

Magnetic Particle Clutches and Brakes

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SG Transmission

Magnetic particle clutches and brakes have been designed to maintain high performance in continuous slip applications through maximum and continuous heat dissipation.

The use of high wear resistant particles assures long operational life in high cycle applications.

Fast response

The OP series has been designed to provide fast response. Response rates can be further quickened through overexcitation circuits.

Stable torque

The OP series produce consistent and repeatable torque. Torque is independent of speed and proportional to voltage applied to the field.

Long life

The OP series sturdy construction and precise formulation of the magnetic particles combine to provide extended life.

Slip capacity

OP series clutches and brakes are designed to deliver high performance under constant slip conditions.



Technical data

Series 51-OPC (Clutch)

Fig 1

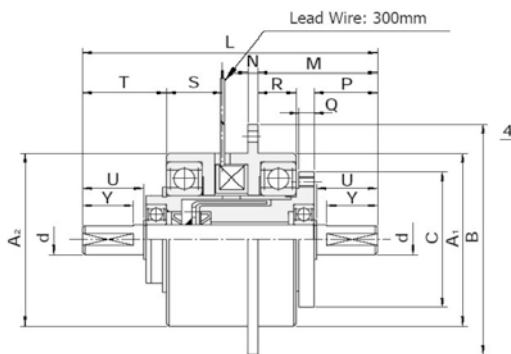
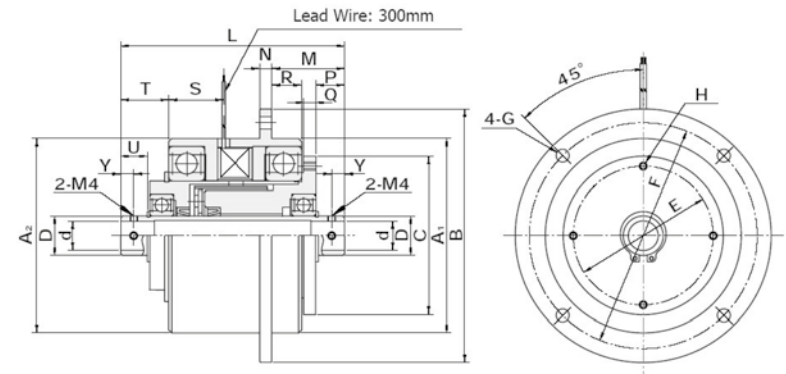


