO LINEAR & PANASONIC DRIVER MACTING

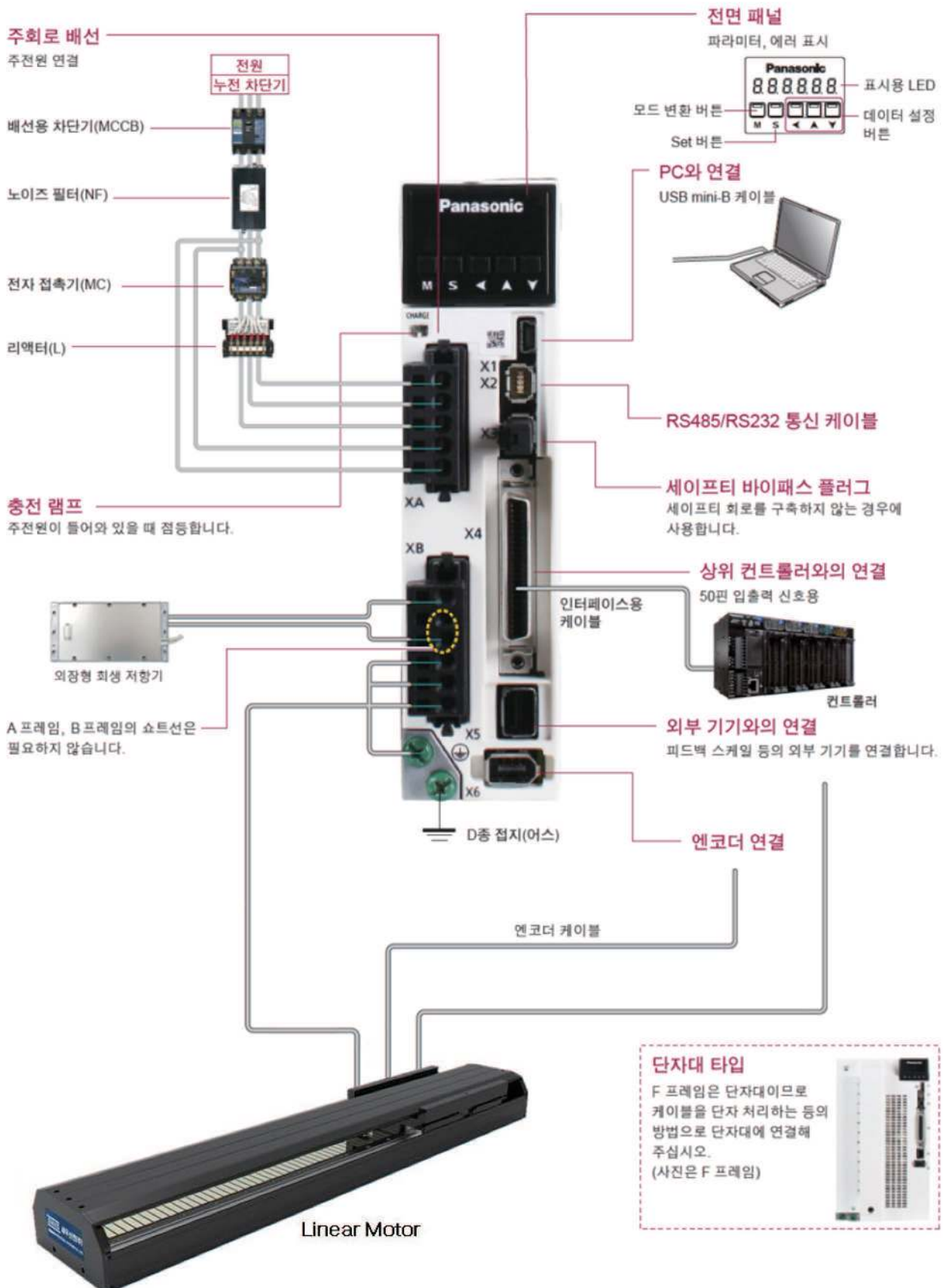
MODEL		Rated Output (W)	Current(Arms)		Motor		
A5L	A6L		A5L	A6L	IronCore	Coreless	Custom
MADHT1507L01/LA1	MADLT15SM/N15SL	200	1.6	1.5	ePMI , PMI	DMI	PU
MBDHT2510L01/LA1	MBDLT25SM/N25SL	400	2.6	2.4	ePS , PS	DS	
MCDHT3520L01/LA1	MCDLT35SM/N35SL	750	4	4.1	ePM , PM	DM	
MDDHT3530L01/LA1	MDDLT45SM/N45SL	1.0k	5.6	5.9	-	-	
MDDHT5540L01/LA1	MDDLT55SM/N55SL	1.5k	9.5	9.3	ePL , PL	-	PM40T, 50P, 50Y
MEDHT7364L01/LA1	MEDLT83SM/N83SL	2.0k	13.4	12.5	ePE , PE	DL, DU20	
MFDHTA390L01/LA1	MFDLTA3SM/NA3SL	3.0k	18.7	19.3	ePE62C	DE, DU30	
MFDHTB3A2L01/LA1	MFDLTB3SM/NB3SL	5.0k	33	27.1	-	DU40	TG

## PANASONIC DRIVER CODING SYSTEM (A6L)





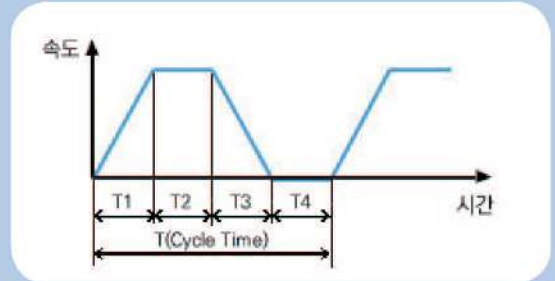
# SYSTEM CONFIGURATION AND WIRING



# 리니어 선정방법

## 1. 추력 계산

- W : 가반하중(kgf)
- k : 안전계수(1.3~1.5)
- μ : 마찰계수
- T1 : 가속시간
- g : 중력 가속도
- T2 : 등속시간
- a : 가속도
- T3 : 감속시간
- d : 감속도
- T4 : 휴지시간



### ◆ 정지시, 등속운동시 필요 추력(부하력)

부하력(Fw) = [(W + Motor 무게) x g + 자석 흡인력] x μ

### ◆ 가속시 필요 추력 : 가속추력(Fa) = [(W + Motor 무게) x g x a] + Fw

### ◆ 감속시 필요 추력 : 감속추력(Fd) = [(W + Motor 무게) x g x a] - Fw

### ◆ 필요 최대추력 : Fmax = Max(Fw, Fa, Fd) x k

### ◆ 유효추력 : Frms = sqrt {[Fa' x T1] + [Fw' x T2] + [Fd' x T3] + [Fw' x T4]} / T

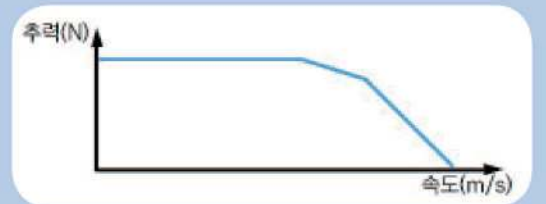
※ 주의1. 예상하지 못한 부하 및 조립상태, 사용환경 등을 고려하여 필요최대추력은 모터 최대추력의 80%이하로 사용할 것을 권장합니다.

※ 주의2. 구동 중 모터 코일부에서 발생하는 열은 시스템의 정밀도에 많은 영향을 줄 수 있습니다. 유효추력은 모터 정격추력의 70% 이하로 사용할 것을 권장합니다.

## 2. 최고속도 검토

### ◆ 모터 특성 추력-속도 그래프 검토

일반적으로 리니어모터는 속도가 증가하면 추력이 감소하는 경향이 있으므로 위의 계산으로 선정된 모터의 필요최대추력이 시스템에서 요구하는 최대속도로 구동할 수 있는지를 추력-속도 그래프에서 확인합니다.

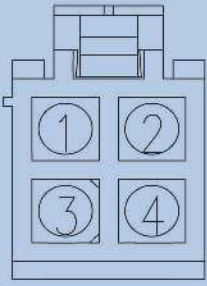


### ◆ 엔코더 분해능에 따른 최고속도 확인 (Driver 사양 : 4Mpps(A5), 8Mpps(A6) 기준)

Encoder Type		Optical Incremental Encoder				
Resolution	μm	5	1	0.5	0.1	0.05
Maximum Velocity	m/s	10	4	2	0.4	0.2

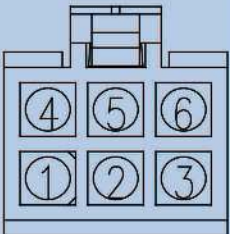
# LINEAR MOTOR SM(CS-AXIS) Series CONNECTOR

Power Connector



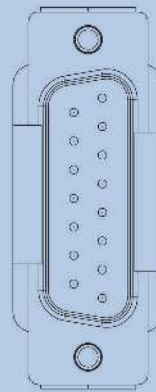
Housing	AMP172167-1
pin	AMP170360-1
1	U(Red)
2	V(Yellow)
3	W(Blue)
4	FG(Green)

Hall Sensor Connector



Housing	MOLEX555/D-06R
pin	MOLEX5556T21
1	HA(Orange)
2	HB(White)
3	HC(Blue)
4	5P(Red)
5	5G(Black)
6	SHHFD

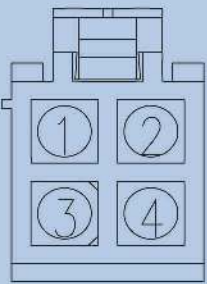
Encoder Connector



Connector	D-SUB 15 PIN (MALE)
A+	14
A-	6
B+	13
B-	5
Z+	12
Z-	4
5V	7, 8
0V	2, 9

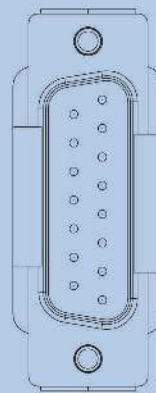
# LINEAR MOTOR SM(CU-AXIS) Series CONNECTOR

Power Connector



Housing	AMP172167-1
pin	AMP170360-1
1	U(Red)
2	V(Yellow)
3	W(Blue)
4	FG(Green)

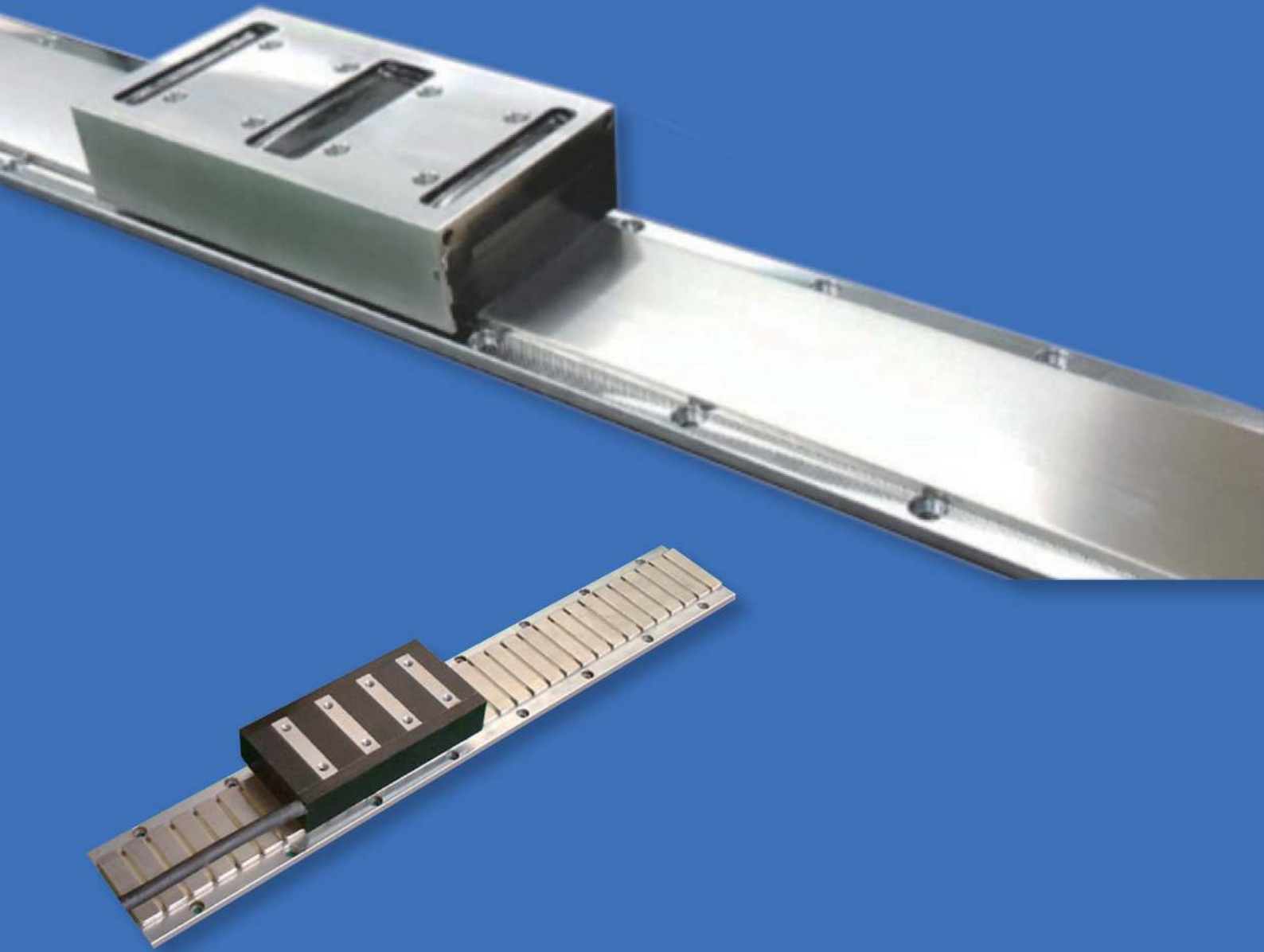
Encoder Connector



Connector	D-SUB 15 PIN (MALE)
A+	14
A-	6
B+	13
B-	5
Z+	12
Z-	4
5V	7, 8
0V	2, 9



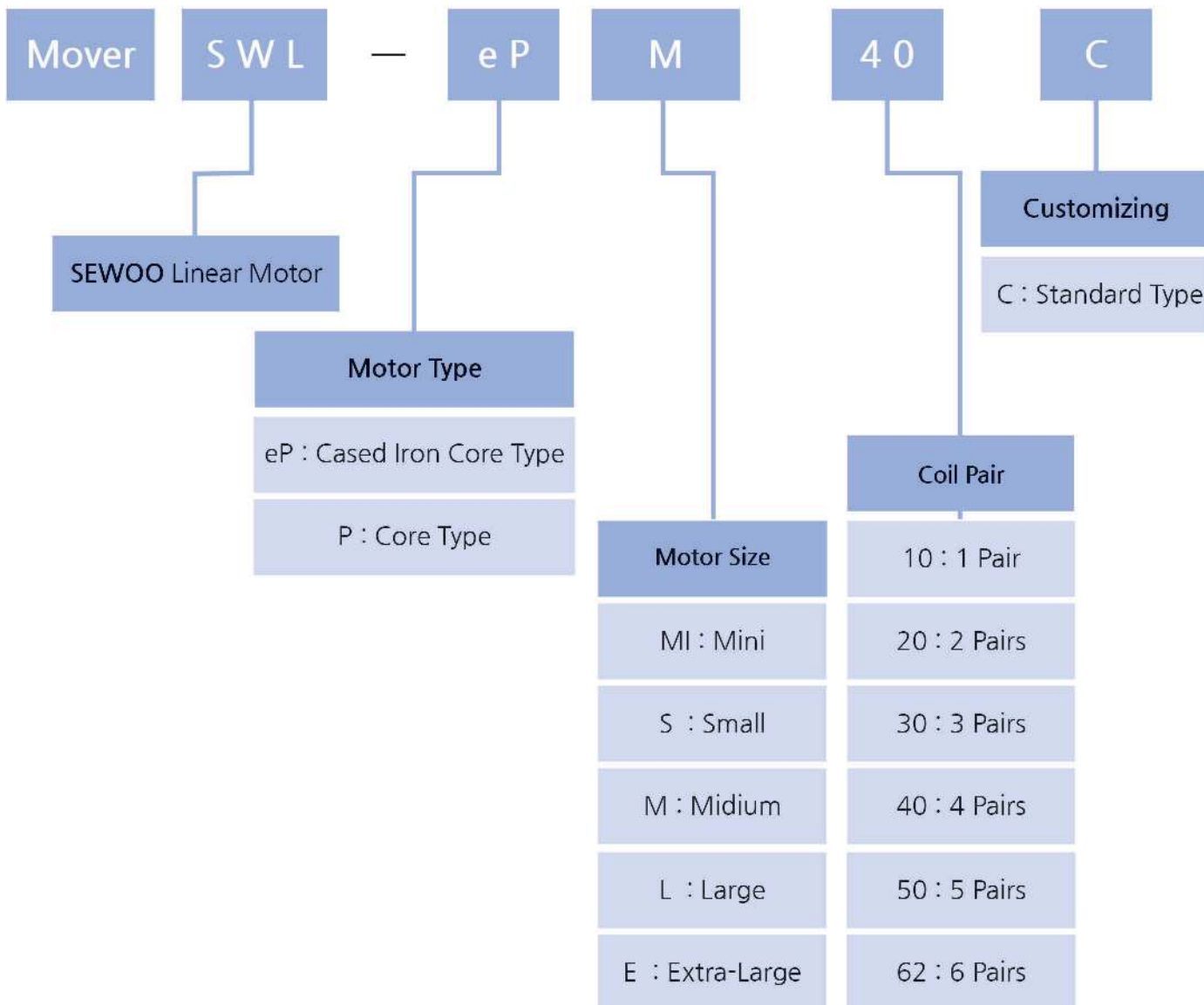
# LINEAR MOTOR SERIES



## IRONCORE TYPE

MOTOR IS COMPOSED OF A MOVER (COIL ASSEMBLY)  
AND A STATOR (MAGNET ARRAY)

# LINEAR MOTOR CODING SYSTEM



MOTOR	Continuous Force	MOTOR	Continuous Force
ePM10~40C	20~80N	PM10~40C	18~75N
ePS10~40C	55~215N	PS10~40C	42~166N
ePM10~40C	80~315N	PM10~40C	78~315N
ePL20~40C	360~700N	PL10~40C	162~639N
ePE20C~62C	770~2200N	PE10~40C	401~1638N

## IronCore Linear Motor

### BASIC SPECIFICATIONS

- ◆ Rating Condition : Continuous
- ◆ Voltage Endurance : AC1500V, 1Min
- ◆ Operating Temperature : 0-40°C
- ◆ Coil Insulation Class : F Class(155°C)
- ◆ Hall Effect Device : Optional
- ◆ Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier



### Performance Specifications

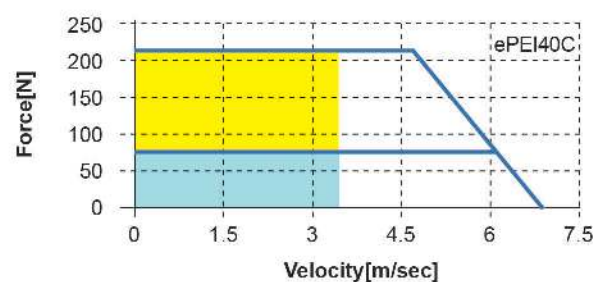
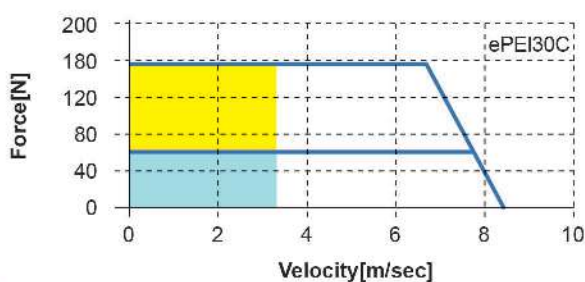
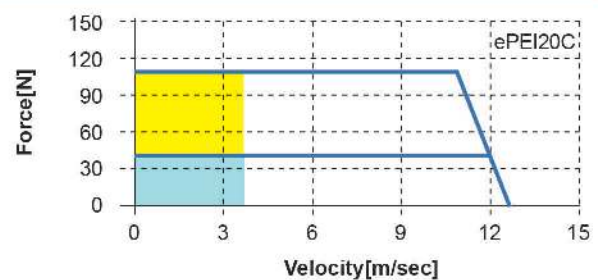
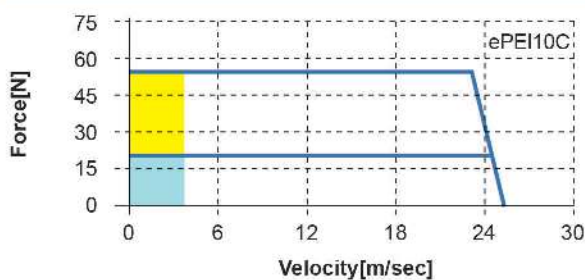
		Unit	SWL-ePMI10C	SWL-ePMI20C	SWL-ePMI30C	SWL-ePMI40C
Continuous	Force	N	20	40	60	80
	Current	Arms	1.5	1.5	1.5	1.5
Max.	Force	N	55	105	155	205
	Current	Arms	4.5	4.5	4.5	4.5
Force Constant(kf)		N/Arms	15	29	44.1	56.8
Back EMF Constant(Kc)		Vrms/(m/sec)	5	9.7	14.7	18.9
Electrical Time Constant(Te)		msec	1.99	2.13	2.15	2.19
Resistance(l to l)		Ω	4.64	9.16	13.75	18.38
Inductance(L to L)		mH	9.24	19.53	29.5	40.2
Attraction Force		N	70	135	205	270
Mover Weight		kg	0.2	0.4	0.6	0.7

© Magnet Pole Pitch(N-N) : 18mm, Stator Weight : 1.7kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

반복 사용 영역 (Intermittent duty zone)

연속 사용 영역 (Continuous duty zone)

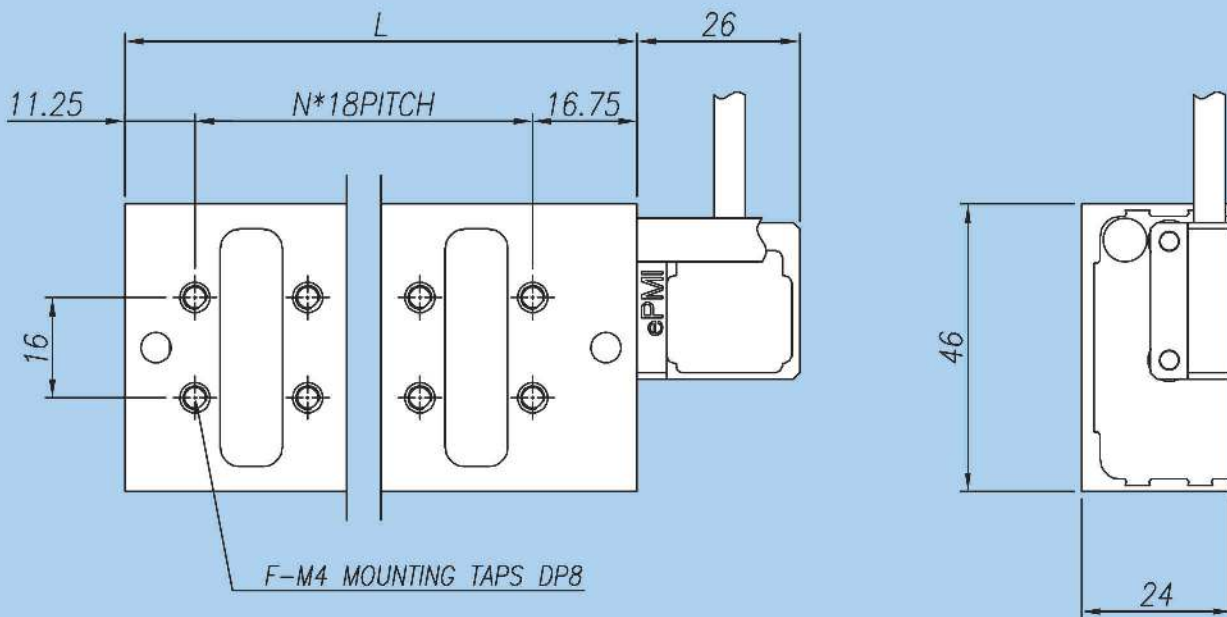




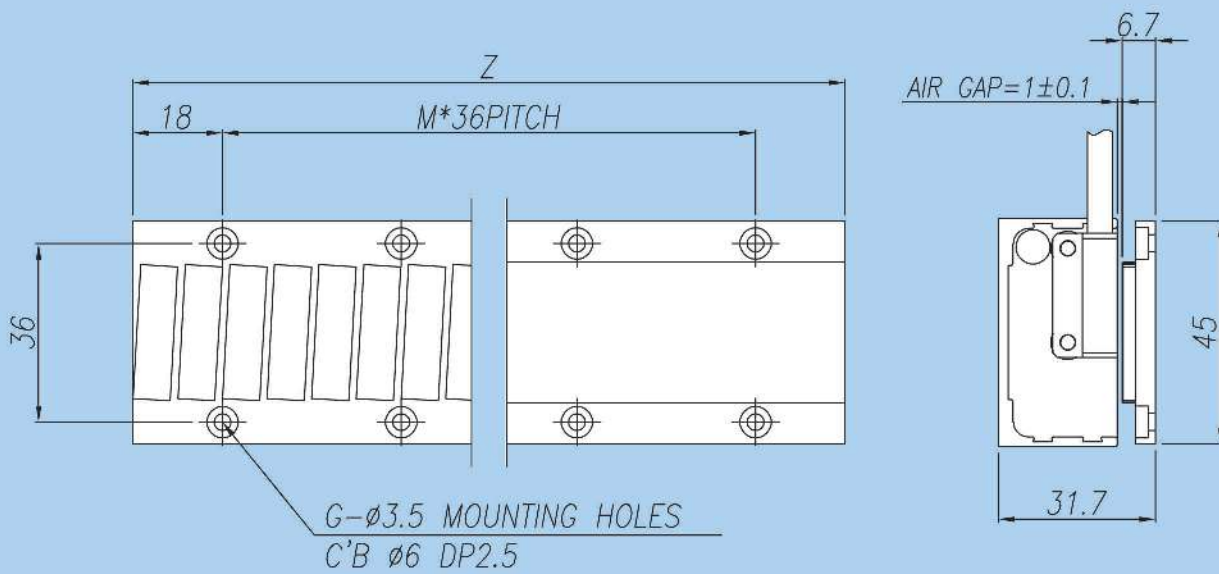
# MECHANICAL DIMENSIONS

## Mover Dimensions

Unit : mm



## Stator Dimensions



### ● Mover

Model SWL-ePMI	L	N	F
10C	46	1	4
20C	82	3	8
30C	118	5	12
40C	154	7	16

### ● Stator

Model SWL-ePMI	Z	M	G
108	108	2	6
144	144	3	8
180	180	4	10
252	252	6	14
360	360	9	20

◆ Check the page 60 for cable and connector types

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

# SWL-ePS SERIES

## IronCore Linear Motor

### BASIC SPECIFICATIONS

- ◆ Rating Condition : Continuous
- ◆ Voltage Endurance : AC1500V, 1Min
- ◆ Operating Temperature : 0-40°C
- ◆ Coil Insulation Class : F Class(155°C)
- ◆ Hall Effect Device : Optional
- ◆ Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier



### Performance Specifications

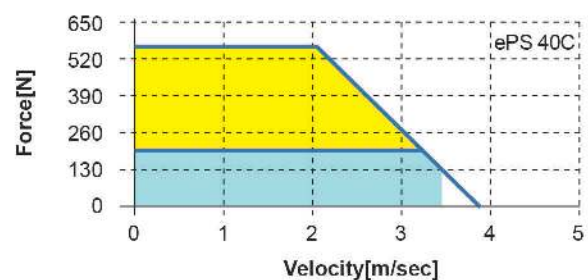
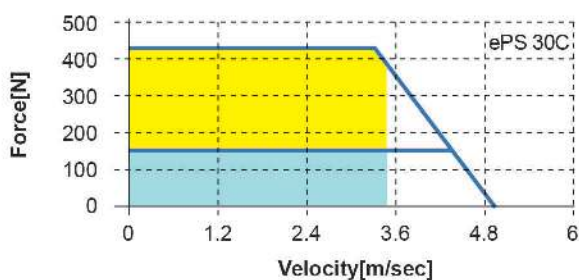
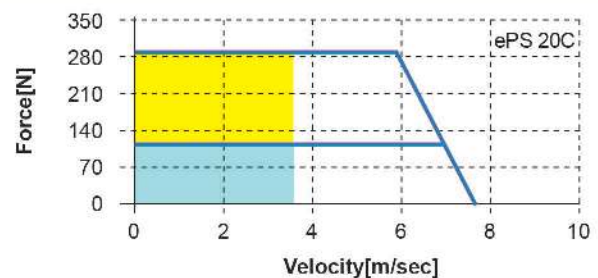
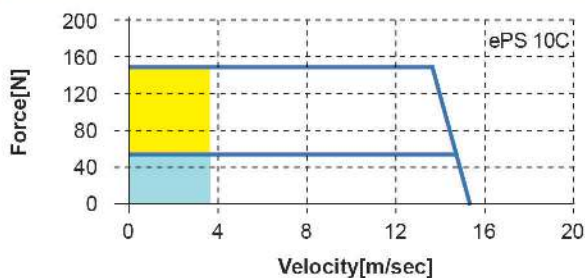
		Unit	SWL-ePS10C	SWL-ePS20C	SWL-ePS30C	SWL-ePS40C
Continuous	Force	N	55	110	160	215
	Current	Arms	2.3	2.3	2.3	2.3
Max.	Force	N	150	295	440	580
	Current	Arms	6.9	6.9	6.9	6.9
Force Constant(kf)		N/Arms	24.8	49.8	75.2	97.3
Back EMF Constant(Ke)		Vrms/(m/sec)	8.3	16.6	25.1	32.4
Electrical Time Constant(Te)		msec	3.44	3.44	3.04	3.56
Resistance(l to l)		Ω	4.37	8.81	13.02	17.34
Inductance(L to L)		mH	15.05	30.33	39.57	61.7
Attraction Force		N	200	400	610	810
Mover Weight		kg	0.5	0.9	1.2	1.6

© Magnet Pole Pitch(N-N) : 30mm, Stator Weight : 2.6kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

반복 사용 영역 (Intermittent duty zone)

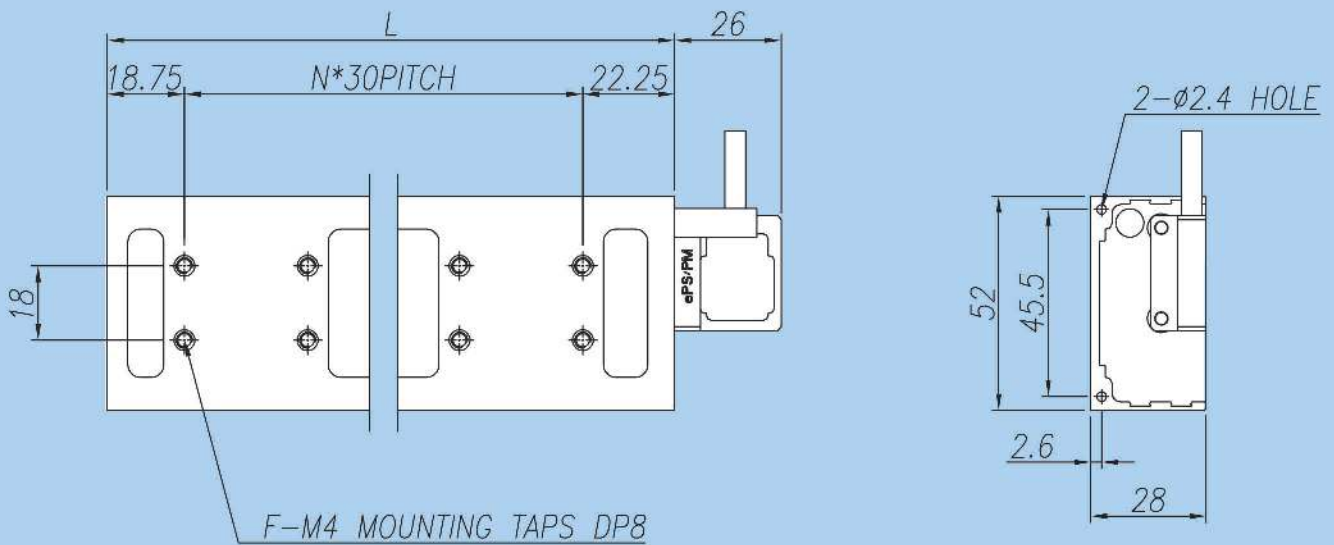
연속 사용 영역 (Continuous duty zone)



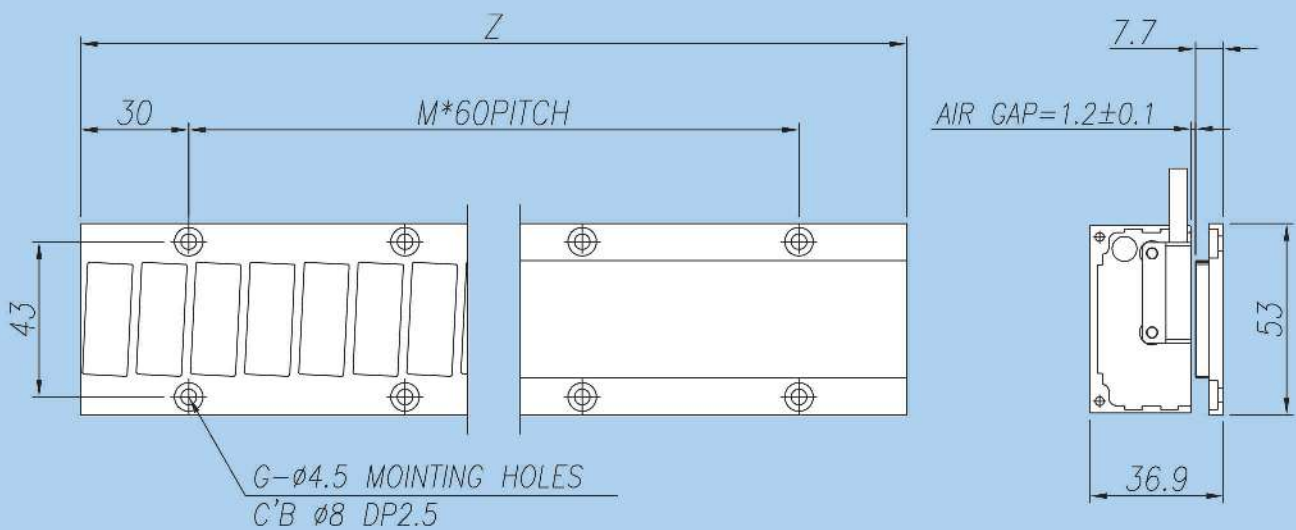
# MECHANICAL DIMENSIONS

## Mover Dimensions

Unit : mm



## Stator Dimensions



### ● Mover

Model SWL-ePS	L	N	F
10C	71	1	4
20C	131	3	8
30C	191	5	12
40C	251	7	16

◆ Check the page 60 for cable and connector types

### ● Stator

Model SWL-ePS	Z	M	G
180	180	2	6
240	240	3	8
300	300	4	10
420	420	6	14
480	480	7	16

.....▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.



