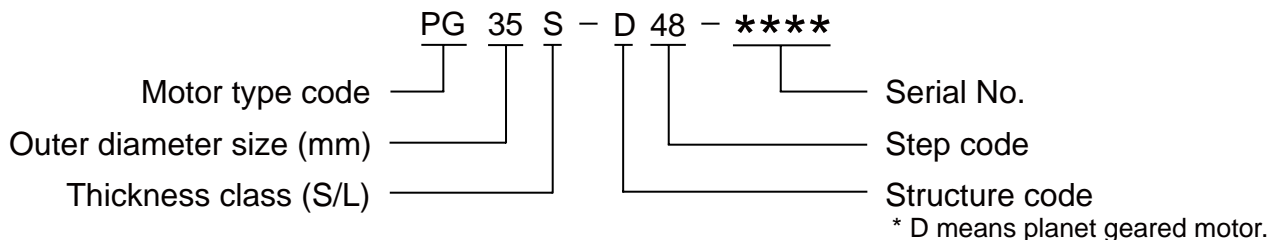




## ■ Product Line Up

Product Name	Step No.	Outer Diameter [mm]	Length [mm]
PG15S-D20	20	15	22.5
PG20S-D20	20	20	27.5
PG20L-D20	20	20	31.5
PG25S-D48	48	25	24.5
PG25L-D24	24	25	29.0
PG35S-D48	48	35	38.5
PG35L-D48	48	35	45.0

## ■ Example of Product Number Explanation




 PM Motor  
 PG Type

## Applications

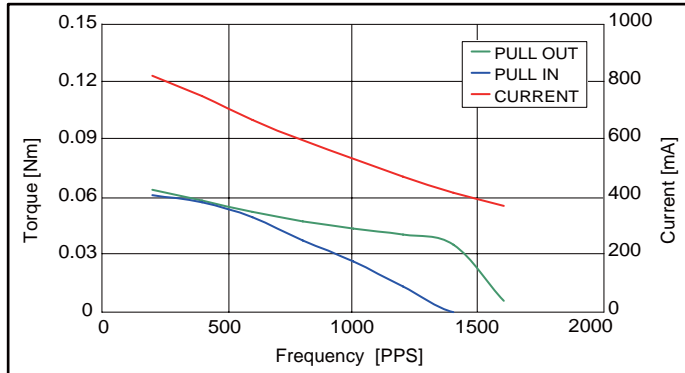
Home electric appliances : Air-conditioners  
 OA Equipment : Printers / Photocopiers  
 Power Tools : Drills / Drivers

## Reference Characteristics

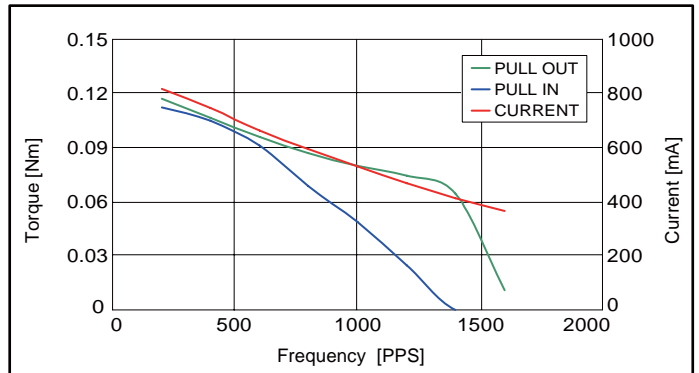
Motor Size	PG15S-D20	
Reduction Ratio	1/50	1/102.5
Drive Characteristics	BIPOLAR CONST. VOLT.	
Drive Voltage	5[V]	
Drive Method	2-2 PHASE	
Step Angle (2phase drive)	0.36°	0.175°
DC Resistance	10[Ω]	
Insulation Resistance	100M[Ω] MIN	
Dielectric Strength	AC 500[V] 1[min]	
Class of Insulation	CLASS B	
Operating Temp.	0[°C] ~ 50[°C]	
Storage Temp.	-30[°C] ~ 80[°C]	
Operating Hum.	20[%] RH ~ 90[%] RH	

