SLS RODLESS SCREW DRIVE ACTUATOR

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LINEAR SOLUTIONS MADE EASY
SLS RODLESS SCREW DRIVE ACTUATOR

Look for this endurance technology symbol indicating our durability design features

This rodless style actuator is designed for carrying light to moderate loads on a wide, rigid base. Based upon our LS pneumatic linear slide, it utilizes a guidance system consisting of two linear guide rods with recirculating ball bearings for stable, smooth and low friction operation. Built-to-order in stroke lengths up to 3 m [120 inches] with multiple screw options available.

YOU CAN CHOOSE:

- Solid nuts of bronze or engineered resins offering quiet performance at the lowest cost; anti-backlash available
- Ball nuts offer positioning accuracy and repeatability with longer life; low-backlash available

- Load-bearing carrier design isolates the motor from axial forces
- Four recirculating ball bearings provide guidance, low friction loss and long life
- Load and moments are transmitted directly to the actuator body
- Precision machined table surface provides a large surface area for secure mounting
- Prevent contaminants from entering the sealing band area to protect internal components
- High thrust bearing assembly design
- WIDE TABLE SURFACE

- FORMED END CAP WIPIES

- LOAD-BEARING CARRIER DESIGN

- SCREW SUPPORT BEARINGS

- WIDE TABLE SURFACE
YOU CAN CHOOSE:

- Motor or gearbox supplied and installed by Tolomatic
- Specify the device to be installed and actuator ships with proper mounting hardware
- Specify and ship your device to Tolomatic for factory installation

LMI (inline) motor mount only

CARRIER OPTIONS

- AUXILIARY CARRIER Doubles the load capacity and increases bending moments capacity significantly
- METRIC OPTION Provides metric tapped holes for mounting of load to carrier and of actuator

SWITCHES

- Styles include: reed, hall-effect or triac. Select either 5m potted cable with flying leads or 150mm to quick-disconnect coupler with mating 5m cable

OPTIONS

- Bumpers protect the screw and nut assembly from damage at end of stroke
- Black anodized extrusion design is optimized for rigidity and strength
- External switch channels on both sides allow easy placement and adjustment of position indicating switches
- Prevents contaminants from entering the screw and nut area for prolonged life
- Fatigue resistant stainless steel bands are specifically made to offer long life and will not elongate
- Actuator base has two T-Slot channels running the entire length for secure mounting
- Table includes two T-Slot channels for easy attachment of any load

LIGHTWEIGHT ALUMINUM DESIGN

STAINLESS STEEL SEALING BAND

T-SLOT MOUNTING
SLS10 Rodless Screw Drive Actuator

ACME SCREW SPECIFICATIONS

SLS10 ACME SCREW CRITICAL SPEED AND PV LIMITS

CRITICAL SPEED WITH 12mm METRIC ACME SCREW

CRITICAL SPEED WITH 1/2" US CONVENTIONAL ACME SCREW

PV LIMITS: 12mm ACME METRIC SCREW w/25mm LEAD

PV LIMITS: 1/2" 1 TPI US CONVENTIONAL ACME SCREW

PV LIMITS: 12mm ACME METRIC SCREW w/12mm LEAD

PV LIMITS: 1/2" 2 TPI US CONVENTIONAL ACME SCREW

PV LIMITS: 1/2" 5 TPI US CONVENTIONAL ACME SCREW

SN = Solid Nut
SNA = Solid Anti-backlash Nut

* Maximum thrust is the maximum continuous dynamic thrust subject to Thrust x Velocity limitation.

