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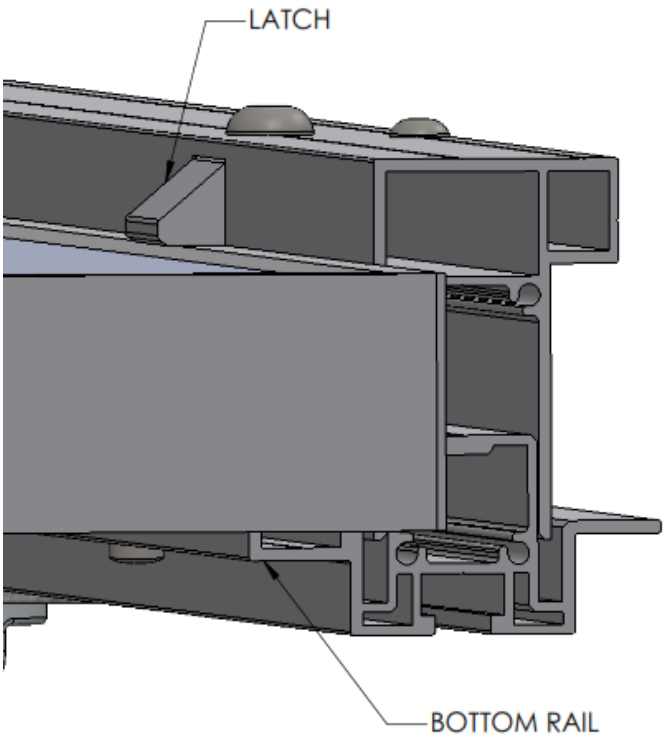
SOLAR SPEEDLATCH

Technical Datasheet

T: (888) 275-2249 F: (714) 975-8193 SolarSpeedRack.com info@solarspeedrack.com

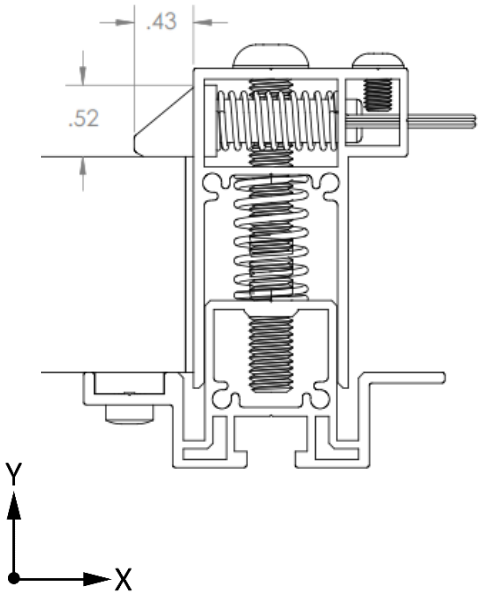
Solar SpeedLatch Module Connection

Part Numbers: SL-R-A-SLK, SL-R-A-BR19F, SL-R-A-TR19F



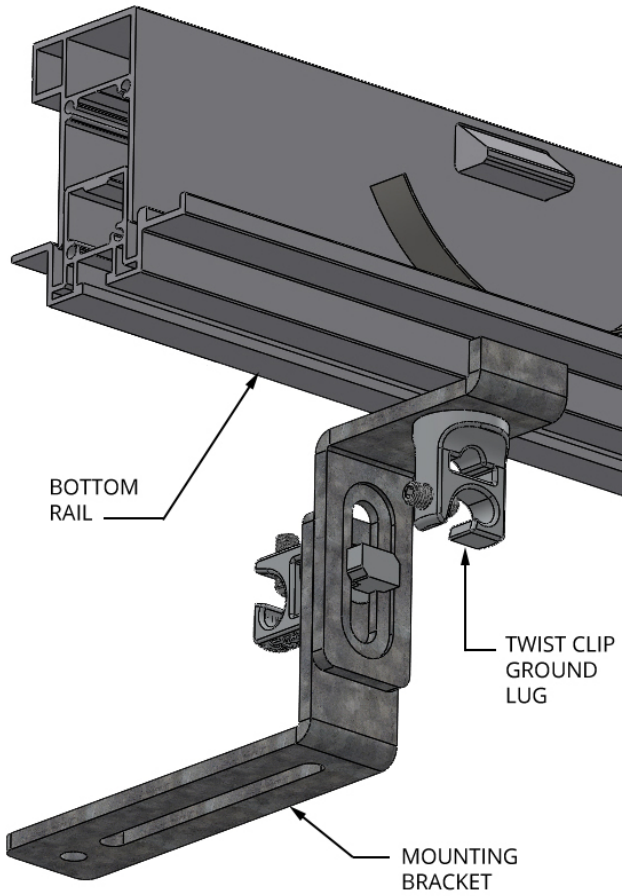
- **Latch Material:** One of the following extruded aluminum alloys: 6005-T5, 6105-T5, 6061-T6
- **Ultimate tensile:** 38 ksi, **Yield:** 35 ksi
- **Finish:** Clear Anodized
- **Latch weight:** ~ 0.034 lbs (15.41 grams)
- Allowable and design loads are valid when components are assembled with **Solar SpeedLatch** series rails according to authorized **Solar SpeedRack®** documents
- Assemble by applying light force to the solar panel, gently pushing down to retract latch into rail. Once panel is in place latch will move back into place securing the panel.
- Resistance factors and safety factors are determined according to of the 2010 Aluminum Design Manual
- Module edge must be fully supported by the rail

