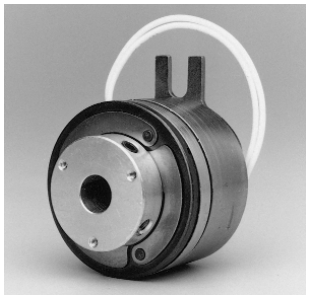
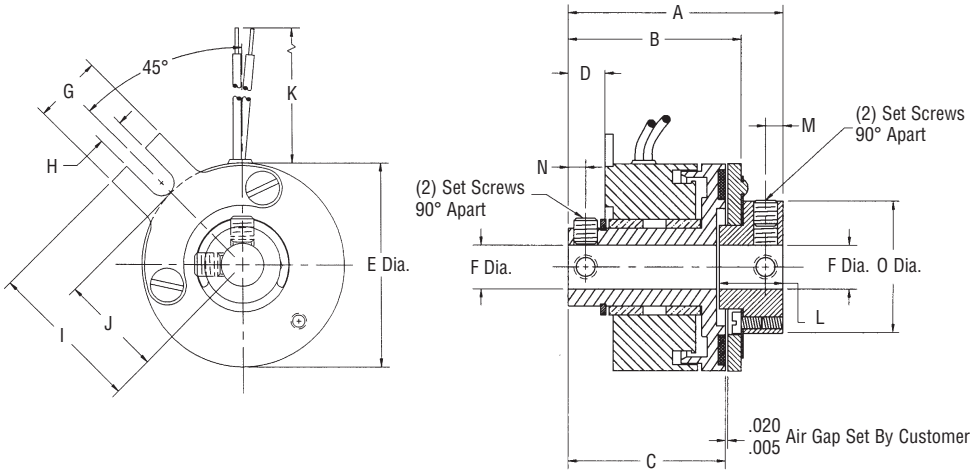
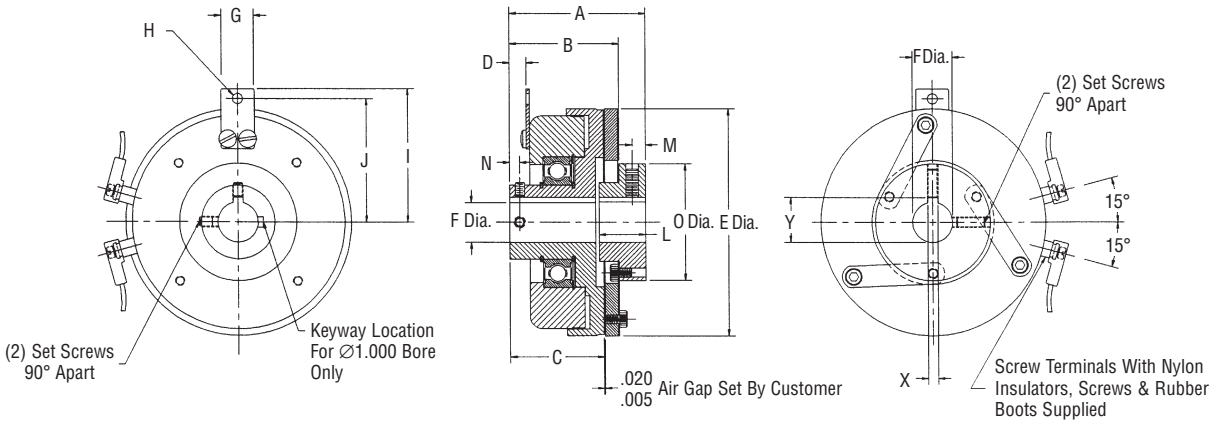
Shaft Mounted Clutch Couplings – Type SO

SO series power-on clutch couplings are used to couple two in-line shafts. The armature hub assembly is mounted to the load shaft, and the rotor assembly is mounted on the input shaft. The field assembly is mounted on the input shaft and retained by a loose-fitting pin or bracket through the anti-rotation tab.





