



PLANETARY GEAR DC MOTORS

Ø 43 - 123 mm
12 - 421W

Transmotec sell a broad range of geared DC motors in standard and customized configurations. Our motors are often available with gear heads, encoders and wire harnesses. Transmotec is the ideal supplier source especially to instrument and apparatus builders. We keep a high number of motors in stock for immediate delivery.

Customizations include:

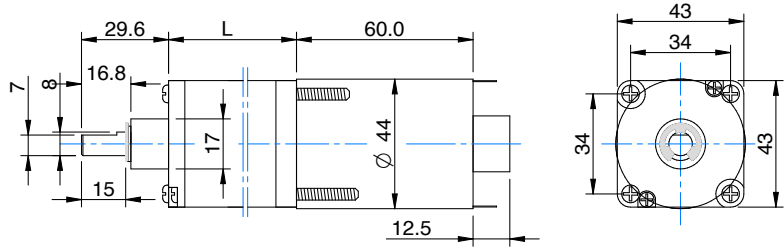
- ✓ Customized harness
- ✓ Shaft configuration
- ✓ Winding configuration
- ✓ And more...

TABLE OF CONTENTS

Model	Voltage	Diameter	Power	Page
PDS4360	12V / 24V	43mm	12W / 13W	1
PDS4377	12V / 24V	43mm	13W / 15W	2
PD52103	12V / 24V	52mm	29W / 29W	3
PDS132190	12V / 24V	132mm	421W / 421W	4
Magnetic encoder (48 counts per revolution, 2 channels)				5
Optical encoder (2000 counts per revolution, 2 channels)				5
Brake (electro mechanic)				5

PDS4360 / Ø 43mm / 12W / 13W

DRAWING
(mm)



PHOTO



MODEL NO. DESIGNATION

PDS4360 - VOLTAGE - REDUCTION

Example: PDS4360-12-4

ADDITIONAL

GEAR MOTOR DATA																			
Reduction	4:1	14:1	24:1	49:1	60:1	75:1	84:1	103:1	144:1	171:1	210:1	259:1	294:1	325:1	361:1	443:1	504:1	619:1	864:1
Nominal torque 12 V (Nm) *	0.14	0.44	0.76	1.40	1.74	2.14	2.40	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
Nominal speed 12 V (rpm) *	725	207	120	59	48	39	34	28	20	17	14	11	10	9	8	7	6	5	3
Nominal torque 24 V (Nm) *	0.14	0.44	0.76	1.40	1.72	2.14	2.4	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
Nominal speed 24 V (rpm) *	800	228	133	65	53	43	38	31	22	19	15	12	11	10	9	7	6	5	4
Length (mm)	80.2	87.8	87.8	95.6	95.6	95.6	95.6	95.6	95.6	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4
Weight (g)	540	600	600	660	660	660	660	660	710	710	710	710	710	710	710	710	710	710	710

* Nominal speed and nominal torque have a tolerance of $\pm 15\%$

GEAR HEAD DATA																			
Reduction	4:1	14:1	24:1	49:1	60:1	75:1	84:1	103:1	144:1	171:1	210:1	259:1	294:1	325:1	361:1	443:1	504:1	619:1	864:1
Max. continous torque (Nm)	0.58	1.96	1.96	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
Intermittently permissable torque (Nm)	0.78	2.54	2.54	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43
Efficiency (%)	90	81	81	73	73	73	73	73	66	66	66	66	66	66	66	66	66	66	66
Length (mm)	20.2	27.8	27.8	35.6	35.6	35.6	35.6	35.6	35.6	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
Weight (g)	190	250	250	310	310	310	310	310	360	360	360	360	360	360	360	360	360	360	360

GEAR MOTOR FEATURES AND STANDARD DATA		
	STANDARD	CUSTOMIZATION OPTIONS
Type	Planetary gear brush dc gear motor	
Motor type	Iron core. brush commutation	Winding parameters
Motor brush type	Carbon brushes	
Motor terminals	Soldering terminals	Wiring harnesses. cables. connectors
EMC filter	No	Yes
Gear material	Metal	
Motor pinion material	Plastic	Metal
Bearing	Sleeve bearing	
Shaft	Hardened stainless steel	Dimensions
Environmental protection	IP40 (with encoder IP40)	
Operating temperature	-10-...+60 °C	- 40-...+60 °C
RoHS compliance	Yes	
CE label	Yes	Yes

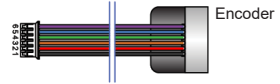
MOTOR DATA		
Nominal voltage (V)	12	24
No load speed (rpm)	3700	4000
No load current (A)	1.2	0.6
Nominal speed (rpm)	2900	3200
Nominal torque (mNm)	39	39
Nominal current (A)	1.8	1.0
Stall torque (mNm)	220	245
Starting current (A)	10	5
Output (W)	12	13
Length (mm)	60	60
Weight (g)	350	350

DRAWING
(mm)