## Torque Characteristics

PG15S-D20 Reduction Ratio 1/50

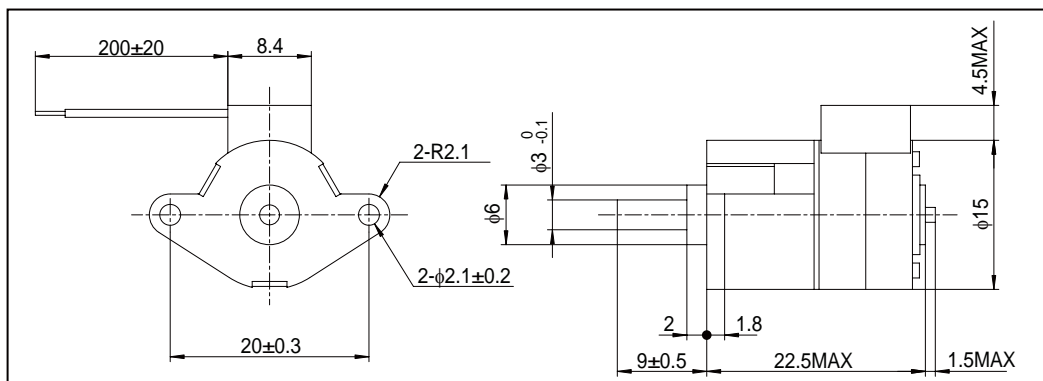


PG15S-D20 Reduction Ratio 1/102.5



These torque values are reference only. Heat radiation conditions and temperature rise effect by duty are different on each equipment, therefore please select motors after considering the heat conditions in the actual equipment.

## Dimensions



The dimensions shown are for reference purpose and can be modified to your requirements. Contact our Engineering Department for details.

# PG20L-D20



PM Motor  
PG Type

## Applications

Home electric appliances : Air-conditioners

OA Equipment : Printers / Photocopiers

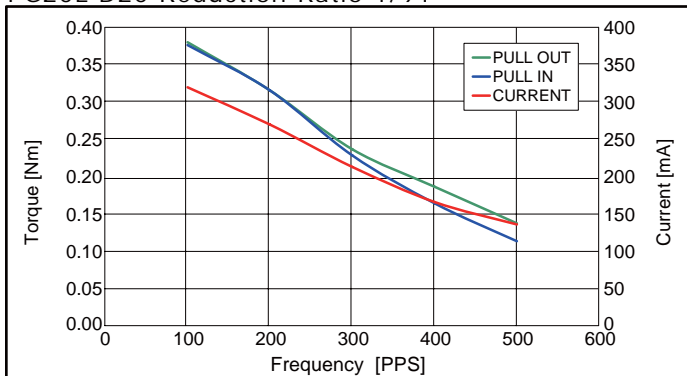
Power Tools : Drills / Drivers

## Reference Characteristics

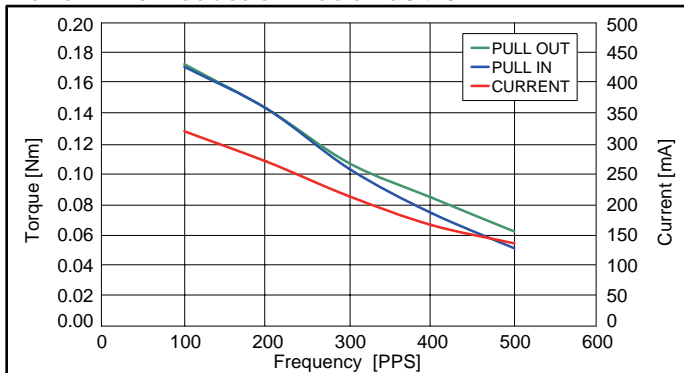
Motor Size	PG20L-D20		
Reduction Ratio	1/34.3	1/91	1/185.4
Drive Characteristics	BIPOLAR CONST. VOLT.		
Drive Voltage	12[V]		
Drive Method	2-2 PHASE		
Step Angle (2phase drive)	0.524°	0.197°	0.097°
DC Resistance	80[Ω]		
Insulation Resistance	100M[Ω] MIN		
Dielectric Strength	AC 500[V] 1[min]		
Class of Insulation	CLASS B		
Operating Temp.	0[°C] ~ 50[°C]		
Storage Temp.	-30[°C] ~ 80[°C]		
Operating Hum.	20[%] RH ~ 90[%] RH		