Model SO08 through SO26



Model SO30 through SO42

Customer Shall Maintain:

a loose-fitting pin through the anti-rotation tab to prevent preloading the bearings; concentricity between the shafts within .005 inch T.I.R.; initial air gap setting of .005-.020 inches.

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Mechanical

MODEL NO.	STATIC TORQUE LB. – IN.	INERTIA LB. – IN.²		WGT. OZ.
		ROTOR	ARM & HUB	
SO08	2.5	.002	.0011	2
SO11	6	.0058	.0024	3.2
SO15	10	.060	.026	3.8
SO17	15	.061	.031	11
SO19	25	.082	.042	12
SO22	50	.215	.070	20
SO26	80	.362	.320	28
SO30	125	.610	.561	45
SO42	250	2.50	2.30	80

Electrical

MODEL NO.	90 VDC		24 VDC		12 VDC	
	AMPS	OHMS	AMPS	OHMS	AMPS	OHMS
SO08	.046	1977	.117	205	.246	48.8
SO11	.047	1930	.198	121	.447	26.8
SO15	.042	2150	.183	132	.380	31.6
SO17	.066	1369	.289	83	.561	21.4
SO19	.074	1213	.322	74.4	.574	20.9
SO22	.079	1140	.322	74.6	.628	19.1
SO26	.092	980	.374	64.2	.760	15.8
SO30	.091	988	.378	65.3	.729	16.4
SO42	.124	722	.468	51.2	.934	12.84

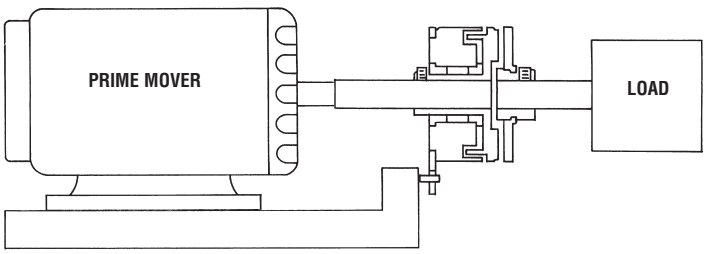
Lead wire is UL recognized style 1213, 1015 or 1430, 22 gage.
Insulation is .050″ O.D. on 08, 11, 15 units; .064″ or .095″ O.D. on all other units.

Dimensions

MODEL NO.	A MAX.	B NOM.	C NOM.	D NOM.	E MAX.	F NOM.	G MAX.	H MIN.	I NOM.	J NOM.	K ± .500	ROTOR KEYWAYS			L MAX.	M NOM.	N NOM.	O MAX.
												BORE	NOMINAL KEYWAY X	Y				
SO08	1.059	.875	.763	.191	.903	1/8 3/16 1/4	.305	.094	.625	.445	12.00	N.A.	SET SCREWS ONLY		.237	.070	.080	.500
SO11	1.168	.933	.777	.147	1.160	3/16 1/4 5/16	.380	.122	.875	.585	12.00	N.A.	SET SCREWS ONLY		.307	.093	.087	.687
SO15	1.575	1.255	1.075	.275	1.500	1/4 5/16 3/8	.520	.180	1.120	.750	12.00	N.A.	SET SCREWS ONLY		.475	.125	.125	.965
SO17	1.605	1.311	1.060	.270	1.780	1/4 5/16 3/8	.505	.184	1.325	.975	12.00	1/4 5/16 3/8	.0625 – .0655 .0625 – .0655 .094 – .097	.285 – .290 .347 – .352 .417 – .427	.460	.115	.125	1.190
SO19	1.609	1.314	1.060	.270	2.000	5/16 3/8 1/2	.505	.184	1.325	.975	12.00	5/16 3/8 1/2	.0625 – .0655 .094 – .097 .125 – .128	.347 – .352 .417 – .427 .560 – .567	.455	.115	.125	1.190
SO22	1.989	1.578	1.423	.281	2.260	3/8 1/2	.442	.170	1.515	1.160	18.00	3/8 1/2	.094 – .097 .125 – .128	.417 – .427 .560 – .567	.510	.115	.117	1.005
SO26	2.115	1.754	1.444	.277	2.645	3/8 1/2 5/8	.510	.190	1.750	1.465	18.00	3/8 1/2 5/8	.094 – .097 .125 – .128 .1885 – .1905	.417 – .427 .560 – .567 .709 – .716	.610	.150	.187	1.440
SO30	2.151	1.815	1.403	.265	3.268	1/2 5/8 3/4	.442	.170	2.050	1.695	SCREW TER-MINALS	1/2 5/8 3/4	.125 – .128 .1885 – .1905 .1885 – .1905	.560 – .567 .709 – .716 .836 – .844	.680	.150	.135	1.825
SO42	2.570	2.050	1.625	.320	4.270	1/2 5/8 3/4 7/8 1	.645	.190	2.500	2.312	SCREW TER-MINALS	1/2 5/8 3/4 7/8 1	.125 – .128 .1885 – .1905 .1885 – .1905 .1885 – .1905 .251 – .253	.560 – .567 .709 – .716 .836 – .844 .962 – .970 1.113 – 1.121	.890	.250	.187	2.195