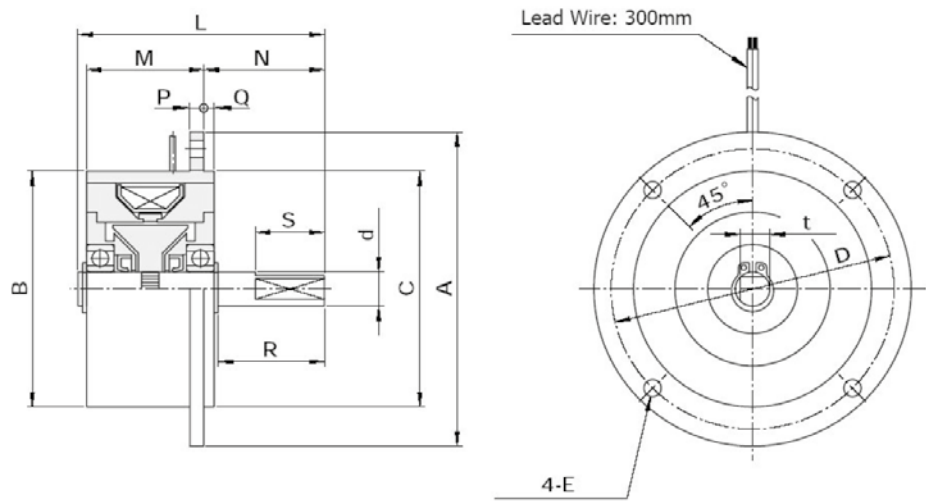
Fig 2



Model		Figure 1			Figure 2	
		51-OPC 5	51-OPC 10	51-OPC 20	51-OPC 40	51-OPC 80
Torque Range (Nm)		0.50	1.0	2.0	4.0	8.0
Wattage (DC24V) (W)		12	14	18	22	33
Moment of Inertia J (KGCM ²)	Input	0.15	0.26	0.84	3.25	5.25
	Output	0.014	0.018	0.07	0.29	0.39
Radial Dimensions (mm)	D1H7	5	7	12	-	-
	t	4.5	6.5	11.5	-	-
	D2H7	-	-	-	12	15
	A1H7	50	54	69	86	98
	A2	50	54	69	86	98
	B	70	76	92	112	128
	CH7	40	42	54	70	80
	D	-	-	-	20	20
	E	30	34	46	60	70
	F	60	66	82	100	114
	G	4.5	4.5	4.5	5.5	6.5
Axial Dimensions (mm)	H	3 - M4	3 - M4	4 - M4	4 - M4	4 - M4
	L	77	83	116	97	112
	M	25	27	47	32	36.5
	N	4	4	4	5	6
	P	11	13	25	10	14.5
	Q	5	5	6	6	6
	R	8.5	8.5	15	15	15
	S	26	18	24	28	30
	T	13.5	15.5	33	21	24
	U	10.5	12.2	24	8.8	13.3
	Y	9	10	20	4	6.5
Weight (lbs)		1.5	1.8	2.8	5.3	6.8

Technical data

Series 52-OPB-N (Brake)

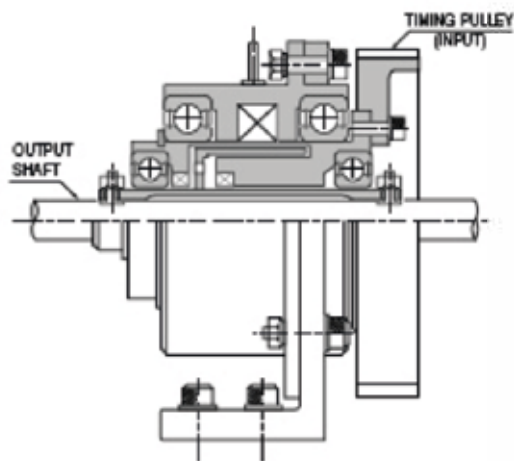


Model		52-OPB	52-OPB 10	52-OPB 20	52-OPB 40	52-OPB 80
Torque range (Nm)		0.5	1.0	2.0	4.0	8.0
Wattage (DC24V) (W)		12	14	18	22	33
Moment of inertia J (KGCM2)		0.15	0.26	0.84	3.25	5.25
Radial dimensions (mm)	DG7	6	7	10	12	15
	t	5.5	6.5	9	10	13
	A	65	75	92	112	128
	B	46	56	69	86	100
	CH9	43	54	69	86	98
	D	56	66	82	100	114
	E	4.5	4.5	4.5	5.5	6.5
Axial dimensions (mm)	L	56	61	71.5	79	95
	M	27.5	33	34	36	42
	N	25.5	25.8	35	40	50
	P	3	4	4	5	6
	Q	2.5	3	3	5	6
	R	22.3	22	31	34	43
	S	12	12	20	20	20
Weight (lbs)		0.9	1.5	2.2	4.0	6.6

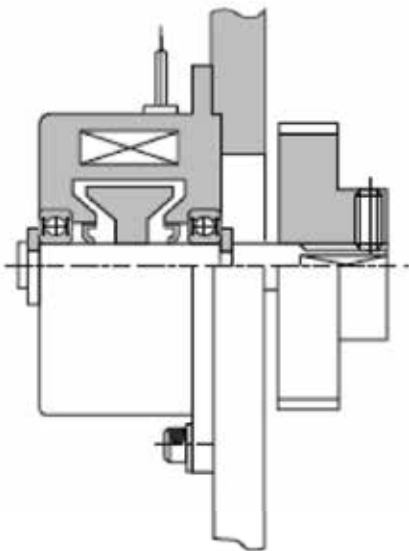
Performance table

Model	Rated torque (Nm)	Coil resistance (20dec C 0hm)	Drag torque (Nm)	Allowable continuous heat dissipation (W)	Max speed (r/min)
51-OPC 5	0.5	50	Max 0.12	15	1800
51-OPC 10	1.0	41	Max 0.23	25	1800
51-OPC 20	2.0	32	Max 0.47	45	1800
51-OPC 40	4.0	26	Max 0.95	70	1800
51-OPC 80	8.0	17.6	Max 1.91	90	1800
52-OPB 5	0.5	90	Max 0.12	25	1800
52-OPB 10	1.0	65	Max 0.23	35	1800
52-OPB 20	2.0	65	Max 0.47	50	1800
52-OPB 40	4.0	65	Max 0.95	60	1800
52-OPB 80	8.0	65	Max 1.91	80	1800

Typical installation



Model 51-OPC Clutch



Model 52-OPB Brake