PDS4377	-	VOLTAGE	-	REDUCTION	-	ME / OE
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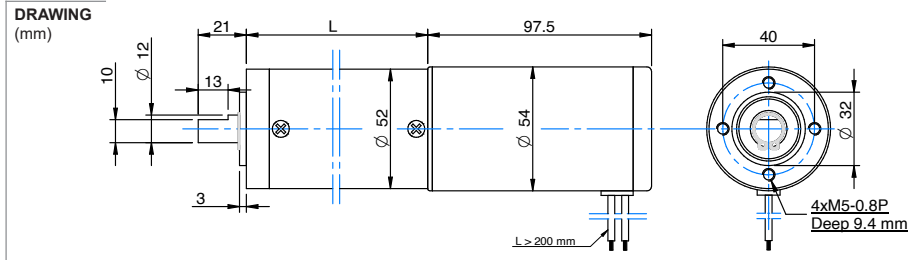
ME = Magnetic encoder
OE = Optical encoder

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	STANDARD	CUSTOMIZATION OPTIONS
Type	Planetary gear brush dc gear motor	
Motor type	Iron core. brush commutation	Winding parameters
Motor brush type	Carbon brushes	
Motor terminals	Soldering terminals	Wiring harnesses. cables. connectors
EMC filter	No	Yes
Gear material	Metal	
Motor pinion material	Plastic	Metal
Bearing	Sleeve bearing	
Shaft	Hardened stainless steel	Dimensions
Encoder option	Magetic/Optical (to order as option)	Through shaft dim. and screw holes
Environmental protection	IP40 (with encoder IP40)	
Operating temperature	-10-...+60 °C	- 40-...+60 °C
RoHS compliance	Yes	
CE label	Yes	Yes

Nominal voltage (V)	12	24
No load speed (rpm)	3600	4000
No load current (A)	1.0	0.5
Nominal speed (rpm)	2700	3200
Nominal torque (mNm)	44	44
Nominal current (A)	2.0	1.1
Stall torque (mNm)	166	176
Starting current (A)	7	4
Output (W)	12.5	14.8
Length (mm)	77	77
Weight (g)	360	360

PD52103 / Ø 52mm / 97.5W / 97.5W



MODEL NO. DESIGNATION

PD52103 - VOLTAGE - REDUCTION - ME / OE / B

Example: PD52103-12-4

ME = Magnetic encoder
OE = Optical encoder
B = Brake

ADDITIONAL



GEAR MOTOR DATA													
Reduction	4.5:1	6:1	8:1	20:1	28:1	39:1	50:1	91:1	127:1	162:1	225:1	244:1	313:1
Nominal torque 12 V (Nm) *	0.3	0.4	0.6	1.1	1.5	2.1	2.8	4.0	5.5	7.0	9.8	10.6	13.6
Nominal speed 12 V (rpm) *	689	517	388	155	111	80	62	34	24	19	14	13	10
Nominal torque 24 V (Nm) *	0.3	0.4	0.6	1.1	1.5	2.1	2.8	4.0	5.5	7.0	9.8	10.6	13.6
Nominal speed 24 V (rpm) *	689	517	388	155	111	80	62	34	24	19	14	13	10
Length (mm)	146.5	146.5	143.5	161.5	161.5	161.5	161.5	176.5	176.5	176.5	176.5	176.5	176.5
Weight (kg)	1.40	1.40	1.40	1.55	1.55	1.55	1.55	1.70	1.70	1.70	1.70	1.70	1.70

* Nominal speed and nominal torque have a tolerance of $\pm 15\%$

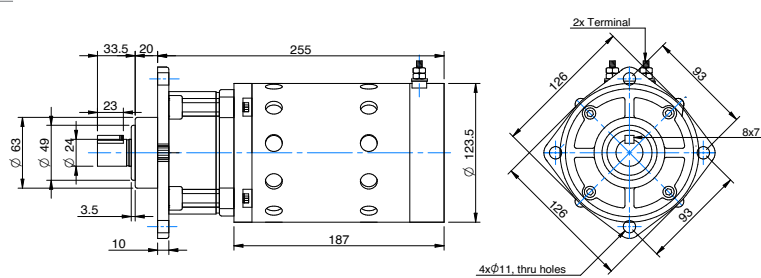
GEAR HEAD DATA													
Reduction	4.5:1	6:1	8:1	20:1	28:1	39:1	50:1	91:1	127:1	162:1	225:1	244:1	313:1
Max. continuous torque (Nm)	2.94	2.94	2.94	14.7	14.7	14.7	14.7	24.5	24.5	24.5	24.5	24.5	24.5
Intermittently permissible torque (Nm)	3.92	3.92	3.92	17.64	17.64	17.64	17.64	29.4	29.4	29.4	29.4	29.4	29.4
Efficiency (%)	79	79	79	62	62	62	62	49	49	49	49	49	49
Length (mm)	49	49	46	64	64	64	64	79	79	79	79	79	79
Weight (kg)	0.6	0.6	0.6	0.75	0.75	0.75	0.75	0.9	0.9	0.9	0.9	0.9	0.9

