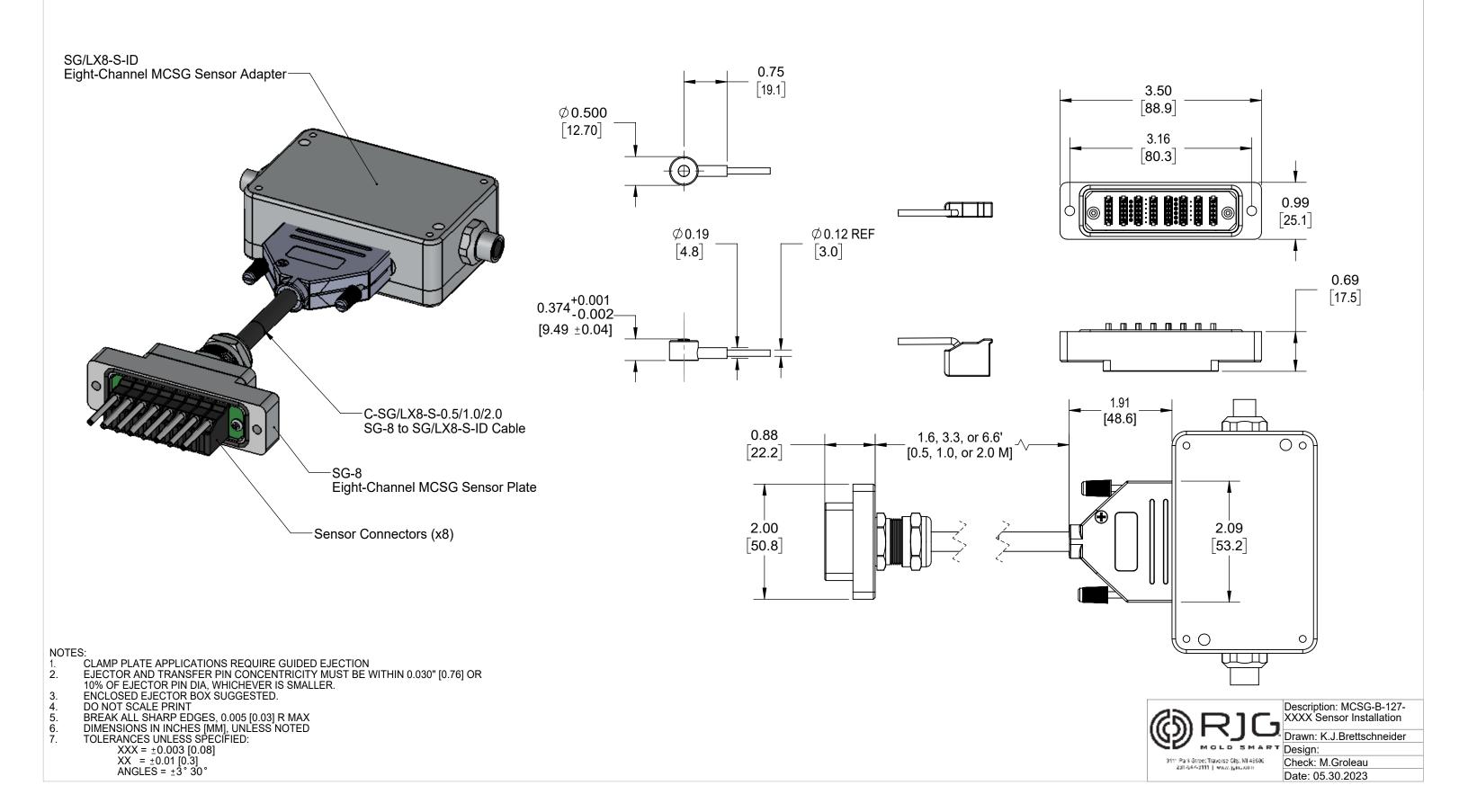
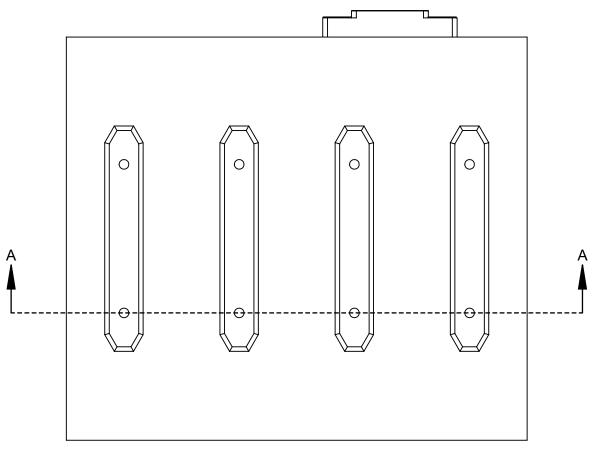
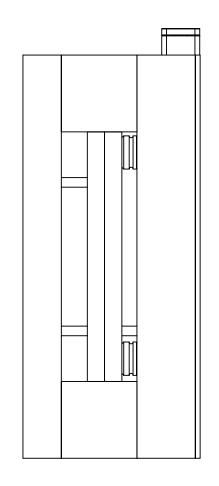
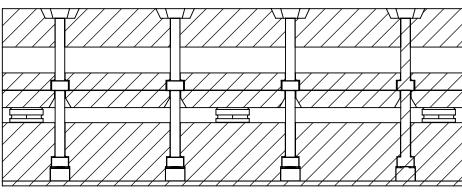
#### Multi-Channel Strain Gage Sensor (MCSG-B-127-XXX) Installation—Sensor, Sensor Connector, and Sensor Cable Dimensions