## IronCore Linear Motor

### BASIC SPECIFICATIONS

- ◆ Rating Condition : Continuous
- ◆ Voltage Endurance : AC1500V, 1Min
- ◆ Operating Temperature : 0-40°C
- ◆ Coil Insulation Class : F Class(155°C)
- ◆ Hall Effect Device : Optional
- ◆ Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier



### Performance Specifications

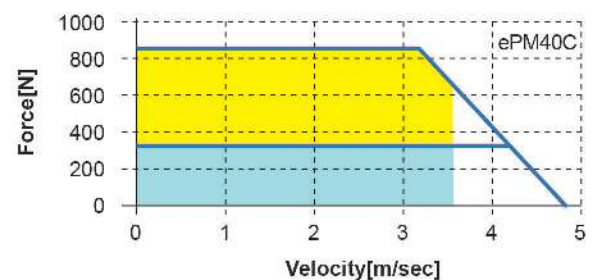
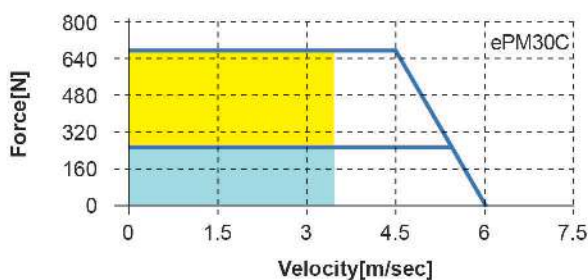
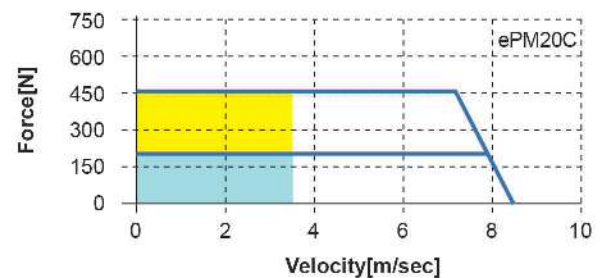
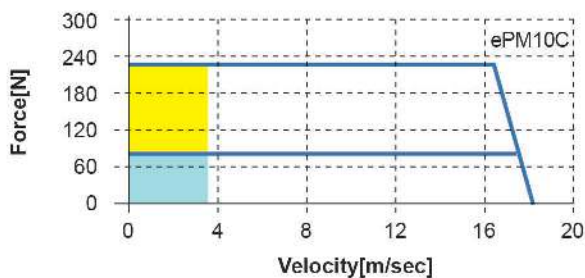
		Unit	SWL-ePM10C	SWL-ePM20C	SWL-ePM30C	SWL-ePM40C
Continuous	Force	N	80	155	235	315
	Current	Arms	3.8	3.8	3.8	3.8
Max.	Force	N	230	445	675	885
	Current	Arms	11.4	11.4	11.4	11.4
Force Constant(kf)		N/Arms	21.2	43.5	63	79.3
Back EMF Constant(Ke)		Vrms/(m/sec)	7	14.5	21	26.4
Electrical Time Constant(Te)		msec	3.32	3.72	3.74	3.84
Resistance(l to l)		Ω	1.85	3.51	5.31	6.92
Inductance(L to L)		mH	6.14	13.04	19.84	26.56
Attraction Force		N	360	710	1070	1430
Mover Weight		kg	0.7	1.3	1.9	2.5

◎ Magnet Pole Pitch(N-N) : 30mm, Stator Weight : 4kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

반복 사용 영역 (Intermittent duty zone)

연속 사용 영역 (Continuous duty zone)

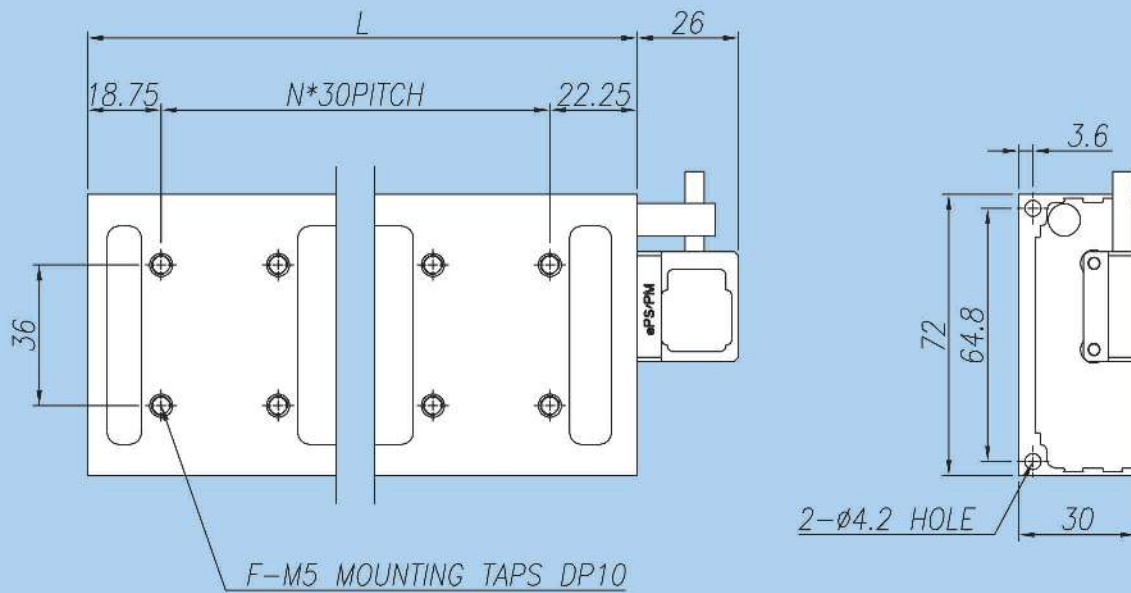




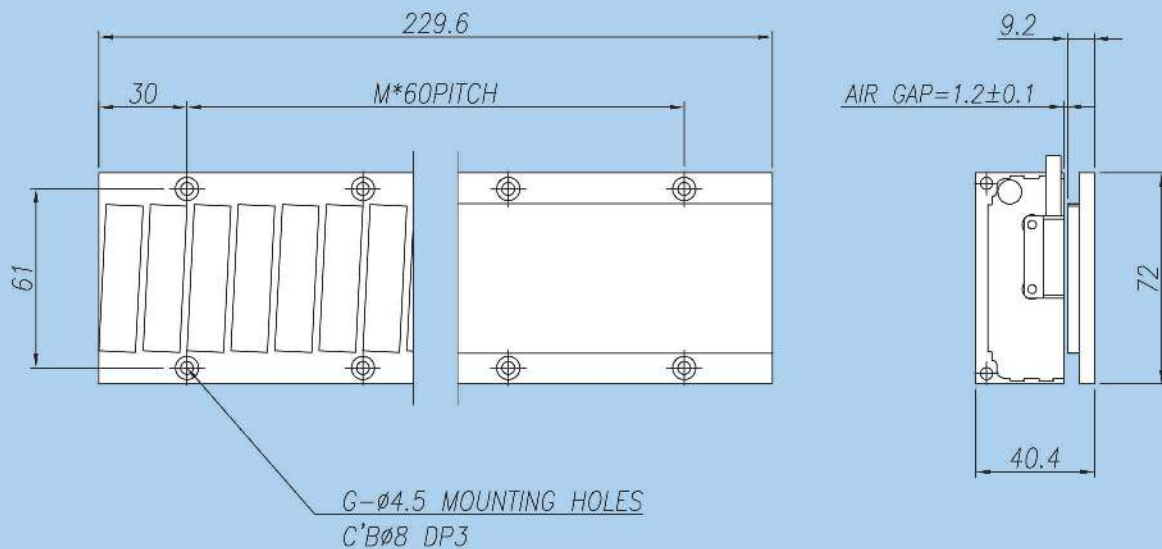
# MECHANICAL DIMENSIONS

## Mover Dimensions

Unit : mm



## Stator Dimensions



### ● Mover

Model SWL-ePM	L	N	F
10C	71	1	4
20C	131	3	8
30C	191	5	12
40C	251	7	16

### ● Stator

Model SWL-ePM	Z	M	G
180	180	2	6
240	240	3	8
420	420	6	14
540	540	8	18
600	600	9	20

◆ Check the page 60 for cable and connector types



The specifications above are subject to change for enhancement of product performance, Without any prior notice.

## IronCore Linear Motor

### BASIC SPECIFICATIONS

- ◆ Rating Condition : Continuous
- ◆ Voltage Endurance : AC1500V, 1Min
- ◆ Operating Temperature : 0~40°C
- ◆ Coil Insulation Class : F Class(155°C)
- ◆ Hall Effect Device : Optional
- ◆ Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier



### Performance Specifications

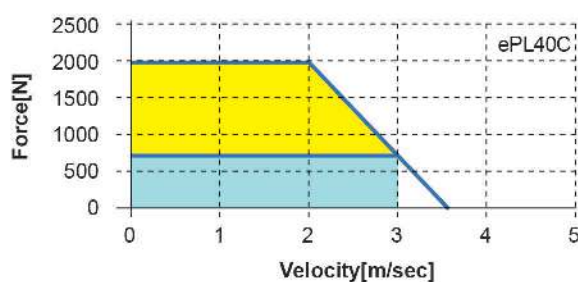
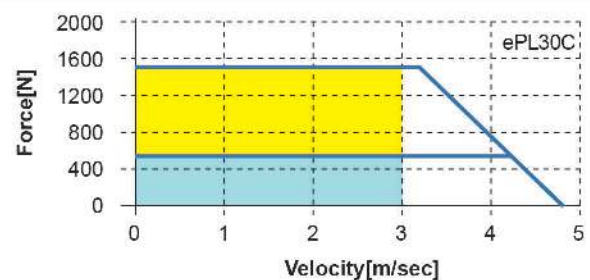
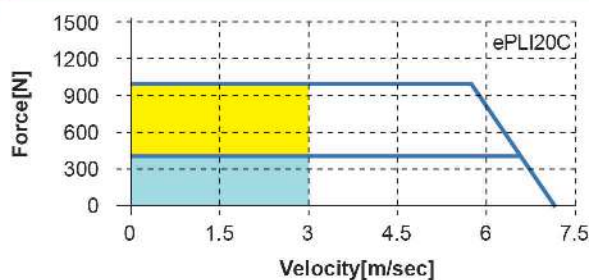
		Unit	SWL-ePL20C	SWL-ePL30C	SWL-ePL40C
Continuous	Force	N	360	530	700
	Current	Arms	6.7	6.7	6.7
Max.	Force	N	1015	1500	2000
	Current	Arms	20.1	20.1	20.1
Force Constant(kf)		N/Arms	54.3	79.5	105.7
Back EMF Constant(Ke)		Vrms/(m/sec)	18.1	26.5	35
Electrical Time Constant(Te)		msec	5.08	5.44	5.57
Resistance(l to l)		Ω	2.77	3.94	5.2
Inductance(L to L)		mH	14.07	21.43	28.94
Attraction Force		N	1430	2140	2850
Mover Weight		kg	4.7	6.9	9.1

© Magnet Pole Pitch(N-N) : 60mm, Stator Weight : 7kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

반복 사용 영역 (Intermittent duty zone)

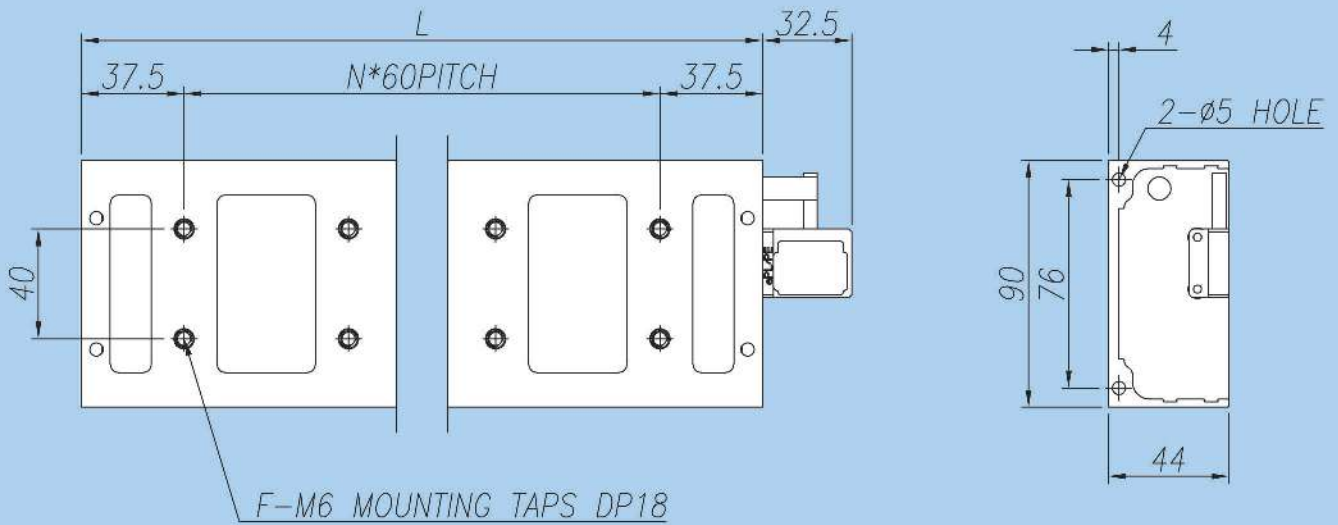
연속 사용 영역 (Continuous duty zone)



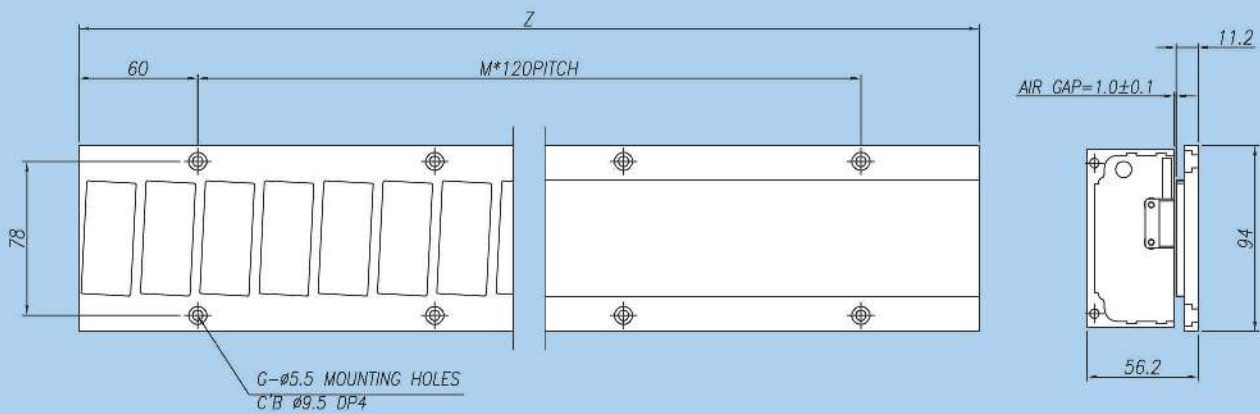
## MECHANICAL DIMENSIONS

### Mover Dimensions

Unit : mm



### Stator Dimensions



#### ● Mover

Model SWL-ePL	L	N	F
20C	255	3	8
30C	375	5	12
40C	495	7	16

◆ Check the page 60 for cable and connector types

#### ● Stator

Model SWL-ePL	Z	M	G
240	240	1	4
360	360	2	6
480	480	3	8
600	600	4	10



The specifications above are subject to change for enhancement of product performance, Without any prior notice.



# SWL-ePE SERIES

## IronCore Linear Motor



### BASIC SPECIFICATIONS

- ◆ Rating Condition : Continuous
- ◆ Voltage Endurance : AC1500V, 1Min
- ◆ Operating Temperature : 0~40°C
- ◆ Coil Insulation Class : F Class(155°C)
- ◆ Hall Effect Device : Optional
- ◆ Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier

### Performance Specifications

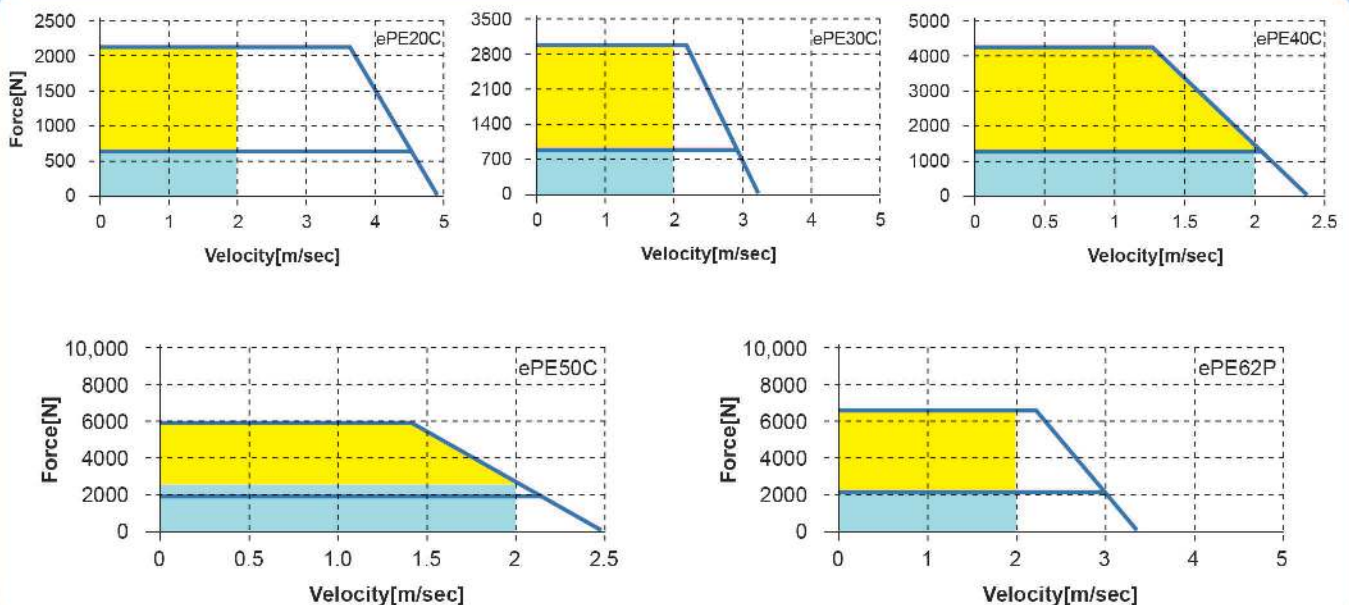
		Unit	SWL-ePE20C	SWL-ePE30C	SWL-ePE40C	SWL-ePE50C	SWL-ePE62C
Continuous	Force	N	770	1125	1500	1895	2200
	Current	Arms	10	10	10	13.3	19.3
Max.	Force	N	2165	3185	4300	5685	6600
	Current	Arms	30	30	30	39.9	57.9
Force Constant(kf)		N/Arms	77.5	113.5	155.6	142.5	113.9
Back EMF Constant(Ke)		Vrms/(m/sec)	25.8	37.8	51.9	47.5	38
Electrical Time Constant(Te)		msec	7.52	7.82	7.57	7.92	7.82
Resistance(L to L)		Ω	1.78	2.6	3.62	2.4	1.3
Inductance(L to L)		mH	13.39	20.33	27.4	19	10.17
Attraction Force		N	3090	4630	6180	7000	8000
Mover Weight		kg	8.2	12.2	16.2	20.2	24.2

◎ Magnet Pole Pitch(N-N) : 60mm, Stator Weight : 15.8kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

반복 사용 영역 (Intermittent duty zone)

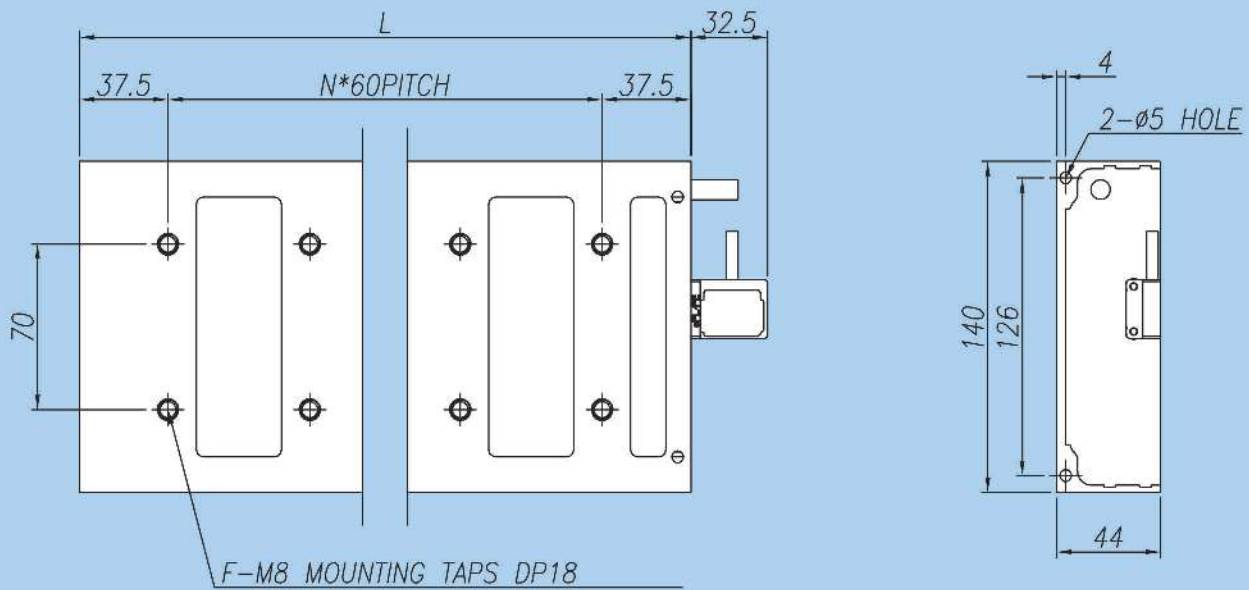
연속 사용 영역 (Continuous duty zone)



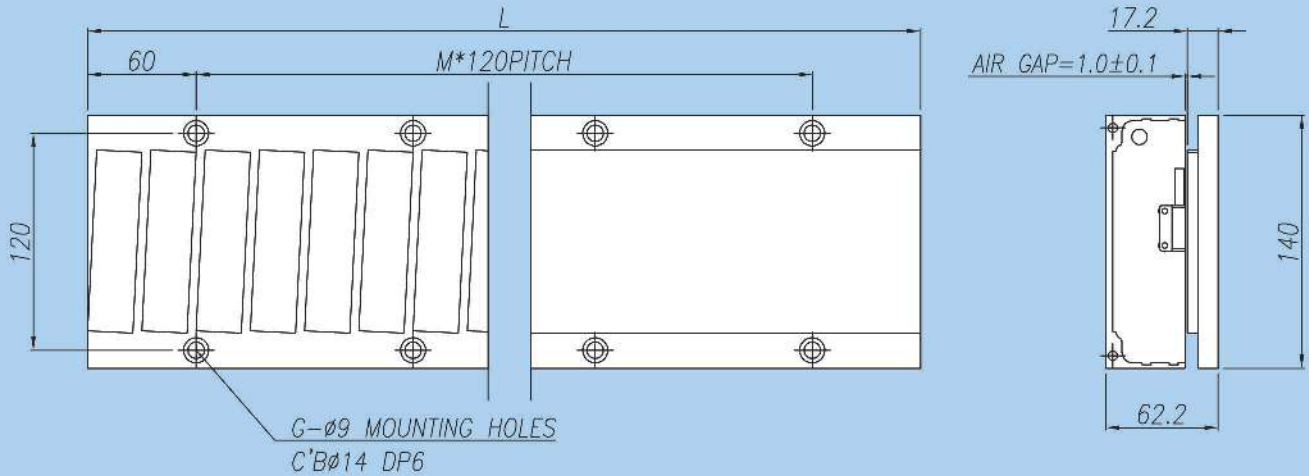
## MECHANICAL DIMENSIONS

### Mover Dimensions

Unit : mm



### Stator Dimensions



#### ● Mover

Model SWL-ePE	L	N	F
20C	255	3	8
30C	375	5	12
40C	495	7	16
50C	615	9	20
62C	735	11	24

#### ● Stator

Model SWL-ePE	Z	M	G
240	240	1	4
360	360	2	6
480	480	3	8
600	600	4	10

◆ Check the page 60 for cable and connector types



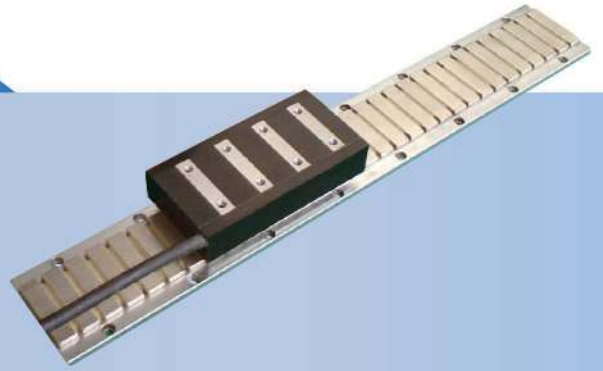
The specifications above are subject to change for enhancement of product performance, Without any prior notice.

# SWL-PMI SERIES

## IronCore Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0-40°C  
 Coil Insulation Class : F Class (155°C)  
 Hall Effect Device : Optional  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

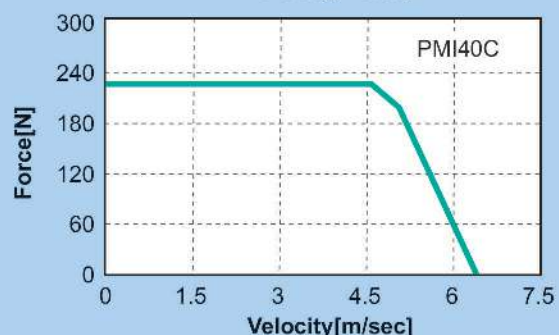
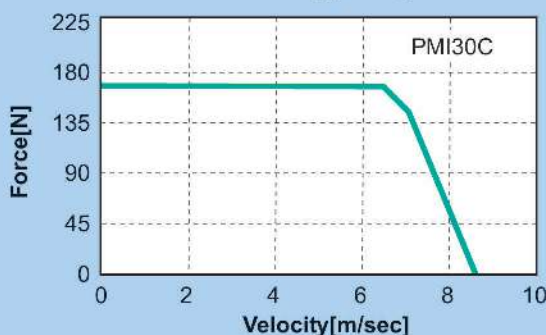
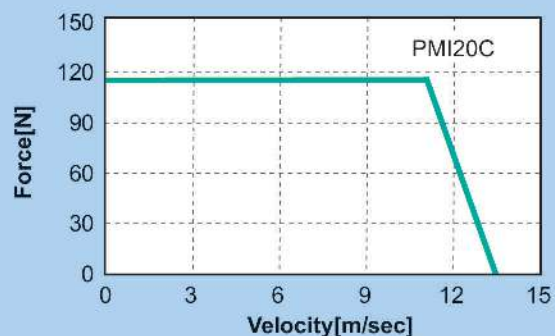
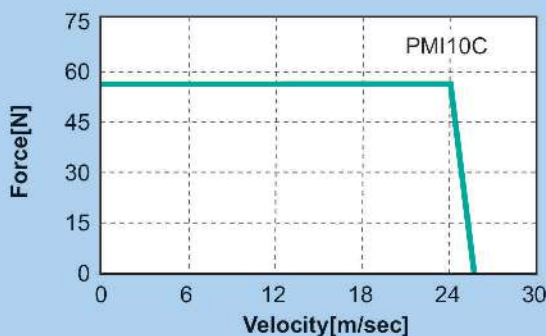


### Performance Specifications

		Unit	SWL-PMI10C	SWL-PMI20C	SWL-PMI30C	SWL-PMI40C
Continuous	Force	N	18.8	38.0	56.8	75.2
	Current	Arms	1.3	1.3	1.3	1.3
Max.	Force	N	56.4	114.0	170.5	225.7
	Current	Arms	3.9	3.9	3.9	3.9
Force Constant(kf)		N/Arms	14.46	29.23	43.71	57.87
Back EMF Constant(Ke)		Vrms/(m/sec)	4.94	9.91	14.74	19.44
Electrical Time Constant(Te)		msec	2.40	2.48	2.48	2.51
Resistance(L to L)		Ω	4.67	9.18	13.77	18.10
Inductance(L to L)		mH	11.20	22.77	34.20	45.49
Attraction Force		N	100	200	300	400
Mover Weight		kg	0.22	0.41	0.60	0.76

Magnet Pole pitch(N-N) : 18mm, Stator Weight : 1.7kg/m

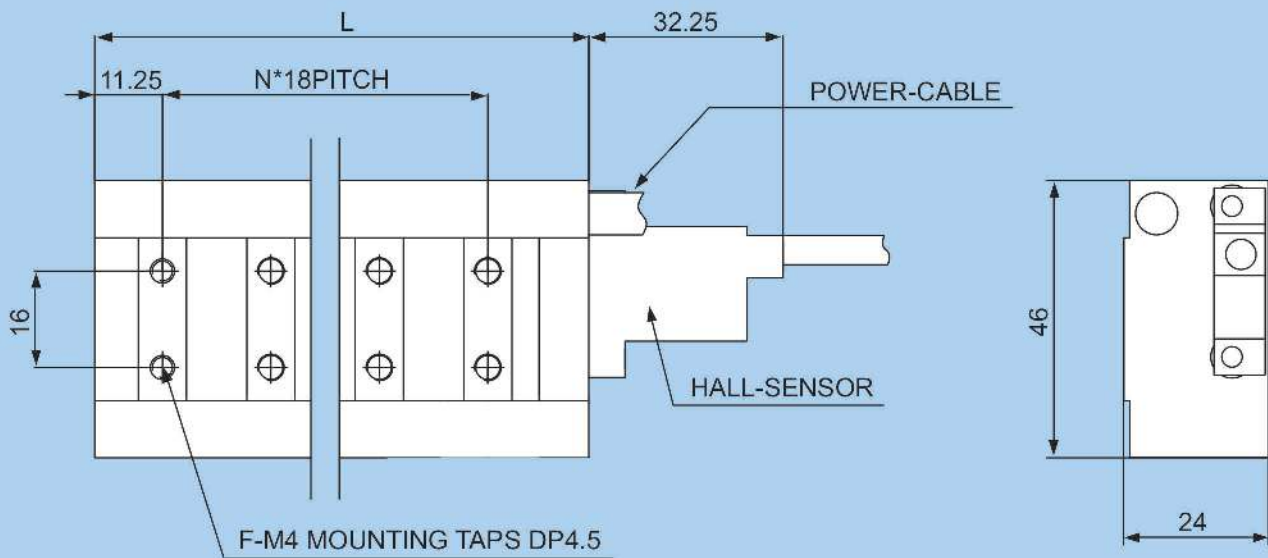
### FORCE VS. VELOCITY CHARACTERISTICS



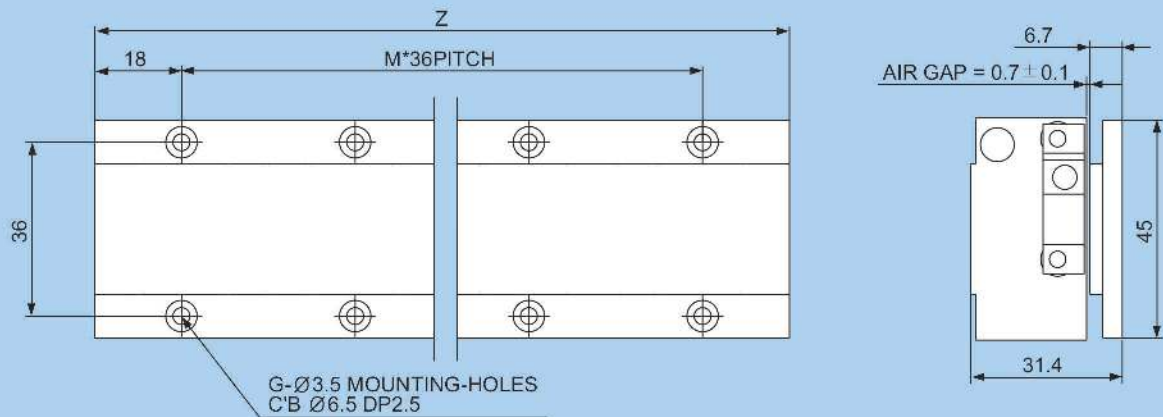


# MECHANICAL DIMENSIONS

## Mover Dimensions



## Stator Dimensions



● Mover

Model SWL-PMI	L	N	F
10C	46	1	4
20C	82	3	8
30C	118	5	12
40C	154	7	16

◆ Check the page 60 for cable and connector types

● Stator

Model SWL-PMI	Z	M	G
72	72	1	4
108	108	2	6
144	144	3	8
180	180	4	10
216	216	5	12
252	252	6	14
288	288	7	16
324	324	8	18
360	360	9	20



The specifications above are subject to change for enhancement of product performance, Without any prior notice.