## Torque Characteristics

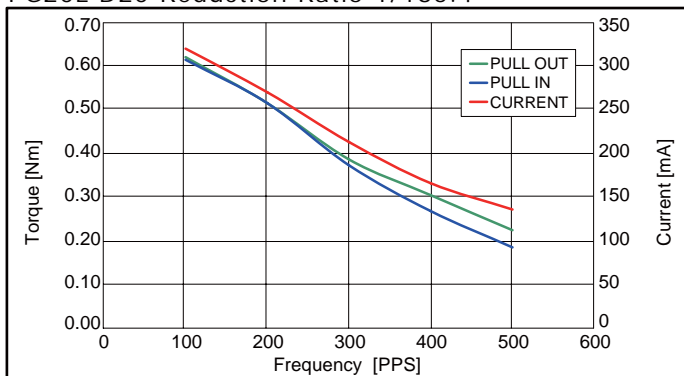
PG20L-D20 Reduction Ratio 1/91



PG20L-D20 Reduction Ratio 1/34.3

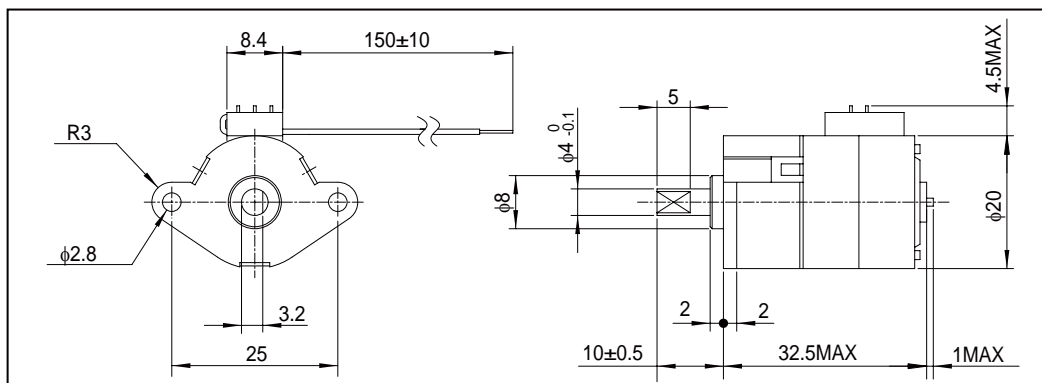


PG20L-D20 Reduction Ratio 1/185.4



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## Dimensions



The dimensions shown are for reference purpose and can be modified to your requirements. Contact our Engineering Department for details.

# PG20S-D20


 PM Motor  
 PG Type

## Applications

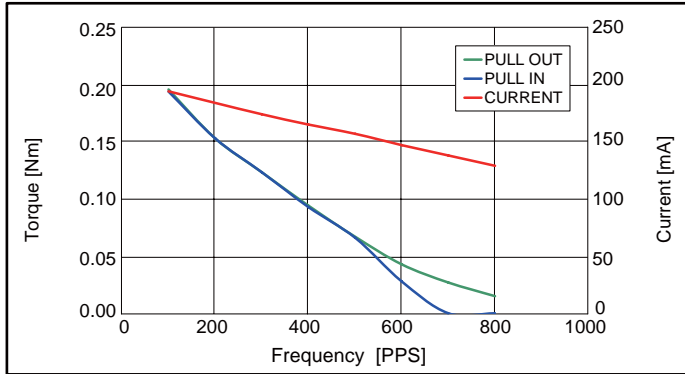
Home electric appliances : Air-conditioners  
 OA Equipment : Printers / Photocopiers  
 Power Tools : Drills / Drivers

## Reference Characteristics

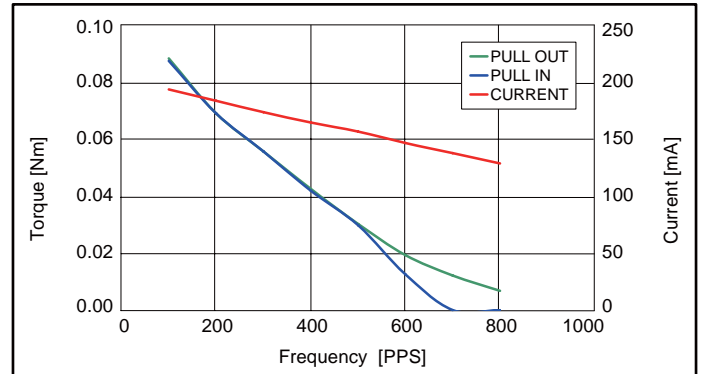
Motor Size	PG20S-D20		
Reduction Ratio	1/34.3	1/91	1/185.4
Drive Characteristics	BIPOLAR CONST. VOLT.		
Drive Voltage	12[V]		
Drive Method	2-2 PHASE		
Step Angle (2phase drive)	0.524°	0.197°	0.097°
DC Resistance	120[Ω]		
Insulation Resistance	100M[Ω] MIN		
Dielectric Strength	AC 500[V] 1[min]		
Class of Insulation	CLASS B		
Operating Temp.	0[°C] ~ 50[°C]		
Storage Temp.	-30[°C] ~ 80[°C]		
Operating Hum.	20[%] RH ~ 90[%] RH		