## Multi-Channel Strain Gage Sensor (MCSG-B-127-XXXX) Installation—Clamp Plate Installation







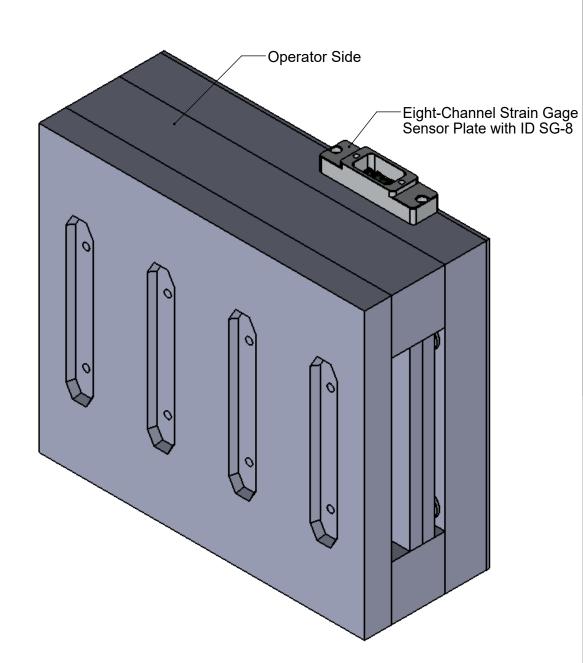
**SECTION A-A** SCALE 1: 2.5

#### NOTES:

- CLAMP PLATE APPLICATIONS REQUIRE GUIDED EJECTION
  EJECTOR AND TRANSFER PIN CONCENTRICITY MUST BE WITHIN 0.030" [0.76] OR
  10% OF EJECTOR PIN DIA, WHICHEVER IS SMALLER.
  ENCLOSED EJECTOR BOX SUGGESTED.

- DO NOT SCALE PRINT
  BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX
  DIMENSIONS IN INCHES [MM], UNLESS NOTED
  TOLERANCES UNLESS SPECIFIED:

XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3°30°

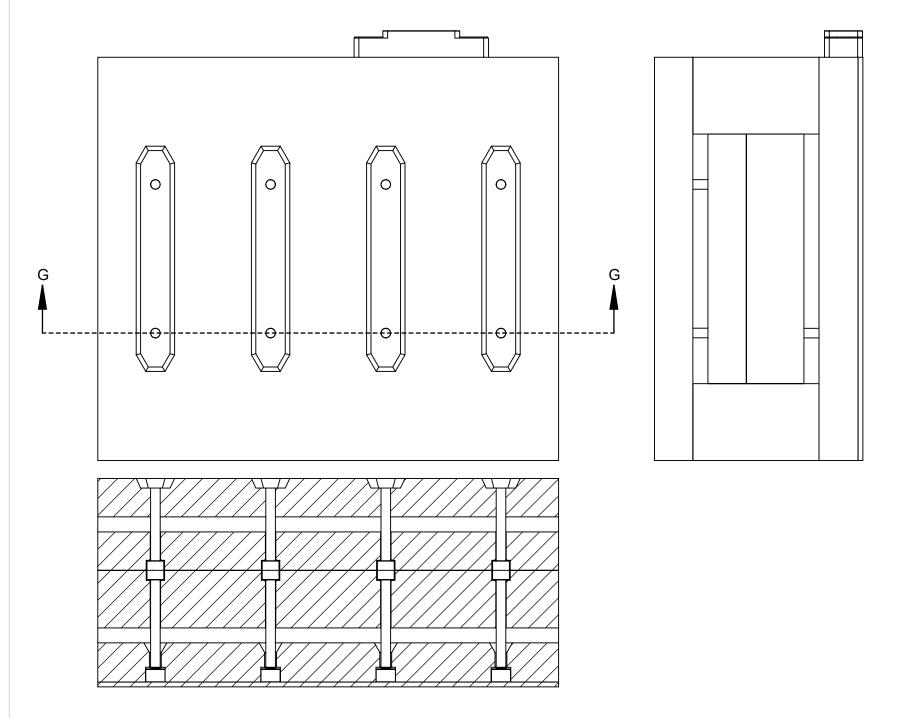




Description: MCSG-B-127-XXXX Sensor Installation

#### Drawing Title: MCSG-B-127-XXXX-03 Multi-Channel Strain Gage Sensor (MCSG-B-127-XXXX) Installation—Clamp Plate Installation Standard Fit 0.020 MIN [0.5 MIN] Part Thickness < 0.05 [1.5], 1/5 of Thickness Per Side B-Plate or Cavity Insert Part Thickness > 0.05 [1.5], 0.01 [0.3] TABLE D **Chamfer Length** Ejector Pin Installed with 0.04-0.08 [1.0-2.0] 0.01 [0.3] Normal Slip-Fit Tolerances 0.10-0.20 [2.5-5.0] 0.02 [0.4] H7/g6 0.24-0.40 [6.0-10.0] 0.025 [0.6] 0.01 MIN 45° REFER TO 0.3 MIN TABLE D Counterbore in Ejector Plate Transfer Pin Flush with Ejector Plate Ejector Retainer Plate 0.48 [12.18] 30° Chamfer Ejector Plate If Pin $\emptyset$ < 0.12 [3.0], $\emptyset$ + 0.04 [1.0] Depth Equal to Pin ∅ If Pin > 0.12 [3.0], + 0.06 [1.5] **DETAIL B** SCALE 2.5:1 Ejector Pin Shoulder $\emptyset$ and Transfer Pin $\emptyset$ Equal F 0.01 MIN H7/g6 0.50 MIN [12 MIN] [0.3 MIN] Fit Must be 1/3 of Pin Length, Else \*\*Consider Head-to-Head Installation\*\* 0.001 | [0.03] | F Clamp Plate 0.001 | [0.03] $0.374^{+0.003}_{-0.000}$ $[9.49 \pm 0.04]$ Cover Plate 32HR Refer to Table E $\emptyset$ 0.510 $^{+0.005}_{-0.000}$ 45° REFER TO CLAMP PLATE APPLICATIONS REQUIRE GUIDED EJECTION **TABLE E** EJECTOR AND TRANSFER PIN CONCENTRICITY MUST BE WITHIN 0.030" [0.76] OR 10% OF EJECTOR PIN DIA, WHICHEVER IS SMALLER. ENCLOSED EJECTOR BOX SUGGESTED. TABLE D $[13 \pm 0.1]$ **MIN Plate Thickness** DO NOT SCALE PRINT BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX DIMENSIONS IN INCHES [MM], UNLESS NOTED TOLERANCES UNLESS SPECIFIED: MCSG-B-127-125 0.2 [5] Description: MCSG-B-127-**DETAIL C** XXXX Sensor Installation MCSG-B-127-500 0.25 [6.0] SCALE 2.5:1 Drawn: K.J.Brettschneider XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3°30° MCSG-B-127-2000 0.25 [6.0] 9111 Park Street Traverse City, MI 45696 Check: M.Groleau REFER TO PRODUCT MANUAL FOR COVER PLATE ALTERNATIVES Date: 05.30.2023