NOTES:

1. 30 and 42 units have a single ball bearing between the field and rotor.
2. 08 units have set screws 120° apart.
3. 08 and 19 units have retaining collar.



See page 3 for ordering information

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PART NUMBERING SYSTEM FOR PRODUCTS ON PAGES 3 TO 35 OF THIS CATALOG

A A B B-C D E F

DIGIT	DIGIT	MODEL NO.
1	7	FSB
1	9	FSBR
2	1	FSBR (MANUAL RELEASE)
0	1	SL
0	3	BSL
0	5	FL
0	7	SO
0	9	FO
1	1	FB
1	3	SLB
1	5	SOB
1	8	SAB

DIGIT	DIGIT	SIZE
0	1	001
0	2	003
0	3	007
0	4	015
0	5	035
0	6	050
0	7	100
0	8	200
0	9	08
1	0	11
1	1	15
1	2	17
1	3	19
1	4	22
1	5	26
1	6	30
1	7	42
1	8	20
1	9	90
2	1	180
2	3	400
2	5	1200

DIGIT	VOLTS
1	90 VDC
2	24 VDC
3	12 VDC
4	120 VAC

DIGIT	BORE
1	1/8
2	3/16
3	1/4
4	5/16
5	3/8
6	1/2
7	5/8
8	3/4
9	7/8
0	1
11	1 1/8
12	1 1/4
13	1 3/8
14	1 1/2

DIGIT	DRIVE
1	ZERO BACKLASH
2	HEX/SQUARE
3	DYNAMIC (MANUAL RELEASE BRAKE ONLY)
4	STATIC (MANUAL RELEASE BRAKE ONLY)
5	SPLINE

DIGIT	CONNECTION
1	LEAD WIRES
2	SCREW TERMINALS
3	SWITCH (MANUAL RELEASE BRAKE ONLY)
4	CONDUIT BOX

How To Order

A. Select the model number from the product guide.
B. Select the size of the clutch or brake.
C. Select the voltage.
D. Select the bore diameter.
E. For all power-on clutches and brakes, select 1. For model FSBR and SAB-20, & 90, select 2. For model FSB spring applied brakes, select 1 or 2. For manual release brakes, select 3 or 4. For SAB-180, 400, & 1200, select 5.
F. For all clutches and brakes, refer to the product guide and specify 1 or 2. For manual release brakes, if a switch is desired, select 3, otherwise use a 1.

Example

SL11 clutch, 24 volts, 1/4" bore
Part No. 0110-2311
FSB050 brake, 90 volts, 3/8" bore, Hex drive
Part No. 1706-1521

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