PV LIMITS: Any material which carries a sliding load is limited by heat buildup. The factors that affect heat generation rate in an application are the pressure on the nut in pounds per square inch and the surface velocity in feet per minute. The product of these factors provides a measure of the severity of an application.

\[
P \times V \leq 0.1
\]

(Max. Thrust Rating) \times (Max. Speed Rating) ≤ 0.1

MAX THRUST: 800 N
MAX THRUST: 170 lb
MAXIMUM STROKE
MAX THRUST*: 130 LB
MAX THRUST*: 170 LB

sizeit.tolomatic.com for fast, accurate actuator selection

ACTUATOR SIZING
SLS10 Rodless Screw Drive Actuator

BALL SCREW SPECIFICATIONS

SLS10 BALL SCREW SPECIFICATIONS

CRITICAL SPEED WITH 10mm METRIC BALL SCREW

CRITICAL SPEED WITH 3/8" US CONVENTIONAL BALL SCREW

LIFE CALCULATION: 10mm METRIC BALL SCREW w/3.2mm LEAD

LIFE CALCULATION: 3/8" 8TPI US CONVENTIONAL BALL SCREW

BN = Ball Nut

* Maximum thrust reflects 90% reliability for 25 million linear millimeters of travel.

**Life indicates theoretical maximum life of screw only, under ideal conditions and does not indicate expected life of actuator.
### SPECIFICATIONS RELATED TO ACTUATOR SIZE AND SCREW SELECTION

#### METRIC LEAD SCREWS

<table>
<thead>
<tr>
<th>ACTUATOR SERIES</th>
<th>SCREW DIAM. (mm)</th>
<th>SCREW TYPE</th>
<th>TPI (turns/in)</th>
<th>LEAD ACCURACY (mm/300)</th>
<th>BACKLASH (mm)</th>
<th>MAXIMUM THRUST (N)</th>
<th>MAXIMUM STROKE (mm)</th>
<th>INERTIA (kg-m² x 10⁻⁶)</th>
<th>BREAKAWAY TORQUE (N-m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLS10</td>
<td>10 BN 3.2</td>
<td>08</td>
<td>0.004</td>
<td>0.015</td>
<td>130</td>
<td>61</td>
<td>0.0054</td>
<td>0.0005</td>
<td>1.063</td>
</tr>
<tr>
<td></td>
<td>10 BNL 3.2</td>
<td>08</td>
<td>0.004</td>
<td>0.002</td>
<td>130</td>
<td>61</td>
<td>0.0054</td>
<td>0.0005</td>
<td>1.063</td>
</tr>
<tr>
<td></td>
<td>12 SN 12</td>
<td>01</td>
<td>0.013</td>
<td>0.003</td>
<td>170</td>
<td>85</td>
<td>0.0062</td>
<td>0.0017</td>
<td>1.438</td>
</tr>
<tr>
<td></td>
<td>12 SN 25</td>
<td>05</td>
<td>0.013</td>
<td>0.18</td>
<td>800</td>
<td>1626</td>
<td>0.0180</td>
<td>0.0017</td>
<td>1.250</td>
</tr>
</tbody>
</table>

#### US CONVENTIONAL LEAD SCREWS

<table>
<thead>
<tr>
<th>ACTUATOR SERIES</th>
<th>SCREW DIAM. (in)</th>
<th>SCREW TYPE</th>
<th>TPI (turns/in)</th>
<th>LEAD ACCURACY (in/ft)</th>
<th>BACKLASH (in)</th>
<th>MAXIMUM THRUST (lb)</th>
<th>MAXIMUM STROKE (in)</th>
<th>INERTIA (lb-in²)</th>
<th>BREAKAWAY TORQUE (lb-in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLS10</td>
<td>0.375 BN</td>
<td>08</td>
<td>0.13</td>
<td>0.015</td>
<td>130</td>
<td>61</td>
<td>0.0054</td>
<td>0.0005</td>
<td>1.063</td>
</tr>
<tr>
<td></td>
<td>0.375 BNL</td>
<td>08</td>
<td>0.13</td>
<td>0.002</td>
<td>130</td>
<td>61</td>
<td>0.0054</td>
<td>0.0005</td>
<td>1.063</td>
</tr>
<tr>
<td></td>
<td>0.500 SN</td>
<td>01</td>
<td>0.006</td>
<td>0.007</td>
<td>170</td>
<td>85</td>
<td>0.0054</td>
<td>0.0017</td>
<td>1.875</td>
</tr>
<tr>
<td></td>
<td>0.500 SNA</td>
<td>02</td>
<td>0.005</td>
<td>0.007</td>
<td>170</td>
<td>120</td>
<td>0.0026</td>
<td>0.0017</td>
<td>1.438</td>
</tr>
<tr>
<td></td>
<td>0.500 SN</td>
<td>05</td>
<td>0.006</td>
<td>0.007</td>
<td>170</td>
<td>120</td>
<td>0.0018</td>
<td>0.0017</td>
<td>1.250</td>
</tr>
</tbody>
</table>