## Multi-Channel Strain Gage Sensor (MCSG-B-127-XXXX) Installation—Head-to-Head Installation



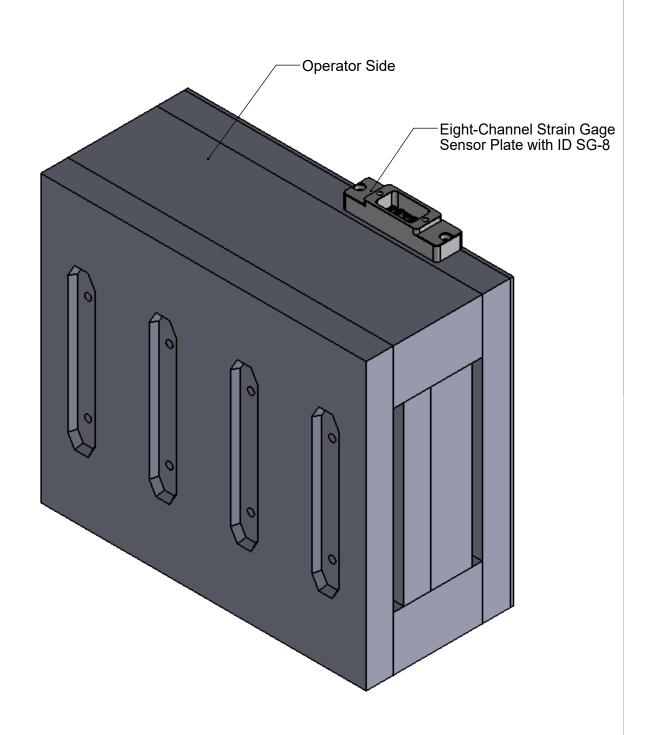


#### NOTES:

- CLAMP PLATE APPLICATIONS REQUIRE GUIDED EJECTION
  EJECTOR AND TRANSFER PIN CONCENTRICITY MUST BE WITHIN 0.030" [0.76] OR
  10% OF EJECTOR PIN DIA, WHICHEVER IS SMALLER.
  ENCLOSED EJECTOR BOX SUGGESTED.

- DO NOT SCALE PRINT
  BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX
  DIMENSIONS IN INCHES [MM], UNLESS NOTED
  TOLERANCES UNLESS SPECIFIED:

XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3°30°





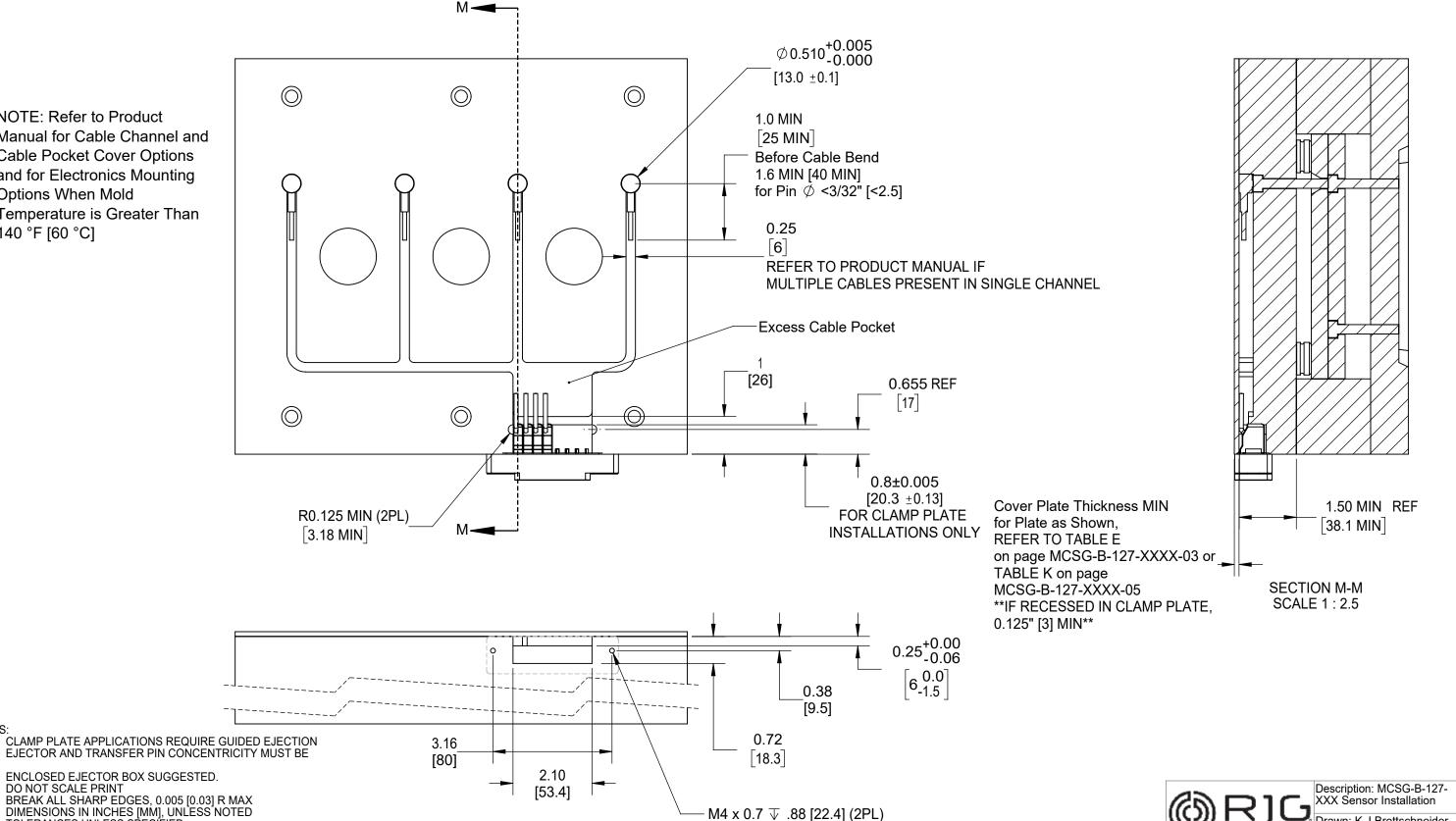
Description: MCSG-B-127-XXXX Sensor Installation