# SWL-PS SERIES

## IronCore Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0~40°C  
 Coil Insulation Class : F Class (155°C)  
 Hall Effect Device : Optional  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

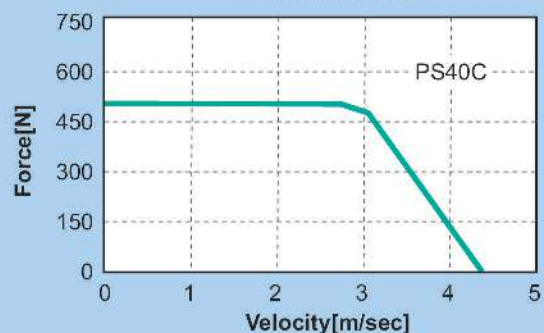
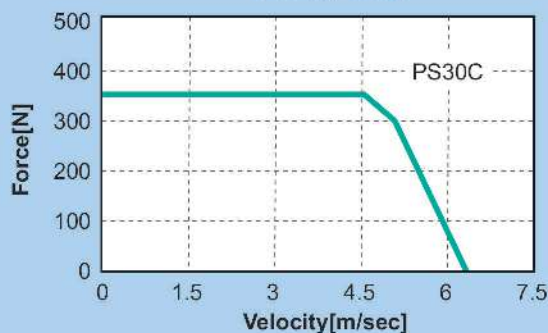
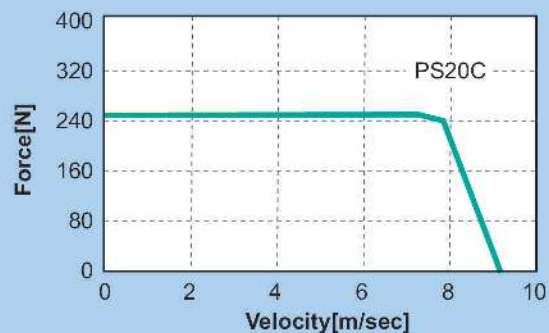
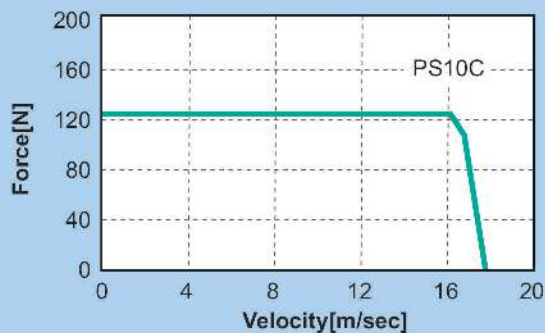


### Performance Specifications

		Unit	SWL-PS10C	SWL-PS20C	SWL-PS30C	SWL-PS40C
Continuous	Force	N	42.1	84.5	125.1	166.7
	Current	Arms	2.0	2.0	2.0	2.0
Max.	Force	N	126.3	253.5	375.3	500.1
	Current	Arms	6.0	6.0	6.0	6.0
Force Constant(kf)		N/Arms	21.05	42.25	62.55	83.36
Back EMF Constant(Ke)		Vrms/(m/sec)	7.12	14.14	21.04	27.97
Electrical Time Constant(Te)		msec	3.41	3.52	3.54	3.53
Resistance(L to L)		Ω	3.86	7.63	11.40	15.25
Inductance(L to L)		mH	13.15	26.89	40.36	53.80
Attraction Force		N	210	410	610	810
Mover Weight		kg	0.38	0.69	1.00	1.31

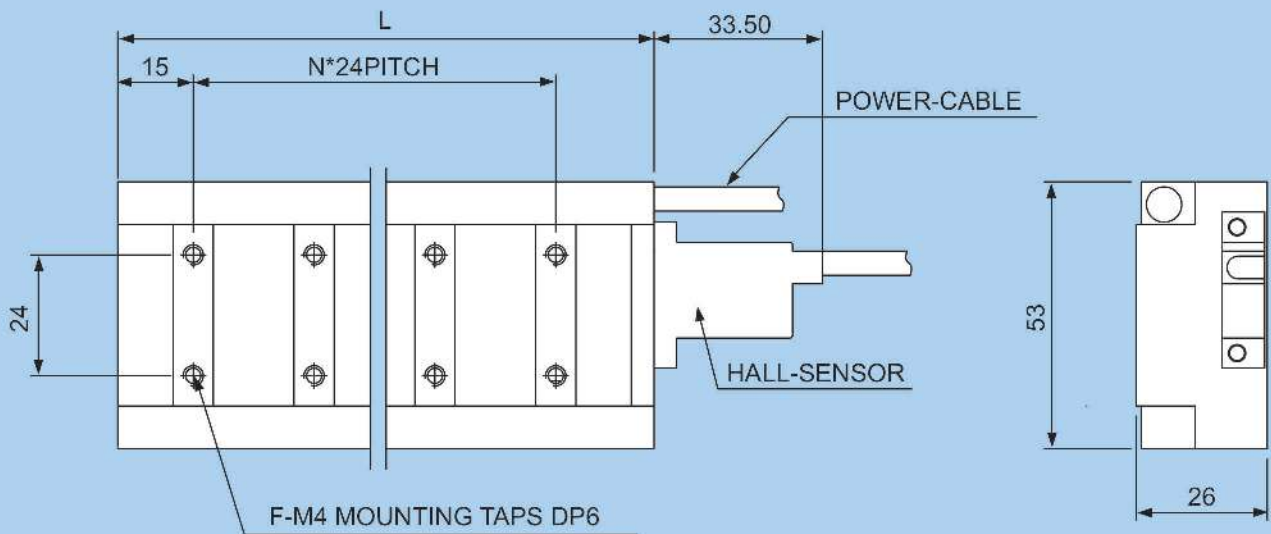
Magnet Pole pitch(N-N) : 24mm, Stator Weight : 2.4kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

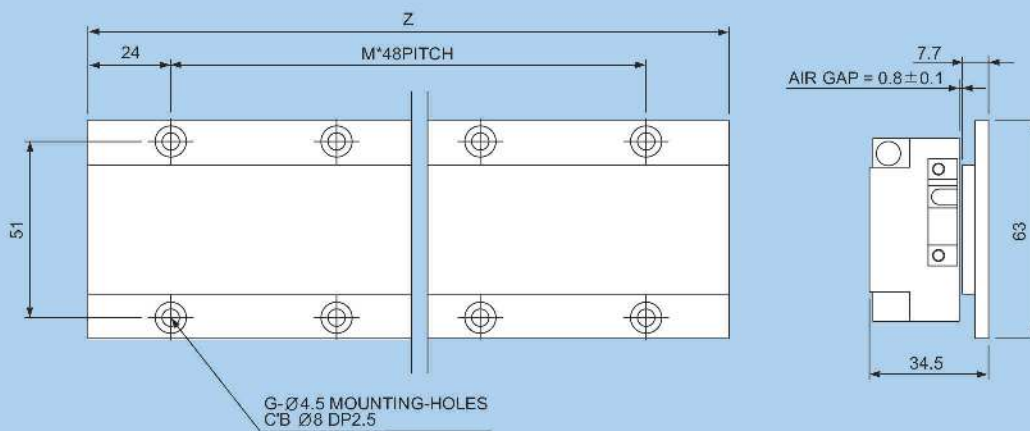


# MECHANICAL DIMENSIONS

## Mover Dimensions



## Stator Dimensions



● Mover

Model SWL-PS	L	N	F
10C	58.5	1	4
20C	106.5	3	8
30C	154.5	5	12
40C	202.5	7	16

◆ Check the page 60 for cable and connector types

● Stator

Model SWL-PS	Z	M	G
96	96	1	4
144	144	2	6
192	192	3	8
240	240	4	10
288	288	5	12
336	336	6	14
384	384	7	16
432	432	8	18
480	480	9	20



The specifications above are subject to change for enhancement of product performance, Without any prior notice.



# SWL-PM SERIES

## IronCore Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0-40°C  
 Coil Insulation Class : F Class (155°C)  
 Hall Effect Device : Optional  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

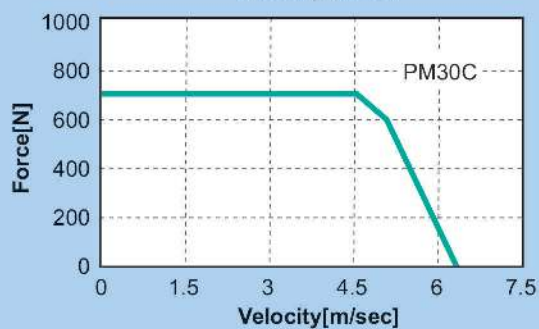
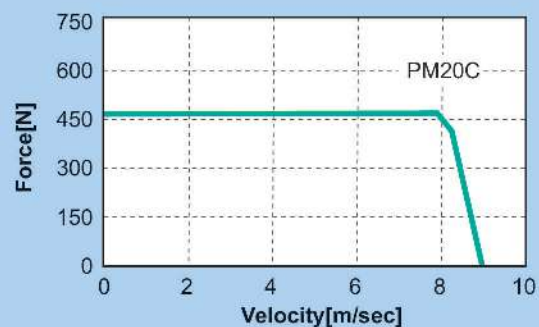
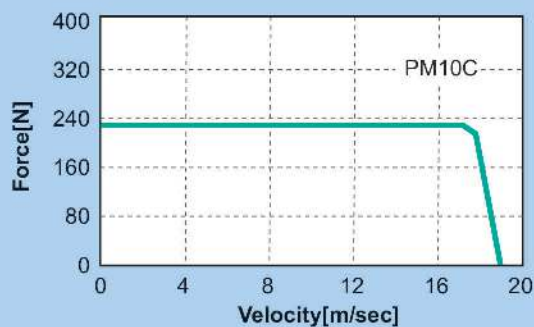


### Performance Specifications

		Unit	SWL-PM10C	SWL-PM20C	SWL-PM30C	SWL-PM40C
Continuous	Force	N	78.3	157.4	236.2	315.3
	Current	Arms	3.8	3.8	3.8	3.8
Max.	Force	N	234.9	472.2	708.6	945.9
	Current	Arms	11.4	11.4	11.4	11.4
Force Constant(kf)		N/Arms	20.61	41.42	62.16	82.97
Back EMF Constant(Ke)		Vrms/(m/sec)	7.01	13.95	20.80	27.68
Electrical Time Constant(Te)		msec	4.71	4.69	4.58	4.59
Resistance(L to L)		Ω	1.63	3.28	5.03	6.68
Inductance(L to L)		mH	7.68	15.38	23.01	30.65
Attraction Force		N	390	770	1160	1540
Mover Weight		kg	0.63	1.18	1.73	2.27

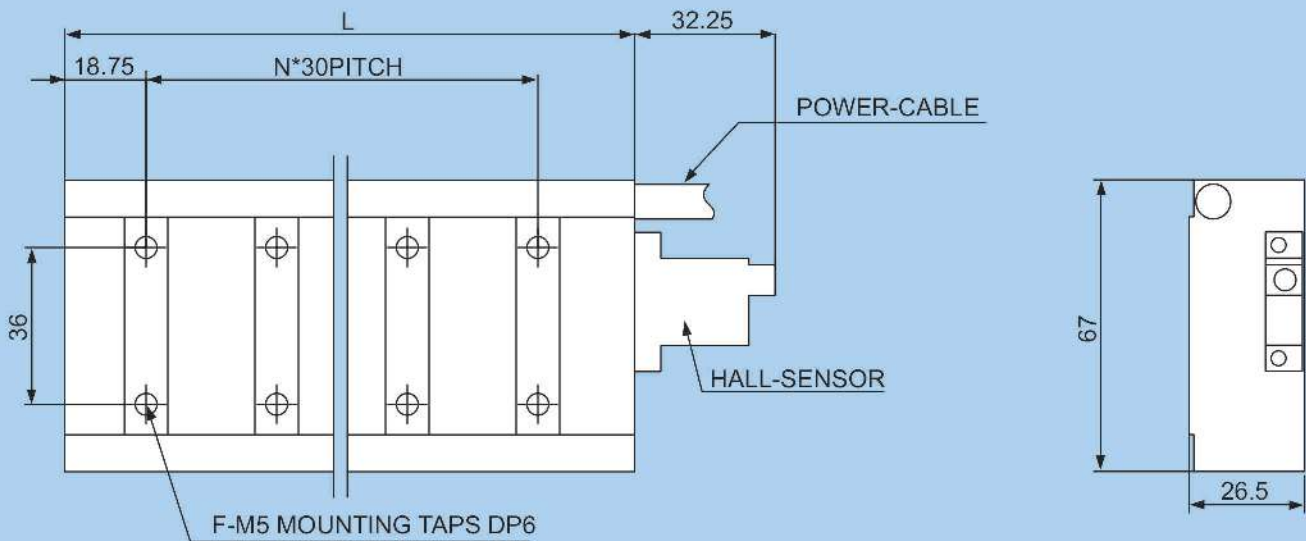
Magnet Pole pitch(N-N) : 30mm, Stator Weight : 3.6kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

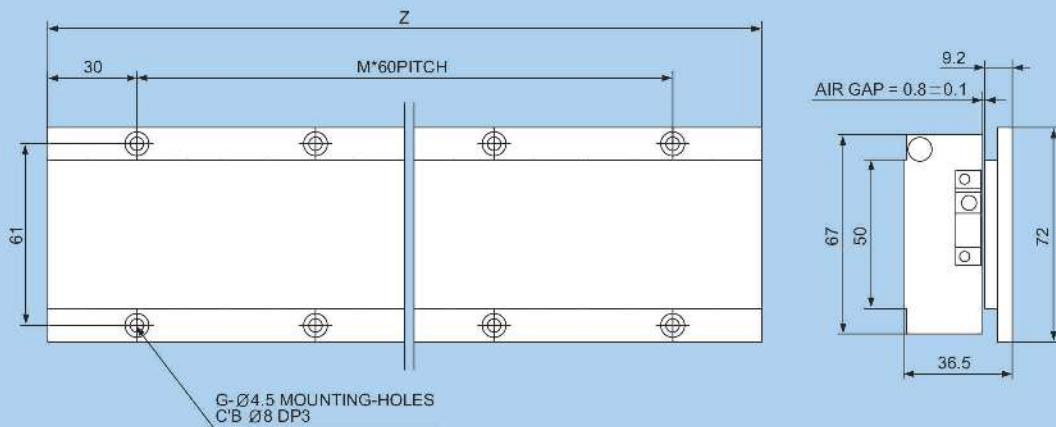


# MECHANICAL DIMENSIONS

## Mover Dimensions



## Stator Dimensions



● Mover

Model SWL-PM	L	N	F
10C	71	1	4
20C	131	3	8
30C	191	5	12
40C	251	7	16

◆ Check the page 60 for cable and connector types

● Stator

Model SWL-PM	Z	M	G
120	120	1	4
180	180	2	6
240	240	3	8
300	300	4	10
360	360	5	12
420	420	6	14
480	480	7	16
540	540	8	18
600	600	9	20



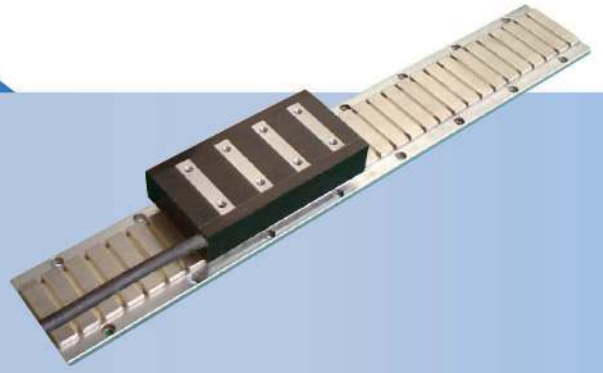
The specifications above are subject to change for enhancement of product performance, Without any prior notice.

# SWL-PL SERIES

## IronCore Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0~40°C  
 Coil Insulation Class : F Class (155°C)  
 Hall Effect Device : Optional  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

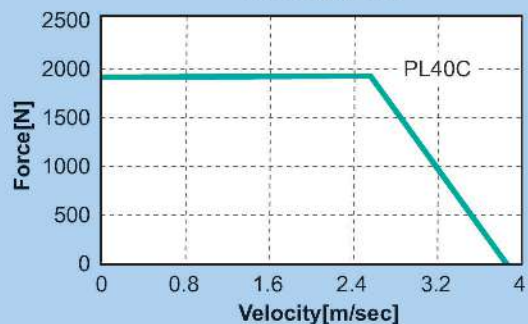
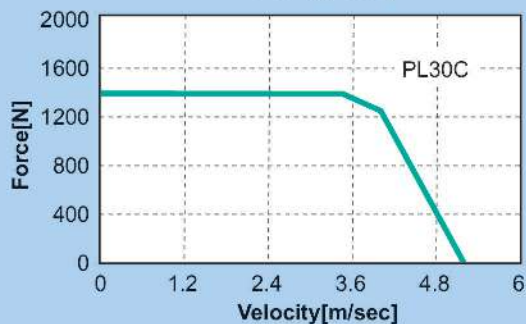
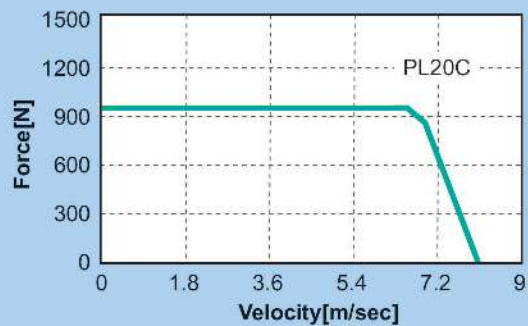
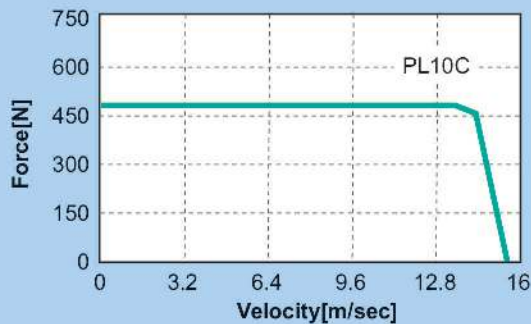


### Performance Specifications

		Unit	SWL-PL10C	SWL-PL20C	SWL-PL30C	SWL-PL40C
Continuous	Force	N	162.6	319.3	480.5	639.3
	Current	Arms	6.4	6.4	6.4	6.4
Max.	Force	N	487.8	957.9	1441.5	1917.9
	Current	Arms	19.2	19.2	19.2	19.2
Force Constant(kf)		N/Arms	25.41	49.89	75.08	99.89
Back EMF Constant(Ke)		Vrms/(m/sec)	8.40	16.60	24.88	33.13
Electrical Time Constant(Te)		msec	6.43	6.39	6.38	6.36
Resistance(L to L)		Ω	1.18	2.36	3.54	4.72
Inductance(L to L)		mH	7.59	15.08	22.59	30.03
Attraction Force		N	690	1380	2070	2760
Mover Weight		kg	2.47	4.27	6.07	7.87

Magnet Pole pitch(N-N) : 42mm, Stator Weight : 6.9kg/m

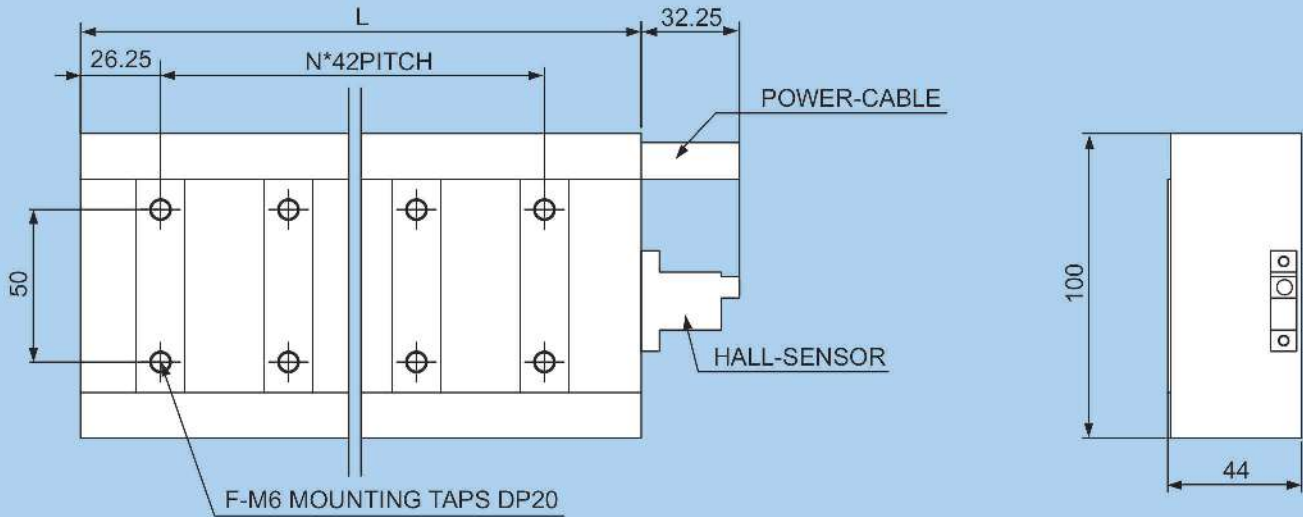
### FORCE VS. VELOCITY CHARACTERISTICS



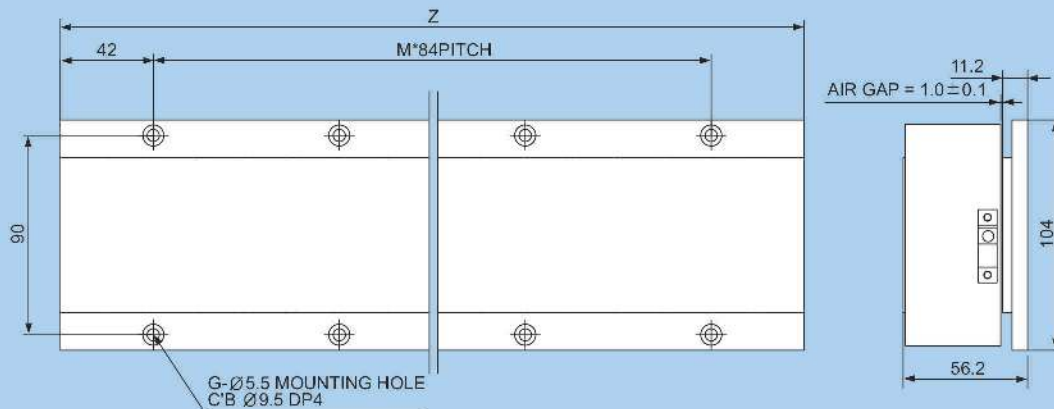


# MECHANICAL DIMENSIONS

## Mover Dimensions



## Stator Dimensions



● Mover

Model SWL-PL	L	N	F
10C	100	1	4
20C	184	3	8
30C	268	5	12
40C	352	7	16

◆ Check the page 60 for cable and connector types

● Stator

Model SWL-PL	Z	M	G
168	168	1	4
252	252	2	6
336	336	3	8
420	420	4	10
504	504	5	12
588	588	6	14



The specifications above are subject to change for enhancement of product performance, Without any prior notice.



# SWL-PE SERIES

## IronCore Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0~40°C  
 Coil Insulation Class : F Class (155°C)  
 Hall Effect Device : Optional  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

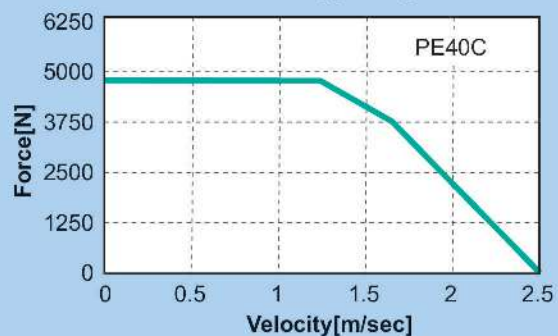
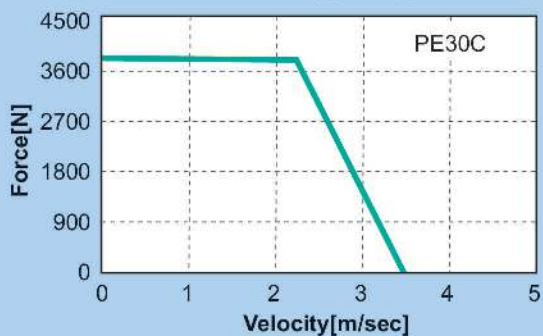
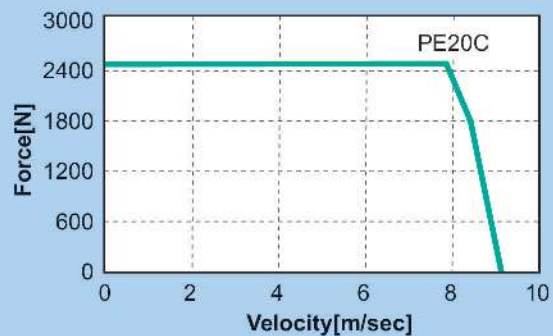
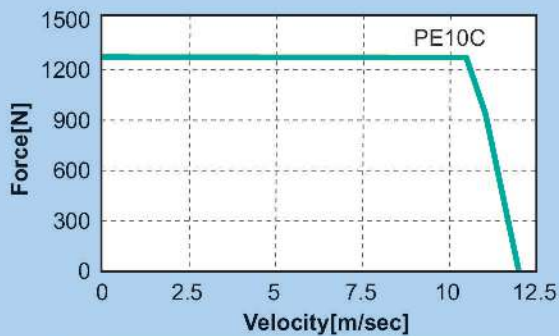


### Performance Specifications

		Unit	SWL-PE10C	SWL-PE20C	SWL-PE30C	SWL-PE40C
Continuous	Force	N	401.8	822.6	1231.6	1638
	Current	Arms	11.3	11.3	11.3	11.3
Max.	Force	N	1205.4	2467.7	3694.7	4915
	Current	Arms	33.9	33.9	33.9	33.9
Force Constant(kf)		N/Arms	35.56	72.79	108.99	145
Back EMF Constant(Ke)		Vrms/(m/sec)	12	24	36	48
Electrical Time Constant(Te)		msec	13.50	15.60	15.50	15.5
Resistance(L to L)		Ω	0.815	1.63	2.47	3.26
Inductance(L to L)		mH	5.78	11.56	17.57	23.13
Attraction Force		N	1750	3500	5250	7000
Mover Weight		kg	5.3	9.8	14.4	18.9

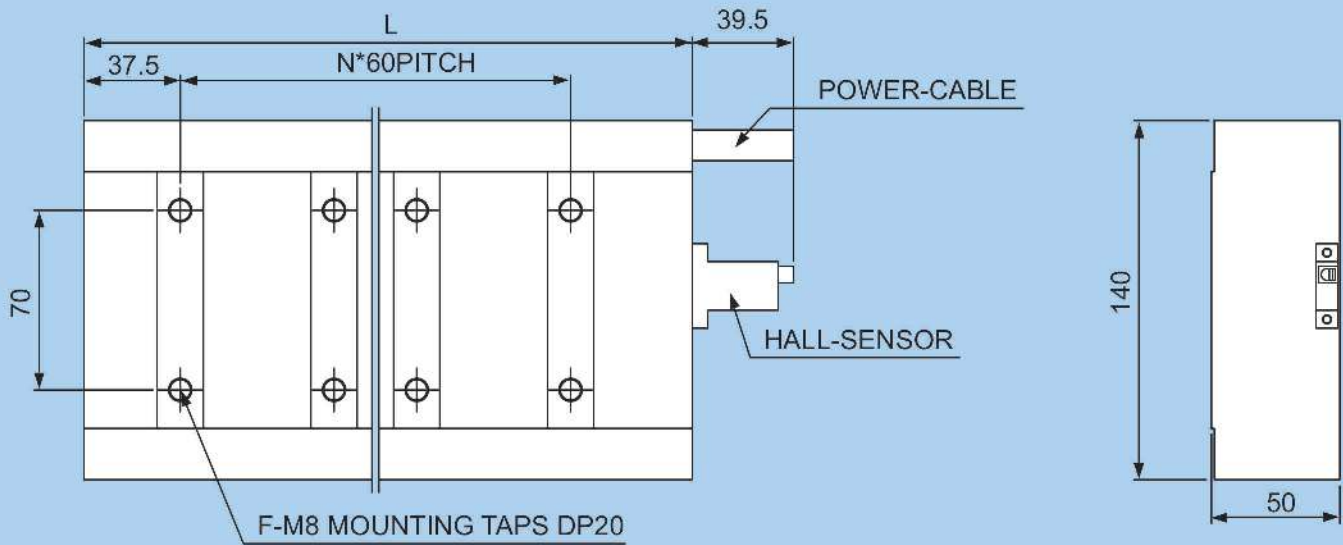
Magnet Pole pitch(N-N) : 60mm, Stator Weight : 13.7kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

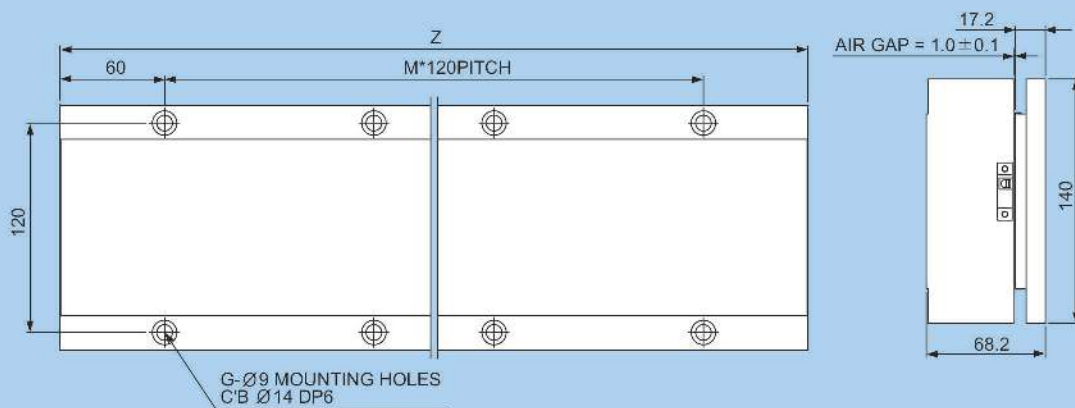


# MECHANICAL DIMENSIONS

## Mover Dimensions



## Stator Dimensions



### ● Mover

Model SWL-PE	L	N	Γ
10C	145	1	4
20C	265	3	8
30C	385	5	12
40C	505	7	16

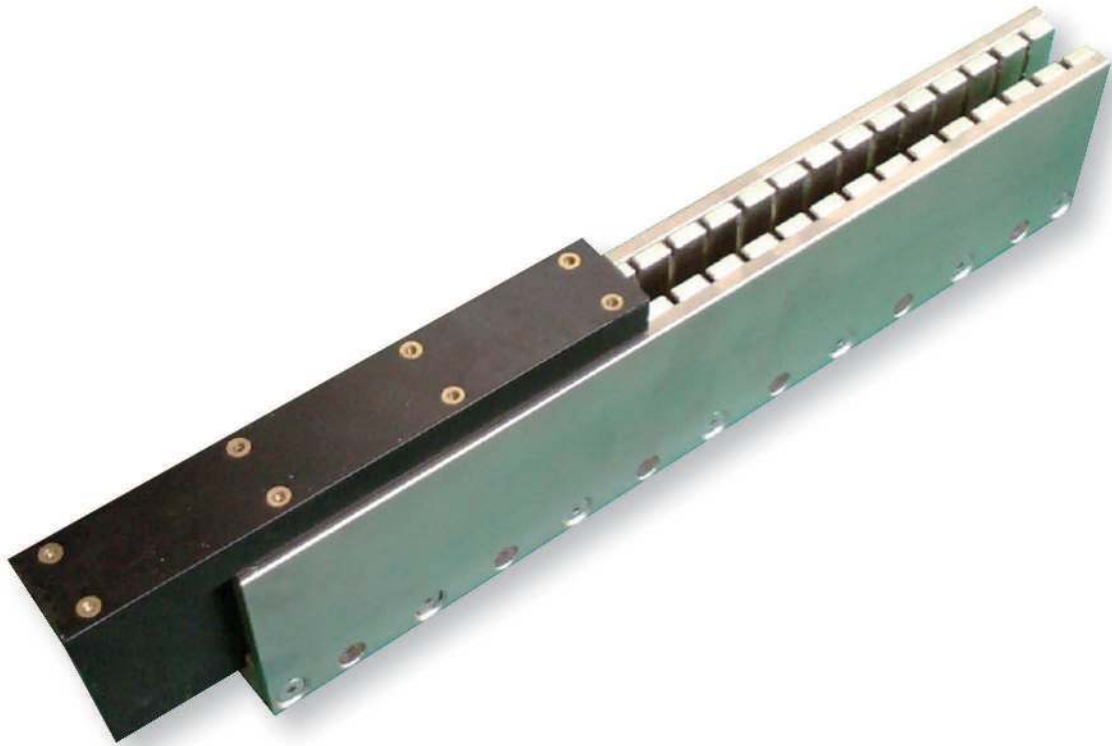
### ● Stator

Model SWL-PE	Z	M	G
240	240	1	4
360	360	2	6
480	480	3	8
600	600	4	10

◆ Check the page 60 for cable and connector types

.....▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

# LINEAR MOTOR SERIES

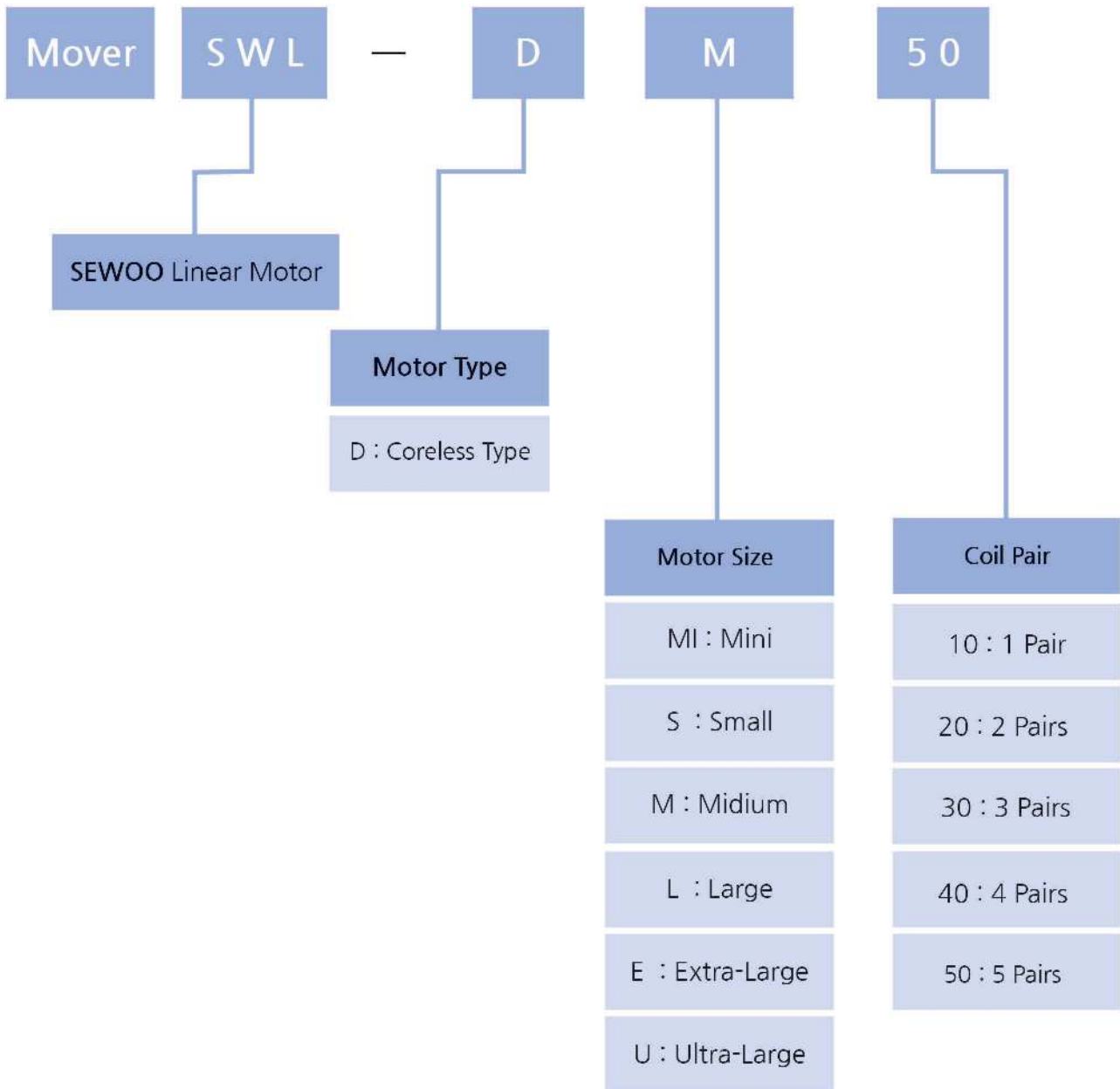


## CORELESS TYPE

MOTOR IS COMPOSED OF A MOVER (COIL ASSEMBLY)  
AND A STATOR(MAGNET ARRAY)



# LINEAR MOTOR CODING SYSTEM



MOTOR	Continuous Force
DMI20~50	24~61N
DS20~50	45~113N
DM20~50	83~208N
DL20~50	188~471N
DE10~40	300~1203N
DU20~40	1000~2000N

# SWL-DMI SERIES

## Coreless Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0~40°C  
 Coil Insulation Class : F Class (155°C)  
 Hall Effect Device : Optional  
 Air cooling available at no extra cost.  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

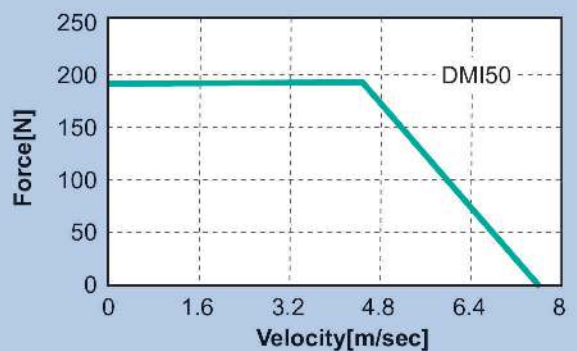
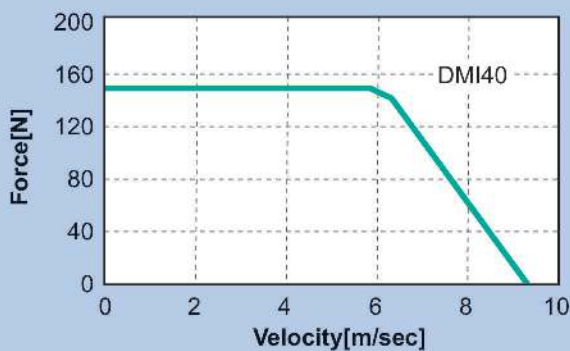
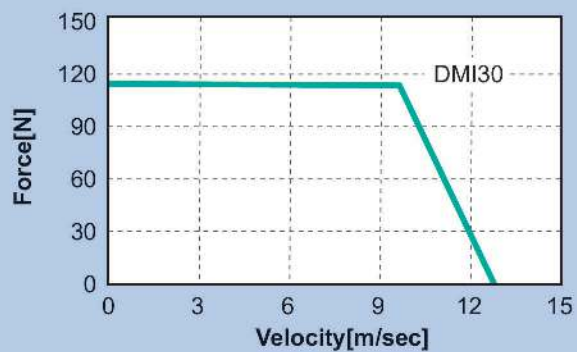
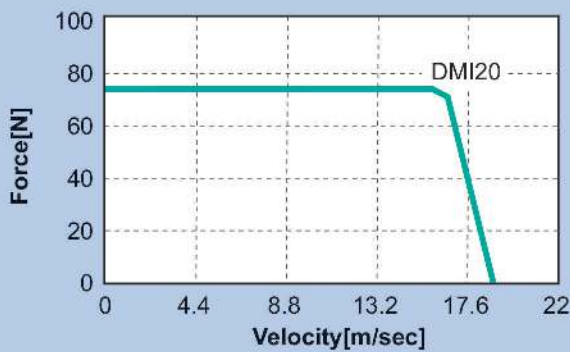


