

# Electromagnetic Friction Clutches & Brakes

## Shaft Mounted Clutches – Type SL

### SL SERIES POWER-ON CLUTCHES

#### Shaft Mounted Clutches – Type SL

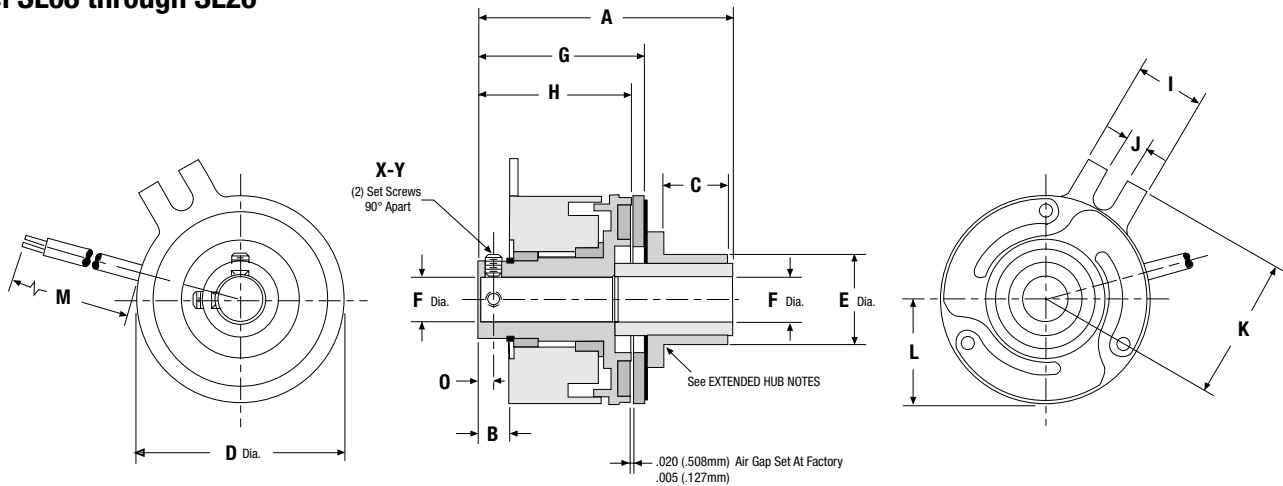


SL series power-on clutches are used to couple two parallel shafts. The armature hub assembly is mounted to the same shaft as the rotor assembly. The armature hub accommodates a pulley, gear, sprocket, etc., to transmit torque to the second shaft. The field assembly is mounted on the shaft and retained by a loose-fitting pin or bracket through the anti-rotation tab.

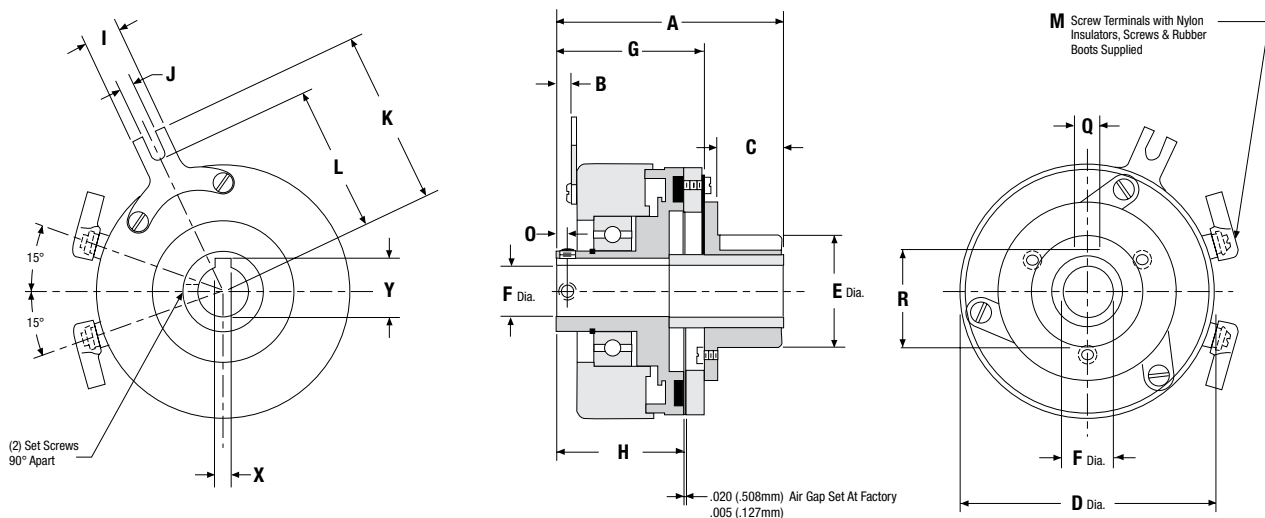
#### Customer Shall Maintain:

A loose-fitting pin through the anti-rotation tab to prevent preloading the bearings.

#### Model SL08 through SL26



#### Model SL30 and SL42



# Electromagnetic Friction Clutches & Brakes

## Shaft Mounted Clutches – Type SL Imperial

### Mechanical

| MODEL NO. | STATIC TORQUE LB. - IN. | INERTIA LB. - IN. <sup>2</sup> |           | WEIGHT OZ. |
|-----------|-------------------------|--------------------------------|-----------|------------|
|           |                         | ROTOR                          | ARM & HUB |            |
| SL08      | 2.5                     | .002                           | .0015     | 2.0        |
| SL11      | 6                       | .0058                          | .0029     | 3.2        |
| SL15      | 10                      | .060                           | .0031     | 3.8        |
| SL17      | 15                      | .061                           | .036      | 11         |
| SL19      | 25                      | .082                           | .047      | 12         |
| SL22      | 50                      | .215                           | .079      | 20         |
| SL26      | 80                      | .362                           | .292      | 28         |
| SL30      | 125                     | .610                           | .561      | 50         |
| SL42      | 250                     | 2.50                           | 2.30      | 85         |

### Electrical

| MODEL NO. | 90 VDC |      | 24 VDC |      | 12 VDC |       |
|-----------|--------|------|--------|------|--------|-------|
|           | AMPS   | OHMS | AMPS   | OHMS | AMPS   | OHMS  |
| SL08      | 0.046  | 1977 | 0.117  | 205  | 0.246  | 48.8  |
| SL11      | 0.047  | 1930 | 0.198  | 121  | 0.447  | 26.8  |
| SL15      | 0.042  | 2150 | 0.183  | 132  | 0.38   | 31.6  |
| SL17      | 0.066  | 1369 | 0.289  | 83   | 0.561  | 21.4  |
| SL19      | 0.074  | 1213 | 0.294  | 81.6 | 0.574  | 20.9  |
| SL22      | 0.079  | 1140 | 0.322  | 74.6 | 0.628  | 19.1  |
| SL26      | 0.092  | 980  | 0.374  | 64.2 | 0.76   | 15.8  |
| SL30      | 0.091  | 988  | 0.378  | 65.3 | 0.729  | 16.5  |
| SL42      | 0.124  | 722  | 0.468  | 51.2 | 0.934  | 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.