**SCREW CODE DESCRIPTION**

- SN: Solid Nut
- SNA: Anti-backlash Solid Nut
- BN: Ball Nut
- BNL: Low-Backlash Ball Nut

---

**Contact Tolomatic for higher accuracy and lower backlash options.**

* For Acme screws, maximum thrust is the maximum continuous dynamic thrust subject to Thrust x Velocity limitation. For ball screws, maximum thrust reflects 90% reliability for 25 million linear millimeters of travel.

### GENERAL ACTUATOR SPECIFICATIONS

#### SLS METRIC ACTUATORS

<table>
<thead>
<tr>
<th>ACTUATOR SERIES</th>
<th>CARRIER WEIGHT (kg)</th>
<th>BASE WEIGHT (kg) (Including Carrier)</th>
<th>WEIGHT PER/IN OF STROKE (g)</th>
<th>TEMPERATURE RANGE (°C)</th>
<th>IP RATING**</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLS10</td>
<td>0.69</td>
<td>2.74</td>
<td>7.23</td>
<td>4-54</td>
<td>44</td>
</tr>
</tbody>
</table>

#### SLS US CONVENTIONAL ACTUATORS

<table>
<thead>
<tr>
<th>ACTUATOR SERIES</th>
<th>CARRIER WEIGHT (lb)</th>
<th>BASE WEIGHT (lb) (Including Carrier)</th>
<th>WEIGHT PER/IN OF STROKE (lb)</th>
<th>TEMPERATURE RANGE (°F)</th>
<th>IP RATING*</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLS10</td>
<td>1.54</td>
<td>6.05</td>
<td>0.404</td>
<td>40 - 130</td>
<td>44</td>
</tr>
</tbody>
</table>

---

* Heat generated by the motor and drive should be taken into consideration as well as linear velocity and work cycle time. For applications that require operation outside of the recommended temperature range, contact Tolomatic.

** Protected against ingress of solid particles greater than 1mm (.039 in) and splashing water.

**LARGE FRAME MOTORS AND SMALLER SIZE ACTUATORS:** Cantilevered motors need to be supported, if subjected to continuous rapid reversing duty and/or under dynamic conditions.
## SLS10 Rodless Screw Drive Actuator

### SPECIFICATIONS

#### FRICTION FORCE

<table>
<thead>
<tr>
<th>LOAD WEIGHT (lbs.)</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRICTION FORCE (lbs.)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

#### SUPPORT RECOMMENDATIONS

<table>
<thead>
<tr>
<th>DISTANCE BETWEEN SUPPORTS (in)</th>
<th>0</th>
<th>6</th>
<th>12</th>
<th>18</th>
<th>24</th>
<th>30</th>
<th>36</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOAD WEIGHT (lbs.)</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>DISTANCE BETWEEN SUPPORTS (mm)</td>
<td>0</td>
<td>15</td>
<td>30</td>
<td>45</td>
<td>60</td>
<td>75</td>
<td>90</td>
<td>105</td>
</tr>
</tbody>
</table>

- Supports required above this line
Breakaway torque will increase when using the Auxiliary carrier option. When ordering, determine your working stroke and enter this value into the configuration string. Overall actuator length will automatically be calculated.