Drawn: K.J.Brettschneider Design:

#### Drawing Title: MCSG-B-127-XXXX-05 Multi-Channel Strain Gage Sensor (MCSG-B-127-XXXX) Installation—Head-to-Head Installation Standard Fit **B-Plate or Cavity Insert** 45° 0.02 MIN **REFER TO** 0.5 MIN **TABLE J** Per Side Part Thickness < 0.05 [1.5], 1/5 of Thickness Part Thickness > 0.05 [1.5], 0.01 [0.3] Ejector Pin Installed with Normal Slip-Fit Tolernaces H7/g6 **TABLE J Chamfer Length** Ejector Retainer Plate 0.04-0.08 [1.0-2.0] 0.01 [0.3] 0.10-0.20 [2.5-5.0] 0.02 [0.4] 0.24-0.40 [6.0-10.0] 0.025 [0.6] 0.01 MIN 45° 0.3 MIN REFER TO-TABLE J Counterbore in Ejector Plate Transfer Pin Flush with Ejector Plate Ejector Plate H7/g6 for 0.02 MIN 0.5 MIN 0.5 MIN [12 MIN] Per Side DETAIL H Transfer Pin ∅ H7/g6 **SCALE 2:1** 0.04 IF < 0.12 [1.0 IF < 3.0] 0.06 IF > 0.12 [1.5 IF > 3.0] 30° Chamfer Ejector Pin Shoulder $\emptyset$ and Tranfer Pin $\emptyset$ Equal Depth Equal to Pin ∅ Clamp Plate 0.01 MIN L 0.3 MIN 0.001 | [0.03] | 0.001 | [0.03] $0.374^{+0.002}_{-0.001}$ Cover Plate 32HRC REFER TO TABLE K $[9.49 \pm 0.04]$ CLAMP PLATE APPLICATIONS REQUIRE GUIDED EJECTION EJECTOR AND TRANSFER PIN CONCENTRICITY MUST BE WITHIN 0.030" [0.76] OR 10% OF EJECTOR PIN DIA, **TABLE K** Sensor Model **MIN Plate Thickness** WHICHEVER IS SMALLER. $\emptyset$ 0.510 $^{+0.005}_{-0.000}$ ENCLOSED EJECTOR BOX SUGGESTED. MCSG-B-127-125 0.2 [5] DO NOT SCALE PRINT Description: MCSG-B-127-BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX DIMENSIONS IN INCHES [MM], UNLESS NOTED TOLERANCES UNLESS SPECIFIED: XXXX Sensor Installation MCSG-B-127-500 0.25 [6.0] $[13.0 \pm 0.1]$ Drawn: K.J.Brettschneider MCSG-B-127-2000 0.25 [6.0] $XXX = \pm 0.003 [0.08]$ DETAIL I $XX = \pm 0.01 [0.3]$ ANGLES = $\pm 3^{\circ} 30^{\circ}$ 9111 Park Street Traverse City, MI 45696 Check: M.Groleau **SCALE 2:1** REFER TO PRODUCT MANUAL FOR COVER PLATE ALTERNATIVES Date: 05.30.2023