## Torque Characteristics

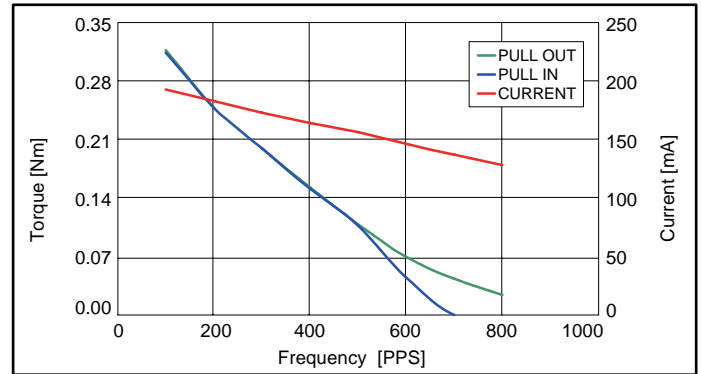
PG20S-D20 Reduction Ratio 1/91



PG20S-D20 Reduction Ratio 1/34.3

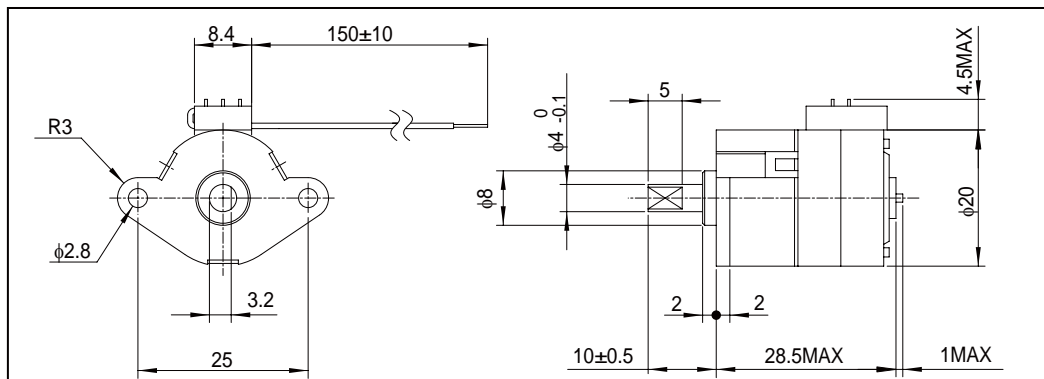


PG20S-D20 Reduction Ratio 1/185.4



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## Dimensions



The dimensions shown are for reference purpose and can be modified to your requirements. Contact our Engineering Department for details.


 PM Motor  
 PG Type

## Applications

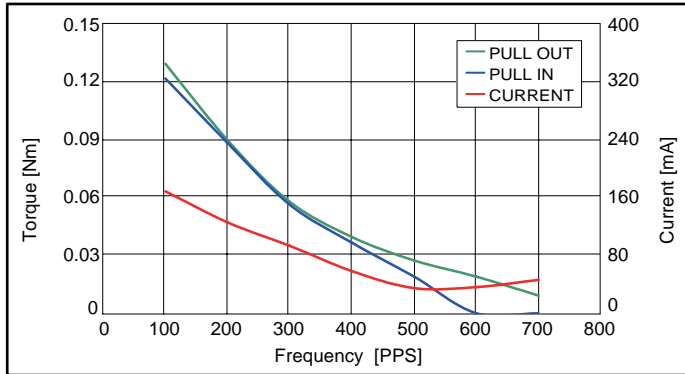
Home electric appliances : Air-conditioners  
 OA Equipment : Printers / Photocopiers  
 Power Tools : Drills / Drivers

## Reference Characteristics

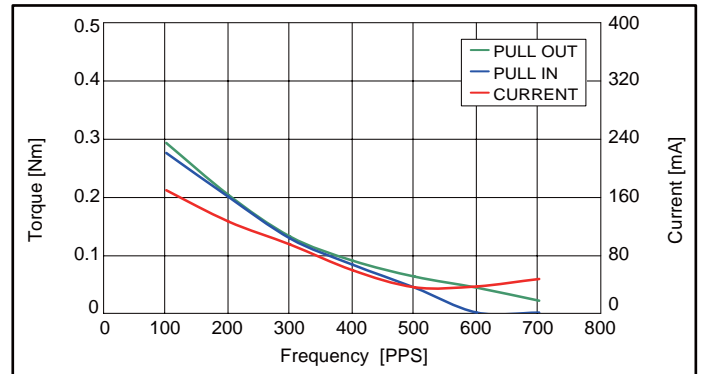
Motor Size	PG25L-D24	
Reduction Ratio	1/30.3	1/76
Drive Characteristics	UNIPOLAR CONST. VOLT.	
Drive Voltage	12[V]	
Drive Method	2-2 PHASE	
Step Angle (2phase drive)	0.495°	0.197°
DC Resistance	110[Ω]	
Insulation Resistance	100M[Ω] MIN	
Dielectric Strength	AC 500[V] 1[min]	
Class of Insulation	CLASS B	
Operating Temp.	0[°C] ~ 50[°C]	
Storage Temp.	-30[°C] ~ 80[°C]	
Operating Hum.	20[%] RH ~ 90[%] RH	