*Loads shown in table are at minimum “D” dimension, for ratings with longer “D” dimension see graph below

**AUXILIARY CARRIER: BENDING MOMENT AT ‘D’ DISTANCE**

Rates shown on charts were calculated with these assumptions:
1.) Coupling between carriers is rigid.
2.) Load is equally distributed between carriers.
3.) Coupling device applies no misalignment loads to carriers.
   * Customer must specify Dimension “D” (Distance between carrier center lines) in configuration string.
**SLS10 Rodless Screw Drive Actuator**

**SPECIFICATIONS**

### LOAD DEFLECTION

#### Y-AXIS DEFLECTION

Figures calculated with the following considerations:
1.) Tube supports spaced at minimum distances for each bore size
2.) Measurement distance from F to center of carrier is 6 inches

#### X-AXIS DEFLECTION

Figures calculated with the following considerations:
1.) Tube supports spaced at minimum distances for each bore size
2.) Measurement distance from F to center of carrier is 8 inches

### DIMENSIONS

**SLS10: IN-LINE MOUNT FOR BRUSHLESS MOTORS AND GEARHEADS**

For gearhead dimensions and specifications, refer to literature #3600-4161

NOTE: MRB & MRV motors are discontinued contact Tolomatic for information on YMH (Your Motor Here)
SLS10 Rodless Screw Drive Actuator

DIMENSIONS

SLS10 ACTUATOR AND OPTIONS DIMENSIONS

CAUTION: DO NOT OVERTIGHTEN SWITCH HARDWARE WHEN INSTALLING FOR EXTENDED SHAFT

NOTE: The scored face of the switch indicates the sensing surface and must face toward the magnet

KIT #0610-9066 Mounting Plate for use with 23 frame
KIT #0610-9067 Mounting Plate for use with 34 frame

NOTE: Some actuators require switch mounting on a specific side of the actuator. Call Tolomatic 1-800-328-2174

Optional mounting plates

Optional switch mounting

SLOTS WILL ACCOMODATE 0.50 SQUARE NUT, 0.266 THICK MAX., 1/4-20

SECTION A-A

OPTIONAL MOUNTING PLATES

UNLESS OTHERWISE NOTED, ALL DIMENSIONS SHOWN ARE IN INCHES (DIMENSIONS IN PARENTHESIS ARE IN MILLIMETERS)
SWITCHES

There are 10 sensing choices: DC reed, form A (open) or form C (open or closed); AC reed (Triac, open); Hall-effect, sourcing, PNP (open); Hall-effect, sinking, NPN (open); each with either flying leads or QD (quick disconnect). Commonly used to send analog signals to PLC (programmable logic controllers), TLL, CMOS circuit or other controller device. These switches are activated by the actuator's magnet.

Switches contain reverse polarity protection. QD cables are shielded; shield should be terminated at flying lead end.

If necessary to remove factory installed switches, be sure to reinstall on the same side of actuator with scored face of switch toward internal magnet.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>ORDER CODE</th>
<th>REED DC</th>
<th>REED AC</th>
<th>HALL-EFFECT DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEAD</td>
<td>5m QD*</td>
<td>5m QD*</td>
<td>5m QD*</td>
</tr>
<tr>
<td>CABLE SHIELDING</td>
<td>Unshielded Shielded†</td>
<td>Unshielded Shielded†</td>
<td>Unshielded Shielded†</td>
</tr>
<tr>
<td>SWITCHING LOGIC</td>
<td>“A” Normally Open “C” Normally Open or Closed Triac Normally Open</td>
<td>PNP (Sourcing) Normally Open NPN (Sinking) Normally Open</td>
<td></td>
</tr>
<tr>
<td>COIL DIRECT</td>
<td>Yes</td>
<td>Yes</td>
<td>—</td>
</tr>
<tr>
<td>POWER LED</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>SIGNAL LED</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
</tr>
<tr>
<td>OPERATING VOLTAGE</td>
<td>200 Vdc max.</td>
<td>120 Vdc max.</td>
<td>120 Vac max.</td>
</tr>
<tr>
<td>OUTPUT RATING</td>
<td>0.6 msec max. (including bounce)</td>
<td>0.7 msec max. (including bounce)</td>
<td>—</td>
</tr>
<tr>
<td>OPERATING TEMPERATURE</td>
<td>-40°F [-40°C] to 158°F [70°C]</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>RELEASE TIME</td>
<td>1.0 msec. max.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>ON TRIP POINT</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>OFF TRIP POINT</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>POWER RATING (WATTS)</td>
<td>10.0§</td>
<td>3.0§§</td>
<td>10.0</td>
</tr>
<tr>
<td>VOLTAGE DROP</td>
<td>2.6 V typical at 100 mA NA — —</td>
<td>NA — —</td>
<td></td>
</tr>
<tr>
<td>RESISTANCE</td>
<td>0.1 Ω Initial (Max.)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>CURRENT CONSUMPTION</td>
<td>—</td>
<td>1 Amp at 86°F [30°C] 0.5 Amp at 140°F [60°C]</td>
<td>200 mA at 25 Vdc</td>
</tr>
<tr>
<td>FREQUENCY</td>
<td>—</td>
<td>47 - 63 Hz</td>
<td>—</td>
</tr>
</tbody>
</table>