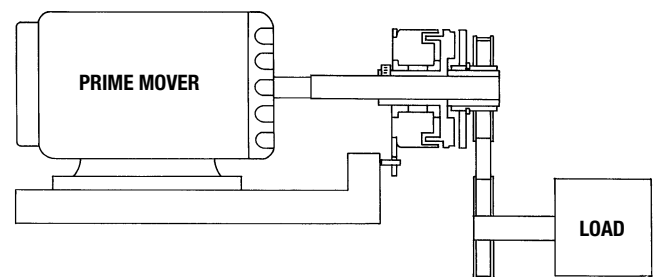
### Dimensions

| MODEL NO. | A MAX. | B NOM. | C MAX. | D MAX. | E ± .002      | F NOM.                        | G NOM. | H NOM. | I MAX. | J MIN. | K NOM. | L NOM. | M ± .500        | O NOM. | ROTOR KEYWAY                    |   |   |                 |
|-----------|--------|--------|--------|--------|---------------|-------------------------------|--------|--------|--------|--------|--------|--------|-----------------|--------|---------------------------------|---|---|-----------------|
|           |        |        |        |        |               |                               |        |        |        |        |        |        |                 |        | BORE                            | KEYWAY  |   |                 |
|           |        |        |        |        |               |                               |        |        |        |        |        |        |                 |        |                                 | X   | Y   |                 |
| SL08      | 1.37   | 0.191  | 0.41   | 0.903  | 0.507 (Knurl) | 1/8<br>3/16<br>1/4            | 0.874  | 0.763  | 0.305  | 0.094  | 0.625  | 0.445  | 12              | 0.08   | N.A.                            | SET SCREWS ONLY   |   |                 |
| SL11      | 1.409  | 0.147  | 0.396  | 1.16   | 0.507 (Knurl) | 3/16<br>1/4<br>5/16           | 0.935  | 0.777  | 0.38   | 0.122  | 0.875  | 0.585  | 12              | 0.087  | N.A.                            | SET SCREWS ONLY   |   |                 |
| SL15      | 1.695  | 0.275  | 0.303  | 1.5    | 0.630 (Knurl) | 1/4<br>5/16<br>3/8            | 1.255  | 1.075  | 0.52   | 0.18   | 1.12   | 0.75   | 12              | 0.125  | N.A.                            | SET SCREWS ONLY   |   |                 |
| SL17      | 1.823  | 0.279  | 0.382  | 1.78   | 0.630 (Knurl) | 1/4<br>5/16<br>3/8            | 1.316  | 1.06   | 0.505  | 0.184  | 1.325  | 0.975  | 12              | 0.125  | N.A.                            | SET SCREWS ONLY   |   |                 |
| SL19      | 1.948  | 0.279  | 0.465  | 2      | 0.756 (Knurl) | 5/16<br>3/8<br>1/2            | 1.329  | 1.06   | 0.505  | 0.184  | 1.325  | 0.975  | 12              | 0.125  | 5/16<br>3/8<br>1/2              | .0625-.0655<br>.094-.097  | .347-.352<br>.417-.427  | SET SCREWS ONLY |
| SL22      | 2.16   | 0.281  | 0.432  | 2.26   | 0.756 (Knurl) | 3/8<br>1/2                    | 1.578  | 1.423  | 0.442  | 0.17   | 1.515  | 1.16   | 18              | 0.117  | 3/8<br>1/2                      | .094-.097<br>.125-.128  | .417-.427<br>.560-.567  | SET SCREWS ONLY |
| SL26      | 2.454  | 0.28   | 0.472  | 2.645  | 0.999         | 3/8<br>1/2<br>5/8             | 1.74   | 1.437  | 0.51   | 0.19   | 1.75   | 1.465  | 18              | 0.154  | 3/8<br>1/2<br>5/8               | .094-.097<br>.125-.128<br>.1885-.1905                               | .417-.427<br>.560-.567<br>.709-.716                             | SET SCREWS ONLY |
| SL30      | 2.8    | 0.25   | 0.83   | 3.268  | 1.374         | 1/2<br>5/8<br>3/4             | 1.815  | 1.39   | 0.442  | 0.17   | 2.05   | 1.695  | SCREW TERMINALS | 0.135  | 1/2<br>5/8<br>3/4               | .125-.128<br>.1885-.1905<br>.1885-.1905                             | .560-.567<br>.709-.716<br>.836-.844                             | SET SCREWS ONLY |
| SL42*     | 3.82   | 0.32   | 1.56   | 4.27   | 1.374         | 1/2<br>5/8<br>3/4<br>7/8<br>1 | 2.05   | 1.625  | 0.645  | 0.19   | 2.5    | 2.312  | SCREW TERMINALS | 0.187  | 1/2<br>5/8<br>3/4<br>7/8*<br>1* | .125-.128<br>.1885-.1905<br>.1885-.1905<br>.1885-.1905<br>.251-.253 | .560-.567<br>.709-.716<br>.836-.844<br>.962-.970<br>1.113-1.121 | SET SCREWS ONLY |

\*7/8 and 1 inch bore in rotor only.