Applied Load Direction	Allowable Load lbs (N)	Safety Factor FS
Tension, Y +	667	1.65
Transverse, X ±	39	3
Sliding, Z ±	39	3



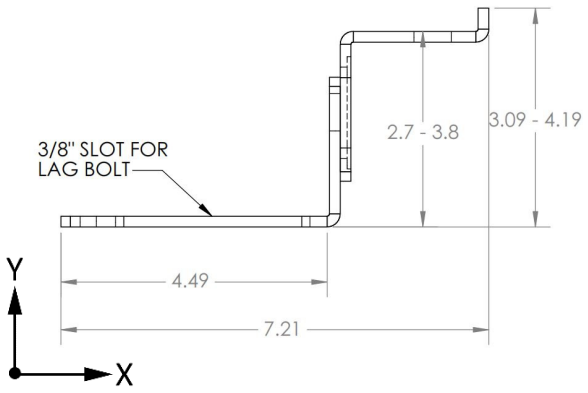
Solar SpeedLatch Rail Connection

Part Numbers: SA-UA-A-TBC, SA-UA-GS-FRB, SL-R-A-BR19F, SL-R-A-BR19F



Applied Load Direction	Allowable Load lbs (N)	Safety Factor FS
Sliding, Z ±	44	3
Tension Y +	140	1.67
Compression, Y -	140	1.67
Traverse, X ±	670	2

- **Bracket Material:** One of the following Galvanized Steels: A36
- **Ultimate tensile:** 58 ksi, **Yield:** 36 ksi
- **Finish:** Galvanized G60, G90
- **Bracket weight:** ~ 0.49 lbs (222.47 grams)
- **Twist Clip Material:** One of the following extruded aluminum alloys: 6005-T5, 6105-T5, 6061-T6
- **Ultimate tensile:** 38 ksi, **Yield:** 35 ksi
- **Finish:** Clear Anodized
- **Twist Clip weight:** ~ 0.05 lbs (22.28 grams)
- Allowable and design loads are valid when components are assembled with **Solar SpeedLatch** series rails according to authorized **Solar SpeedRack®** documents
- Assemble by placing the rail onto the bracket as shown (left). To fasten simply insert Speed Twist Clip through hole in bracket. Twist and Rail will be locked into place.
- Resistance factors and safety factors are determined according to of the 2010 Aluminum Design Manual
- Module edge must be fully supported by the rail

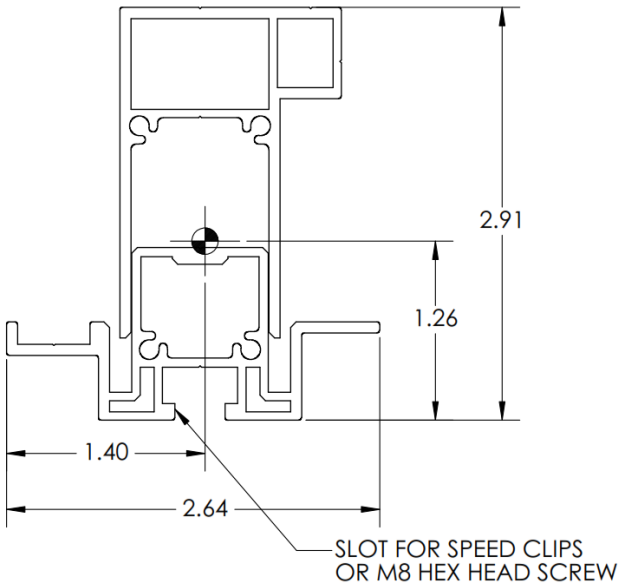


Solar SpeedLatch Rail Specifications

Part Numbers: SL-R-A-BR19F, SL-R-A-BR19F

Properties	Units	Solar SpeedLatch
Beam Height	in	2.33
Approximate Weight (per linear ft)	plf	1.53
Total Cross Sectional Area	in^2	1.19
Section Modulus (X-Axis)	in^3	Top: 0.41
		Bottom: 0.29
Section Modulus (Y-Axis)	in^4	Left: 0.33
		Right: 0.29
Moment of Inertia (X-Axis)	in^4	0.36
Moment of Inertia (Y-Axis)	in^4	0.41
Radius of Gyration (X-Axis)	in	0.550
Radius of Gyration (Y-Axis)	in	0.587

Dimensions specified in Inches unless otherwise noted



Solar SpeedLatch Distributed Load Specifications

Rail Span (ft)	SOLAR SPEEDLATCH® DISTRIBUTED LOAD ALONG RAIL (plf)													
	15	20	30	45	65	95	140	180	220	260	300	340	380	420
2														↑
2.5														
3												↑	↑	
3.5										↑	↑			
4									↑					
4.5								↑						
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5.5														
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10.5														
11	↑													

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