### Performance Specifications

		Unit	SWL-DMI20	SWL-DMI30	SWL-DMI40	SWL-DMI50
Continuous	Force	N	24.7	37.0	49.1	61.7
	Current	Arms	1.3	1.3	1.3	1.3
Max.	Force	N	74.1	111.1	148.2	185.2
	Current	Arms	3.9	3.9	3.9	3.9
Force Constant(kf)		N/Arms	19.0	28.5	38.0	47.5
Back EMF Constant(Ke)		Vrms/(m/sec)	6.78	10.17	13.56	16.95
Electrical Time Constant(Te)		msec	0.38	0.38	0.38	0.38
Resistance(l to l)		Ω	10.39	15.59	20.78	25.98
Inductance(L to L)		mH	3.95	5.93	7.91	9.89
Mover Weight		kg	0.25	0.35	0.45	0.55

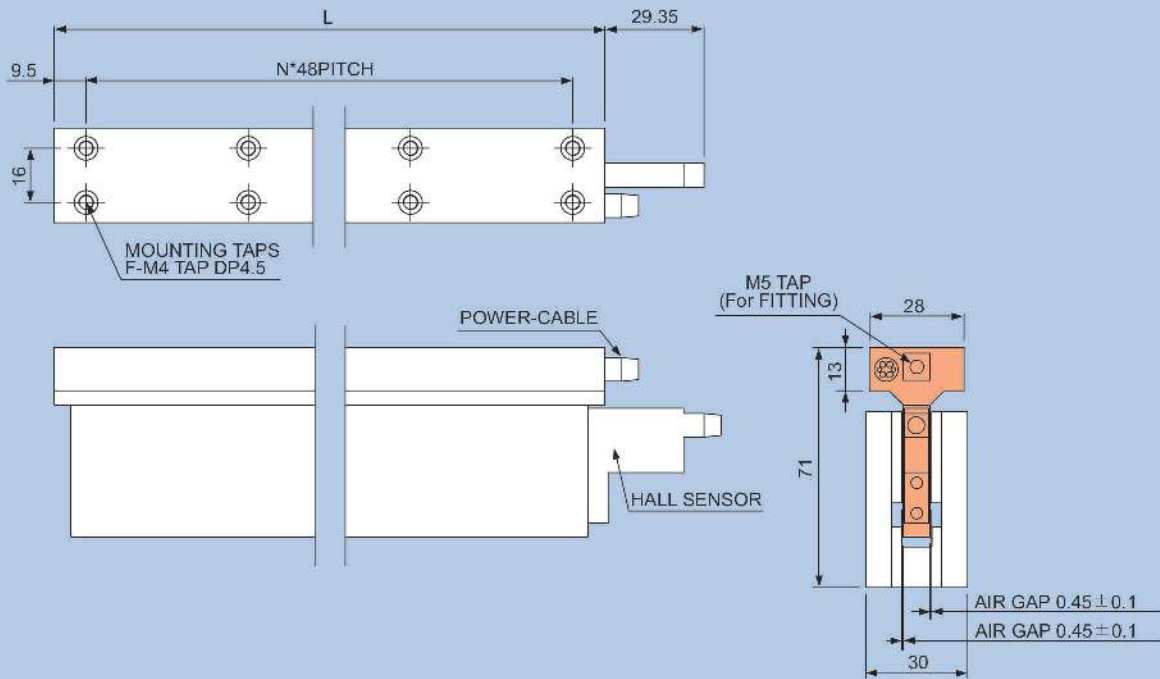
Magnet Pole pitch (N-N) : 24mm, Stator Weight : 7.9kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

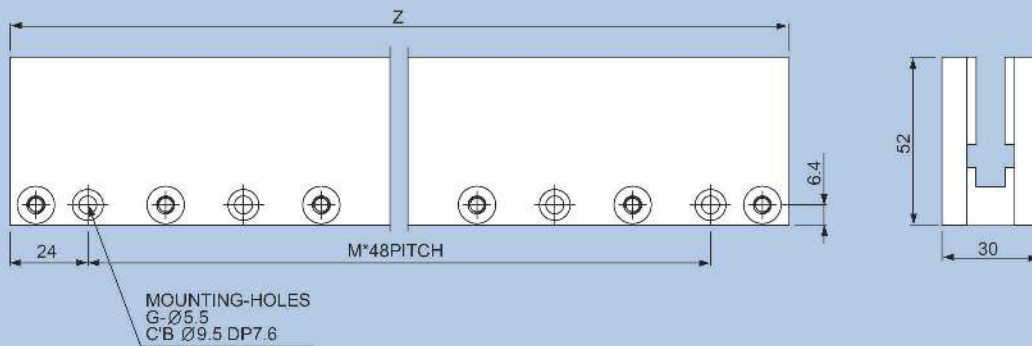


## MECHANICAL DIMENSIONS

### Mover Dimensions



### Stator Dimensions



● Mover

Model SWL-DMI	I	N	F
20	115	2	6
30	163	3	8
40	211	4	10
50	259	5	12

◆ Check the page 61 for cable and connector types

● Stator

Model SWL-DMI	/	M	G
96	96	1	2
144	144	2	3
192	192	3	4
240	240	4	5
288	288	5	6
336	336	6	7
384	384	7	8
432	432	8	9
480	480	9	10

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.



# SWL-DS SERIES

## Coreless Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0~40°C  
 Coil Insulation Class : F Class (155°C)  
 Hall Effect Device : Optional  
 Air cooling available at no extra cost.  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

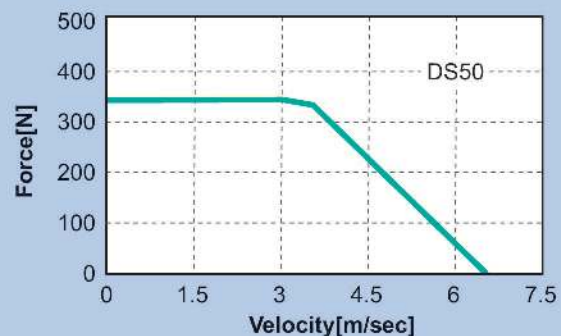
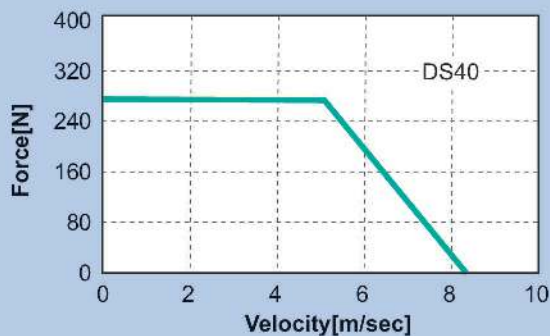
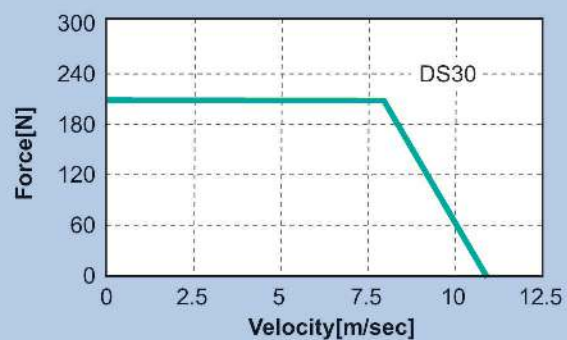
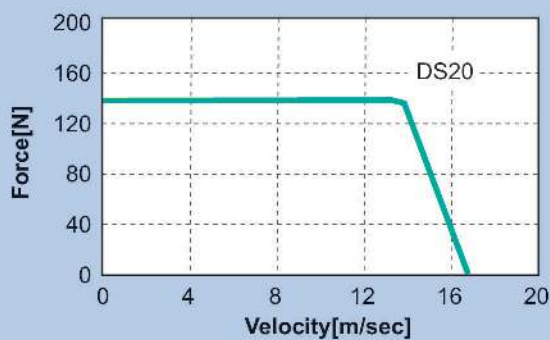


### Performance Specifications

		Unit	SWL-DS20	SWL-DS30	SWL-DS40	SWL-DS50
Continuous	Force	N	45.2	67.8	90.5	113.1
	Current	Arms	1.96	1.96	1.96	1.96
Max.	Force	N	135.7	203.5	271.4	339.2
	Current	Arms	5.9	5.9	5.9	5.9
Force Constant(k <sub>f</sub> )		N/Arms	23.07	34.61	46.15	57.69
Back EMF Constant(K <sub>e</sub> )		Vrms/(m/sec)	7.69	11.54	15.38	19.23
Electrical Time Constant(T <sub>e</sub> )		msec	0.44	0.44	0.44	0.44
Resistance(L to L)		Ω	8.41	12.65	16.89	21.13
Inductance(L to L)		mH	3.74	5.61	7.47	9.34
Mover Weight		kg	0.40	0.57	0.73	0.90

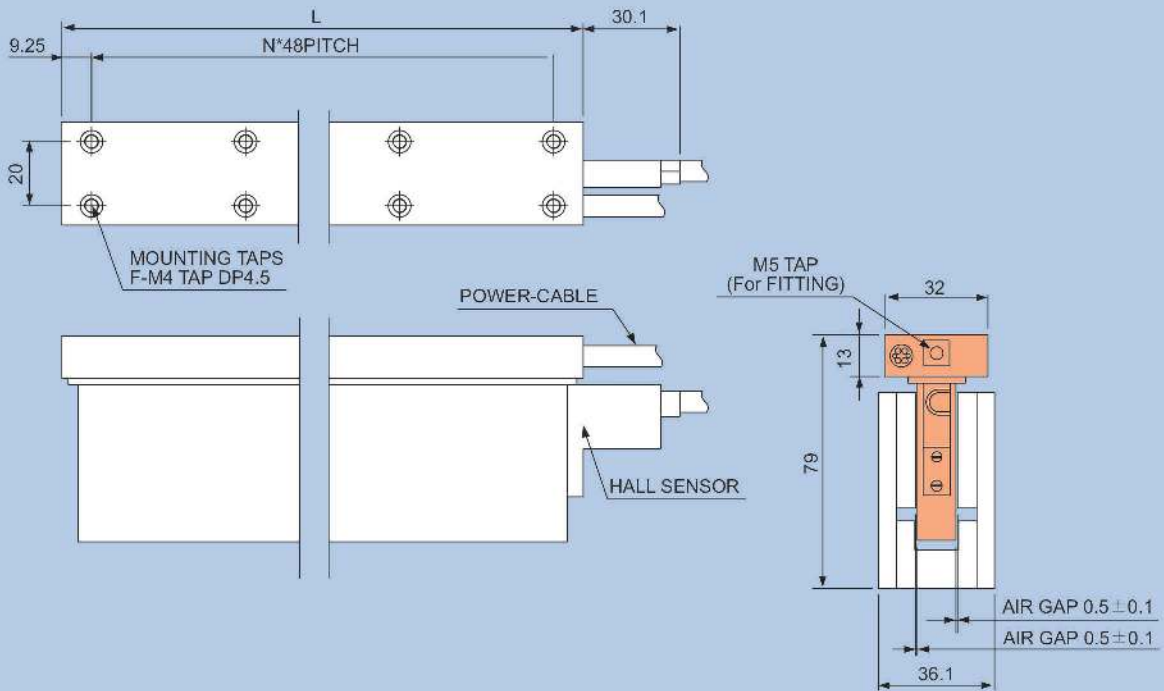
Magnet Pole pitch(N-N) : 24mm, Stator Weight : 10.6kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

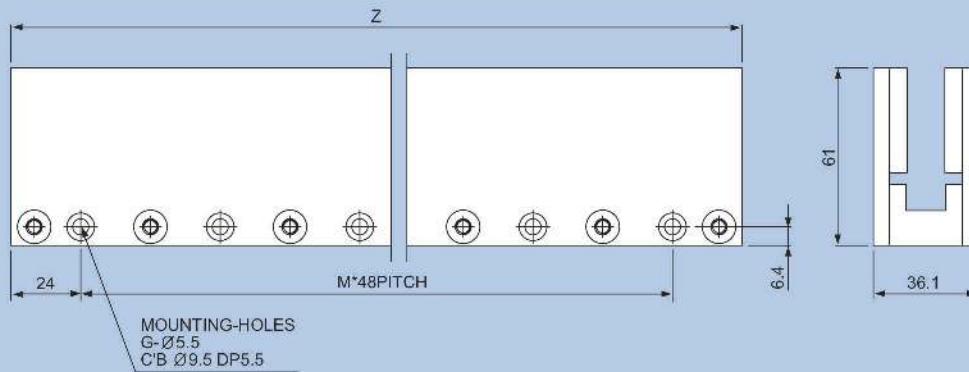


## MECHANICAL DIMENSIONS

### Mover Dimensions



### Stator Dimensions



● Mover

Model SWL-DS	I	N	F
20	114.5	2	6
30	162.5	3	8
40	210.5	4	10
50	258.5	5	12

◆ Check the page 61 for cable and connector types

● Stator

Model SWL-DS	/	M	G
96	96	1	2
144	144	2	3
192	192	3	4
240	240	4	5
288	288	5	6
336	336	6	7
384	384	7	8
432	432	8	9
480	480	9	10



The specifications above are subject to change for enhancement of product performance, Without any prior notice.

# SWL-DM SERIES

## Coreless Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0-40°C  
 Coil Insulation Class : F Class (155°C)  
 Hall Effect Device : Optional  
 Air cooling available at no extra cost.  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

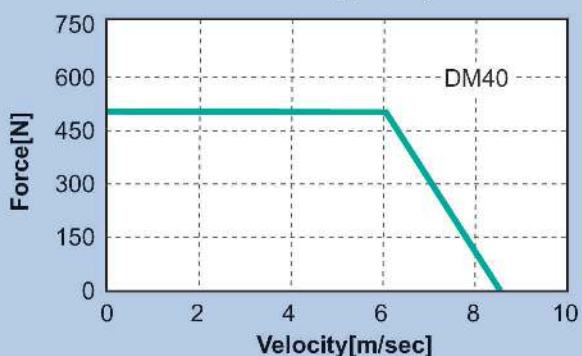
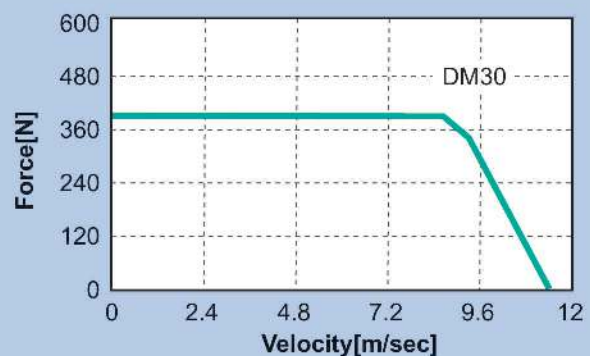
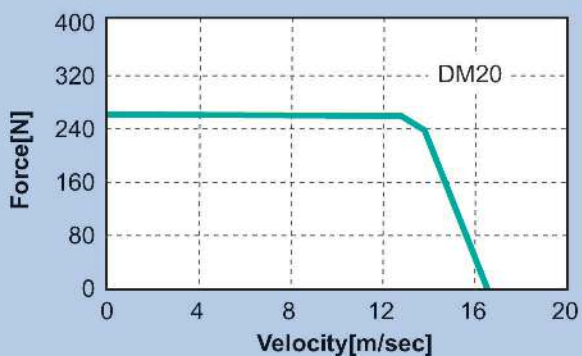


### Performance Specifications

		Unit	SWL-DM20	SWL-DM30	SWL-DM40	SWL-DM50
Continuous	Force	N	83.3	125.0	166.6	208.3
	Current	Arms	3.65	3.65	3.65	3.65
Max.	Force	N	250.0	374.9	499.9	624.9
	Current	Arms	11	11	11	11
Force Constant(kf)		N/Arms	22.83	34.24	45.65	57.07
Back EMF Constant(Ke)		Vrms/(m/sec)	7.61	11.41	15.22	19.02
Electrical Time Constant(Te)		msec	0.63	0.65	0.66	0.67
Resistance(L to L)		Ω	3.44	5.02	6.60	8.18
Inductance(L to L)		mH	2.18	3.28	4.37	5.46
Mover Weight		kg	0.60	0.88	1.16	1.44

Magnet Pole pitch(N-N) : 30mm, Stator Weight : 11.2kg/m

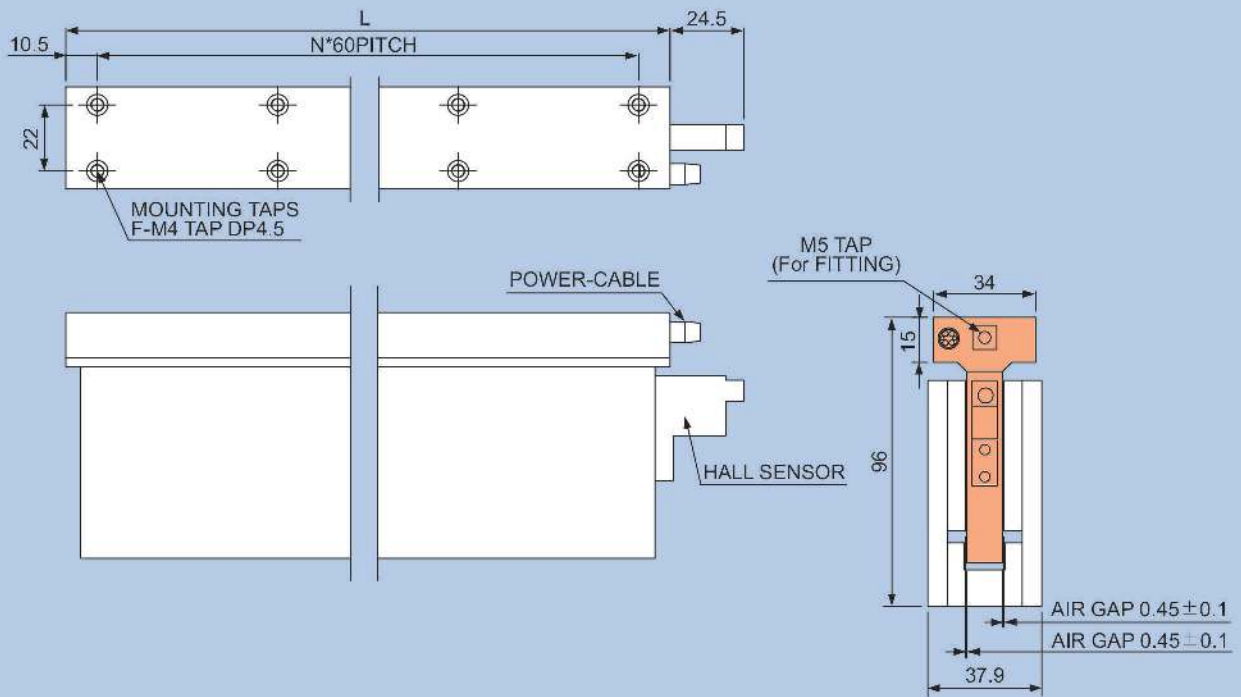
### FORCE VS. VELOCITY CHARACTERISTICS



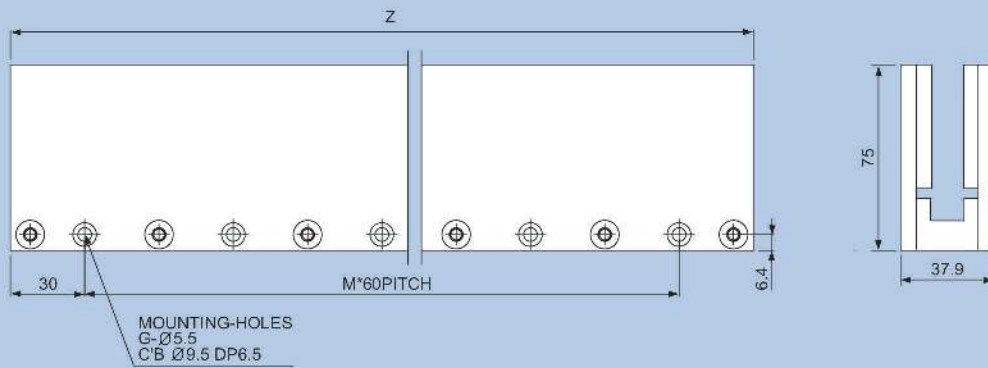


## MECHANICAL DIMENSIONS

### Mover Dimensions



### Stator Dimensions



● Mover

Model SWL-DM	I	N	F
20	141	2	6
30	201	3	8
40	261	4	10
50	321	5	12

◆ Check the page 61 for cable and connector types

● Stator

Model SWL-DM	/	M	G
120	120	1	2
180	180	2	3
240	240	3	4
300	300	4	5
360	360	5	6
420	420	6	/
480	480	7	8
540	540	8	9
600	600	9	10

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

# SWL-DL SERIES

## Coreless Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0~40°C  
 Coil Insulation Class : F Class (155°C)  
 Hall Effect Device : Optional  
 Air cooling available at no extra cost.  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

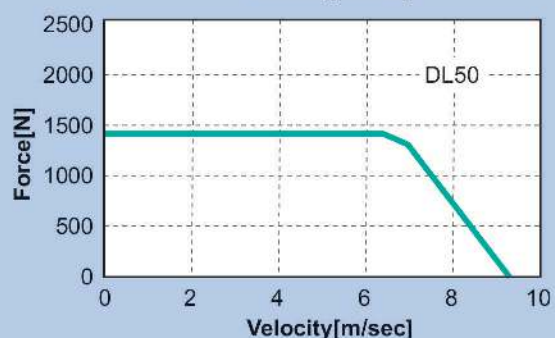
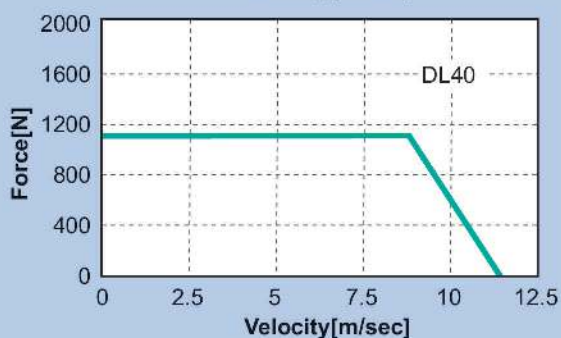
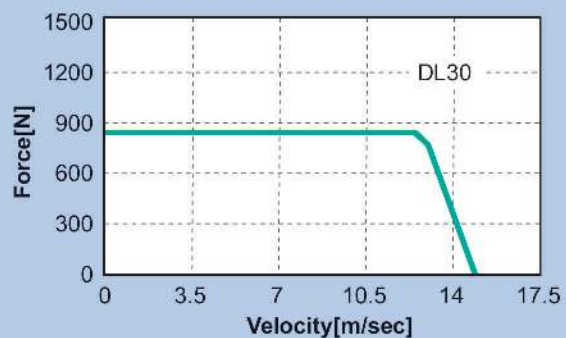
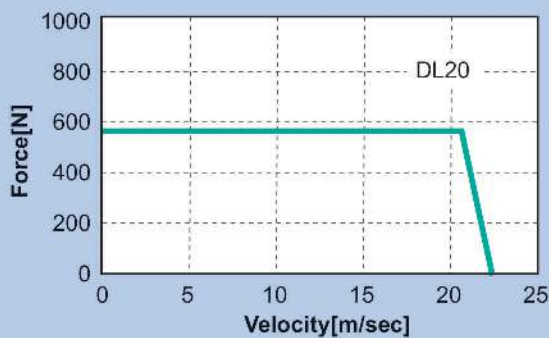


### Performance Specifications

		Unit	SWL-DL20	SWL-DL30	SWL-DL40	SWL-DL50
Continuous	Force	N	188.5	282.7	377.0	471.2
	Current	Arms	10.2	10.2	10.2	10.2
Max.	Force	N	565.4	848.2	1130.9	1413.6
	Current	Arms	30.6	30.6	30.6	30.6
Force Constant(k <sub>f</sub> )		N/Arms	18.48	27.77	36.96	46.70
Back EMF Constant(K <sub>e</sub> )		Vrms/(m/sec)	5.56	8.34	11.12	13.90
Electrical Time Constant(T <sub>e</sub> )		msec	1.18	1.20	1.21	1.21
Resistance(l to l)		Ω	0.92	1.36	1.80	2.24
Inductance(L to L)		mH	1.09	1.63	2.18	2.77
Mover Weight		kg	1.30	1.89	2.48	3.07

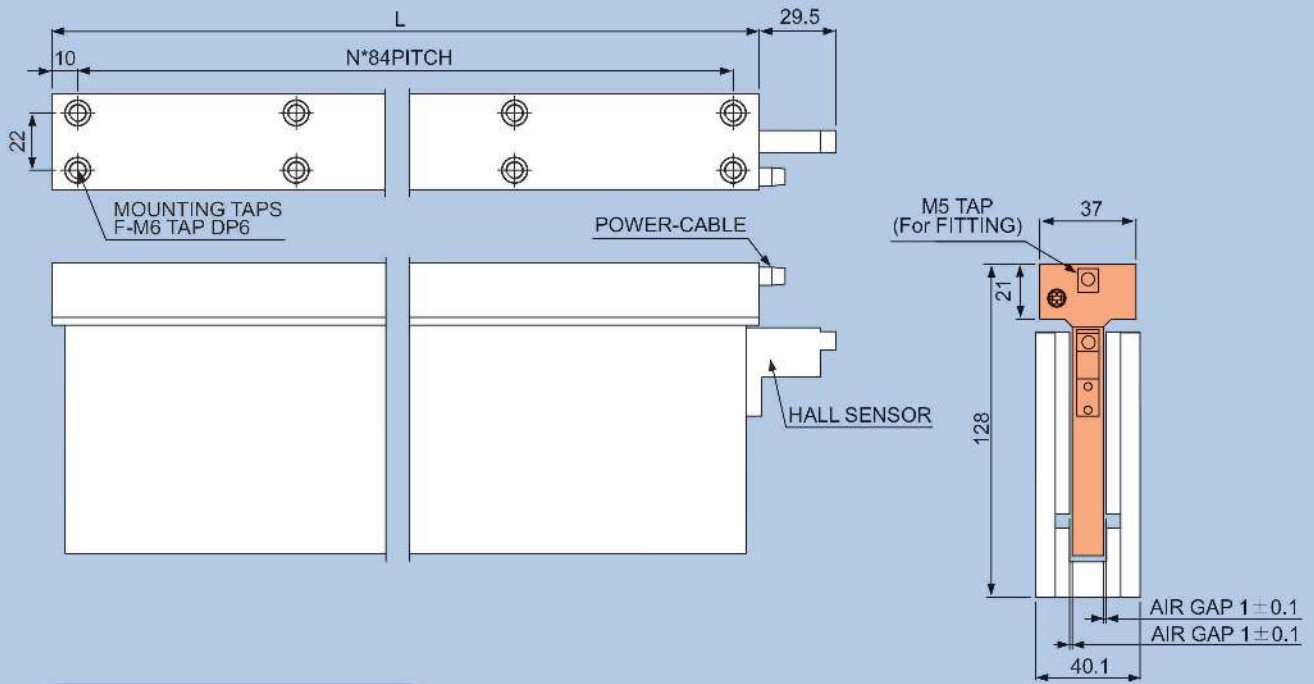
Magnet Pole pitch(N-N) : 42mm, Stator Weight : 18.6kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

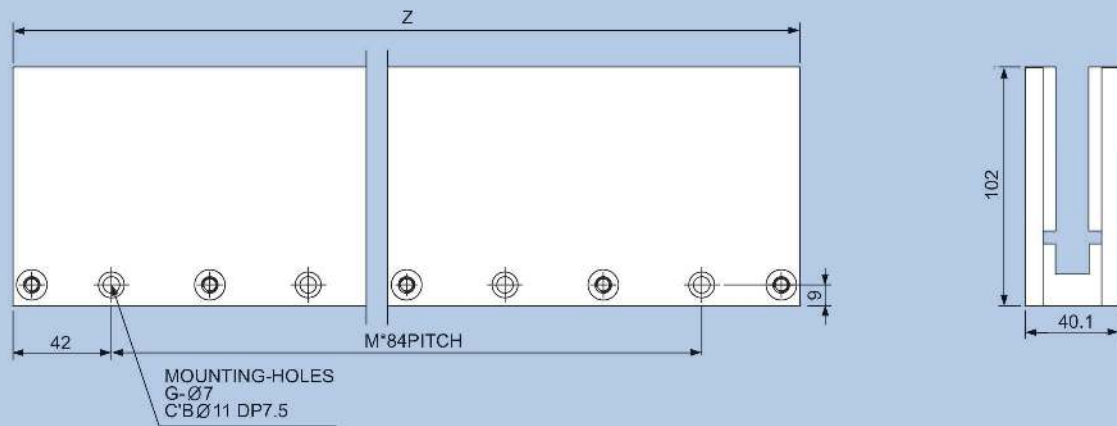


## MECHANICAL DIMENSIONS

### Mover Dimensions



### Stator Dimensions



#### ● Mover

Model SWL-DL	L	N	Γ
20	188	2	6
30	272	3	8
40	356	4	10
50	440	5	12

◆ Check the page 61 for cable and connector types

#### ● Stator

Model SWL-DL	Z	M	G
168	168	1	2
252	252	2	3
336	336	3	4
420	420	4	5
504	504	5	6
588	588	6	7

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.



## Coreless Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0~40℃  
 Coil Insulation Class : F Class (155℃)  
 Hall Effect Device : Optional  
 Air cooling available at no extra cost.  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

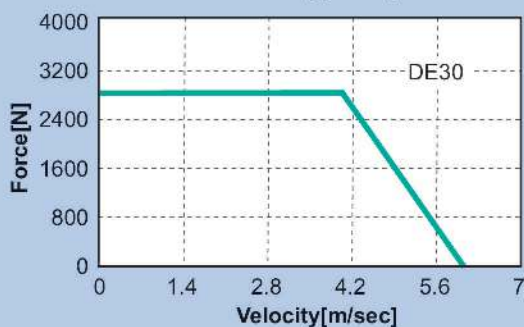
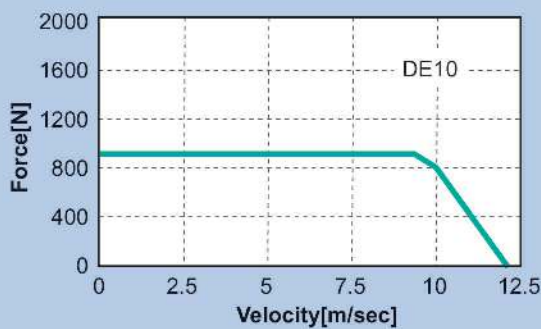


### Performance Specifications

		Unit	SWL-DE10	SWL-DE20	SWL-DE30	SWL-DE40
Continuous	Force	N	300.9	610.9	902.8	1203.8
	Current	Arms	13.9	13.9	13.9	13.9
Max.	Force	N	902.8	1805.6	2708.5	3611.3
	Current	Arms	41.6	41.6	41.6	41.6
Force Constant(k <sub>f</sub> )		N/Arms	21.73	43.46	65.19	86.91
Back EMF Constant(K <sub>e</sub> )		Vrms/(m/sec)	7.29	14.58	21.87	29.16
Electrical Time Constant(T <sub>e</sub> )		msec	2.54	2.54	2.54	2.54
Resistance(l to l)		Ω	0.52	1.05	1.57	2.09
Inductance(L to L)		mH	1.92	3.84	5.75	7.67
Mover Weight		kg	1.80	3.50	4.70	6.30

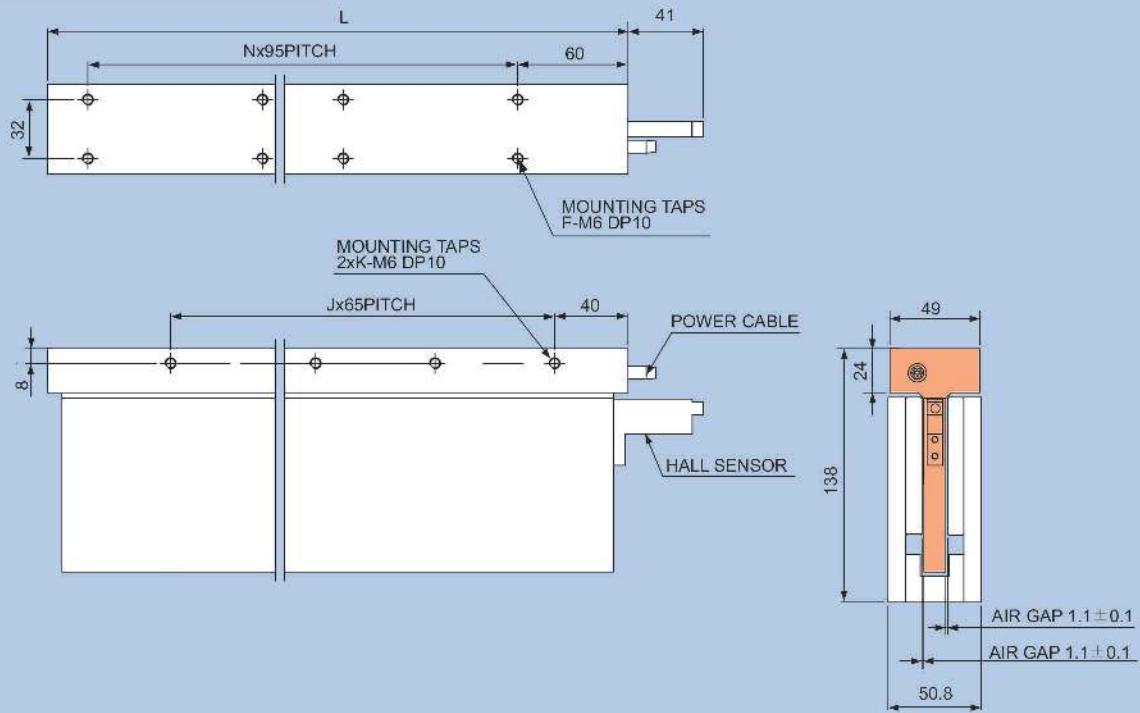
Magnet Pole pitch(N-N) : 84mm, Stator Weight : 29.2kg/m

### FORCE VS. VELOCITY CHARACTERISTICS

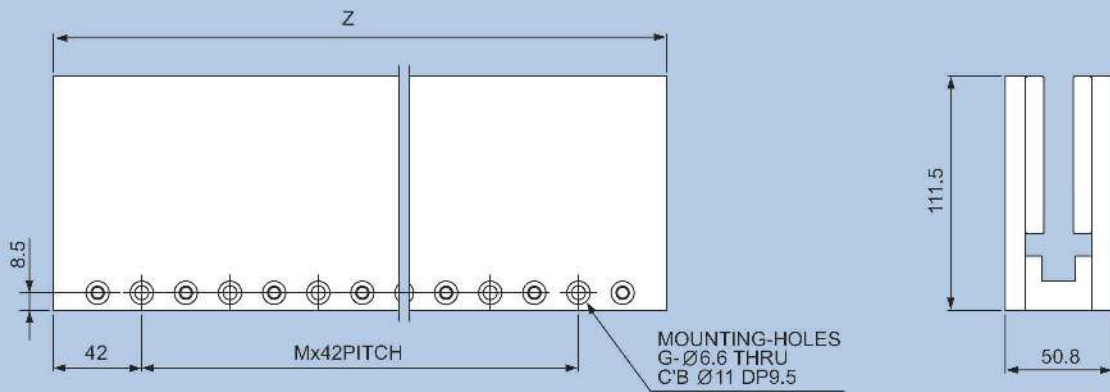


## MECHANICAL DIMENSIONS

### Mover Dimensions



### Stator Dimensions



● Mover

Model SWL-DE	L	N	Γ	J	K
10	199	1	4	2	3
20	367	3	8	4	5
30	535	4	10	/	8
40	703	6	14	10	11

◆ Check the page 61 for cable and connector types

● Stator

Model SWL-DE	Z	M	G
168	168	2	3
252	252	4	5
336	336	6	/
420	420	8	9
504	504	10	11

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

# SWL-DU SERIES

## Coreless Linear Motor

### BASIC SPECIFICATIONS

Rating Condition : Continuous  
 Voltage Endurance : AC1500V, 1Min  
 Operating Temperature : 0~40°C  
 Coil Insulation Class : F Class (155°C)  
 Hall Effect Device : Optional  
 Air cooling available at no extra cost.  
 Power Supply Requirement : Trapezoidal or Sinusoidal 3-phase Brushless Amplifier.