## Torque Characteristics

PG25L-D24 Reduction Ratio 1/30.3

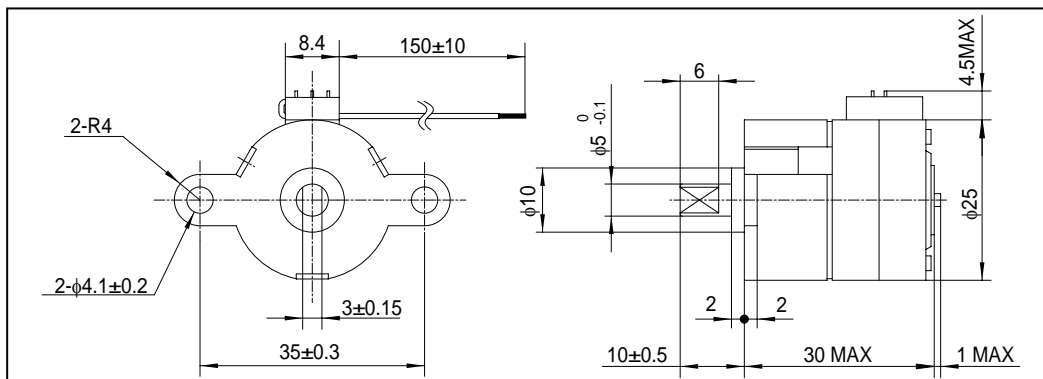


PG25L-D24 Reduction Ratio 1/76

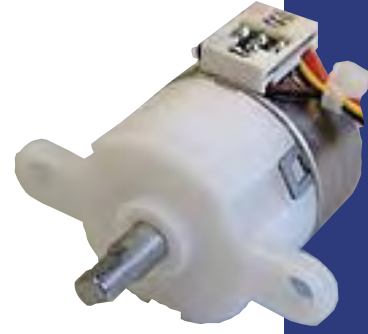


These torque values are reference only. Heat radiation conditions and temperature rise effect by duty are different on each equipment, therefore please select motors after considering the heat conditions in the actual equipment.

## Dimensions



The dimensions shown are for reference purpose and can be modified to your requirements. Contact our Engineering Department for details.



