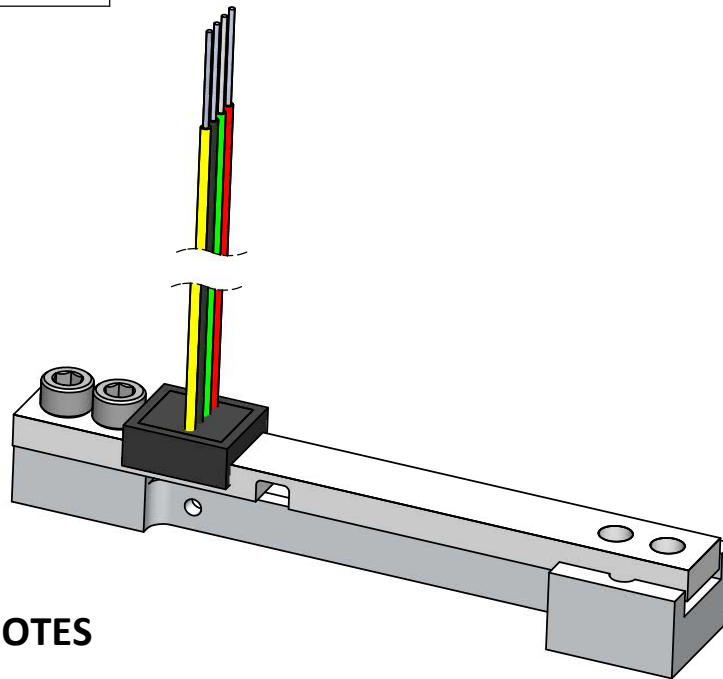


REVISIONS			
MOD No.	REV.	DRAWN BY:	DATE
2558	A	RFP	8/9/16
3473	1	SML	10/18/19



APPLICATION NOTES

SMD "S100" SENSOR WITH OVERLOAD PROTECTION


SMD manufactures a wide variety of low range force sensors using our proprietary thin film technology. The long term stability and "snappy" performance of these products is unsurpassed due to our thin-film manufacturing process that allows creation of a high resistance full bridge without the use of glues and organic materials between the flexure and the metal sensing film. In order for these sensors to last forever they must be protected so that the base metal flexure is never plastically deformed. If stresses below the yield point of the host flexure are maintained these sensors will perform for many million cycles faithfully retaining their initial zero offset. This means that your measurements will always be accurate and there shouldn't be any need for zero recalibration either before or after an extended test.

An environment is needed that preserves the flexures integrity and that is exactly what our overload protection mounts do. These flexures can be set up to ensure the flexure is never overloaded in compression or side loading modes. They are carefully designed for each of the lower force ranges to have properties that ensure the integrity of the sensor. For extended testing or quick mounting these get you moving quickly and ensure the accuracy of your results.

You can order these overload protection mounts for the S-100 Ranges:

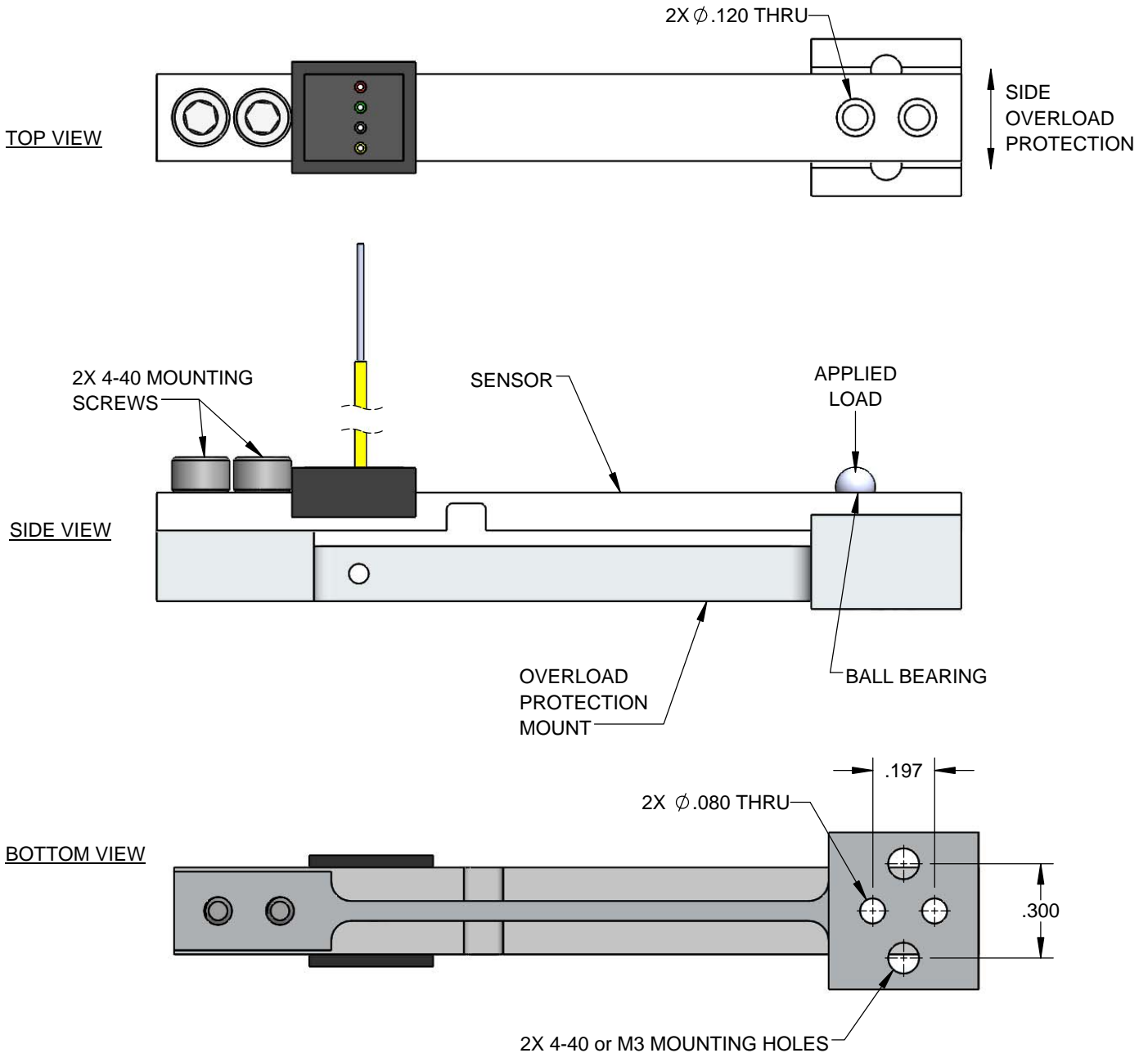
- .2-1 Newton, Overload Mount: SMD5690 *
- 5 Newton, Overload Mount: SMD5688 *
- 10 Newton, Overload Mount: SMD5689 *

* The above mentioned flexures can be ordered in a -A, or -M representing 4-40 threaded mountings holes or Metric M3 threaded mounting holes

UNLESS OTHERWISE SPECIFIED:				55 Barnes Park Rd. North Wallingford, CT 06492 Telephone: (203) 294-5800 www.smdsensors.com							
BREAK SHARP EDGES .003-.015 SURFACES TO BE SQUARE &/OR PARALLEL W/IN .005 X/X = 1/64" .XXX = ±.005" .X = ±.030" .XXXX = ±.001" .XX = ±.010" ANGLES = ±2° SURFACE FINISH 32/				TITLE: APPLICATION NOTES - S100 SENSOR with OVERLOAD PROTECTION		DATE:	SCALE:	DIM:	DRAWN:	CHECKED:	NEXT ASSY:
BREAK SHARP EDGES .08-.4 SURFACES TO BE SQUARE &/OR PARALLEL W/IN .127 .Xmm = ±0.5mm X.XXmm = ±0.3mm X.XXXmm = ±0.15mm		ANGLES = ±2° SURFACE FINISH 0.8/		11/4/13	NONE	INCHES	RFP/SML	DES	-	-	1
				DWG No. SMD2207ANOP		USED ON: S100		SHT 1 OF 2			

RECOMMENDED MOUNTING FOR S100 SENSOR

Ideally, load interface should be via a single point of contact, such as the intersection of a sphere to a plate.



The overload protection mount is mounted to mechanical ground.
 The sensor moves with applied load.
 When mounting the load cell, take care not to interfere with the load cells movement.

UNLESS OTHERWISE SPECIFIED:		BREAK SHARP EDGES .08-.4. REMOVE ALL BURRS. SURFACES TO BE SQUARE &/OR PARALLEL W/IN .127			55 Barnes Park Rd. North Wallingford, CT 06492 Telephone: (203) 294-5800 www.smdsensors.com	
BREAK SHARP EDGES .003-.015. REMOVE ALL BURRS. SURFACES TO BE SQUARE &/OR PARALLEL W/IN .005		.Xmm = ±0.5mm .X.XXmm = ±0.3mm .X.XXXmm = ±0.15mm			DWG No. SMD2207ANOP	SCALE -
.XX = ±.010"	ANGLES = ±2°	SURFACE FINISH $\sqrt{32}$				REV 1