**CAUTION: DO NOT OVER TIGHTEN SWITCH HARDWARE WHEN INSTALLING!**

**WARNING:** Do not exceed power rating (Watt = Voltage X Amperage). Permanent damage to sensor will occur.

*QD = Quick Disconnect; Male coupler is located 6" [152mm] from sensor. Female coupler to flying lead distance is 197" [5m] also see Cable Shielding specification above.

**REPLACEMENT OF QD SWITCHES MANUFACTURED BEFORE JULY 1, 1997:** It will be necessary to replace or rewire the female end coupler.

1Shielded from the female quick disconnect coupler to the flying leads. Shield should be terminated at flying lead end.

§§ Maximum current 250mA (not to exceed 3VA) Refer to Temperature vs. Current graph and Voltage Derating graph.

§§§ Maximum current 500mA (not to exceed 10VA) Refer to Temperature vs. Current graph and Voltage Derating graph.

Reed Switch Life Expectancy: Up to 200,000,000 cycles (depending on load current, duty cycle and environmental conditions)
PERFORMANCE

**TEMP. vs CURRENT, DC REED**

- REED FORM A
- REED FORM C

**TEMP. vs CURRENT, AC REED**

**VOLTAGE DERATING, DC REED**

**WIRING DIAGRAMS**

- **RT & RM** DC REED, FORM A
- **CT & CM** AC REED, TRIAC

**INSTALLATION INFORMATION**

- **CT & CM** AC REED, TRIAC
- **KT & KM** HALL-EFFECT, SOURCING, PNP
- **KT & KM** HALL-EFFECT, SINKING, NPN

---

**THE NOTCHED FACE OF THE SWITCH INDICATES THE SENSING SURFACE AND MUST FACE TOWARD THE MAGNET.**
COMPILE APPLICATION REQUIREMENTS

ORIENTATION

- □ Horizontal
- □ Side
- □ Horizontal Down
- □ Vertical
- □ Angled ° α
- □ β

- □ Load attached to carrier
- □ Load supported by other mechanism

DISTANCE FROM CENTER OF CARRIER TO LOAD CENTER OF GRAVITY

- dx ________
- dy ________
- dz ________

- □ inch
- □ millimeter

STROKE LENGTH

- □ inch (SK)
- □ millimeters

STROKE LENGTH

BENDING MOMENTS APPLIED TO CARRIER

- Mx ________
- My ________
- Mz ________

- □ in.-lbs.
- □ N-m

STROKE LENGTH

PRECISION

- Repeatability ________

- □ inch
- □ millimeters

STROKE LENGTH

OPERATING ENVIRONMENT

- Temperature, Contamination, etc.

THrust REQUIRED

- Fz ________
- Fy ________

- □ lbf.
- □ N

- □ (U.S. Standard)
- □ (Metric)

MOTION PROFILE

Graph your most demanding cycle, including accel/decel, velocity and dwell times. You may also want to indicate load variations and I/O changes during the cycle. Label axes with proper scale and units.