## Applications

Home electric appliances : Air-conditioners

OA Equipment : Printers / Photocopiers

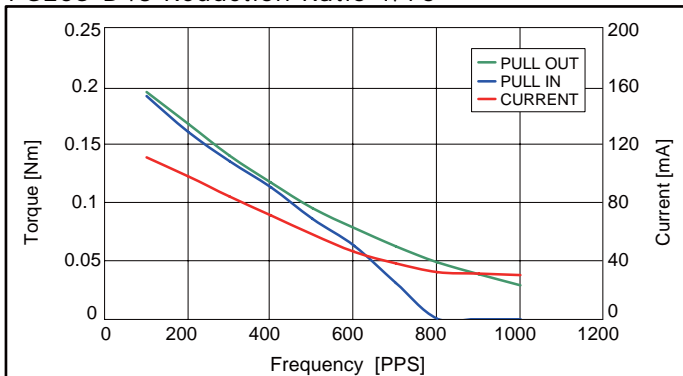
Power Tools : Drills / Drivers

## Reference Characteristics

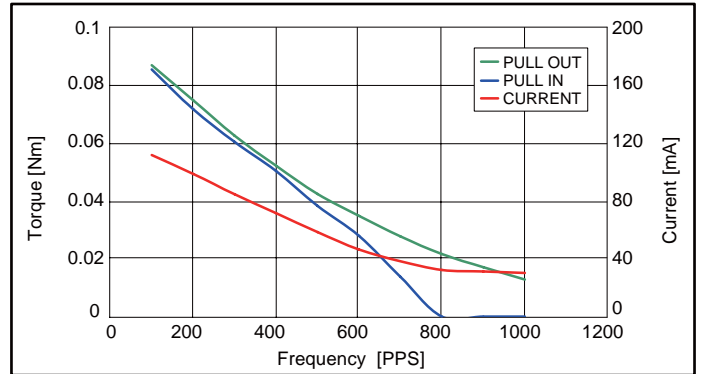
Motor Size	PG25S-D48		
Reduction Ratio	1/30.3	1/76	1/236
Drive Characteristics	UNIPOLAR CONST. VOLT.		
Drive Voltage	12[V]		
Drive Method	2-2 PHASE		
Step Angle (2phase drive)	0.2475°	0.0986°	0.0317°
DC Resistance	200[Ω]		
Insulation Resistance	100M[Ω] MIN		
Dielectric Strength	AC 500[V] 1[min]		
Class of Insulation	CLASS B		
Operating Temp.	0[°C] ~ 50[°C]		
Storage Temp.	-30[°C] ~ 80[°C]		
Operating Hum.	20[%] RH ~ 90[%] RH		

## Torque Characteristics

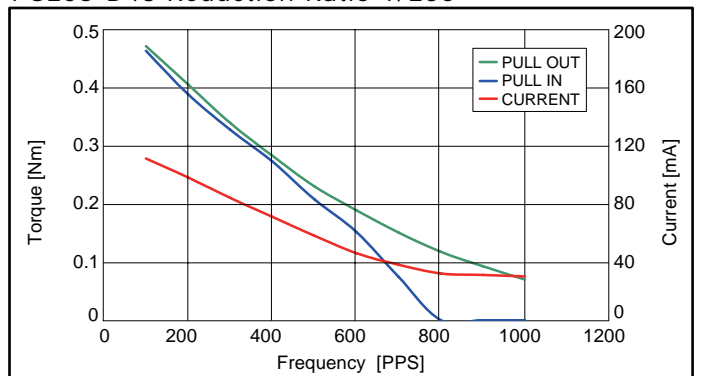
PG25S-D48 Reduction Ratio 1/76



PG25S-D48 Reduction Ratio 1/30.3

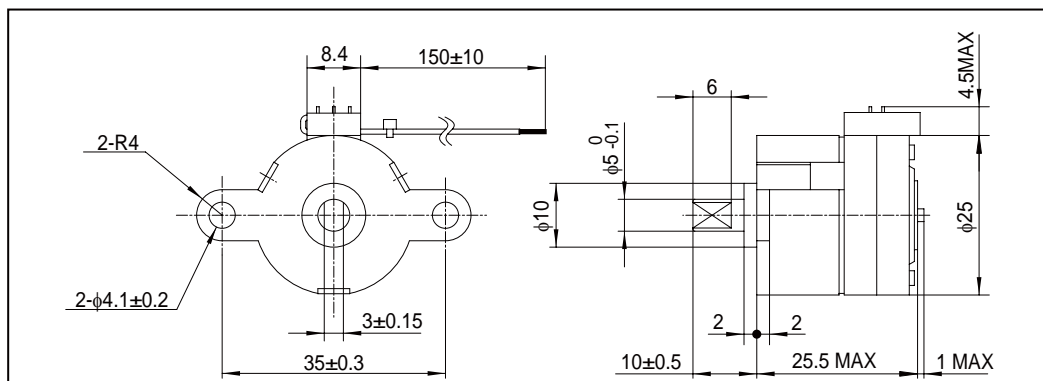


PG25S-D48 Reduction Ratio 1/236



These torque values are reference only. Heat radiation conditions and temperature rise effect by duty are different on each equipment, therefore please select motors after considering the heat conditions in the actual equipment.

## Dimensions



The dimensions shown are for reference purpose and can be modified to your requirements. Contact our Engineering Department for details.


 PM Motor  
 PG Type

## Applications

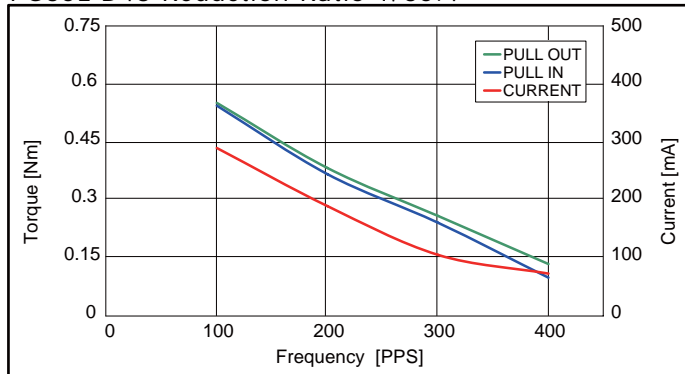
Home electric appliances : Air-conditioners  
 OA Equipment : Printers / Photocopiers  
 Power Tools : Drills / Drivers