### Notes:

- 08 units have set screws 120° apart
- 08 and 19 units have retaining collar
- 30 and 42 units have single ball bearing between field and rotor
- 26 units have (3)-#8-32 tapped holes on 1.375 in. B.C. in armature hub face instead of knurl
- 30 and 42 units have keyway instead of knurl (Q=.312/.314, R=1.198/1.193)
- 7/8 and 1 inch bore in rotor only for 42 unit



See page 4 for Ordering Information

# Electromagnetic Friction Clutches & Brakes

## Shaft Mounted Clutches – Type SL Metric

### Mechanical

| MODEL NO. | STATIC TORQUE N-m | INERTIA kg-cm <sup>2</sup> |           | WEIGHT kg |
|-----------|-------------------|----------------------------|-----------|-----------|
|           |                   | ROTOR                      | ARM & HUB |           |
| SL08      | .28               | .006                       | .004      | 0.57      |
| SL11      | .68               | .017                       | .008      | 0.91      |
| SL15      | 1.13              | .176                       | .009      | .108      |
| SL17      | 1.70              | .179                       | .105      | .312      |
| SL19      | 2.83              | .240                       | .138      | .340      |
| SL22      | 5.65              | .629                       | .231      | .567      |
| SL26      | 9.04              | 1.062                      | .855      | .794      |
| SL30      | 14.12             | 1.785                      | 1.642     | 1.417     |
| SL42      | 28.24             | 7.316                      | 6.731     | 2.410     |

### Electrical

| MODEL NO. | 90 VDC |      | 24 VDC |      | 12 VDC |       |
|-----------|--------|------|--------|------|--------|-------|
|           | AMPS   | OHMS | AMPS   | OHMS | AMPS   | OHMS  |
| SL08      | 0.046  | 1977 | 0.117  | 205  | 0.246  | 48.8  |
| SL11      | 0.047  | 1930 | 0.198  | 121  | 0.447  | 26.8  |
| SL15      | 0.042  | 2150 | 0.183  | 132  | 0.38   | 31.6  |
| SL17      | 0.066  | 1369 | 0.289  | 83   | 0.561  | 21.4  |
| SL19      | 0.074  | 1213 | 0.294  | 81.6 | 0.574  | 20.9  |
| SL22      | 0.079  | 1140 | 0.322  | 74.6 | 0.628  | 19.1  |
| SL26      | 0.092  | 980  | 0.374  | 64.2 | 0.76   | 15.8  |
| SL30      | 0.091  | 988  | 0.378  | 65.3 | 0.729  | 16.5  |
| SL42      | 0.124  | 722  | 0.468  | 51.2 | 0.934  | 12.84 |

Lead wire is UL recognized style 1213, 1015 or 1430, 22 gage.  
Insulation is 1.27 mm O.D. on 08, 11, 15 units; 1.63 or 2.41 mm O.D. on all other units.