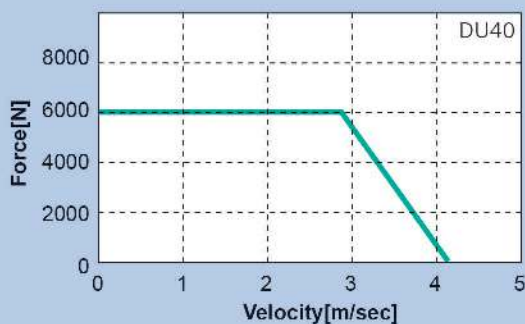
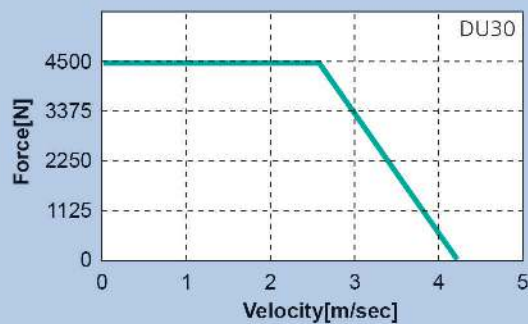


### Performance Specifications

		Unit	SWL-DU20	SWL-DU30	SWL-DU40
Continuous	Force	N	1000	1500	2000
	Current	Arms	11	16.5	22
Max.	Force	N	3000	4500	6000
	Current	Arms	33	49.5	66
Force Constant(kf)		N/Arms	90.9	90.9	90.9
Back EMF Constant(Ke)		Vrms/(m/sec)	30.3	30.3	30.3
Electrical Time Constant(Te)		msec	0.3	0.2	0.15
Resistance(L to L)		Ω	2.4	1.6	1.2
Inductance(L to L)		mH	8.1	5.4	4.05
Mover Weight		kg	5.6	8.3	11

Magnet Pole pitch(N-N) : 84mm, Stator Weight : 46.3kg/m

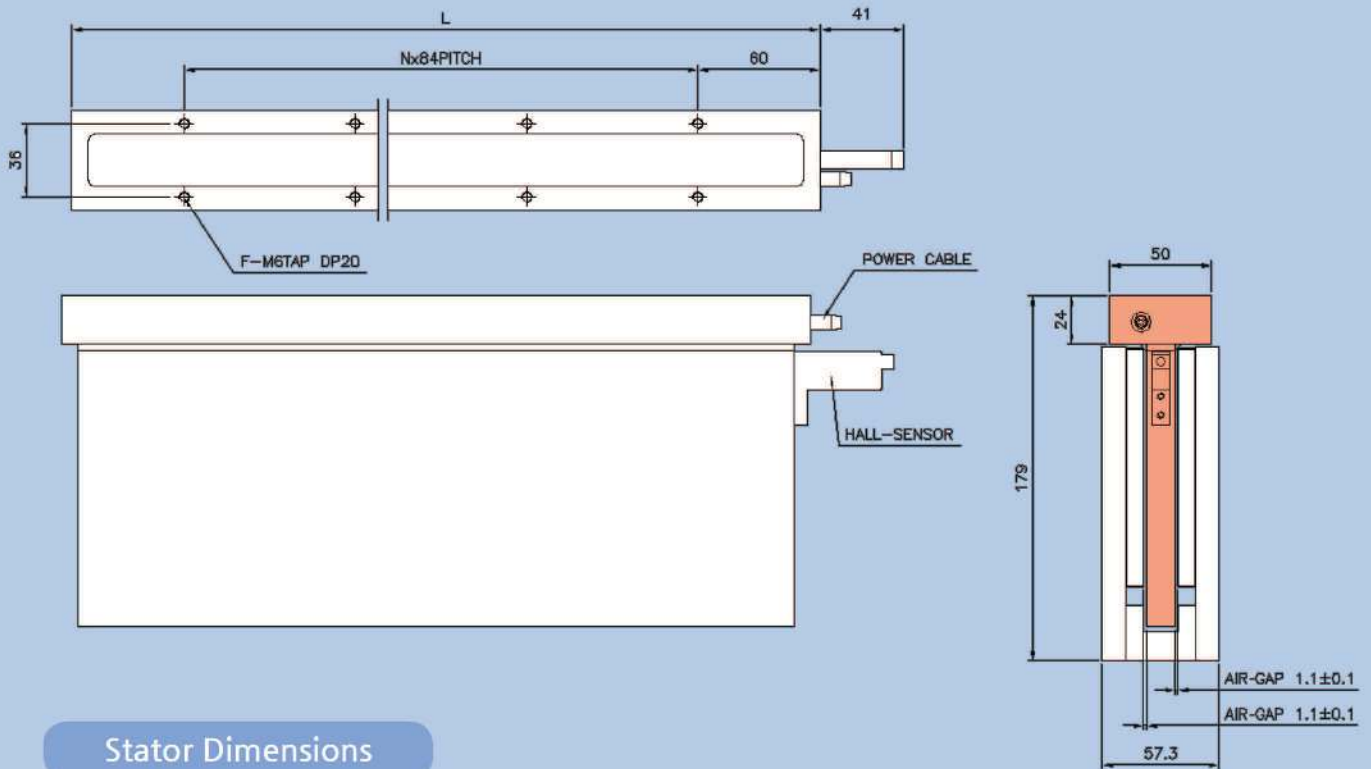
### FORCE VS. VELOCITY CHARACTERISTICS



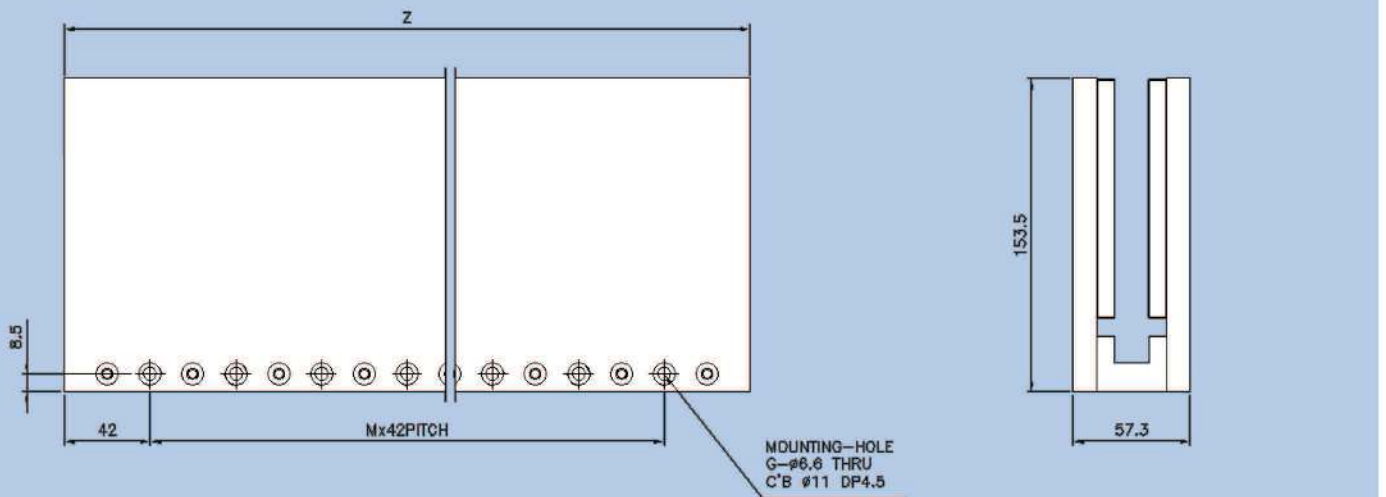


# MECHANICAL DIMENSIONS

## Mover Dimensions



## Stator Dimensions



### ● Mover

Model SWL-DU	L	N	F
20	36/	3	8
30	53.5	5	12
40	70.3	7	16

### ● Stator

Model SWL-DU	/	M	G
252	252	4	5
336	336	6	7

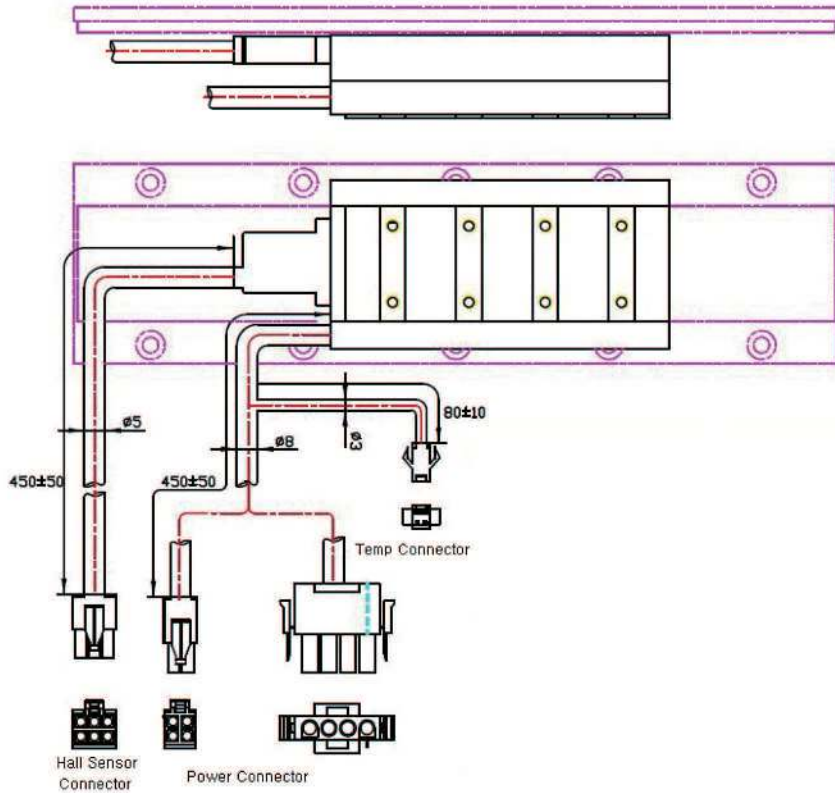
◆ Check the page 61 for cable and connector types



The specifications above are subject to change for enhancement of product performance, Without any prior notice.

# Sewoo Linear Motor Over View

## Iron Core Linear Motor Connectors

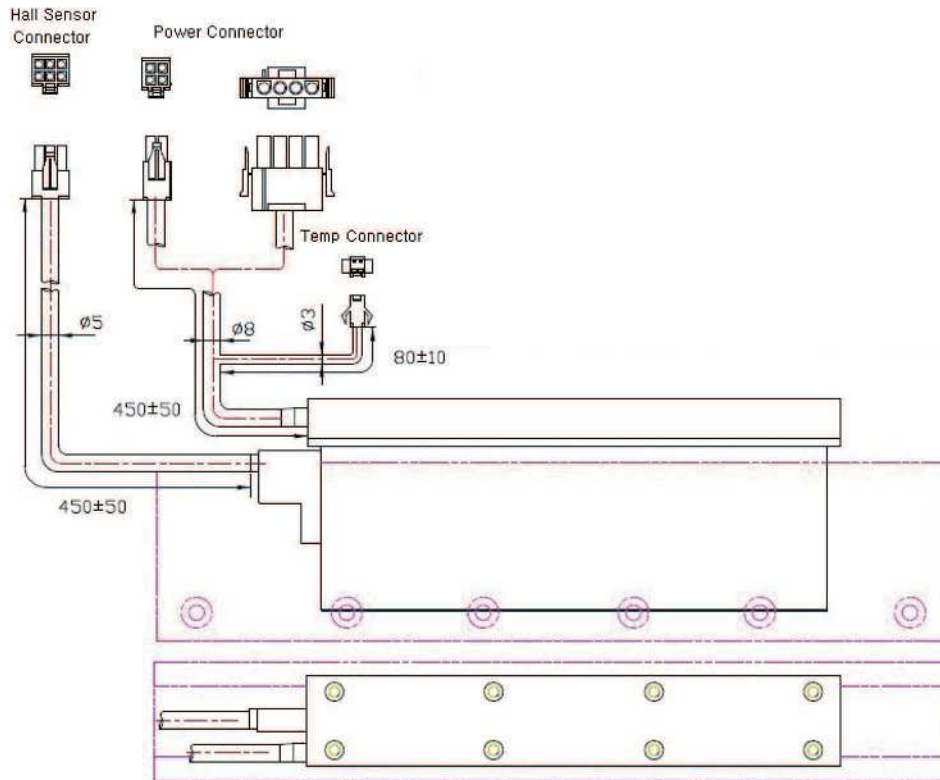


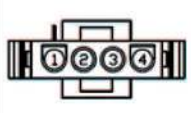
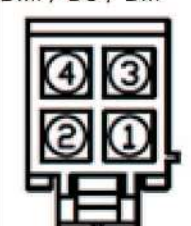
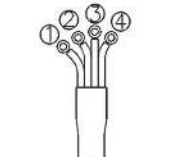
Power Connector		
ePL/ePE PL/PE 	Housing	AMP350779 1
	Pin	AMP350561 3
	1	U(Red)
	2	V(Yellow)
	3	W(Blue)
ePMI/ePS/ePM PMI/PS/PM 	Housing	AMP172167 1
	Pin	AMP170360-1
	1	U(Red)
	2	V(Yellow)
	3	W(Blue)
ePMI/ePS/ePM PMI/PS/PM 	Pin	워킹피치 5.5-4
	1	U (RED)
	2	V (YELLOW)
	3	W (BLUE)
	4	FG (GREEN)

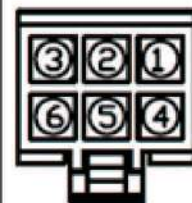
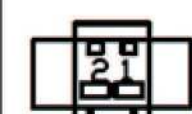
Hall Sensor & Temperature Connector		
	Housing	MOLEX5557D 06R
	Pin	MOLEX5556
	1	1IA(Orange)
	2	1IB(White)
	3	1IC(Blue)
	4	5P(Red)
	5	5G(Black)
	6	SHIELD
	Housing	JST SMP-02V
	Pin	JST SHF-0111-0.8
	1	TEMP(Black)
	2	TEMP(Black)

# Sewoo Linear Motor Over View

## Coreless Linear Motor Connectors



Power Connector		
	DL / DE / DU20,30	I housing AMP350779 1
		Pin AMP350561 3
		1 U(Red)
		2 V(Yellow)
		3 W(Blue)
	DMI / DS / DM	I housing AMP172167 1
		Pin AMP170360 1
		1 U(Red)
		2 V(Yellow)
		3 W(Blue)
	DU40	Pin 워킹타시 5.5-4
		1 U (RED)
		2 V (YELLOW)
		3 W (BLUE)
		4 FG (GREEN)

Hall Sensor & Temperature Connector		
	I housing	MOI GX5557D 06R
	Pin	MOI GX5556
		1 IIA(Orange)
		2 IIB(White)
		3 IIC(Blue)
		4 5P(Red)
		5 5G(Black)
		6 SHILED
	Housing	JST SMP-02V
	Pin	JST SHF-0111-0.8
		1 TEMP(Black)
		2 TEMP(Black)



# BLDC MOTOR SERIES



**BLDC MOTOR D-CUT TYPE**  
**BLDC MOTOR GEARED TYPE**

# BLDC Motor Coding

BD

90

N

220

200

SHAFT TYPE	
BD	D-Cut Type
BG	Geared Type
BK	Key Type

Flange Size & Poles	
42	□42mm / 4 Poles
60	□60mm / 4 Poles
80	□80mm / 12 Poles
90	□90mm / 12 Poles
9S	□90mm / 10 Poles
100	□100mm / 8 Poles

Input Voltage	
012	12V DC
024	24V DC
220	220V AC

Output	
005	5W
.	.
.	.
.	.
600	600W
1000	1000W

Magnet Type & 드라이버 장착형식	
F	Ferrite / 드라이버 외장
I	Ferrite / 드라이버 내장
N	Nd-Fe-B (ND Bonded) / 드라이버 외장
S	Nd-Fe-B (ND Sintered) / 드라이버 외장

# BLDC42 SERIES

## BD42

- ◆ □42mm
- ◆ 12V/24V
- ◆ 5W/7W
- ◆ D-CUT TYPE SHAFT



### Specifications

MODEL		BD42					
		I012005	I012007	I024007	F012005	F012007	F024007
Rated Voltage	V	12	12	24	12	12	24
Rated Output	W	5	7	7	5	7	7
Rated Current	A	1.0	1.0	0.5	1.0	1.0	0.5
Rated Speed	rpm	2000	2400	2400	2000	2400	2400
Rated Torque	kgf-cm	0.26	0.28	0.28	0.26	0.28	0.28
Weight	kg	0.25	0.25	0.25	0.25	0.25	0.25
Applicable Drive		☒ Driver Inside(내상형)			SBDO-01(외상형)		

☒ Driver inside type is not adjustable for speed

The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Speed-Torque Curve

BD42-I012005



BD42-I012007



BD42-I024007



BD42-F012005



BD42-F012007



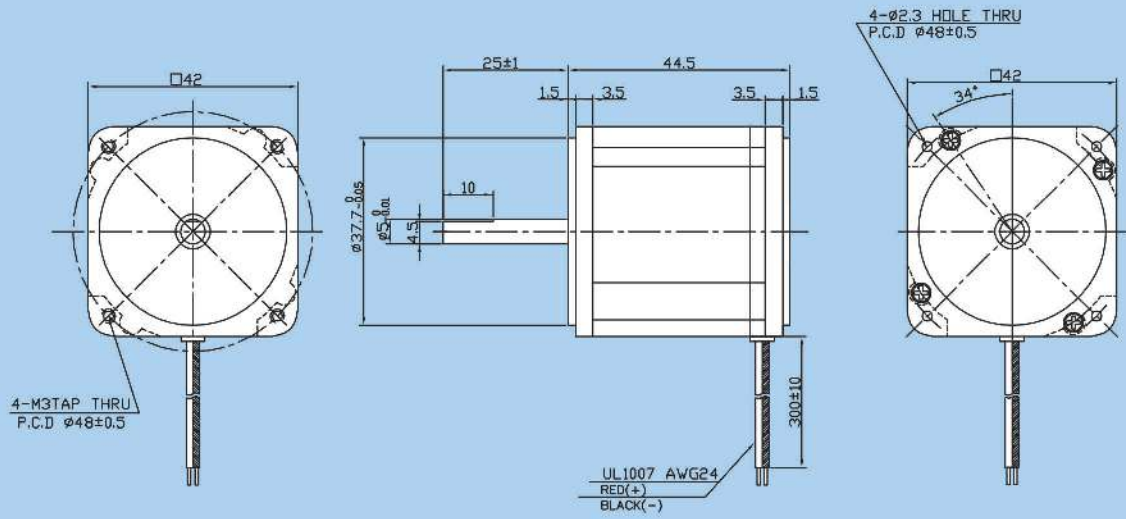
BD42-F024007



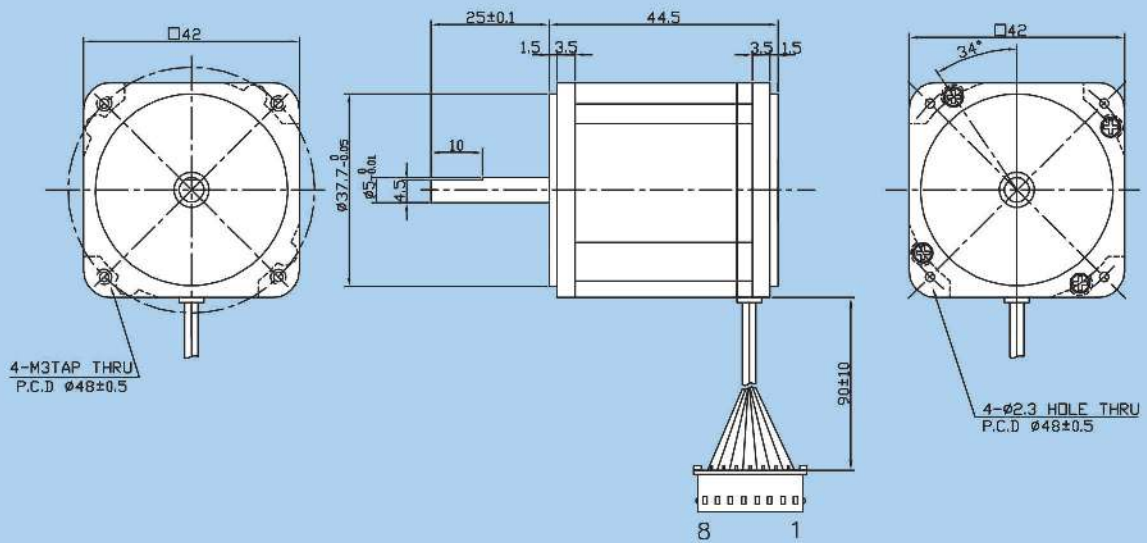


Dimension

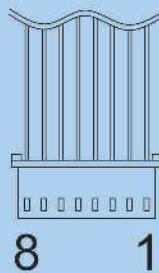
BD42 내장형



BD42 외장형



CONNECTOR(CHB0640-8)



CONNECTOR : CHB0640-8

PIN No.	Cable Color	LeadWire	Remark
1	WHITE	AWG 24	Ilw
2	BROWN	AWG 24	Ilv
3	GRAY	AWG 24	Ilu
4	BLACK	AWG 24	GND
5	ORANGE	AWG 24	Vcc
6	YELLOW	AWG 24	U
7	RED	AWG 24	V
8	BLUE	AWG 24	W

# BLDC60 SERIES

## BD60

- ◆ □60mm
- ◆ 12V/24V/220V
- ◆ 10W/15W/20W/40W/50W/60W/80W
- ◆ D-CUT, GEAR TYPE SHAFT

밀폐형



기본형

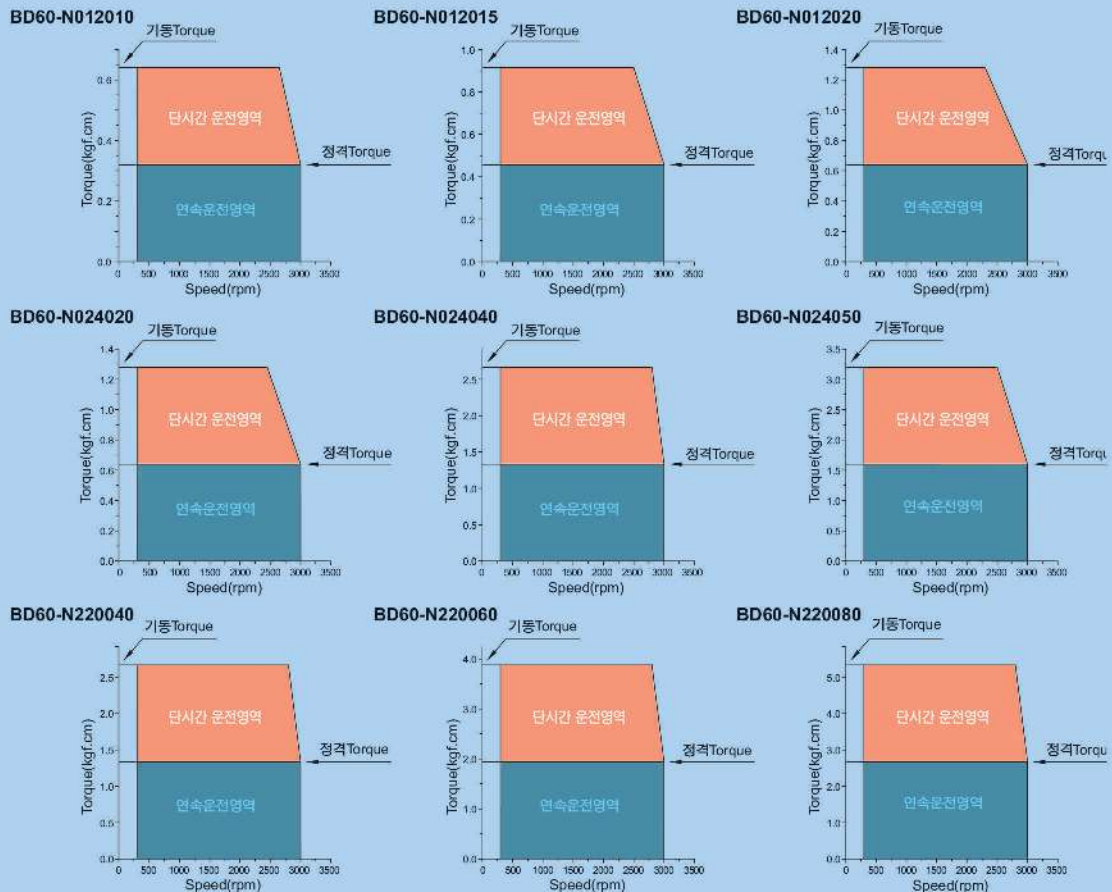
### Specifications

MODEL		BD60								
		N012010	N012015	N012020	N024020	N024040	N024050	N220040	N220060	N220080
Rated Voltage	V	12			24			220		
Rated Output	W	10	15	20	20	40	50	40	60	80
Rated Current	A	1.4	2.1	2.8	1.4	2.3	3.2	0.7	0.9	1.1
Rated Speed	rpm	3000								
Rated Torque	kgf-cm	0.3	0.4	0.6	0.6	1.3	1.6	1.3	1.9	2.5
Weight	kg	0.5	0.6	0.7	0.5	0.6	0.7	0.5	0.6	0.7
Applicable Drive		SBDM 05A						<input type="checkbox"/> SBDSMA 07A <input type="checkbox"/> SBDSMI 03D <input type="checkbox"/> SBDSMS 03D		

☐ Before placing an order, consult with manufacturer and place of purchase

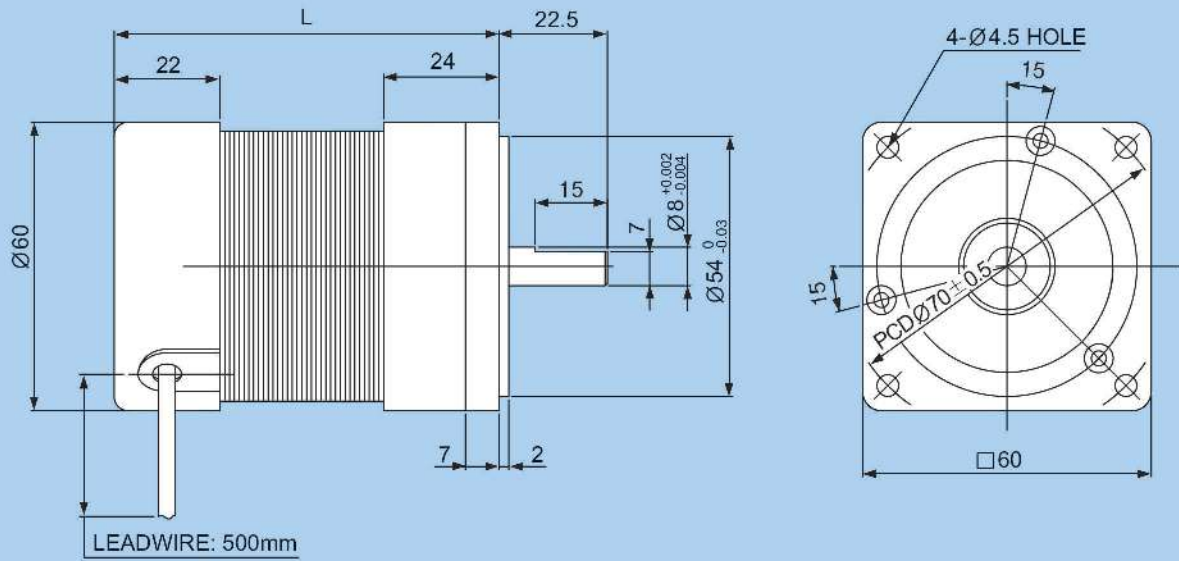
▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Speed-Torque Curve

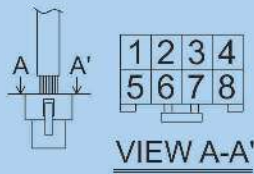


**Dimension**

☞ 밀폐형 SPEC 별도 협의 바랍니다.



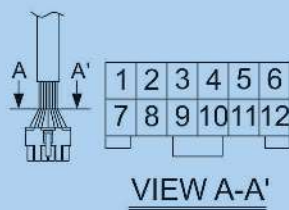
CONNECTOR  
: MOLEX 5557-08  
(SBDM-05A)



CONNECTOR(5557-8)

PIN No.	Cable Color	LeadWire	Remark
1	ORANGE	AWG 24	Vcc
2	RED	AWG 20	U
3	YELLOW	AWG 20	V
4	BLUE	AWG 20	W
5	BLACK	AWG 24	GND
6	WHITE	AWG 24	Ilu
7	GREEN	AWG 24	Hv
8	BROWN	AWG 24	Hw

CONNECTOR  
: MOLEX 5557-12  
(AC 전원용)



CONNECTOR(5557-12)

PIN No.	Cable Color	LeadWire	Remark
1	BLUE	AWG 20	W
2			
3			
4	BROWN	AWG 24	Ilw
5	GREEN	AWG 24	Ilv
6	WHITE	AWG 24	Ilu
7	YELLOW	AWG 20	V
8	RED	AWG 20	U
9	GRN/YLN	AWG 20	SHIFD
10			
11	ORANGE	AWG 24	Vcc
12	BLACK	AWG 24	GND

L	MODEL
60	N012010 / N024020 / N220040
70	N012015 / N024040 / N220060
80	N012020 / N024050 / N220080



# BLDC80 SERIES

## BD80

- ◆ □80mm
- ◆ 12V/24V/220V
- ◆ 25W/40W/60W/80W/100W
- ◆ D-CUT, GEAR TYPE SHAFT

밀폐형



기본형

### Specifications

MODEL		BD80								
		N012025	N012040	N012060	N024040	N024060	N024080	N220060	N220080	N220100
Rated Voltage	V	12			24			220		
Rated Output	W	25	40	60	40	60	80	60	80	100
Rated Current	A	3.0	4.5	7.0	2.1	3.1	4.2	0.7	0.9	1.1
Rated Speed	rpm	3000								
Rated Torque	kgf-cm	0.8	1.3	1.9	1.3	1.9	2.5	1.9	2.5	3.2
Weight	kg	1.4	1.5	1.6	1.4	1.5	1.6	1.4	1.5	1.6
Applicable Drive		SBDM 05A	SBDM 10A		SBDM 05A		SBDM 10A	<input type="checkbox"/> SBDSMA 02A <input type="checkbox"/> SBDSMI 03D <input type="checkbox"/> SBDSMS 03D		

☞ Before placing an order, consult with manufacturer and place of purchase

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Speed-Torque Curve

BD80-N012025



BD80-N012040



BD80-N012060



BD80-N024040



BD80-N024060



BD80-N024080



BD80-N220060



BD80-N220080



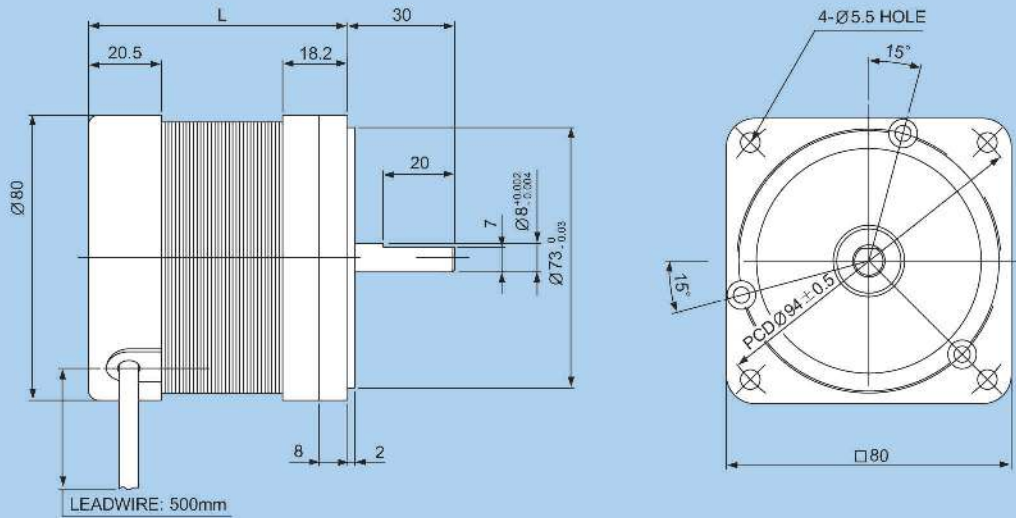
BD80-N220100



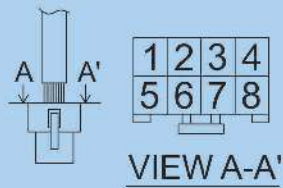


**Dimension**

☞ 밀폐형 SPEC 별도 협의 바랍니다.