## Reference Characteristics

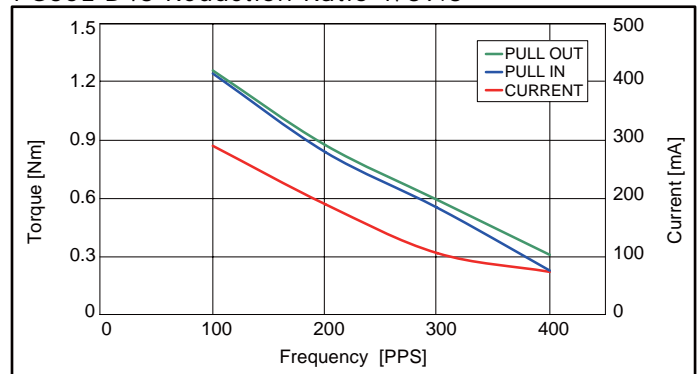
Motor Size	PG35L-D48	
Reduction Ratio	1/35.4	1/89.8
Drive Characteristics	UNIPOLAR CONST. VOLT.	
Drive Voltage	12[V]	
Drive Method	2-2 PHASE	
Step Angle (2phase drive)	0.2118°	0.0835°
DC Resistance	70[Ω]	
Insulation Resistance	100M[Ω] MIN	
Dielectric Strength	AC 500[V] 1[min]	
Class of Insulation	CLASS B	
Operating Temp.	0[°C] ~ 50[°C]	
Storage Temp.	-30[°C] ~ 80[°C]	
Operating Hum.	20[%] RH ~ 90[%] RH	

## Torque Characteristics

PG35L-D48 Reduction Ratio 1/35.4

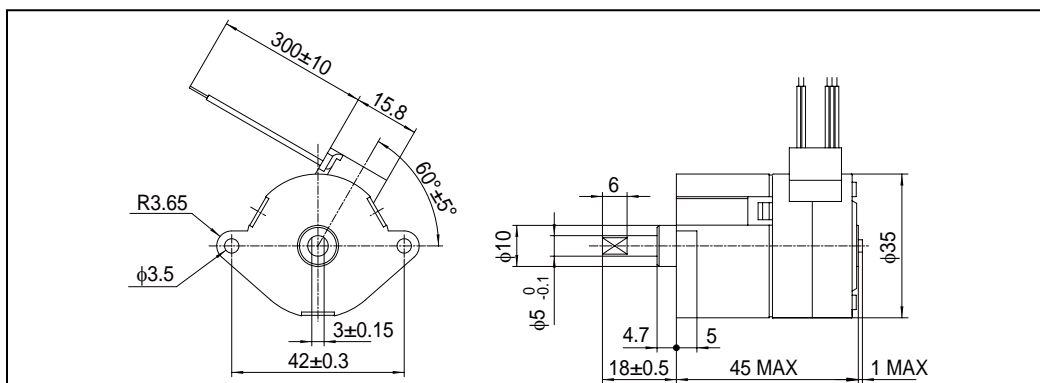


PG35L-D48 Reduction Ratio 1/89.8

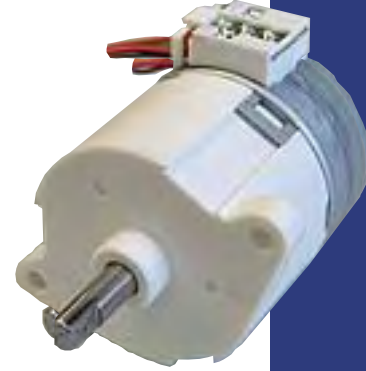


These torque values are reference only. Heat radiation conditions and temperature rise effect by duty are different on each equipment, therefore please select motors after considering the heat conditions in the actual equipment.

## Dimensions



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PM Motor  
PG Type

## Applications

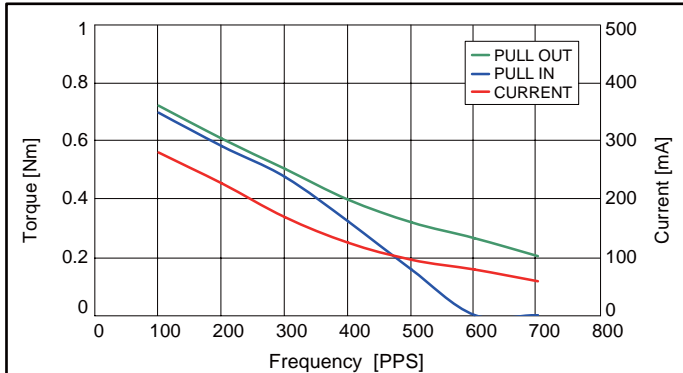
Home electric appliances : Air-conditioners  
OA Equipment : Printers / Photocopiers  
Power Tools : Drills / Drivers

