

## MM-3M-ST

Standard Motorized  
MicroMini™ Stages

### Specifications:

<b>*Repeatability:</b>	±2µm
<b>*Homing Repeatability:</b>	±2µm
<b>*Accuracy (linearity):</b>	±3µm
<b>Speed (max.):</b>	1.6mm/second @ 12 V with 64:1 gearhead
<b>Slider Backlash:</b>	0 (spring preloaded)
<b>Encoder Conversion (resolution):</b>	0.12406µm per count with 64:1 gearhead (16:1, 64:1, 256:1, 1024:1 gearheads optional)

\*Encoder resolution must be added based on the gearhead: 16:1 add ±0.5µm, 64:1 add ±0.12µm

<b>Wobble (max.):</b>	20 µrad (~4 arc-second)
<b>Runout (max.):</b>	0.002 mm
<b>Gearhead Backlash:</b>	1-2 µm equivalent; can be compensated in software without overshoot
<b>Motor:</b>	10 mm diameter, 6-12 VDC servo, brush type (see motor specifications)
<b>Vacuum compatibility:</b>	10 <sup>-3</sup> Torr, standard, 10 <sup>-6</sup> Torr available

### Load Capacity:

<b>*Direct top or side load:</b>	0.34 kg
<b>*Push:</b>	0.50 kg
<b>**Retract ext-comp.:</b>	2 ounce-24 ounce (57gram - 680 gram)
<b>*Tilt:</b>	6 inch-ounce (420 gram-centimeter)
<b>*Twist:</b>	3 inch-ounce (210 gram-centimeter)

\*These stages may be run at twice the specified ratings without damage, but with a loss of accuracy and speed.

\*\*Retract is limited by the preload spring.

### Travel Ranges and Dimensions:

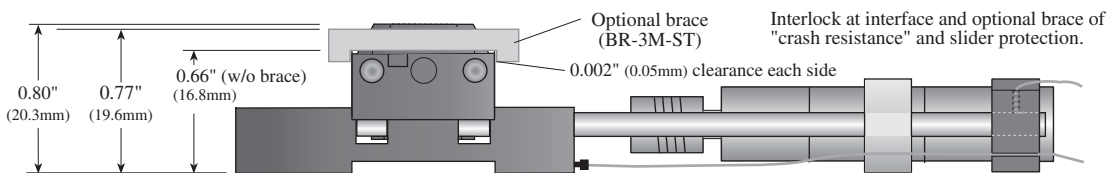
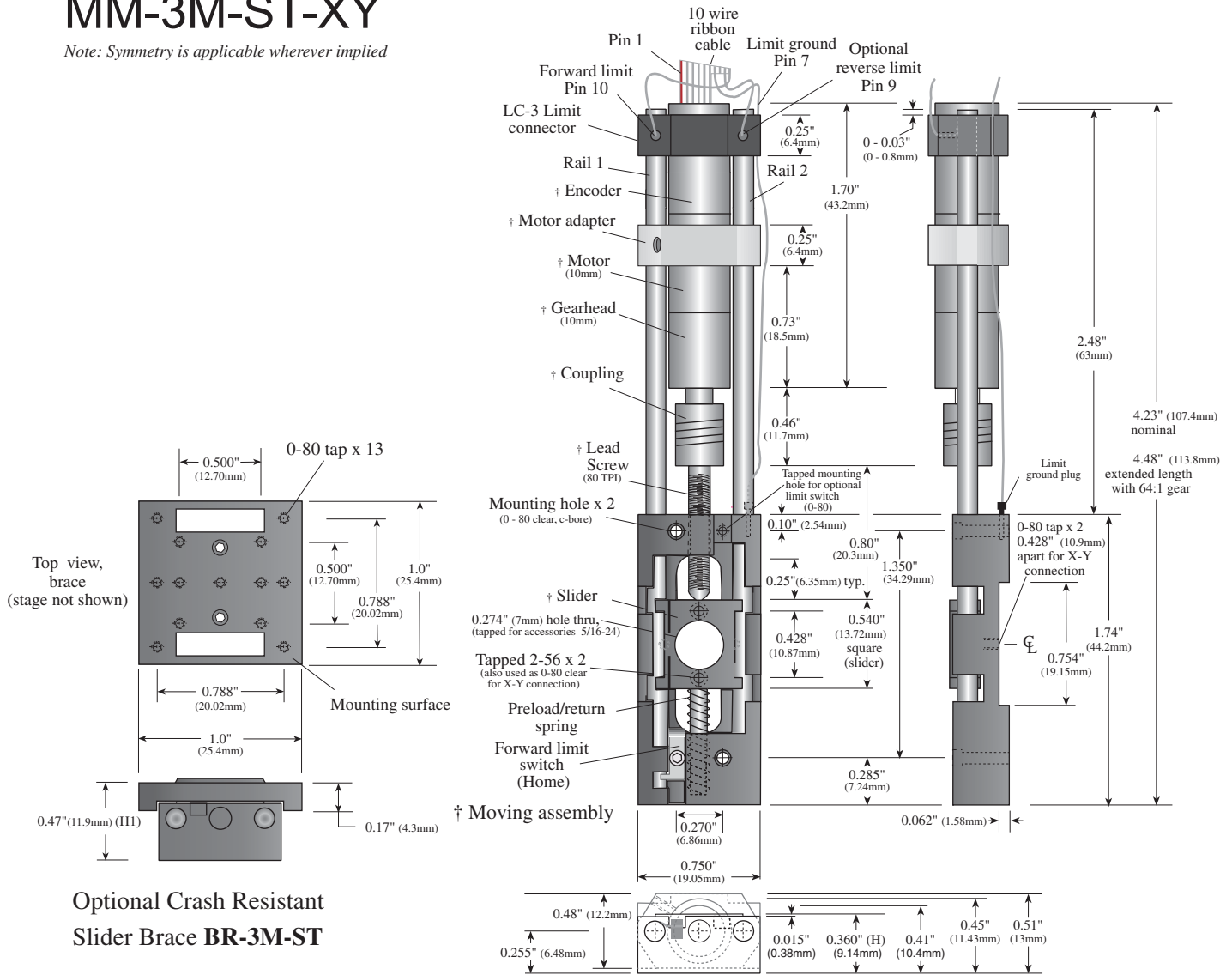
Model No.	Travel Range	Stage Body (L x W x H)	Weight
<b>MM-3M-ST</b>	12.7mm	113.8 x 19.05 x 9.14 (mm)	50g
	0.5 inch	4.48 x 0.75 x 0.36 (inch)	50g
<b>MM-3M-ST-XY</b>	12.7mm	113.8 x 113.8 x 18.28 (mm)	100g
	0.5 inch	4.48 x 4.48 x 0.66 (inch)	100g

# Standard **MM-3M-ST** Motorized MicroMini™ Stage - 0.5 inch (12.7mm) Travel

## Dimensional Data

### MM-3M-ST-XY

Note: Symmetry is applicable wherever implied



Note: Crash resistance is in XY plane only  
Z axis is not recommended on this version.

The information contained in this data sheet is subject to change without notice. Critical dimensions or specifications should be verified with our technical support staff.

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