## Multi-Channel Strain Gage Sensor (MCSG-B-127-XXXX) Installation—Clamp Plate/Head-to-Head Installation

NOTE: Refer to Product Manual for Cable Channel and Cable Pocket Cover Options and for Electronics Mounting Options When Mold Temperature is Greater Than 140 °F [60 °C]



ENCLOSED EJECTOR BOX SUGGESTED. DO NOT SCALE PRINT
BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX
DIMENSIONS IN INCHES [MM], UNLESS NOTED
TOLERANCES UNLESS SPECIFIED:

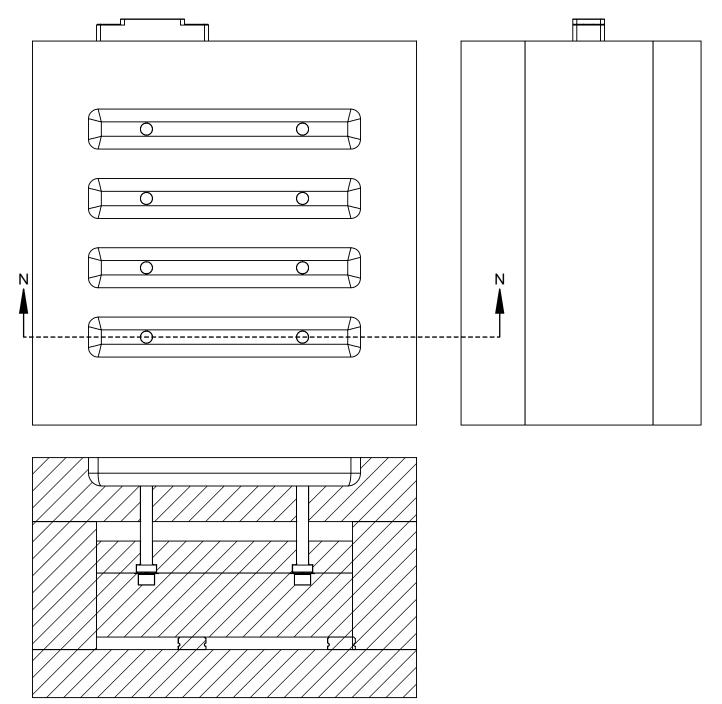
NOTES:

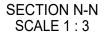
XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3° 30°

9111 Park Street Traverse City, MI 48686.

Drawn: K.J.Brettschneider

## Multi-Channel Strain Gage Sensor (MCSG-B-127-XXXX) Installation—Ejector Plate Installation





#### NOTES:

ES:

EJECTOR AND TRANSFER PIN CONCENTRICITY MUST BE WITHIN 0.030" [0.76] OR 10% OF EJECTOR PIN DIA, WHICHEVER IS SMALLER.

ENCLOSED EJECTOR BOX SUGGESTED.

DO NOT SCALE PRINT

BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX

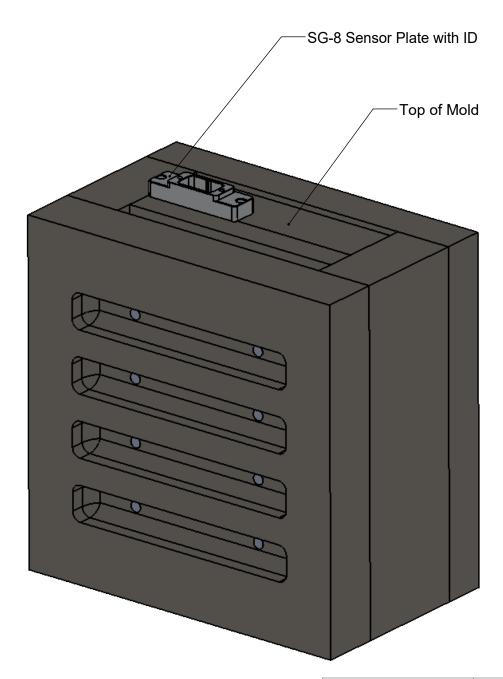
DIMENSIONS IN INCHES [MM], UNLESS NOTED

TOLERANCES UNLESS SPECIFIED:

XXX = ±0.003 [0.08]

XX = ±0.01 [0.3]