## Reference Characteristics

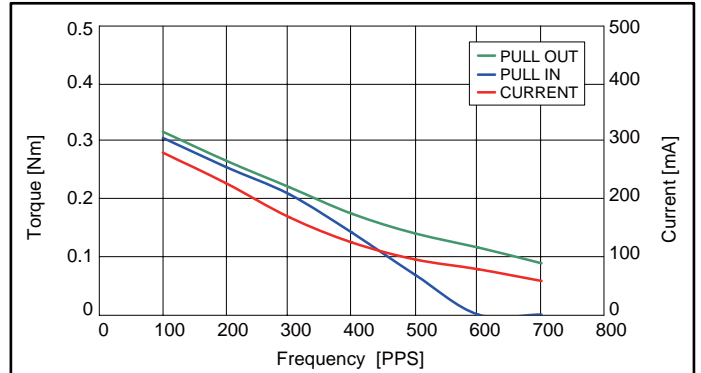
Motor Size	PG35S-D48		
Reduction Ratio	1/35.4	1/89.8	1/280.5
Drive Characteristics	UNIPOLAR CONST. VOLT.		
Drive Voltage	12[V]		
Drive Method	2-2 PHASE		
Step Angle (2phase drive)	0.2118°	0.0835°	0.0267°
DC Resistance	70[Ω]		
Insulation Resistance	100M[Ω] MIN		
Dielectric Strength	AC 500[V] 1[min]		
Class of Insulation	CLASS B		
Operating Temp.	0[°C] ~ 50[°C]		
Storage Temp.	-30[°C] ~ 80[°C]		
Operating Hum.	20[%] RH ~ 90[%] RH		

## Torque Characteristics

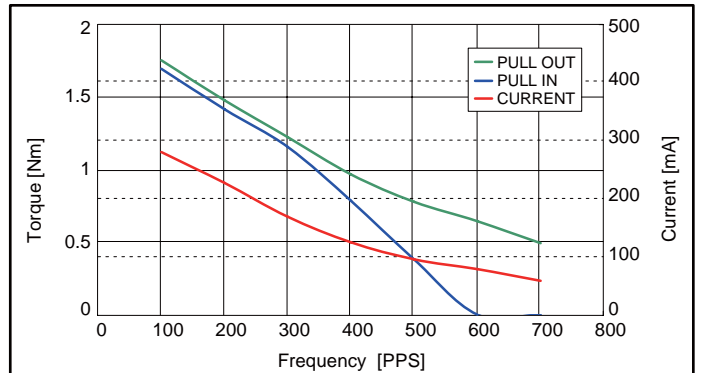
PG35S-D48 Reduction Ratio 1/89.8



PG35S-D48 Reduction Ratio 1/35.4

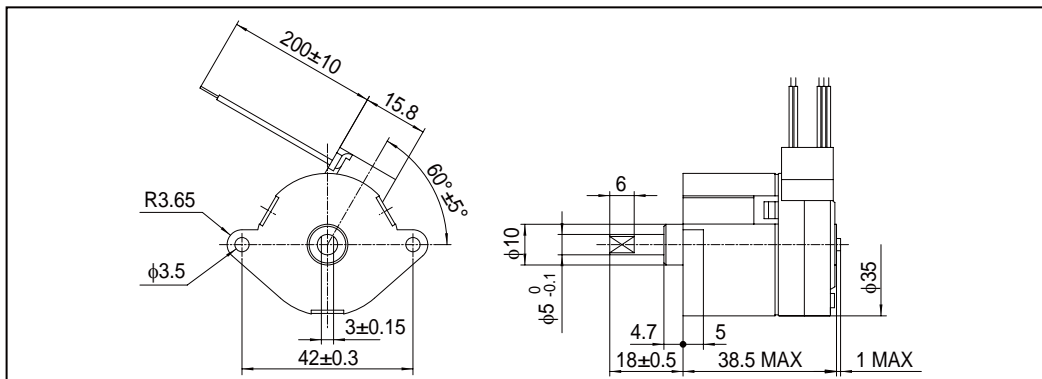


PG35S-D48 Reduction Ratio 1/280.5



These torque values are reference only. Heat radiation conditions and temperature rise effect by duty are different on each equipment, therefore please select motors after considering the heat conditions in the actual equipment.

## Dimensions



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