CONNECTOR  
: MOLEX 5557-08  
(SBDM-05A)



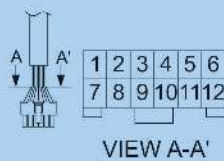
CONNECTOR(5557-8)

PIN No.	Cable Color	LeadWire	Remark
1	ORANGE	AWG 24	Vcc
2	RED	AWG 20	U
3	YELLOW	AWG 20	V
4	BLUE	AWG 20	W
5	BLACK	AWG 24	GND
6	WHITE	AWG 24	Ilu
7	GREEN	AWG 24	Hv
8	BROWN	AWG 24	Hw

CONNECTOR(5557-12)

PIN No.	Cable Color	LeadWire	Remark
1	BLUE	AWG 20	W
2			
3			
4	BROWN	AWG 24	Ihw
5	GREEN	AWG 24	Ilv
6	WHITE	AWG 24	Ilu
7	YELLOW	AWG 20	V
8	RED	AWG 20	U
9	GRN/YEL	AWG 20	SHIELD
10			
11	ORANGE	AWG 24	Vcc
12	BLACK	AWG 24	GND

CONNECTOR  
: MOLEX 5557-12  
(AC 권취용)

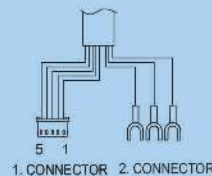


1. CONNECTOR(5264-05)

PIN No.	Cable Color	LeadWire	Remark
1	WHITE	AWG 24	Hu
2	GREEN	AWG 24	Hv
3	BROWN	AWG 24	Hw
4	BLACK	AWG 24	GND
5	ORANGE	AWG 24	Vcc

2. CONNECTOR

PIN No.	Cable Color	LeadWire	Remark
1	RED	AWG 16	U
2	YELLOW	AWG 16	V
3	BLUE	AWG 16	W



CONNECTOR  
: MOLEX 5264-05  
(SBDM-10A)

L	MODEL
52.7	N012025 / N024040 / N220060
62.7	N012040 / N024060 / N220080
72.7	N012060 / N024080 / N220100

# BLDC90 SERIES

## BD90

- ◆ □90mm
- ◆ 12V/24V/220V
- ◆ 40W/50W/60W/70W/100W/150W/200W
- ◆ D-CUT, GEAR TYPE SHAFT

밀폐형



기본형

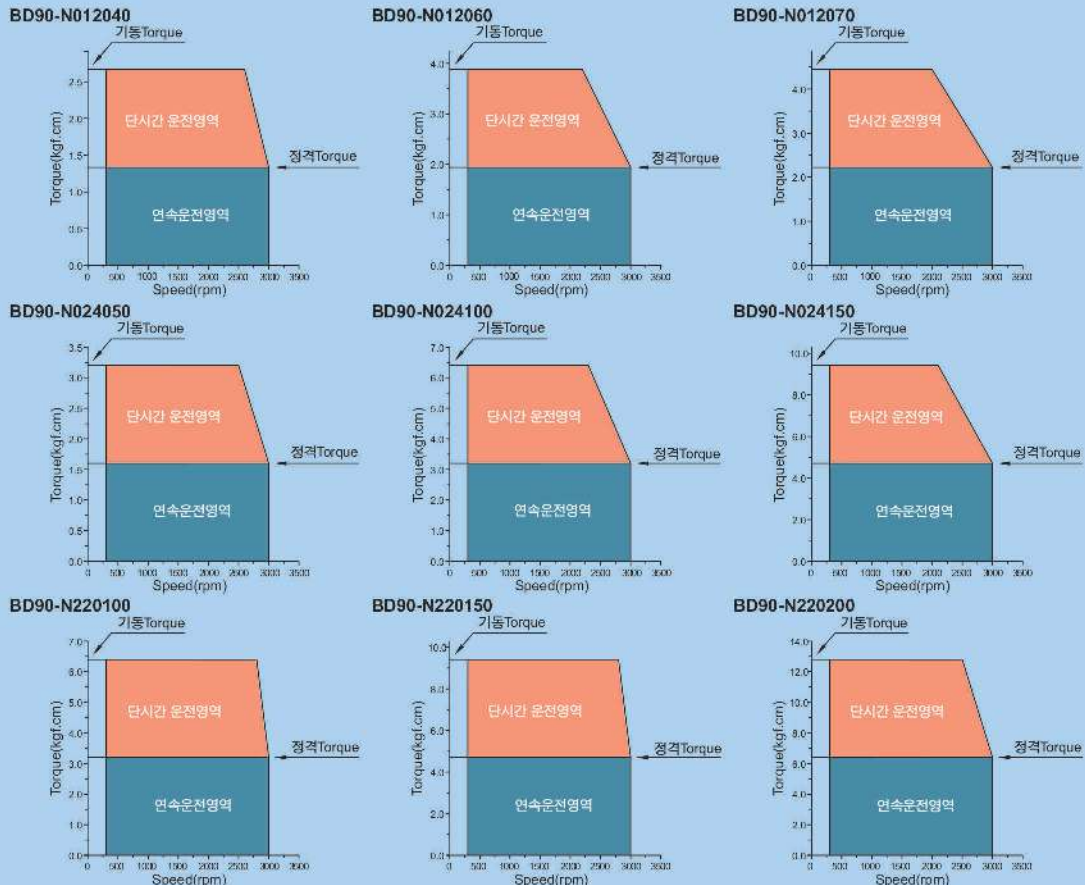
### Specifications

MODEL		BD90								
		N012040	N012060	N012070	N024050	N024100	N024150	N220100	N220150	N220200
Rated Voltage	V	12			24			220		
Rated Output	W	40	60	70	50	100	150	100	150	200
Rated Current	A	5.8	8.5	10	3.0	5.6	8.1	1.0	1.6	2.1
Rated Speed	rpm	3000								
Rated Torque	kgf-cm	1.3	1.9	2.2	1.6	3.2	4.8	3.2	4.8	6.3
Weight	kg	2.1	2.3	2.5	2.1	2.3	2.5	2.1	2.3	2.5
Applicable Drive		SBDM 10A			SBDM 05A	SBDM 10A	SBDM 25A	<input type="checkbox"/> SBDSMA 02A <input type="checkbox"/> SBDSMI 03D <input type="checkbox"/> SBDSMS 03D	<input type="checkbox"/> SBDSMI 03D <input type="checkbox"/> SBDSMS 03D	

☒ Before placing an order, consult with manufacturer and place of purchase.

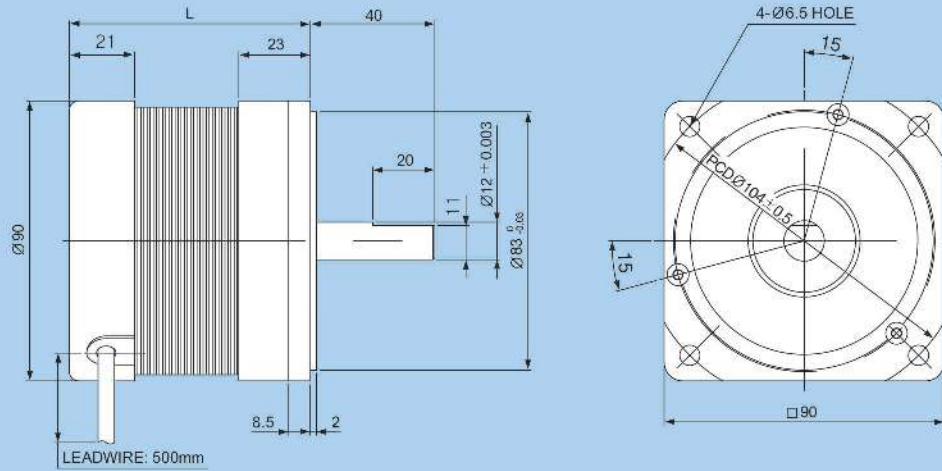
▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Speed-Torque Curve



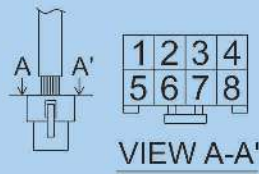
**Dimension**

☞ 밀폐형 SPEC 별도 협의 바랍니다.



CONNECTOR(5557-8)

CONNECTOR  
: MOLEX 5557-08  
(SBDM-05A)

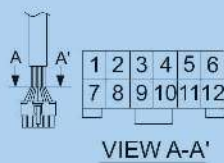


PIN No.	Cable Color	LeadWire	Remark
1	ORANGE	AWG 24	Vcc
2	RED	AWG 20	U
3	YELLOW	AWG 20	V
4	BLUE	AWG 20	W
5	BLACK	AWG 24	GND
6	WHITE	AWG 24	Ilu
7	GREEN	AWG 24	Hv
8	BROWN	AWG 24	Hw

CONNECTOR(5557-12)

PIN No.	Cable Color	LeadWire	Remark
1	BLUE	AWG 20	W
2			
3			
4	BROWN	AWG 24	Ihw
5	GREEN	AWG 24	Ihv
6	WHITE	AWG 24	Ilu
7	YELLOW	AWG 20	V
8	RED	AWG 20	U
9	GRN/YFL	AWG20	SHIELD
10			
11	ORANGE	AWG 24	Vcc
12	BLACK	AWG 24	GND

CONNECTOR  
: MOLEX 5557-12  
(AC 견원용)



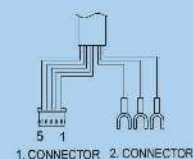
1. CONNECTOR(5264-05)

PIN No.	Cable Color	LeadWire	Remark
1	WHITE	AWG 24	Hu
2	GREEN	AWG 24	Hv
3	BROWN	AWG 24	Hw
4	BLACK	AWG 24	GND
5	ORANGE	AWG 24	Vcc

2. CONNECTOR

PIN No.	Cable Color	LeadWire	Remark
1	RED	AWG 16	U
2	YELLOW	AWG 16	V
3	BLUE	AWG 16	W

CONNECTOR  
: MOLEX 5264-05  
(SBDM-10A/25A)



L	MODEL
57.5	N012040 / N024050 / N220100
67.5	N012060 / N024100 / N220150
77.5	N012070 / N024150 / N220200



# BLDC90 SERIES

## BK90 (고출력형)

- ◆ □90mm
- ◆ 12V/24V/220V
- ◆ 100W/120W/150W/200W/250W/300W/400W/500W/600W
- ◆ KEY TYPE SHAFT



### Specifications

MODEL		BK90 (고출력형)										
		S012100	S012120	S012150	S024200	S024250	S024300	S024400	S220300	S220400	S220500	S220600
Rated Voltage	V	12			24				220			
Rated Output	W	100	120	150	200	250	300	400	300	400	500	600
Rated Current	A	13.5	15.8	19.5	11.9	14.8	17.8	23.9	2.9	3.6	4.6	5.5
Rated Speed	rpm	3000										
Rated Torque	kgf-cm	3.2	3.9	4.8	6.3	7.9	9.5	13.3	9.5	13	16.2	19.5
Weight	kg	2.2	2.5	2.8	2.2	2.5	2.8	2.7	2.2	2.2	2.5	2.8
Applicable Drive		SBDM-25A					SBDM-10D		SBDSMD-05D			

The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Speed-Torque Curve

BK90-S012100



BK90-S012120



BK90-S012150



BK90-S024200



BK90-S024250



BK90-S024300



BK90-S024400



BK90-S220300



BK90-S220400



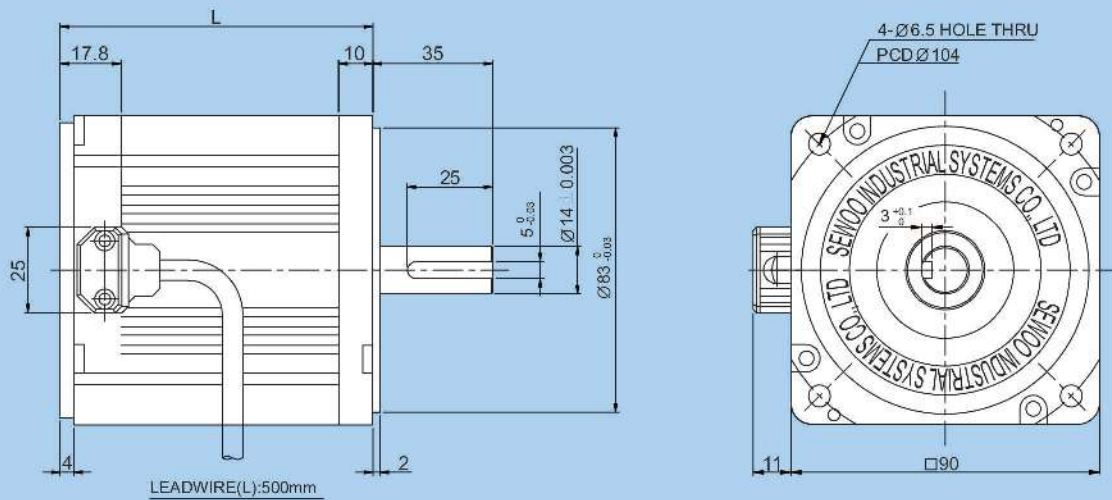
BK90-S220500



BK90-S220600



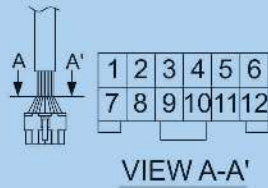
Dimension



CONNECTOR(5557-12)

PIN No.	Cable Color	LeadWire	Remark
1	BLUE	AWG 20	W
2			
3			
4	BROWN	AWG 24	Hw
5	GREEN	AWG 24	Hv
6	WHITE	AWG 24	Lu
7	YELLOW	AWG 20	V
8	RED	AWG 20	U
9	GRE/YEL	AWG20	SHIELD
10			
11	ORANGE	AWG 24	Vcc
12	BLACK	AWG 24	GND

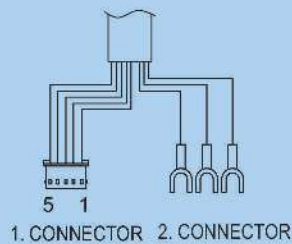
CONNECTOR  
: MOLEX 5557-12  
(AC 전위용)



1. CONNECTOR(5264-05)

PIN No.	Cable Color	LeadWire	Remark
1	WHITE	AWG 24	Hu
2	GREEN	AWG 24	Hv
3	BROWN	AWG 24	Hw
4	BLACK	AWG 24	GND
5	ORANGE	AWG 24	Vcc

CONNECTOR  
: MOLEX 5264 05  
(SRDM 25A)



2. CONNECTOR

PIN No.	Cable Color	LeadWire	Remark
1	RED	AWG 14	U
2	YELLOW	AWG 14	V
3	BLUE	AWG 14	W

◆ BK90-S024400 모델은 AWG 12 와이어 적용

L	MODEL
81.3	S220300 / S220400
91.3	S012100 / S024200 / S220500
101.3	S012120/S012150/S024250/S220600
111.3	S024300/S024400

# BLDC9S SERIES



## BD9S

- ◆ □90mm
- ◆ 24V/220V
- ◆ 100W/150W/200W/250W/350W
- ◆ D-CUT, GEAR TYPE SHAFT

### Specifications

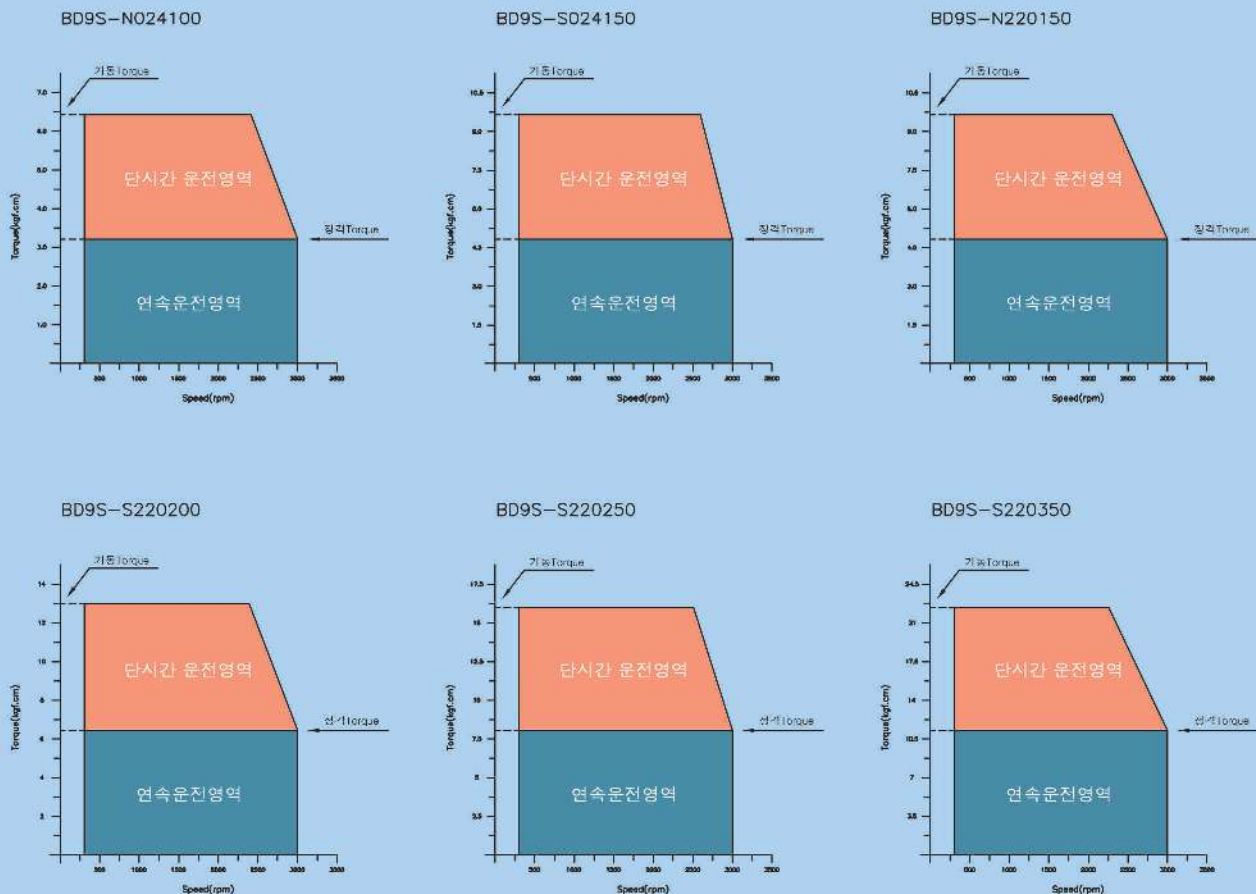
※ 12SLOT 10POLES 형식의 모터.

MODEL		BD9S					
		N024100	S024150	N220150	S220200	S220250	S220350
Rated Voltage	V	24			220		
Rated Output	W	100	150	150	200	250	350
Rated Current	A	6.1	10	7	7.3	7.8	3.5
Rated Speed	rpm	3000					
Rated Torque	kgf-cm	3.2	4.8	4.8	6.5	8.1	11.1
Weight	kg	2.2	2.2	2.2	2.2	2.4	2.4
Applicable Drive		SBDM 10A	SBDM 25A	SBDSMI 03D SBDSMS 03D			SBDSMD 05D

☞ Before placing an order, consult with manufacturer and place of purchase.

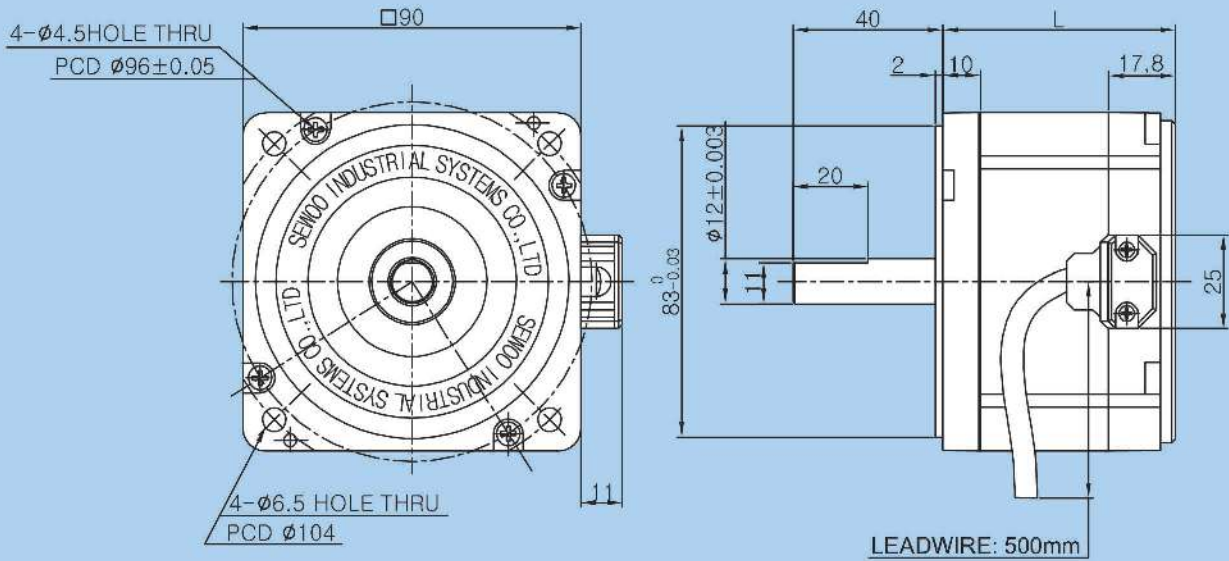
The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Speed-Torque Curve



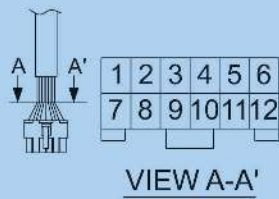


**Dimension**



CONNECTOR(5557-12)

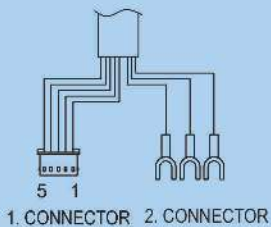
CONNECTOR  
: MOLEX5557-12  
(AC POWER용)



PIN No.	Cable Color	LeadWire	Remark
1	BI UE	AWG 20	W
2			
3			
4	BROWN	AWG 24	Ilw
5	GRFN	AWG 24	Ilv
6	WHITE	AWG 24	Hu
7	YELLOW	AWG 20	V
8	RED	AWG 20	U
9	GR/YG	AWG 20	SHIELD
10			
11	ORNG	AWG 24	Vcc
12	BLACK	AWG 24	GND

1. CONNECTOR(5264-05)

CONNECTOR  
: MOLEX 5264-05  
(SBDM 10A/25A)



PIN No.	Cable Color	LeadWire	Remark
1	WHITE	AWG 24	Ilv
2	GRFN	AWG 24	Ilv
3	BROWN	AWG 24	Ilw
4	BLACK	AWG 24	GND
5	ORNG	AWG 24	Vcc

2. CONNECTOR

PIN No.	Cable Color	LeadWire	Remark
1	RED	AWG 14	U
2	YELLOW	AWG 14	V
3	BLUE	AWG 14	W

L	MODEL
62	N024100 / S024150 / N220150 / S220200
74	S220250 / S220350

# BLDC 100 SERIES

## BK100

- ◆ □100mm
- ◆ 220V
- ◆ 750W/1000W
- ◆ KEY TYPE SHAFT



### Specifications

MODEL		BK100			
		BK100-S220750		BK100-S2201000	
Rated Voltage	V	220			
Rated Output	W	750		1000	
Rated Current*	Arms	3.6	3.4	4.13	4.57
Rated Speed	r/min	2000	3000	2000	3000
Rated Torque	kgf-cm	36.7	24.4	48	33
Weight	kg	4.5	4.8	5.5	5.5
Applicable Drive		BX 15000A / SBDSMS 01D / MDA1K			

The specifications above are subject to change for enhancement of product performance, Without any prior notice

\* Rated current is the average value of each phase current

### Speed-Torque Curve

**BK100-S220750(2000)**



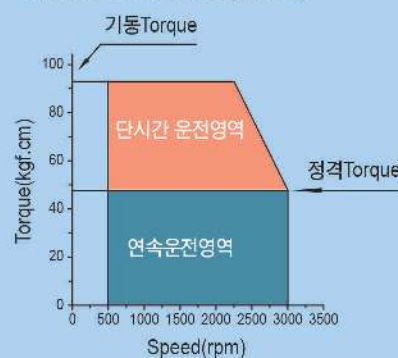
**BK100-S220750(3000)**



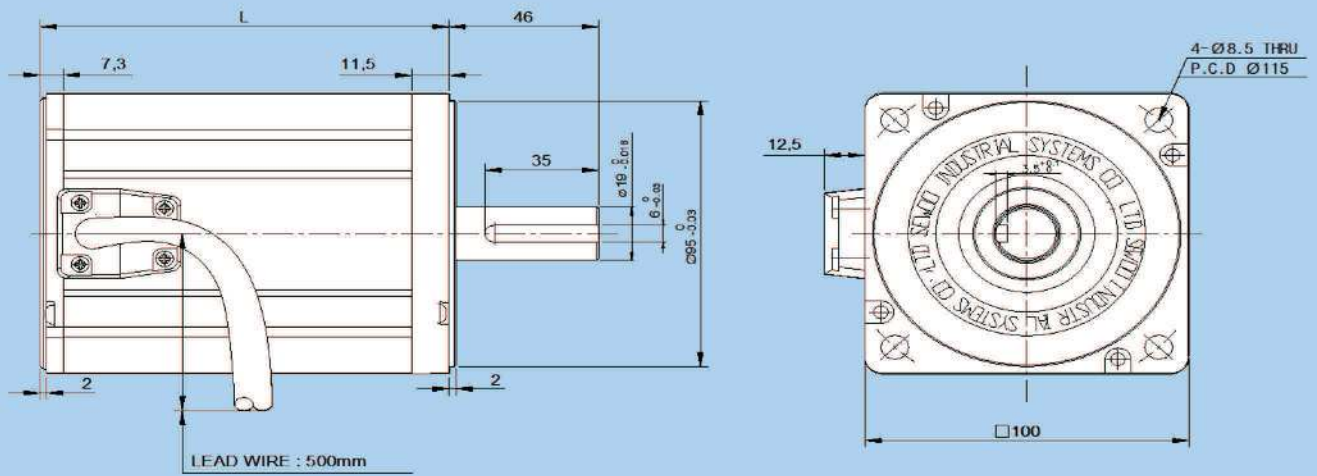
**BK100-S2201000(2000)**



**BK100-S2201000(3000)**



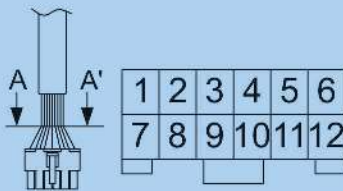
**Dimension**



- The Dimension above are subject to change for enhancement of product performance, Without any prior notice

**CONNECTOR(5557-12)**

CONNECTOR  
: MOLEX5557-12  
(AC POWER)



**VIEW A-A'**

PIN No.	Cable Color	LeadWire	Remark
1	BLUE	AWG 16	W
2			
3			
4	BROWN	AWG 24	Hw
5	GREEN	AWG 24	llv
6	WHITE	AWG 24	llu
7	YELLOW	AWG 16	V
8	RED	AWG 16	U
9			
10			
11	ORANGE	AWG 24	Vcc
12	BLACK	AWG 24	GND

L	MODEL
136	S220750(2000, 3000)
161	S2201000(2000, 3000)



# BLDC60 SERIES

## BG60

- ◆ □60mm
- ◆ 12V/24V/220V
- ◆ 10W/15W/20W/40W/50W/60W/80W
- ◆ GEARED TYPE SHAFT



### Specifications

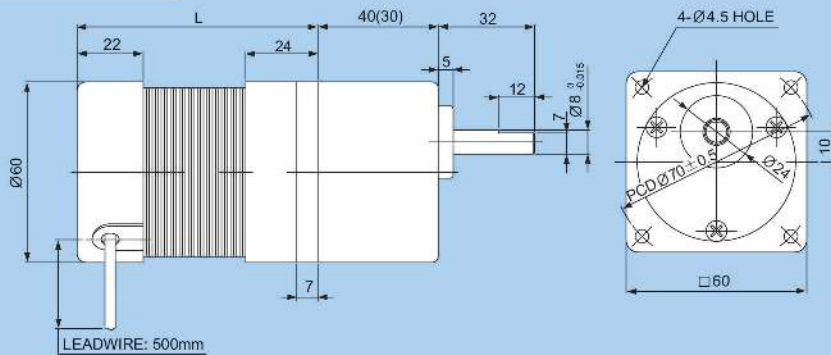
MODEL		BG60								
		N012010	N012015	N012020	N024020	N024040	N024050	N220040	N220060	N220080
Rated Voltage	V	12			24			220		
Rated Output	W	10	15	20	20	40	50	40	60	80
Rated Current	A	1.4	2.1	2.8	1.4	2.3	3.2	0.7	0.9	1.1
Rated Speed	rpm	*15~1000								
Rated Torque	kgf-cm	0.9~30	1.4~30	1.8~30	1.8~30	3.8~30	4.7~30	3.8~30	5.7~30	7.7~30
Weight	kg	0.8	0.9	1.0	0.8	0.9	1.0	0.8	0.9	1.0
Applicable Drive		SBDM-05A						<input type="checkbox"/> SBDSMA-02A <input type="checkbox"/> SBDSMI-03D <input type="checkbox"/> SBDSMS-03D		

☐ Before placing an order, consult with manufacturer and place of purchase.

\* The velocity depends on the rate of the reduction gear.

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



### GEAR HEAD SIZE

GEAR RATIO	SIZE
3 / 1 ~ 18 / 1	30
20 / 1 ~ 200 / 1	40

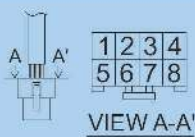
### CONNECTOR(5557-8)

PIN No.	Cable Color	LeadWire	Remark
1	ORANGE	AWG 24	Vcc
2	RED	AWG 20	U
3	YELLOW	AWG 20	V
4	BLUE	AWG 20	W
5	BLACK	AWG 24	GND
6	WHITE	AWG 24	Ilu
7	GREEN	AWG 24	Ilv
8	BROWN	AWG 24	Hw

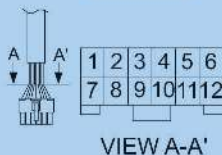
### CONNECTOR(5557-12)

PIN No.	Cable Color	LeadWire	Remark
1	BLUE	AWG 20	W
2			
3			
4	BROWN	AWG 24	Ihw
5	GREEN	AWG 24	Ilv
6	WHITE	AWG 24	Ilu
7	YELLOW	AWG 20	V
8	RED	AWG 20	U
9	GRN/YEL	AWG 20	SHIELD
10			
11	ORANGE	AWG 24	Vcc
12	BLACK	AWG 24	GND

CONNECTOR  
: MOLEX 5557-08  
(SBDM 05A)



CONNECTOR  
: MOLEX 5557-12  
(AC 권선용)



L	MODEL
60	N012010 / N024020 / N220040
70	N012015 / N024040 / N220060
80	N012020 / N024050 / N220080

# BLDC80 SERIES

## BG80

- ◆ □80mm
- ◆ 12V/24V/220V
- ◆ 25W/40W/60W/80W/100W
- ◆ GEARED TYPE SHAFT

밀폐형



기본형

### Specifications

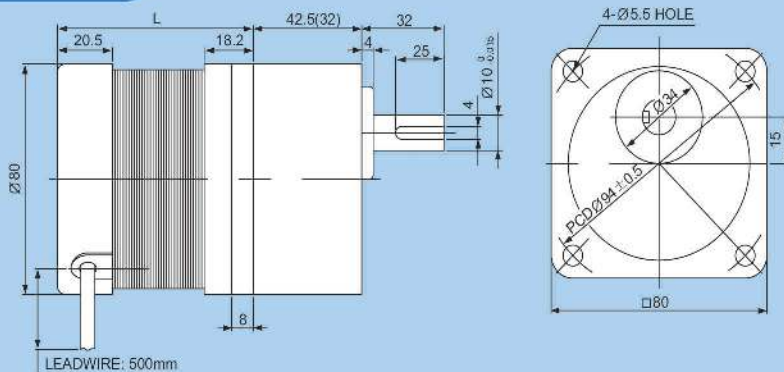
MODEL	BG80										
	N012025	N012040	N012060	N024040	N024060	N024080	N220060	N220080	N220100		
Rated Voltage	V	12			24			220			
Rated Output	W	25	40	60	40	60	80	60	80	100	
Rated Current	A	3.0	4.5	7.0	7.1	3.1	4.7	0.7	0.9	1.1	
Rated Speed	rpm	*15~1000									
Rated Torque	kgf-cm	2.4~80	3.8~80	5.8~80	3.8~80	5.7~80	7.6~30	5.7~80	7.6~80	9.5~80	
Weight	kg	1.9	2.0	2.1	1.9	2.0	2.1	1.9	2.0	2.1	
Applicable Drive		SBDM-05A	SBDM-10A		SBDM-05A		SBDM-10A	☐ SBDSMA-02A ☐ SBDSMI-03D SBDSMS-03D			

☐ Before placing an order, consult with manufacturer and place of purchase.

\* The velocity depends on the rate of the reduction gear.