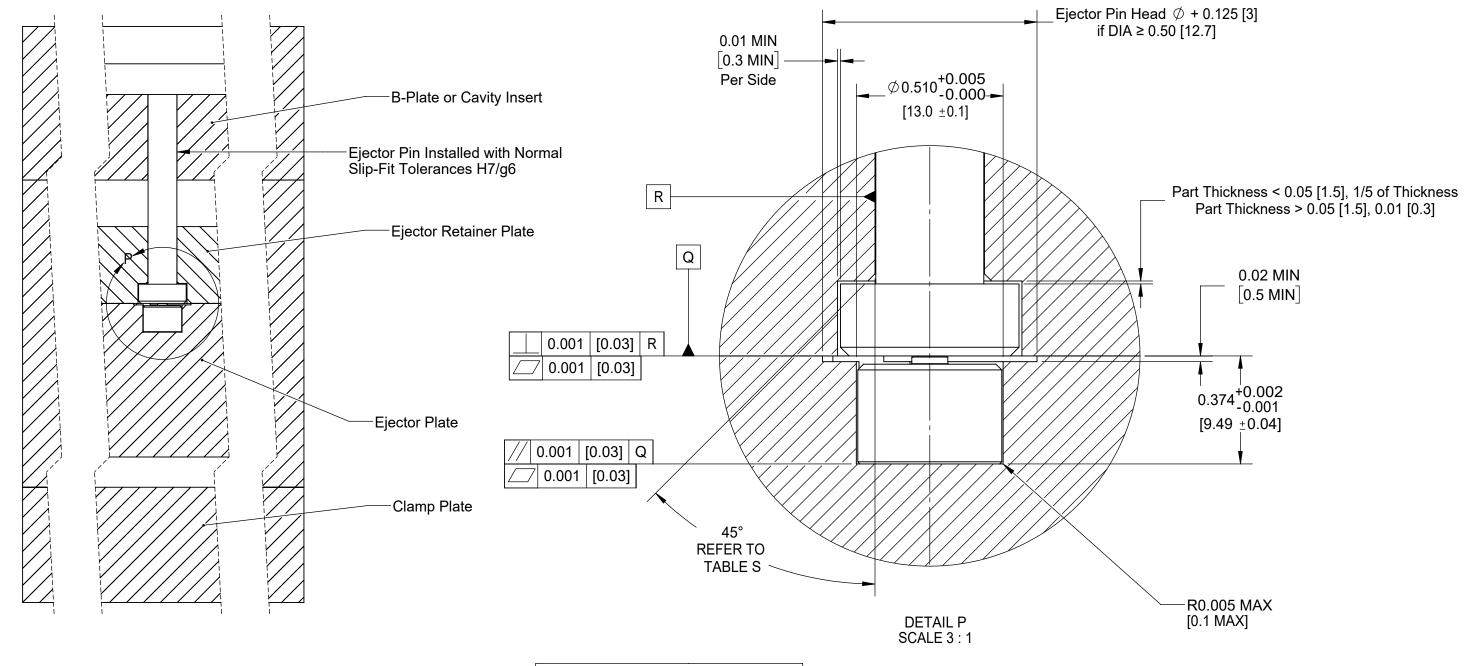
ANGLES = ±3° 30°





Description: MCSG-B-127-XXXX Sensor Installation

### Multi-Channel Strain Gage Sensor (MCSG-B-127-XXXX) Installation—Ejector Plate Installation



- ES:

  EJECTOR AND TRANSFER PIN CONCENTRICITY MUST BE WITHIN 0.030" [0.76] OR

  10% OF EJECTOR PIN DIA, WHICHEVER IS SMALLER.

  ENCLOSED EJECTOR BOX SUGGESTED.

  DO NOT SCALE PRINT

  BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX

  DIMENSIONS IN INCHES [MM], UNLESS NOTED

  TOLERANCES UNLESS SPECIFIED:

XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3° 30°

TABLE S	
	Chamfer Length
0.04-0.08 [1.0-2.0]	0.01 [0.3]
0.10-0.20 [2.5-5.0]	0.02 [0.4]
0.24-0.40 [6.0-10.0]	0.025 [0.6]