MOVE PROFILE

- Move Distance ________

- Dwell Time After Move ________

- Max. Speed ________

- □ in/sec
- □ mm/sec

- □ sec

- □ per minute
- □ per hour

- Speed T

- Time or Distance ( )

- □ Speed

- □ Time

- □ Distance

CONTACT INFORMATION

Name, Phone, Email

Co. Name, Etc.
SELECTION GUIDELINES

The process of selecting a load bearing actuator for a given application can be complex. It is highly recommended that you contact Tolomatic or a Tolomatic Distributor for assistance in selecting the best actuator for your application. The following overview of the selection guidelines are for educational purposes only.

1. COMPARE LOAD TO MAXIMUM LOAD CAPACITIES

Calculate the application load (combination of load mass and forces applied to the carrier) and application bending moments (sum of all moments Mx, My, and Mz applied to the carrier). Be sure to evaluate the magnitude of dynamic inertia moments. When a rigidly attached load mass is accelerated or decelerated, its inertia induces bending moments on the carrier. Careful attention to how the load is decelerated at the end of the stroke is required for extended actuator performance and application safety. If either load or any of your moments exceed figures indicated in the Moment and Load Capacity table (pg. SLS_8) for the actuator consider:

1) Higher capacity bearing style
2) A different actuator style (B3S, MXE, etc.)
3) Auxiliary carrier
4) External guide system

2. CALCULATE LOAD FACTOR LF

For loads with a center of gravity offset from the carrier account for both applied (static) and dynamic loads. The load factor (L_F) must not exceed the value of 1.

\[
L_F = \frac{M_x}{M_{x_{max}}} + \frac{M_y}{M_{y_{max}}} + \frac{M_z}{M_{z_{max}}} \leq 1
\]

If L_F does exceed the value of 1, consider the four choices listed in step #2.

3. ESTABLISH YOUR MOTION PROFILE AND CALCULATE ACCELERATION RATE

Using the application stroke length and maximum carrier velocity (or time to complete the linear motion), establish the motion profile. Select either triangular (accel-decel) or trapezoidal (accel-constant speed-decel) profile. Now calculate the maximum acceleration and deceleration rates of the move. Speed should not exceed critical speed value as shown in graph (page SLS_4-5) for the screw/nut combination chosen. Also, do not exceed safe rates of dynamic inertia moments determined in step #3.

4. SELECT THE LEAD SCREW

Based on the application requirements for accuracy, backlash, quiet operation, life, etc. select the appropriate lead screw type (Acme screw with a solid nut or ball screw with a standard or anti-backlash nut) and the pitch (lead). For additional information on screw selection, consult “Which Screw? Picking the Right Technology” (#9900-4644) available at www.tolomatic.com.

5. SELECT MOTOR (GEARHEAD IF NECESSARY) AND DRIVE

To help select a motor and drive, use the sizing equations located in the Engineering Resources section [ENGR] to calculate the application thrust and torque requirements. Refer to Motor sections [MRV] & [MRS] to determine the motor and drive.

6. DETERMINE T-NUTS/MOUNTING PLATE

7. CONSIDER OPTIONS

- Choose metric or inch (US Conventional) load mounting.
- Switches - Reed, Solid State PNP or NPN, all available normally open or normally closed

REQUIREMENTS

- Consult the Support Recommendations graph for the model selected (page SLS_7)
- Cross reference the application load and maximum distance between supports
- Select the appropriate number of T-nuts, and mounting plates if required for motor and adapter clearance.

SPEED FACTOR

For applications with high speed or significant shock and vibration: Calculated values of loads and bending moments must be increased by speed factor from the graph below to obtain full rated life of profiled rail bearing system.