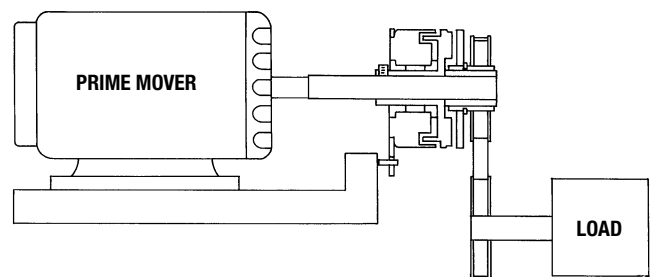
### Dimensions

| MODEL NO. | A MAX. | B NOM. | C MAX. | D MAX.  | E ± .051       | F NOM.               | G NOM. | H NOM. | I MAX. | J MIN. | K NOM. | L NOM. | M ± 12.7        | O NOM. | ROTOR KEYWAY         |   |   |
|-----------|--------|--------|--------|---------|----------------|----------------------|--------|--------|--------|--------|--------|--------|-----------------|--------|----------------------|---|---|
|           |        |        |        |         |                |                      |        |        |        |        |        |        |                 |        | BORE                 | KEYWAY                                    |   |
|           |        |        |        |         |                |                      |        |        |        |        |        |        |                 |        |                      | X   | Y   |
| SL08      | 34.798 | 4.851  | 10.414 | 22.936  | 12.878 (Knurl) | 5H9                  | 22.200 | 19.380 | 7.747  | 2.388  | 15.875 | 11.303 | 304.8           | 2.032  | N.A.                 | SET SCREWS ONLY                           |   |
| SL11      | 35.789 | .734   | 10.058 | 29.464  | 12.582 (Knurl) | 6H9<br>8H9           | 23.749 | 19.736 | 9.652  | 3.099  | 22.225 | 14.859 | 304.8           | 2.210  | N.A.                 | SET SCREWS ONLY                           |   |
| SL15      | 43.053 | 6.985  | 7.969  | 38.100  | 16.022 (Knurl) | 8H9<br>10H9          | 31.877 | 27.305 | 13.208 | 4.572  | 28.448 | 19.050 | 304.8           | 3.175  | N.A.                 | SET SCREWS ONLY                           |   |
| SL17      | 46.304 | 7.087  | 9.703  | 45.212  | 16.002 (Knurl) | 8H9<br>10H9          | 33.426 | 26.924 | 12.827 | 4.674  | 33.655 | 24.765 | 304.8           | 3.175  | N.A.                 | SET SCREWS ONLY                           |   |
| SL19      | 49.479 | 7.087  | 11.811 | 50.800  | 19.202 (Knurl) | 10H9                 | 33.757 | 26.924 | 12.827 | 4.674  | 33.655 | 24.765 | 304.8           | 3.175  | 10H9                 | 2.988-3.060                               | 11.40-11.50                               |
| SL22      | 54.864 | 7.137  | 10.973 | 57.404  | 19.202 (Knurl) | 10H9                 | 40.081 | 32.334 | 11.227 | 4.318  | 38.481 | 29.464 | 457.2           | 2.972  | 10H9                 | 2.988-3.060                               | 11.40-11.50                               |
| SL26      | 62.586 | 1.036  | 11.989 | 67.183  | 25.375         | 10H9<br>15H9         | 44.526 | 36.678 | 12.954 | 4.826  | 44.450 | 37.211 | 457.2           | 3.912  | 10H9<br>15H9         | 2.988-3.060<br>4.985-5.078                | 11.40-11.50<br>17.30-17.40                |
| SL30      | 71.120 | 6.350  | 21.082 | 83.007  | 34.900         | 15H9                 | 46.101 | 35.306 | 11.227 | 4.318  | 52.070 | 43.053 | SCREW TERMINALS | 3.429  | 15H9                 | 4.985-5.078                               | 17.30-17.40                               |
| SL42*     | 97.028 | 8.128  | 39.624 | 108.458 | 34.900         | 17H9<br>20H9<br>25H9 | 52.070 | 41.275 | 16.383 | 4.826  | 63.500 | 58.725 | SCREW TERMINALS | 4.750  | 17H9<br>20H9<br>25H9 | 4.985-5.078<br>5.985-6.078<br>7.982-8.098 | 19.30-19.40<br>22.80-22.90<br>26.30-28.50 |

\*20 and 25 mm bore in rotor only.

### Notes:

- 08 units have set screws 120° apart
- 08 and 19 units have retaining collar
- 30 and 42 units have single ball bearing between field and rotor
- 26 units have (3)-M#4 tapped holes on (34.93 mm) B.C. in armature hub face instead of knurl
- 30 and 42 units have keyway instead of knurl (Q= 7.925/7.976, R=30.429/30.302)
- 20 and 25 mm bore in rotor only for 42 unit



See page 4 for Ordering Information