GEAR MOTOR FEATURES AND STANDARD DATA		
	STANDARD	CUSTOMIZATION OPTIONS
Type	Planetary gear brush dc gear motor	
Motor type	Iron core. brush commutation	Winding parameters
Motor brush type	Carbon brushes	
Motor terminals	Soldering terminals	Wiring harnesses. cables. connectors
EMC filter	No	Yes
Gear material	Metal	
Motor pinion material	Plastic	Metal
Bearing	Sleeve bearing	
Shaft	Hardened stainless steel	Dimensions
Encoder option	Magetic/Optical (to order as option)	Through shaft dim. and screw holes
Environmental protection	IP40 (with encoder or brake IP40)	
Operating temperature	-10-...+60 °C	- 40-...+60 °C
RoHS compliance	Yes	
CE label	Yes	Yes

MOTOR DATA		
Nominal voltage (V)	12	24
No load speed (rpm)	3600	3600
No load current (A)	0.6	0.4
Nominal speed (rpm)	3100	3100
Nominal torque (mNm)	88	88
Nominal current (A)	3.3	1.6
Stall torque (Nm)	0.7	0.7
Starting current (A)	22	11
Output (W)	29	29
Length (mm)	97.5	97.5
Weight (kg)	0.8	0.8

PDS132190 / Ø 132mm / 421W / 421W

DRAWING
(mm)



MODEL NO. DESIGNATION

PDS132190 - VOLTAGE - REDUCTION - B
Example: PDS132190-12-4 B = Brake

PHOTO



ADDITIONAL



Brake

GEAR MOTOR DATA		
Reduction		10:1
Nominal torque 12 V (Nm) *		16
Nominal speed 12 V (rpm) *		202
Nominal torque 24 V (Nm) *		16
Nominal speed 24 V (rpm) *		202
Length (mm)		255
Weight (kg)		6.5

* Nominal speed and nominal torque have a tolerance of $\pm 15\%$

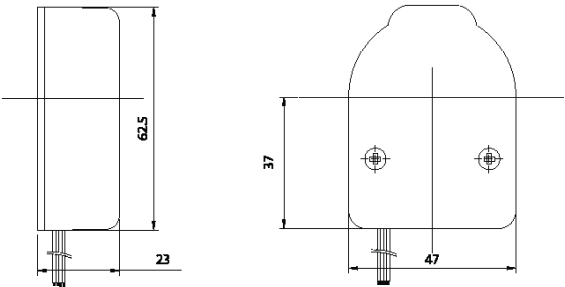
GEAR HEAD DATA		
Reduction		10:1
Max. continous torque (Nm)		29.4
Intermittently permissable torque (Nm)		44.0
Efficiency (%)		80
Weight (kg)		2.5

GEAR MOTOR FEATURES AND STANDARD DATA		
	STANDARD	CUSTOMIZATION OPTIONS
Type	Planetary gear brush dc gear motor	
Motor type	Iron core. brush commutation	Winding parameters
Motor brush type	Carbon brushes	
Motor terminals	Screw bolt terminals	Wiring harnesses. cables. connectors
EMC filter	No	Yes
Gear material	Metal	
Motor pinion material	Plastic	
Bearing	Ball bearing	
Shaft	Hardened stainless steel	Dimensions
Brake option	Electric brake (to order as option)	
Environmental protection	IP00 (with brake IP00)	
Operating temperature	-10-...+60 °C	- 40-...+60 °C
RoHS compliance	Yes	
CE label	Yes	Yes

MOTOR DATA		
Nominal voltage (V)	12	24
No load speed (rpm)	2400	2400
No load current (A)	5.5	2.5
Nominal speed (rpm)	2020	2020
Nominal torque (Nm)	2	2
Nominal current (A)	43	22
Stall torque (Nm)	8.2	8.2
Starting current (A)	262	131
Output (W)	421	421
Length (mm)	187	187
Weight (kg)	10.5	10.5

Magnetic encoder / 48 counts per revolution / 2 channels
Optical encoder / 2000 counts per revolution / 2 channels

DRAWING
(mm)



PHOTO



ENCODER DATA				
MAGNETIC			OPTICAL	
Pulses per revolution PPR two channels	24		1000	
Pulses per revolution CPR two channels	48		2000	
Phase shift	90°		90°	
VCC	+5 VDC	Orange lead	+5 VDC	Pin 1
GND	0 VDC	Green lead	0 VDC	Pin 5, Pin 8
Signal A		Blue lead		A- Pin 6
Signal B		Yellow lead		B- Pin 7
Current			< 80 mA	
Index			Z+ Pin 4	
Output wave			Line driver	
Frequency response			25 KHz max.	
Connection			DB9 female	
Weight	< 100g			
Wire length	400mm		110mm	

Brake / Electro mechanic



BRAKE DATA					
Suitable for motor with diameter	mm	54 61	64	71 80 89	109 123
Type	Brake activation unenergized				
Voltage	VDC	12 24			24
Power	W	7	10	12	25
Static friction torque	Nm	0.5	2.0	4.5	8.0
Cable length	mm	250	70	400	600
Diameter	mm	50.0	57.0	60.6	102
Length	mm	29.6	32.0	34.2	56.5
Weight	Kg	0.35	0.45	0.45	2.00