The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



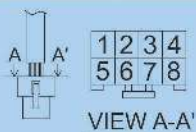
### GEAR HEAD SIZE

GEAR RATIO	SIZE
3 / 1 ~ 18 / 1	32
20 / 1 ~ 200 / 1	42.5

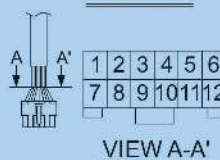
#### CONNECTOR(5557-8)

PIN No.	Cable Color	LeadWire	Remark
1	ORANGE	AWG 24	Vcc
2	RED	AWG 20	U
3	YELLOW	AWG 20	V
4	BLUE	AWG 20	W
5	BLACK	AWG 24	GND
6	WHITE	AWG 24	Ilu
7	GREEN	AWG 24	Hv
8	BROWN	AWG 24	Hw

CONNECTOR : MOLEX 5557-08 (SBDM 05A)



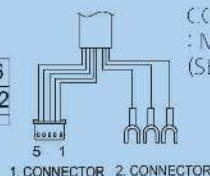
CONNECTOR : MOLEX 5557-12 (AC 전원용)



#### CONNECTOR(5557-12)

PIN No.	Cable Color	LeadWire	Remark
1	BLUE	AWG 20	W
2			
3			
4	BROWN	AWG 24	Ilw
5	GREEN	AWG 24	Ilv
6	WHITE	AWG 24	Ilu
7	YELLOW	AWG 20	V
8	RED	AWG 20	U
9	GRE/YEL	AWG 20	SHIELD
10			
11	ORANGE	AWG 24	Vcc
12	BLACK	AWG 24	GND

CONNECTOR : MOLEX 5264-05 (SBDM10A)



#### 2. CONNECTOR

PIN No.	Cable Color	LeadWire	Remark
1	RED	AWG 16	U
2	YELLOW	AWG 16	V
3	BLUE	AWG 16	W

#### 1. CONNECTOR(5264-05)

PIN No.	Cable Color	LeadWire	Remark
1	WHITE	AWG 24	Hu
2	GREEN	AWG 24	Hv
3	BROWN	AWG 24	Hw
4	BLACK	AWG 24	GND
5	ORANGE	AWG 24	Vcc

L	MODEL
52.7	N012025 / N024040 / N220060
62.7	N012040 / N024060 / N220080
72.7	N012060 / N024080 / N220100



# BLDC90 SERIES

## BG90 (강력형)

- ◆ □90mm
- ◆ 12V/24V/220V
- ◆ 40W/50W/60W/70W/100W/150W/200W
- ◆ GEARED TYPE SHAFT

밀폐형



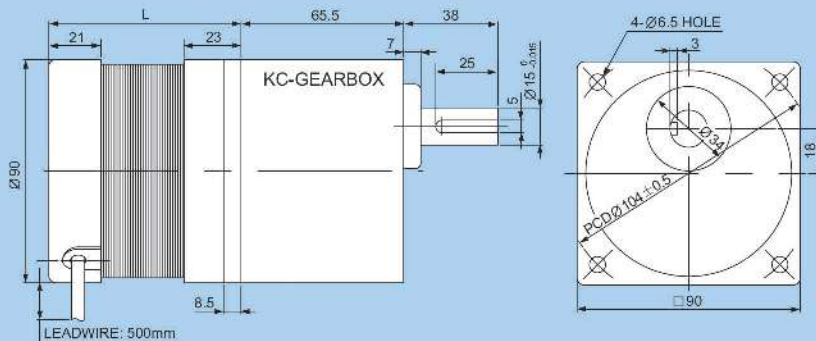
기본형

### Specifications

MODEL	BG90 (강력형)								
	N012040	N012060	N012070	N024050	N024100	N024150	N220100	N220150	
Rated Voltage	V	12			24			220	
Rated Output	W	40	60	70	50	100	150	100	150
Rated Current	A	5.8	8.5	10	3.0	5.6	8.1	1.0	1.6
Rated Speed	rpm	*15~1000							
Rated Torque	kgf-cm	3.1~200	4.6~200	5.4~200	3.9~200	7.7~200	11.6~200	7.7~200	11.6~200
Weight	kg	3.1	3.3	3.5	3.1	3.3	3.5	3.1	3.3
Applicable Drive		SBDM 10A			SBDM-05A	SBDM-10A	SBDM-25A	<input type="checkbox"/> SBDSMA-02A <input type="checkbox"/> SBDSMI-03D <input type="checkbox"/> SBDSMS-03D	<input type="checkbox"/> SBDSMI-03D <input type="checkbox"/> SBDSMS-03D

☐ Before placing an order, consult with manufacturer and place of purchase. \* The velocity depends on the rate of the reduction gear.  
 The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



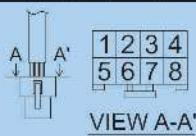
### GEAR HEAD SIZE

GEAR RATIO	SIZE
3 / 1 ~ 200 / 1	65.5

### CONNECTOR(5557-8)

PIN No.	Cable Color	LeadWire	Remark
1	ORANGE	AWG 24	Vcc
2	RED	AWG 20	U
3	YELLOW	AWG 20	V
4	BLUE	AWG 20	W
5	BLACK	AWG 24	GND
6	WHITE	AWG 24	Ilu
7	GREEN	AWG 24	Ilv
8	BROWN	AWG 24	Hw

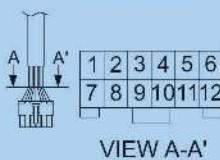
CONNECTOR : MOLEX 5557-08 (SBDM 05A)



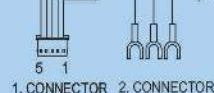
### CONNECTOR(5557-12)

PIN No.	Cable Color	LeadWire	Remark
1	BLUE	AWG 20	W
2			
3			
4	BROWN	AWG 24	Ilw
5	GREEN	AWG 24	Ilv
6	WHITE	AWG 24	Ilu
7	YELLOW	AWG 20	V
8	RED	AWG 20	U
9	GR/YE	AWG20	SHIELD
10			
11	ORANGE	AWG 24	Vcc
12	BLACK	AWG 24	GND

CONNECTOR : MOLEX 5557-12 (AC 권위용)



CONNECTOR : MOLEX 5264-05 (SBDM 10A/25A)



### 2. CONNECTOR

PIN No.	Cable Color	LeadWire	Remark
1	RED	AWG 16	U
2	YELLOW	AWG 16	V
3	BLUE	AWG 16	W

### 1. CONNECTOR(5264-05)

PIN No.	Cable Color	LeadWire	Remark
1	WHITE	AWG 24	Hu
2	GREEN	AWG 24	Hv
3	BROWN	AWG 24	Hw
4	BLACK	AWG 24	GND
5	ORANGE	AWG 24	Vcc

L	MODEL
57.5	N012040 / N024050 / N220100
67.5	N012060 / N024100 / N220150
77.5	N012070 / N024150



# BLDC90 SERIES

## BG90 (초강력형)

- ◆ □90mm
- ◆ 24V/220V
- ◆ 40W/50W/60W/70W/100W/150W/200W
- ◆ GEARED TYPE SHAFT

밀폐형



기본형

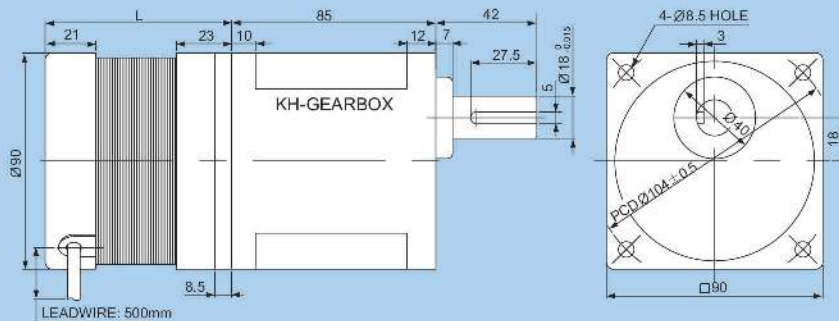
### Specifications

MODEL		BG90 (초강력형)		
		N024150	N220150	N220200
Rated Voltage	V	24	220	
Rated Output	W	150	150	200
Rated Current	A	8.1	1.6	2.1
Rated Speed	rpm	*15~1000		
Rated Torque	kgf-cm	11.6~300	11.6~300	15.4~300
Weight	kg	3.8	3.6	3.8
Applicable Drive		SBDM 25A	□ SBDSMI 03D SBDSMS 03D	

□ Before placing an order, consult with manufacturer and place of purchase. \* The velocity depends on the rate of the reduction gear.

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



### GEAR HEAD SIZE

GEAR RATIO	SIZE
3 / 1 ~ 200 / 1	85

### CONNECTOR(5557-12)

PIN No.	Cable Color	LeadWire	Remark
1	BLUE	AWG 20	W
2			
3			
4	BROWN	AWG 24	I lw
5	GREEN	AWG 24	I lv
6	WHITE	AWG 24	I lu
7	YELLOW	AWG 20	V
8	RED	AWG 20	U
9	GRN/YFL	AWG20	SHIELD
10			
11	ORANGF	AWG 24	Vcc
12	BLACK	AWG 24	GND

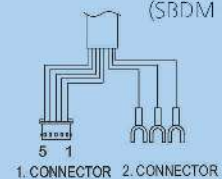
### 2. CONNECTOR

PIN No.	Cable Color	LeadWire	Remark
1	RED	AWG 16	U
2	YELLOW	AWG 16	V
3	BLUE	AWG 16	W

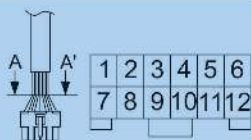
### 1. CONNECTOR(5264-05)

PIN No.	Cable Color	LeadWire	Remark
1	WHITE	AWG 24	Hu
2	GREEN	AWG 24	Hv
3	BROWN	AWG 24	Hw
4	BLACK	AWG 24	GND
5	ORANGF	AWG 24	Vcc

CONNECTOR : MOLEX 5264-05 (SBDM 25A)



CONNECTOR : MOLEX 5557-12 (AC 사용용)



VIEW A-A'

L	MODEL
67.5	N220150
77.5	N024150 / N220200





# BLDC DRIVER SERIES



## BLDC DRIVER

MODEL		적용 모터 사이즈	드라이버 적용 가능 최대출력
DC12V DC24V	SBDO-01	□42	~ 7W
	SBDM-05	□60 / □80	~ 50W
	SBDM-10	□80 / □90	~ 150W
	SBDM-25	□90	~ 300W
AC110V AC220V	SBDSMA-02	□60 / □80 / □90	~ 100W
	SBDSMI-03D	□60 / □80 / □90	~ 250W
	SBDSMS-03D	□60 / □80 / □90	~ 250W
	SBDSMD-05D	□90	~ 600W

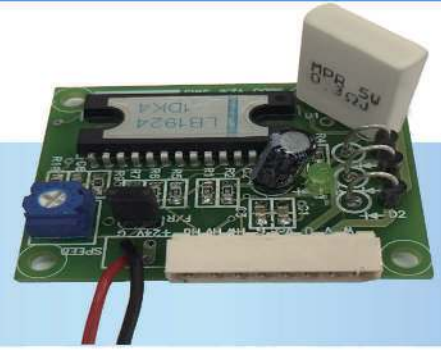


# BLDC MOTOR DRIVER

## MODEL : SBDO-01

\*Standard SBDO-01 does not have a case

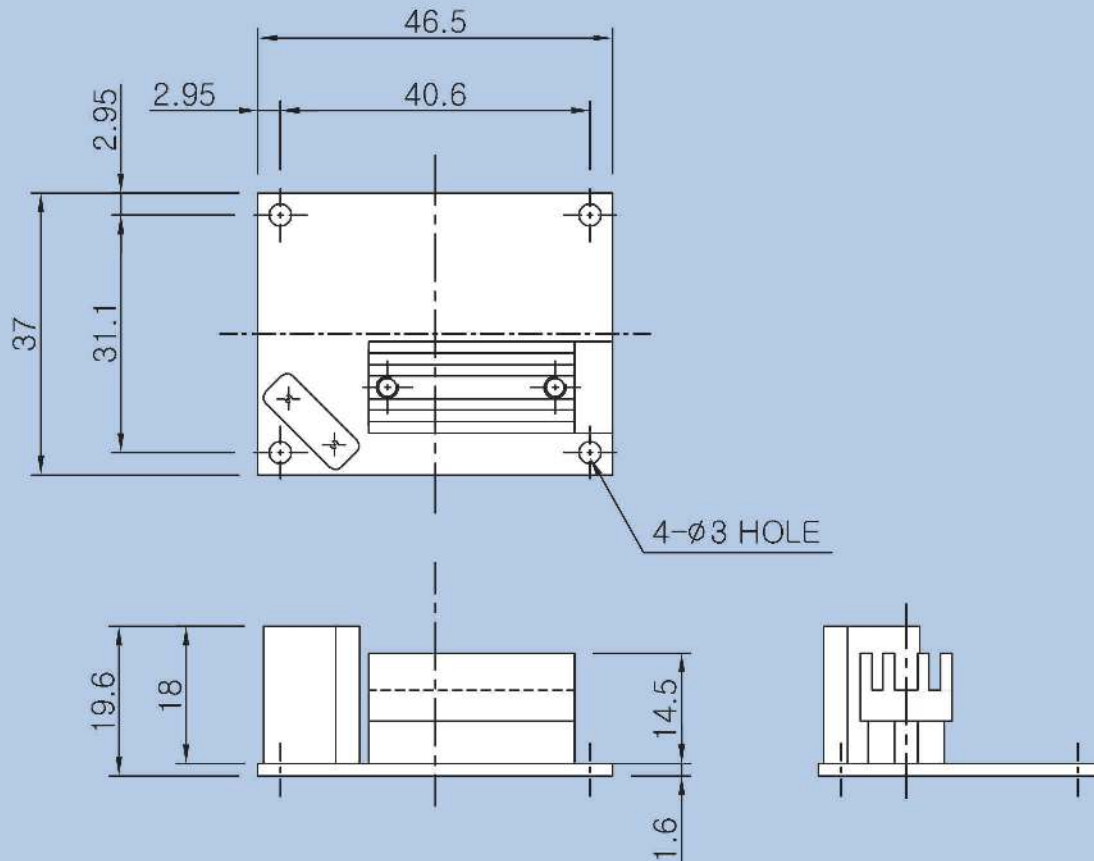
항목	내용
전원 입력 / 보호기능	DC 12~24V / 전류 1A 제한
적용 모터	24V 7W 이하
외형 사이즈	46.5 X 37 X 19.6



### 입 / 출력 신호

	명칭	색상	기능 설명	비고
전원IN	GND	흑색	Ground	
	VCC	적색	VCC 입력	DC 12~24V
볼륨	GND	가변저항	Ground	
	SPEED_IN		0~5V SPEED 입력 신호	
	DC 5V		DC 5V 출력	
PIN HEADER	GND	PIN HEADER 2P	Ground	PIN HEADER SOCKET으로 CW/CCW 변경
	CW/CCW		방향 명령 입력 신호	

### 외형 도면 / 크기



# BLDC MOTOR DRIVER

## MODEL : SBDM-05A

\*Standard SBDM-05A does not have a case



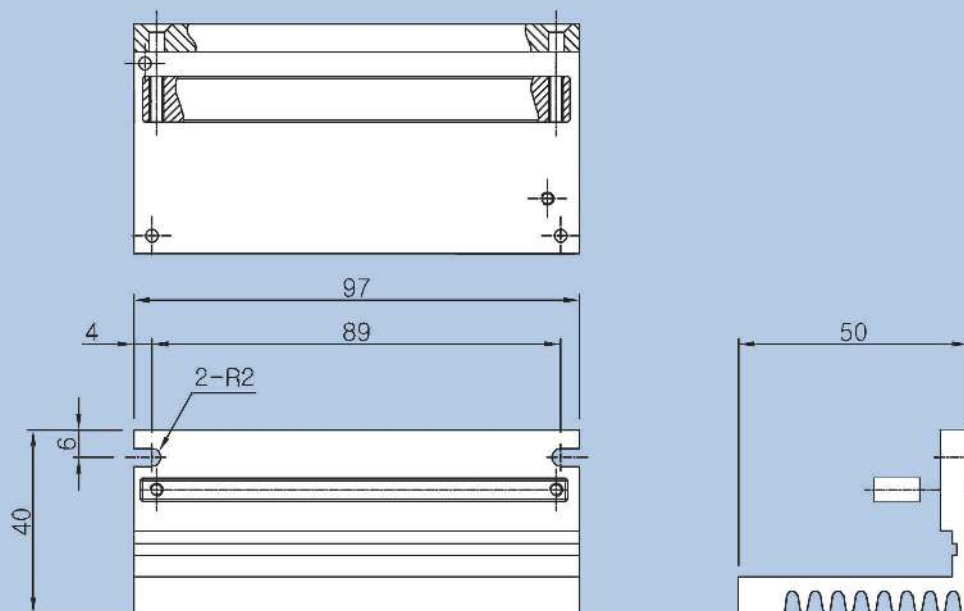
항목	내용
전원 입력 / 보호기능	DC 12~24V / 전류 5A 차단
직용 모터	24V 50W 이하
외형 사이즈	97 X 50 X 40

### 입 / 출력 신호

PIN	명칭	색상	기능 설명	비고
1	GND	흑색	Ground	
2	DIR_OUT	녹색	회전 방향 신호 출력	
3	ALM_OUT	자색	알람 상태 신호 출력	
4	SPEED_OUT	등색	모터 속도 펄스 출력	
5	ALM_RESET	회색	알람 에러 경지시 상태 리셋	*L : RESET 명령
6	CW/CCW	갈색	방향 명령 입력 신호	*H : CCW / L : CW
7	BRAKE	흰색	다이내믹 브레이크 입력 신호	*H : ON / L : OFF
8	RUN/STOP	분홍색	RUN / STOP 명령어 입력 신호	*H : STOP / L : RUN
9	GND	청색	Ground	
10	SPEED_IN	황색	0~5V SPEED 입력 신호	
11	DC 5V	적색	DC 5V 출력	

\*H : HIGH 신호 (GND 와 연결 안함) / L : LOW 신호 (GND와 연결)

### 외형 도면 / 크기



# BLDC MOTOR DRIVER

## MODEL : SBDM-10A / SBDM-25A

\*Case is optional

항목	내용
전원 입력 / 부하기능	DC 12~48V / 전류 10A, 25A 차단
적용 모터	24V 250W 이하
외형 사이즈	86.1 X 45 X 106

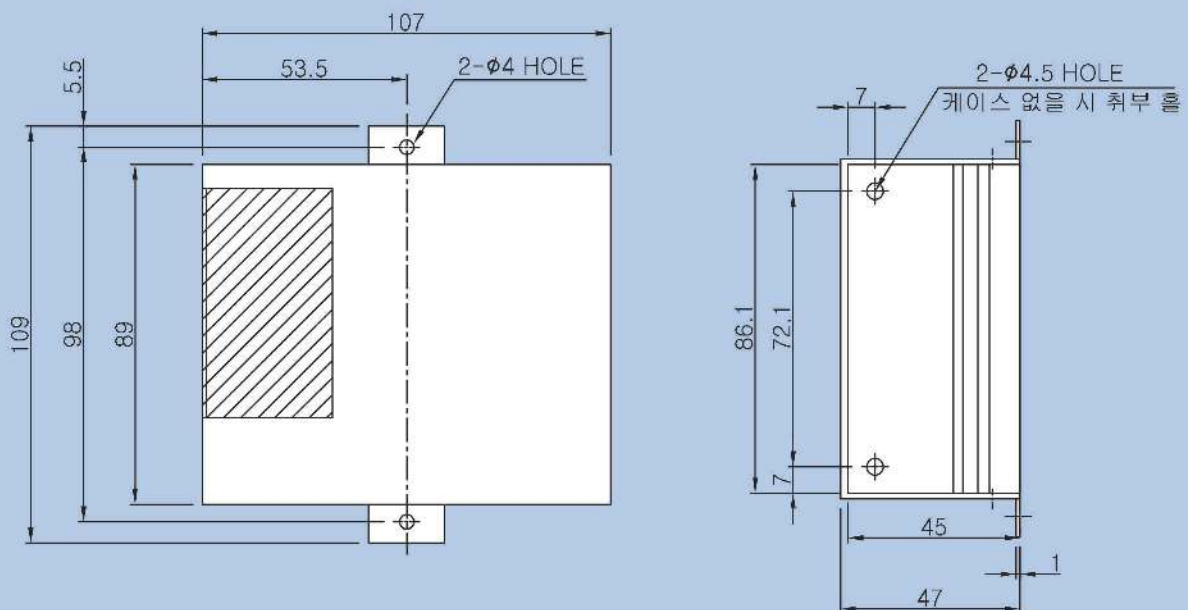


### 입 / 출력 신호

PIN	명칭	색상	기능 설명	비고
1	GND	흑색	Ground	
2	DIR_OUT	녹색	회전 방향 신호 출력	
3	ALM_OUT	자색	알람 상태 신호 출력	
4	SPEED_OUT	등색	모터 속도 펄스 출력	
5	ALM_RESET	회색	알람 에러 정지시 상태 리셋	*L : RESET 명령
6	CW/CCW	갈색	방향 명령 입력 신호	*H : CCW / L : CW
7	BRAKE	흰색	다이내믹 브레이크 입력 신호	*H : ON / L : OFF
8	RUN/STOP	분홍색	RUN / STOP 명령어 입력 신호	*H : STOP / L : RUN
9	GND	청색	Ground	
10	SPEED_IN	황색	0~5V SPEED 입력 신호	
11	DC 5V	적색	DC 5V 출력	

\*H : HIGH 신호 (GND와 연결 안함) / L : LOW 신호 (GND와 연결)

### 외형 도면 / 크기





# BLDC MOTOR DRIVER

## MODEL : SBDSMA-02A

\*Standard SBDSMA-02A have a case

항목	내용
전원 입력 / 보호기능	AC 220V / 전류 1.2A 차단
적용 모터	220V 100W 이하
외형 사이즈	100 X 60 X 106.5

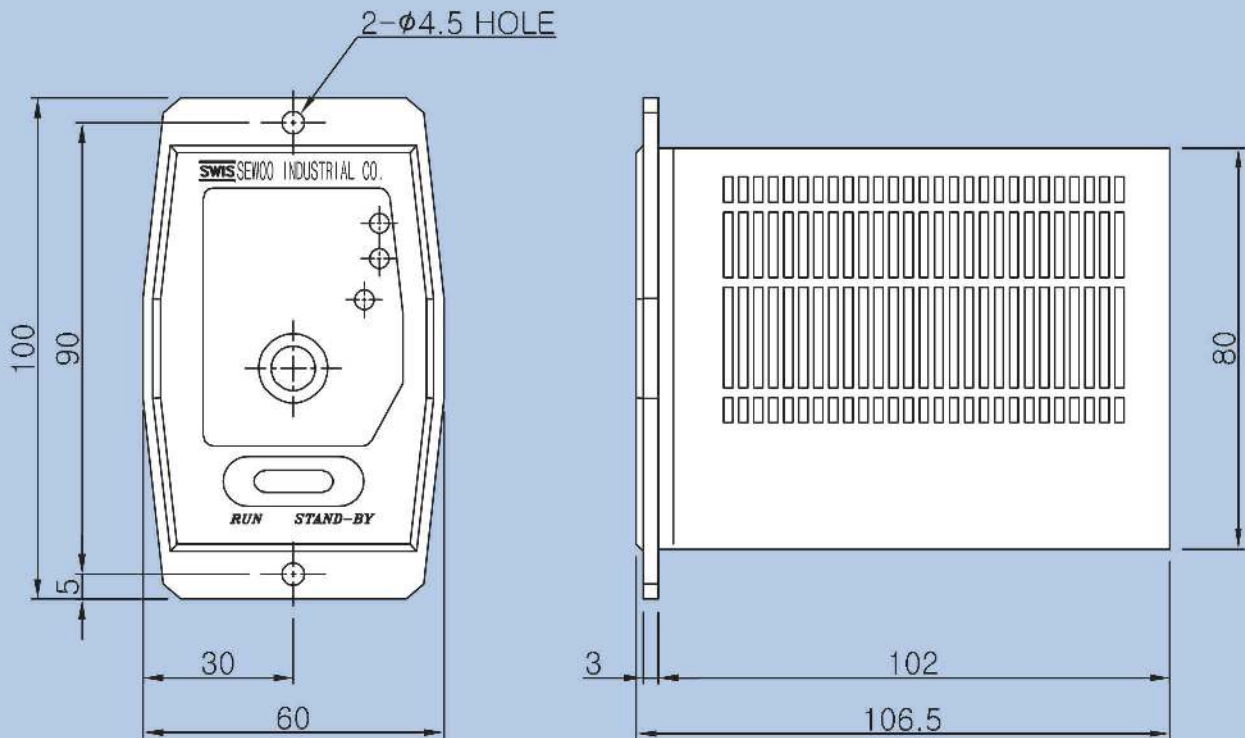


### 입 / 출력 신호

PIN	명칭		기능 설명	비고
1	ALM_OUT	BR-762EW-5P	알람 상태 신호 출력	Open-Collector
2	SPEED_OUT		모터 속도 펄스 출력	Open-Collector
3	CCW		CCW RUN 명령 입력 단자	*H: OFF / L : ON
4	COM		Ground	
5	CW		CW RUN 명령 입력 단자	*H: OFF / L : ON

\*COM단자 접촉 시 L(ON)

### 외형 도면 / 크기



# BLDC MOTOR DRIVER

## MODEL : SBDSMS-03D

\*Standard SBDSMS-03D have a case

항목	내용
전원 입력 / 보호기능	AC 220V / 전류 3A
적용 모터	220V 200W 이하
외형 사이즈	86.1 X 45 X 106

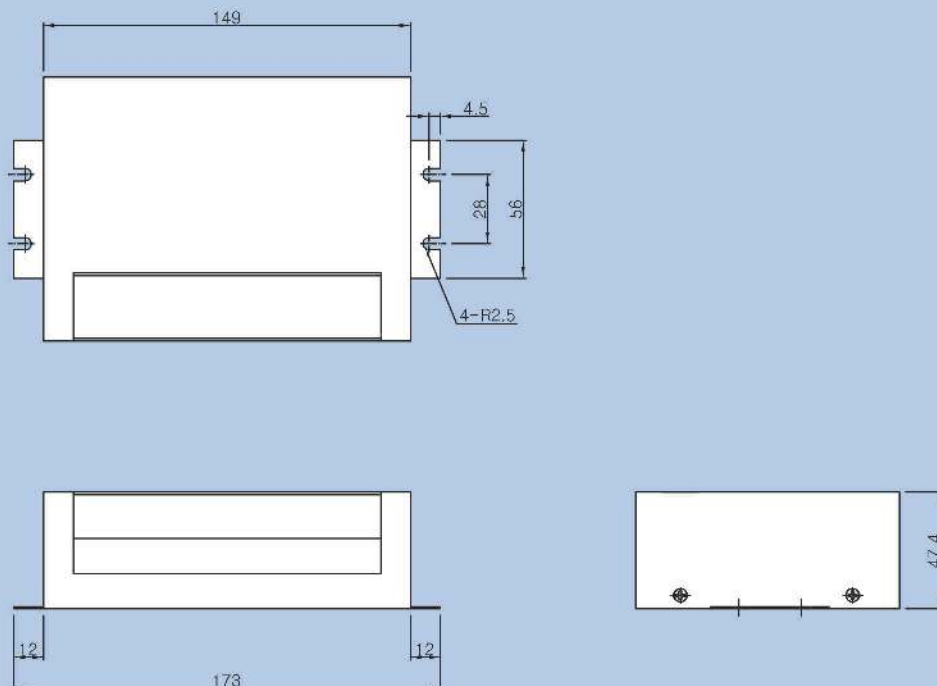


### 입 / 출력 신호

PIN	명칭	색상	기능 설명	비고
1	GND	흑색	Ground	
2	DIR_OUT	녹색	회전 방향 신호 출력	
3	ALM_OUT	자색	알람 상태 신호 출력	
4	SPEED_OUT	등색	모터 속도 펄스 출력	
5	ALM_RESET	회색	알람 에러 정지시 상태 리셋	*L : RESET 명령
6	CW/CCW	갈색	방향 명령 입력 신호	*H : CCW / L : CW
7	BRAKE	흰색	다이나믹 브레이크 입력 신호	*H : ON / L : OFF
8	RUN/STOP	분홍색	RUN / STOP 명령어 입력 신호	*H : STOP / L : RUN
9	GND	청색	Ground	
10	SPEED_IN	황색	0~5V SPEED 입력 신호	
11	DC 5V	적색	DC 5V 출력	

\*H : HIGH 신호 (GND와 연결 안함) / L : LOW 신호 (GND와 연결)

### 외형 도면 / 크기



# BLDC MOTOR DRIVER

## MODEL : SBDSMI-03D



\*Standard SBDSMI-03D have a case

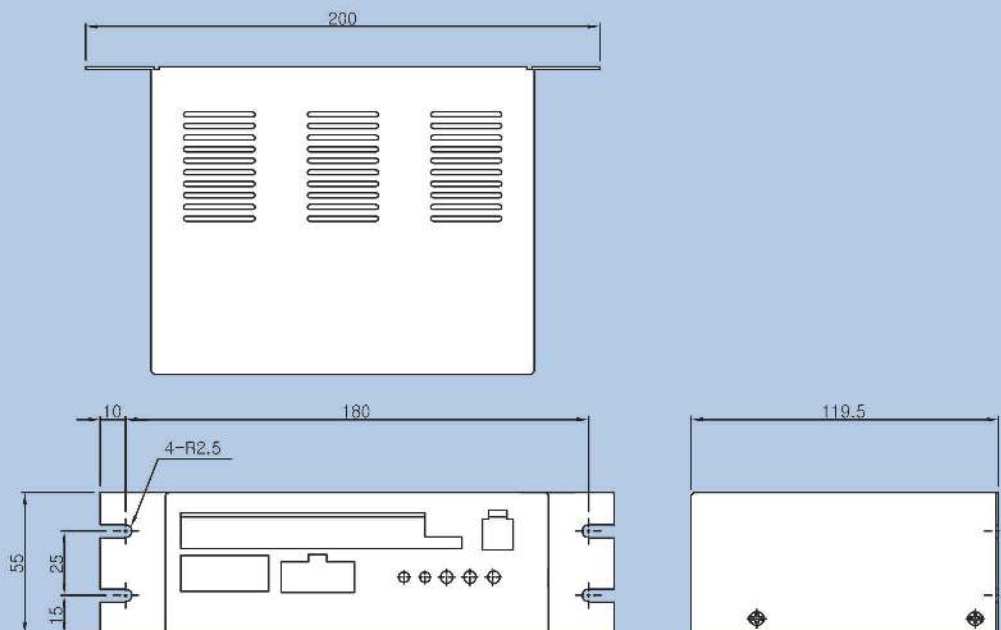
항목	내용
전원 입력 / 보호기능	AC 220V / 전류 3A 차단
적용 모터	220V 200W 이하
외형 사이즈	200 X 55 X 119.5

### 입 / 출력 신호

PIN	명칭		기능 설명	비고
1	INPUT_COM	BR-762ELC-12P	EXT. 선택 시의 출력신호 High Voltage 입력단자	0~24V
2	EXT. VR.		가변저항이 아닌 8번핀의 입력을 SPEED_INPUT으로 사용	*H : INT. VR. / L : EXT.
3	CW		CW RUN 명령	*H : STOP / L : RUN
4	CCW		CCW RUN 명령	*H : STOP / L : RUN
5	SLOW_DOWN		STOP시 SLOW_DOWN 기능을 사용	*H : OFF / L : ON
6	ALARM_RESET		알람 정지 시 RESET 기능을 사용	*L : RESET 명령
7	H		DC 5V 출력	
8	M		SPEED_INPUT (EXT. VR.)	
9	L		Ground	
10	GND		Ground	
11	SPEED_OUT		모터 속도 펄스 출력	Open-Collector
12	ALARM_OUT		알람 상태 신호 출력	Open-Collector

\*H : HIGH 신호 (GND 와 연결 안함) / L : LOW 신호 (GND와 연결)

### 외형 도면 / 크기





# BLDC MOTOR DRIVER

## MODEL : SBDSMD-05D

\*Standard SBDSMD-05D have a case

항목	내용
전원 입력 / 보호기능	AC 220V / 전류 5A, 7A 차단
적용 모터	220V 400W / 600W 이하
외형 사이즈	155 X 55 X 127.8

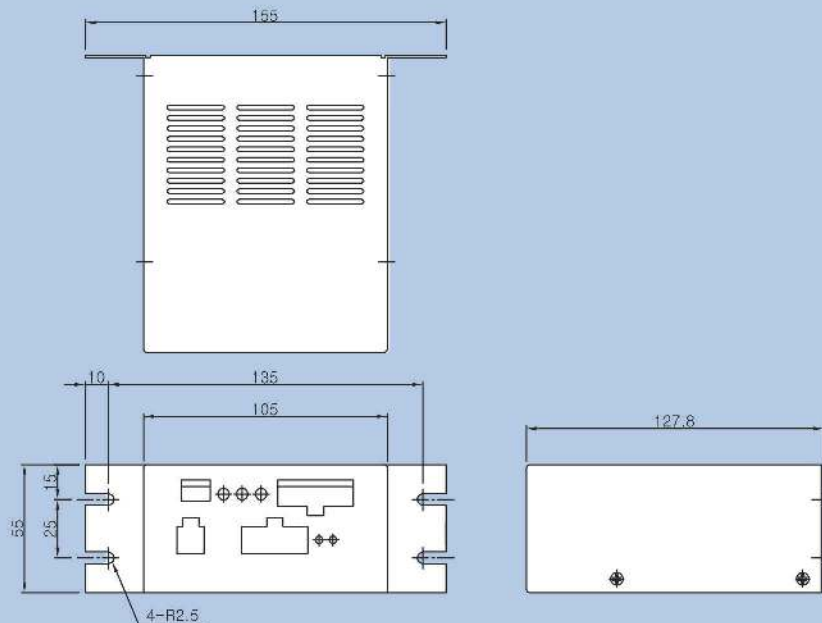


### 입 / 출력 신호

PIN	명칭	기능 설명	기능 설명	비고
1	GND	흑색		
2	DIR_OUT	녹색	회전 방향 신호 출력	Open-Collector
3	ALM_OUT	자색	알람 상태 신호 출력	Open-Collector
4	SPEED_OUT	등색	모터 속도 펄스 출력	Open-Collector
5	GND	청색	Ground	
6	SPEED_IN	황색	0~5V SPEED 입력 신호	
7	DC 5V	적색	DC 5V 출력	
8	N.C.			
9	CW/CCW	갈색	방향 명령 입력 신호	*H : CCW / L : CW
10	BRAKE	백색	다이내믹 브레이크 입력 신호	*H : ON / L : OFF
11	RUN/STOP	분홍색	RUN / STOP 명령어 입력 신호	*H : STOP / L : RUN
12	INT_SPEED	회색	내부 볼륨 SPEED 선택 기능 ON	*H : OFF / L : ON
13	ALM_RESET	청색	알람 에러 정지시 상태 리셋	*L : RESET 명령
14	N.C.			