![SPEED FACTOR GRAPH]

ACTUATOR SIZING
### SLS Rodless Screw Drive Actuator

#### ORDERING

**BASE MODEL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>SLS 10</th>
<th>SNO2</th>
<th>SK25</th>
<th>LMI</th>
</tr>
</thead>
</table>

**MODEL TYPE**

| SLS | SLS Series US Conventional Screw Drive |

**SIZE**

| 10 |

**NUT/SCREW CONFIGURATION**

**INCH MODELS**

<table>
<thead>
<tr>
<th>SOLID NUT / PITCH (turn/in)</th>
<th>SOLID NUT / LEAD (mm/turn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNO1</td>
<td>S25</td>
</tr>
<tr>
<td>SNO2</td>
<td>S12</td>
</tr>
<tr>
<td>SNA02</td>
<td></td>
</tr>
<tr>
<td>SNO5</td>
<td></td>
</tr>
</tbody>
</table>

**METRIC MODELS**

<table>
<thead>
<tr>
<th>BALL NUT / PITCH (turn/in)</th>
<th>BALL NUT / LEAD (mm/turn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BN08</td>
<td>BN08</td>
</tr>
<tr>
<td>BNL08</td>
<td>BNL08</td>
</tr>
</tbody>
</table>

† The metric version provides metric tapped holes for mounting of the load to the carrier and of the actuator to mounting surfaces.

**STROKE LENGTH & MOUNTING TYPE**

- **SK** Stroke: enter desired stroke length in inches
- **SM** Stroke: enter desired stroke length in millimeters

**NOTE:** Actuator mounting threads and mounting fasteners will be either inch or metric; depending on how stroke length is indicated.

- **SK** = inch mounting
- **SM** = metric mounting

**SIZES**

| 10 |

**OPTIONS SPECIFICATIONS**

<table>
<thead>
<tr>
<th>DC18</th>
<th>KT2</th>
<th>TN4</th>
<th>MP2</th>
</tr>
</thead>
</table>

**MOTOR MOUNTING / REDUCTIONS**

(must choose one)

- **LMI** In-Line mounting
- ****LMX Extended shaft - old style (see note)
- **** For replacement actuators with extended motor shafts purchased prior to 6/24/02 use LMX

**SWITCHES**

- **RM** Reed Switch (Form A) with 5-meter lead/QD (quick-disconnect), & quantity
- **RT** Reed Switch (Form A) with 5-meter lead, and quantity desired
- **BM** Reed Switch (Form C) with 5-meter lead/QD, and quantity desired
- **BT** Reed Switch (Form C) with 5-meter lead, and quantity desired
- **KM** Hall-effect Sinking Switch with 5-meter lead/QD, and quantity desired
- **KT** Hall-effect Sinking Switch with 5-meter lead, and quantity desired
- **TM** Hall-effect Sourcing Switch with 5-meter lead/QD, and quantity desired
- **TT** Hall-effect Sourcing Switch with 5-meter lead, and quantity desired
- **CM** TRIAC Switch with 5-meter lead/QD, and quantity desired
- **CT** TRIAC Switch with 5-meter lead, and quantity desired

**AUXILIARY CARRIER (SLS 8)**

**DC** Auxiliary Carrier, then center-to-center spacing desired in inches (SK) or millimeters (SM).

Same unit of measure as stroke length is required.

Center-to-center spacing between carriers adds to overall length of the actuator, this distance will not be subtracted from stroke length specified in the previous step.

**MINIMUM "D" DISTANCE BETWEEN CARRIERS**

<table>
<thead>
<tr>
<th>in</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>169.7</td>
</tr>
</tbody>
</table>

**T-NUT OPTION**

| TN_ | Additional T-nuts and quantity |

**MOUNTING PLATES**

| MP_ | Mounting Plates plus quantity desired |

**FOOD GRADE LUBRICATION**

| LUB | Grease, Food/Drug |

**FIELD RETROFIT KITS**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SLS10_SK</th>
<th>SLS10_SM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; Mounting Plates</td>
<td>0610-9010</td>
<td>0610-9010</td>
</tr>
<tr>
<td>1/2&quot; Mounting Plates</td>
<td>0610-9045</td>
<td>0610-9045</td>
</tr>
</tbody>
</table>

**“YOUR MOTOR HERE” MADE-TO-ORDER MOTOR MOUNTS. 3 WEEKS.**

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**WARNING:** Not all codes listed are compatible with all options.

Use the Sizing Software to determine available options and accessories based on your application requirements.

**NOTE:** MRB & MRV motors are discontinued contact Tolomatic for information on YMH (Your Motor Here)
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- **LIBRARY**
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