\*H : HIGH 신호 (GND와 연결 안함) / L : LOW 신호 (GND와 연결)

### 외형 도면 / 크기



# BLDC MOTOR DRIVER



## MODEL : SBDM-40D

\*Standard SBDM-40D have a case

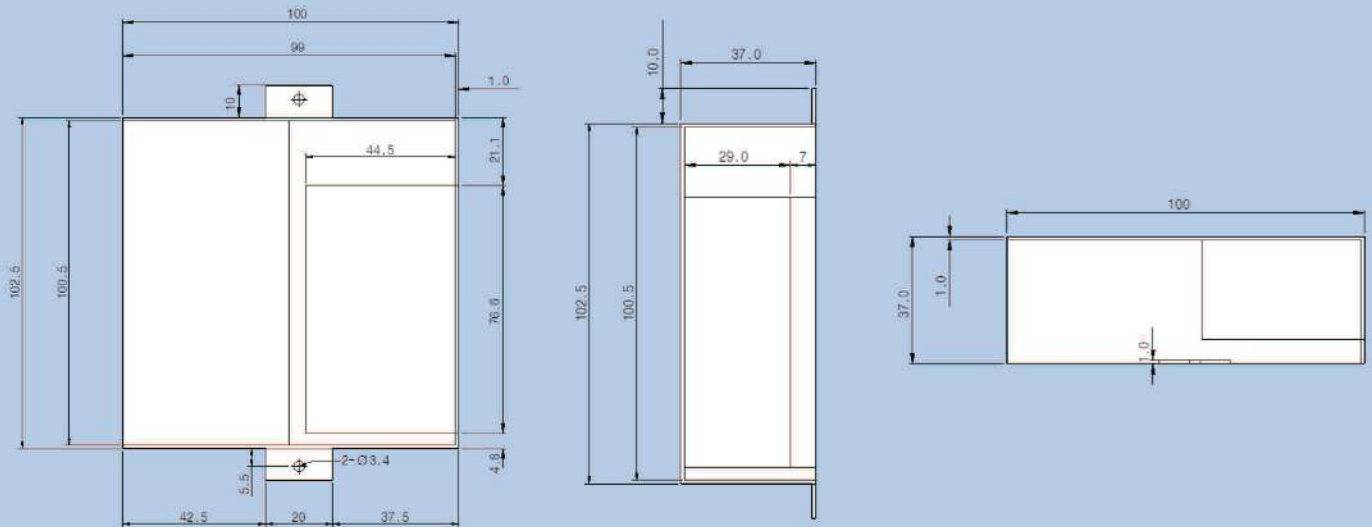
항목	내용
전원 입력 / 보호기능	DC 12~48V / 과전류 보호
적용 모터	24V 300W 이상
외형 사이즈	100 X 102.5 X 37

### 입 / 출력 신호

PIN	명칭	기능 설명	기능 설명	비고
1	GND	흑색	Ground	
2	DIR_OUT	녹색	회전 방향 신호 출력	
3	ALM_OUT	자색	알람 상태 신호 출력	
4	SPEED_OUT	등색	모터 속도 펄스 출력	
5	ALM_RESET	회색	알람 에러 정지시 상태 리셋	*L : RESET 명령
6	CW/CCW	갈색	방향 명령 입력 신호	*H : CCW / L : CW
7	BRAKE	백색	다이나믹 브레이크 입력 신호	*H : ON / L : OFF
8	RUN/STOP	분홍색	RUN / STOP 명령어 입력 신호	*H : STOP / L : RUN
9	GND	청색	Ground	
10	SPEED_IN	황색	0~3.3V SPEED 입력 신호	
11	DC 3.3V	적색	DC 5V 출력	

\*H : HIGH 신호 (GND와 연결 안함) / L : LOW 신호 (GND와 연결)

### 외형 도면 / 크기



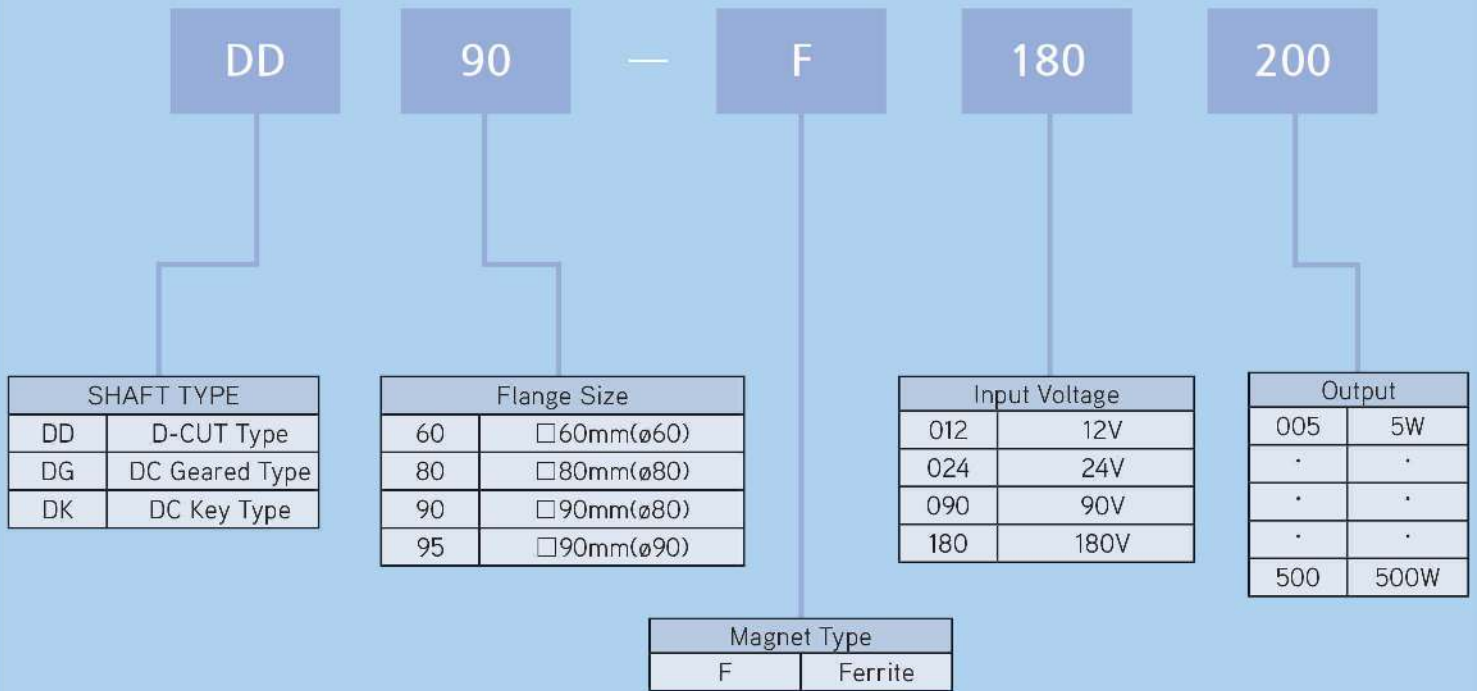
# DC MOTOR SERIES



DC MOTOR D-CUT TYPE  
DC MOTOR GEARED TYPE



# DC Motor Coding



# DC60 SERIES

## DD60

- ◆ □60mm
- ◆ 12V/24V/90V/180V
- ◆ 15W/30W/50W
- ◆ D-CUT TYPE SHAFT



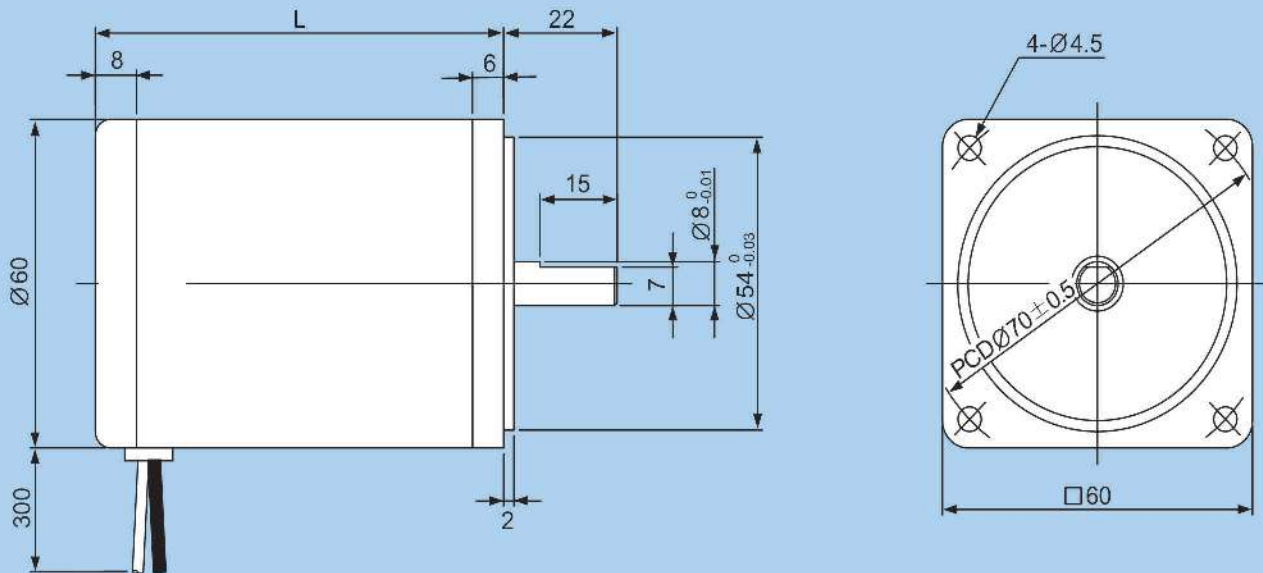
Unit : mm

### Specifications

MODEL		DD60										
		F012015	F012030	F024015	F024030	F024050	F090015	F090030	F090050	F180015	F180030	F180050
Rated Voltage	V	12		24			90			180		
Rated Output	W	15	30	15	30	50	15	30	50	15	30	50
Rated Current	A	1.8	3.5	0.9	1.8	3.0	0.2	0.5	0.8	0.1	0.2	0.4
Rated Speed	rpm	3000										
Rated Torque	kgf-cm	0.5	1.0	0.5	1.0	1.6	0.5	1.0	1.9	0.5	1.0	1.6
Weight	kg	0.8	1.2	0.7	1.0	1.2	0.7	0.8	1.2	0.8	1.0	1.2

The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



L	MODEL
79	F024015 / F090015
89	F012015 / F090030 / F180015
99	F024030 / F180030
109	F012030 / F024050 / F090050 / F180050

# DC60 SERIES

## DG60

- ◆ □60mm
- ◆ 12V/24V/90V/180V
- ◆ 15W/30W/50W
- ◆ GEARED TYPE SHAFT



### Specifications

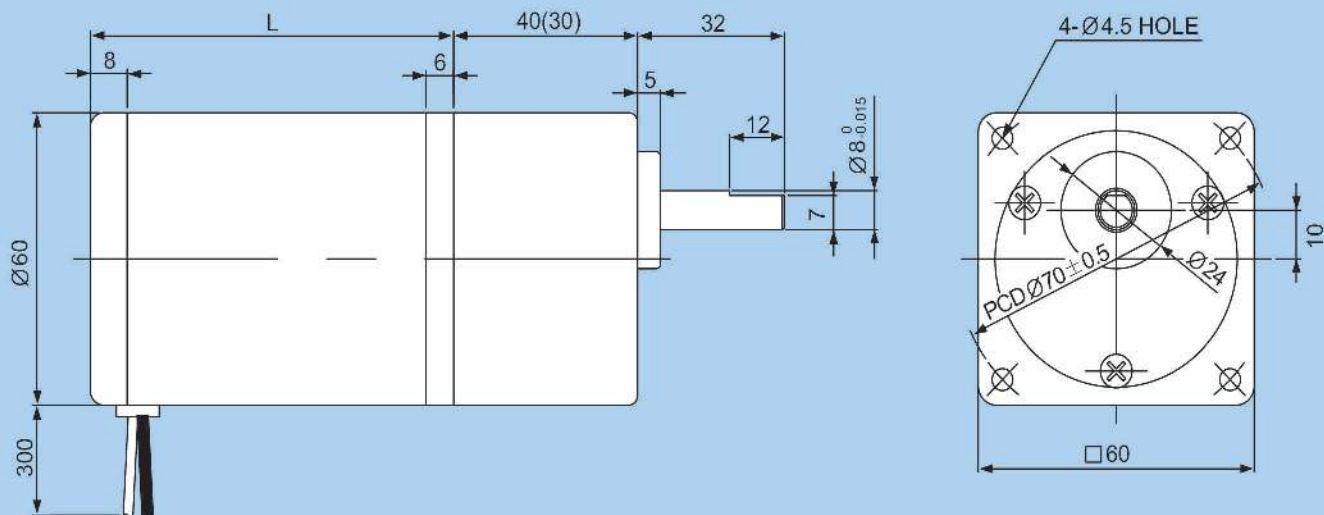
Unit : mm

MODEL		DG60										
		F012015	F012030	F024015	F024030	F024050	F090015	F090030	F090050	F180015	F180030	F180050
Rated Voltage	V	12		24			90			180		
Rated Output	W	15	30	15	30	50	15	30	50	15	30	50
Rated Current	A	1.8	3.5	0.9	1.8	3.0	0.2	0.5	0.8	0.1	0.2	0.4
Rated Speed	rpm	*15~1000										
Rated Torque	kgf-cm	1.2~30	2.4~30	1.2~30	2.4~30	3.9~30	1.2~30	2.4~30	3.9~30	1.2~30	2.4~30	3.9~30
Weight	kg	1.1	1.5	1.0	1.3	1.5	1.0	1.3	1.5	1.0	1.3	1.5

\* The velocity depends on the rate of the reduction gear.

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



### GEAR HEAD SIZE

GEAR RATIO	SIZE
3 / 1 ~ 18 / 1	30
20 / 1 ~ 200 / 1	40

L	MODEL
79	F024015 / F090015
89	F012015 / F090030 / F180015
99	F024030 / F180030
109	F012030 / F024050 / F090050 / F180050



# DC80 SERIES

## DD80

- ◆ □80mm
- ◆ 12V/24V/90V/180V
- ◆ 25W/30W/40W/60W
- ◆ D-CUT TYPE SHAFT



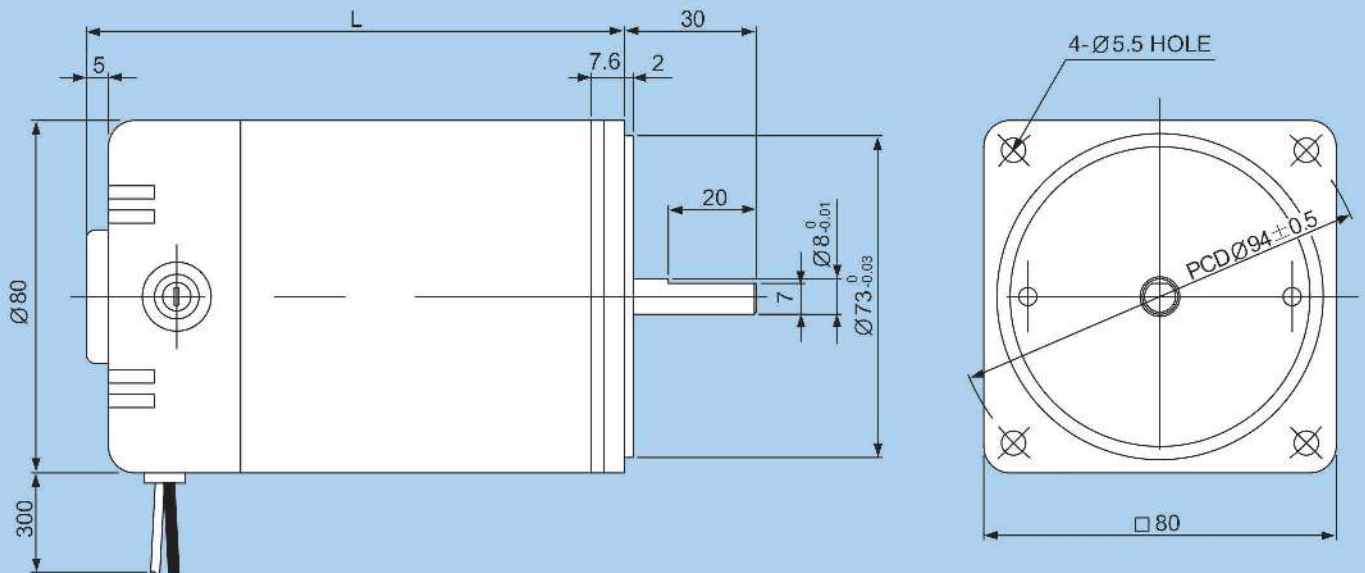
Unit : mm

### Specifications

MODEL		DD80											
		F012030	F012040	F012060	F024025	F024040	F024060	F090030	F090040	F090060	F180030	F180040	F180060
Rated Voltage	V	12			24			90			180		
Rated Output	W	30	40	60	25	40	60	30	40	60	30	40	60
Rated Current	∧	3.5	4.7	7.0	1.5	2.3	3.5	0.5	0.6	0.9	0.2	0.3	0.5
Rated Speed	rpm	3000											
Rated Torque	kgf·cm	1.0	1.3	1.9	1.0	1.3	1.9	1.0	1.3	1.9	1.0	1.3	1.9
Weight	kg	1.4	1.5	1.9	1.4	1.5	1.9	1.4	1.5	1.9	1.4	1.5	1.9

The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



L	MODEL
122.1	F012030 / F012040 / F024025 / F024040 / F090030 / F090040 / F180030 / F180040
139.6	F012060 / F024060 / F090060 / F180060

# DC80 SERIES

## DG80

- ◆ □80mm
- ◆ 12V/24V/90V/180V
- ◆ 25W/30W/40W/60W
- ◆ GEARED TYPE SHAFT



### Specifications

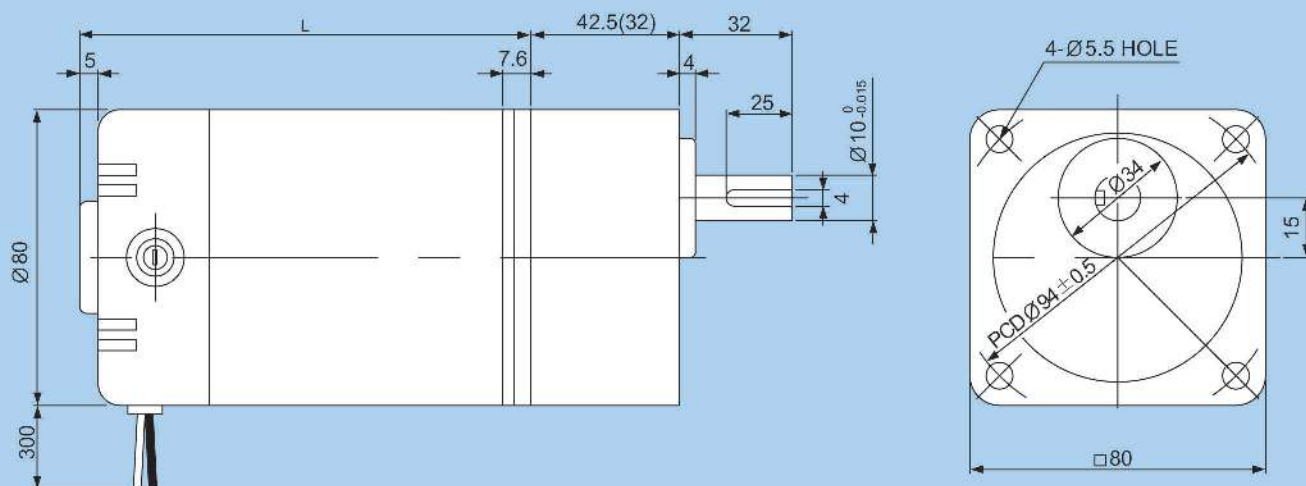
Unit : mm

MODEL		DG80											
		F012030	F012040	F012060	F024025	F024040	F024060	F090030	F090040	F090060	F180030	F180040	F180060
Rated Voltage	V	12			24			90			180		
Rated Output	W	30	40	60	25	40	60	30	40	60	30	40	60
Rated Current	A	3.5	4.7	7.0	1.5	2.3	3.5	0.5	0.6	0.9	0.2	0.3	0.5
Rated Speed	rpm	*15~1000											
Rated Torque	kgf cm	2.4~80	3.2~80	4.6~80	2.4~80	3.2~80	4.6~80	2.4~80	3.2~80	4.6~80	2.4~80	3.2~80	4.6~80
Weight	kg	1.9	2.1	2.4	1.9	2.1	2.4	1.9	2.1	2.4	1.9	2.1	2.4

\* The velocity depends on the rate of the reduction gear.

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



### GEAR HEAD SIZE

GEAR RATIO	SIZE
3 / 1 ~ 18 / 1	32
20 / 1 ~ 200 / 1	42.5

L	MODEL
122.1	F012030 / F012040 / F024025 / F024040 / F090030 / F090040 / F180030 / F180040
139.6	F012060 / F024060 / F090060 / F180060

# DC90 SERIES

## DD90

- ◆ □90mm, Ø80mm
- ◆ 12V/24V/90V/180V
- ◆ 60W/90W/120W/150W/200W/250W
- ◆ D-CUT TYPE SHAFT



### Specifications

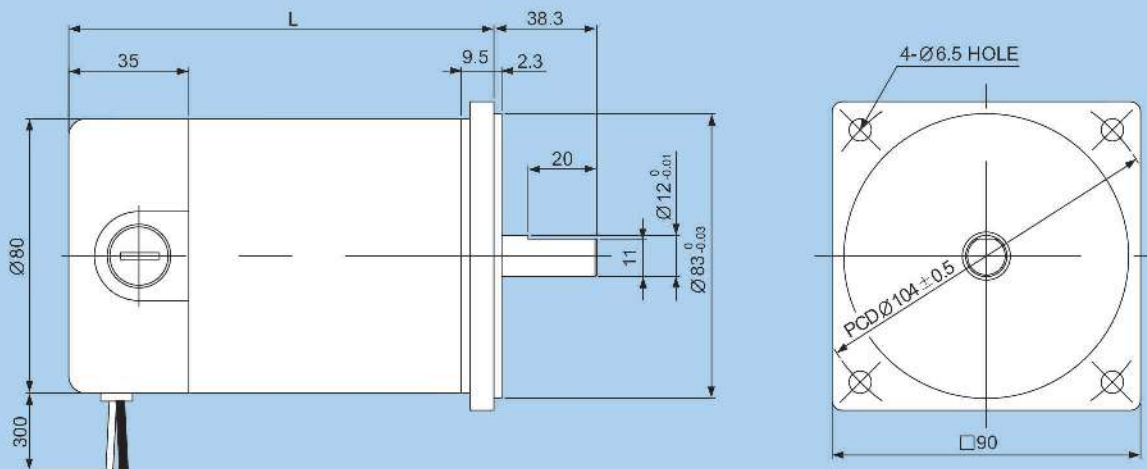
Unit : mm

MODEL		DD90							
		F012060	F012090	F012120	F012150	F024060	F024090	F024120	F024150
Rated Voltage	V	12				24			
Rated Output	W	60	90	120	150	60	90	120	150
Rated Current	A	7.0	10.6	14.1	17.6	3.5	5.3	7.0	8.8
Rated Speed	rpm	3000							
Rated Torque	kgf-cm	1.9	2.9	3.9	4.9	1.9	2.9	3.9	4.9
Weight	kg	2.1	2.2	2.9	3.4	2.1	2.2	2.9	3.1

MODEL		DD90										
		F090060	F090090	F090120	F090150	F090200	F180060	F180090	F180120	F180150	F180200	F180250
Rated Voltage	V	90					180					
Rated Output	W	60	90	120	150	200	60	90	120	150	200	250
Rated Current	A	0.9	1.4	1.9	2.3	3.1	0.5	0.7	0.9	1.2	1.6	2.0
Rated Speed	rpm	3000										
Rated Torque	kgf-cm	1.9	2.9	3.9	4.9	6.5	1.9	2.9	3.9	4.9	6.5	8.1
Weight	kg	2.1	2.2	2.9	3.0	3.1	2.1	2.2	2.9	3.0	3.1	3.4

The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



L	MODEL
141.5	F012060 / F012090 / F024060 / F024090 / F090060 / F090090 / F180060 / F180090
159.5	F012120 / F024120 / F024150 / F090120 / F090150 / F180120 / F180150 / F180200
184.5	F012150 / F090200 / F180250



# DC90 SERIES

## DG90 (강력형)

- ◆ □90mm, Ø80mm
- ◆ 12V/24V/90V/180V
- ◆ 60W/90W/120W/150W/200W/250W
- ◆ GEARED TYPE SHAFT



Unit : mm

### Specifications

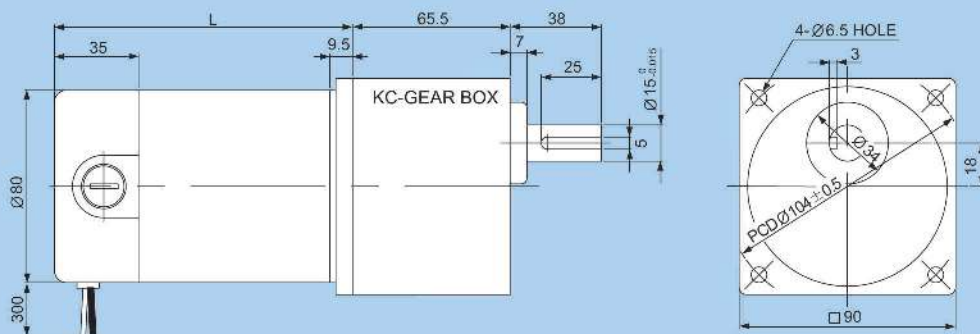
MODEL		DG90 ( 강력형 )							
		F012060	F012090	F012120	F012150	F024060	FF024090	F024120	F024150
Rated Voltage	V	12				24			
Rated Output	W	60	90	120	150	60	90	120	150
Rated Current	A	7.0	10.6	14.1	17.6	3.5	5.3	7.0	8.8
Rated Speed	rpm	*15~1000							
Rated Torque	kgf-cm	4.6~200	7.0~200	9.5~200	11.9~200	4.6~200	7.0~200	9.5~200	11.9~200
Weight	kg	3.1	3.5	4.2	4.5	3.1	3.5	4.2	4.5

MODEL		DG90 ( 강력형 )							
		F090060	F090090	F090120	F090150	F180060	F180090	F180120	F180150
Rated Voltage	V	90				180			
Rated Output	W	60	90	120	150	60	90	120	150
Rated Current	A	0.9	1.4	1.9	2.3	0.5	0.7	0.9	1.2
Rated Speed	rpm	*15~1000							
Rated Torque	kgf-cm	4.6~200	7.0~200	9.5~200	11.9~200	4.6~200	7.0~200	9.5~200	11.9~200
Weight	kg	3.1	3.5	4.3	4.4	3.1	3.5	4.2	4.3

\* The velocity depends on the rate of the reduction gear.

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



### GEAR HEAD SIZE

GEAR RATIO	SIZE
3 / 1 ~ 200 / 1	65.5

L	MODEL
141.5	F012060 / F012090 / F024060 / F024090 / F090060 / F090090 / F180060 / F180090
159.5	F012120 / F024120 / F024150 / F090120 / F090150 / F180120 / F180150 / F180200
184.5	F012150 / F090200 / F180250

# DC90 SERIES

## DG90 (초강력형)

- ◆ □90mm, Ø80mm
- ◆ 12V/24V/90V/180V
- ◆ 60W/90W/120W/150W/200W/250W
- ◆ GEARED TYPE SHAFT



Unit : mm

### Specifications

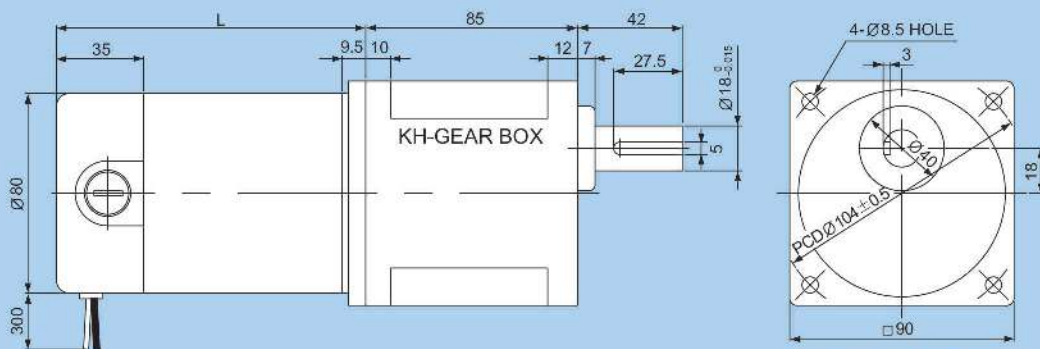
MODEL		DG90 ( 초강력형 )						
		F012150	F024150	F090150	F090200	F180150	F180200	F180250
Rated Voltage	V	12	24	90		180		
Rated Output	W	150	150	150	200	150	200	250
Rated Current	A	17.6	8.8	2.3	3.1	1.2	1.6	2.0
Rated Speed	rpm	*15~1000						
Rated Torque	kgf-cm	11.9~300	11.9~300	11.9~300	15.8~300	11.9~300	15.8~300	19.7~300
Weight	kg	4.6	4.7	4.6	5.4	4.5	4.9	5.4

MODEL		DG90 ( 초강력형 )							
		F090150	F090200	F090250	F090300	F180150	F180200	F180250	F180300
Rated Voltage	V	90				180			
Rated Output	W	150	200	250	300	150	200	250	300
Rated Current	A	2.3	3.1	4.0	4.7	1.2	1.6	2.0	2.3
Rated Speed	rpm	*15~1000							
Rated Torque	kgf-cm	11.9~300	15.8~300	19.7~300	23.6~300	11.9~300	15.8~300	19.7~300	23.6~300
Weight	kg	4.7	5.1	5.3	5.6	4.4	4.7	5.2	5.3

\* The velocity depends on the rate of the reduction gear.

●●●●●▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



GEAR HEAD SIZE

GEAR RATIO	SIZE
3 / 1 ~ 200 / 1	85

L	MODEL
141.5	F012060 / F012090 / F024060 / F024090 / F090060 / F090090 / F180060 / F180090
159.5	F012120 / F024120 / F024150 / F090120 / F090150 / F180120 / F180150 / F180200
184.5	F012150 / F090200 / F180250



# DC95 SERIES

## DD95

- ◆ □90mm, Ø90mm ◆ 12V/24V/90V/180V
- ◆ 70W/90W/100W/120W/150W/200W/250W/300W/350W/450W/500W
- ◆ D-CUT TYPE SHAFT



### Specifications

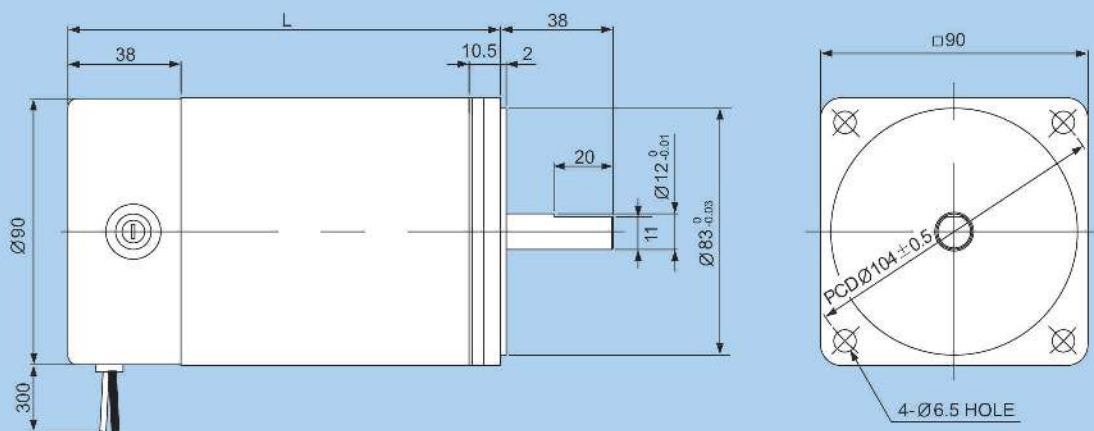
Unit : mm

MODEL		DD95											
		F012060	F012090	F012120	F012150	F012200	F024070	F024090	F024120	F024150	F024200	F024250	F024300
Rated Voltage	V	12						24					
Rated Output	W	70	90	120	150	200	70	90	120	150	200	250	300
Rated Current	A	7.0	10.6	14.1	17.6	23.5	4.2	5.4	7.0	8.9	11.7	14.7	17.9
Rated Speed	rpm	3000											
Rated Torque	kgf-cm	1.9	2.9	3.9	4.9	6.5	2.3	2.9	3.9	4.9	6.5	8.1	9.7
Weight	kg	2.6	2.9	3.0	3.2	3.6	2.6	2.8	3.0	3.1	3.3	3.6	3.8

MODEL		DD95																
		F090100	F090120	F090150	F090200	F090250	F090300	F090350	F090450	F180100	F180120	F180150	F180200	F180250	F180300	F180350	F180450	F180500
Rated Voltage	V	90								180								
Rated Output	W	100	120	150	200	250	300	350	450	100	120	150	200	250	300	350	450	500
Rated Current	A	1.6	1.9	2.3	3.1	4.0	4.7	5.6	7.1	0.8	1.0	1.2	1.6	2.0	2.3	2.8	3.6	4.0
Rated Speed	rpm	3000																
Rated Torque	kgf-cm	3.2	3.9	4.9	6.5	8.1	9.7	11.4	14.6	3.2	3.9	4.9	6.5	8.1	9.7	11.4	14.6	16.2
Weight	kg	2.6	2.7	2.9	3.2	3.4	3.6	3.7	3.8	2.4	2.5	2.6	3.0	3.1	3.4	3.6	3.8	4.0

.....▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



L	MODEL
120.5	F012060 / F024070 / F024090 / F090100 / F180100 / F180120 / F180150
145.5	F012090 / F012120 / F024120 / F024150 / F090120 / F090150 / F180200
163.5	F012150 / F024200 / F090200 / F090250 / F180250 / F180300 / F180350
188.5	F012200 / F024250 / F024300 / F090300 / F090350 / F090450 / F180450 / F180500



# DC95 SERIES

## DG95 (강력형)

- ◆ □90mm, Ø90mm ◆ 12V/24V/90V/180V
- ◆ 70W/90W/100W/120W/150W/200W/250W/300W/350W/450W/500W
- ◆ GEARED TYPE SHAFT



### Specifications

Unit : mm

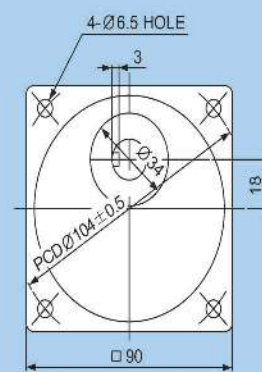
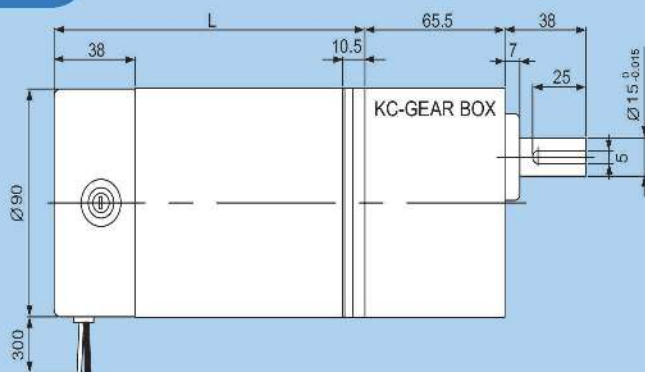
MODEL		DG95 (강력형)							
		F012060	F012090	F012120	F012150	F024070	F024090	F024120	F024150
Rated Voltage	V	12				24			
Rated Output	W	70	90	120	150	70	90	120	150
Rated Current	A	7.0	10.6	14.1	17.6	4.2	5.4	7.0	8.9
Rated Speed	rpm	*15~1000							
Rated Torque	kgf-cm	4.6~200	7.0~200	9.5~200	11.9~200	4.6~200	7.0~200	9.5~200	11.9~200
Weight	kg	3.9	4.2	4.3	4.5	3.9	4.0	4.3	4.5

MODEL		DG95 (강력형)					
		F090100	F090120	F090150	F180100	F180120	F180150
Rated Voltage	V	90			180		
Rated Output	W	100	120	150	100	120	150
Rated Current	A	1.6	1.9	2.3	0.8	1.0	1.2
Rated Speed	rpm	*15~1000					
Rated Torque	kgf-cm	7.8~200	9.5~200	11.9~200	7.8~200	9.5~200	11.9~200
Weight	kg	3.9	4.3	4.5	3.9	4.0	4.2

\* The velocity depends on the rate of the reduction gear.

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



GEAR HEAD SIZE

GEAR RATIO	SIZE
3 / 1 ~ 200 / 1	65.5

L	MODEL
120.5	F012060 / F024070 / F024090 / F090100 / F180100 / F180120 / F180150
145.5	F012090 / F012120 / F024120 / F024150 / F090120 / F090150 / F180200
163.5	F012150 / F024200 / F090200 / F090250 / F180250 / F180300 / F180350
188.5	F012200 / F024250 / F024300 / F090300 / F090350 / F090450 / F180450 / F180500

# DC95 SERIES



## DG95 (초강력형)

- ◆ □90mm, Ø90mm ◆ 12V/24V/90V/180V
- ◆ 70W/90W/100W/120W/150W/200W/250W/300W/350W/450W/500W
- ◆ GEARED TYPE SHAFT

### Specifications

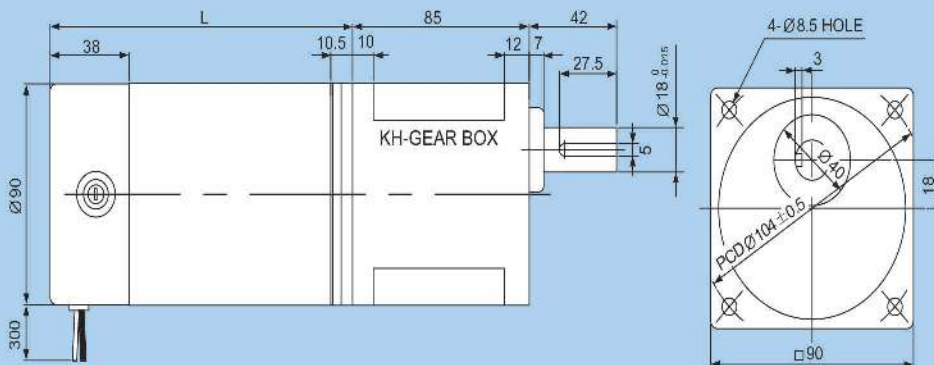
MODEL		DG95 ( 초강력형 )					
		F012150	F012200	F024150	F024200	F024250	F024300
Rated Voltage	V	12			24		
Rated Output	W	150	200	150	200	250	300
Rated Current	A	17.6	23.5	8.9	11.7	14.7	17.9
Rated Speed	rpm	*15~1000					
Rated Torque	kgf-cm	11.9~300	15.8~300	11.9~300	15.8~300	19.7~300	23.6~300
Weight	kg	4.7	5.3	4.7	5.3	5.6	5.8

MODEL		DG95 ( 초강력형 )							
		F090150	F090200	F090250	F090300	F180150	F180200	F180250	F180300
Rated Voltage	V	90				180			
Rated Output	W	150	200	250	300	150	200	250	300
Rated Current	A	2.3	3.1	4.0	4.7	1.2	1.6	2.0	2.3
Rated Speed	rpm	*15~1000							
Rated Torque	kgf-cm	11.9~300	15.8~300	19.7~300	23.6~300	11.9~300	15.8~300	19.7~300	23.6~300
Weight	kg	4.7	5.1	5.3	5.6	4.4	4.7	5.2	5.3

\* The velocity depends on the rate of the reduction gear.

▶ The specifications above are subject to change for enhancement of product performance, Without any prior notice.

### Dimension



#### GEAR HEAD SIZE

GEAR RATIO	SIZE
3 / 1 ~ 200 / 1	85

L	MODEL
120.5	F012060 / F024070 / F024090 / F090100 / F180100 / F180120 / F180150
145.5	F012090 / F012120 / F024120 / F024150 / F090120 / F090150 / F180200
163.5	F012150 / F024200 / F090200 / F090250 / F180250 / F180300 / F180350
188.5	F012200 / F024250 / F024300 / F090300 / F090350 / F090450 / F180450 / F180500

MEMO





MEMO





**SWIS** 세우산전(주)  
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