Description: MCSG-B-127-XXXX Sensor Installation

Drawn: K.J.Brettschneider

Check: M.Groleau

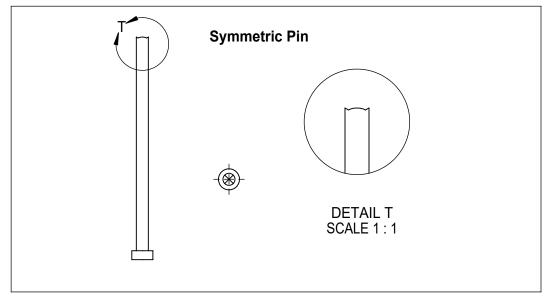
Date: 05.30.2023

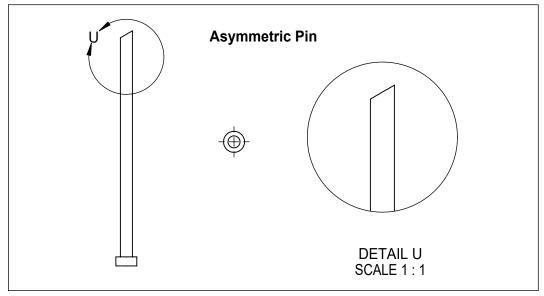
## Drawing Title: MCSG-B-127-XXXX-09 Multi-Channel Strain Gage Sensor (MCSG-B-127-XXXX) Installation—Ejector Plate Installation 1.0 25 Before Cable Bend 1.6 MIN [40 MIN] for Pin $\phi$ <3/32" [<2.5] **Excess Cable Pocket** R0.125 MIN (2PL) 0.655 REF 0.780±0.005 1.0 0.875 MIN REF 17 3.18 MIN [26] $[19.8 \pm 0.13]$ **Excess Cable Pocket** [22.2 MIN] -M4 X 0.7 (2PL) ▼.88 [22.4] $0.25^{+0.00}_{-0.06}$ 0.72 0.38 [18.3] $\left[6_{-1.50}^{\phantom{0}0.00}\right]$ [9.5] ES: EJECTOR AND TRANSFER PIN CONCENTRICITY MUST BE WITHIN 0.030" [0.76] OR 10% OF EJECTOR PIN DIA, WHICHEVER IS SMALLER. ENCLOSED EJECTOR BOX SUGGESTED. DO NOT SCALE PRINT BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX DIMENSIONS IN INCHES [MM], UNLESS NOTED TOLERANCES UNLESS SPECIFIED: XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3° 30° 3.16 [80] 2.10 Description: MCSG-B-127-XXXX Sensor Installation \_ [53.4] 9111 Park Street Traverse City, MI 45686 Check: M.Groleau

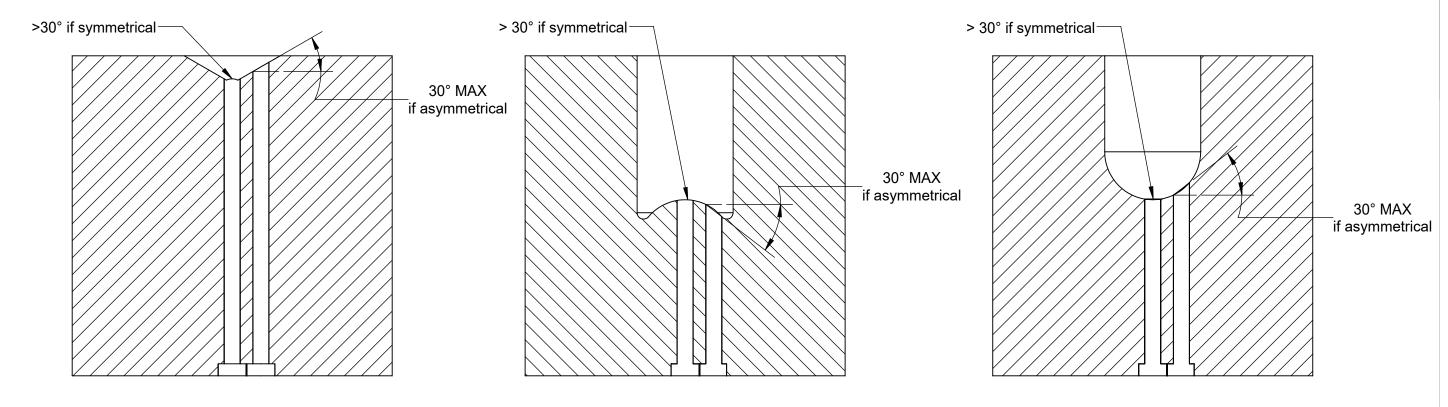
Date: 05.30.2023

## MCSG-B-127-XXXX Sensor Installation—Contoured Pin Angle Specification

NOTE: Contoured/angled pins (asymmetric) not to exceed 30° MAX unless pin design is symmetrical to provide even, downward pressure across pin surface to loading of sensor. Contact RJG Customer Support for assistance in verification of contoured/angled pin use.







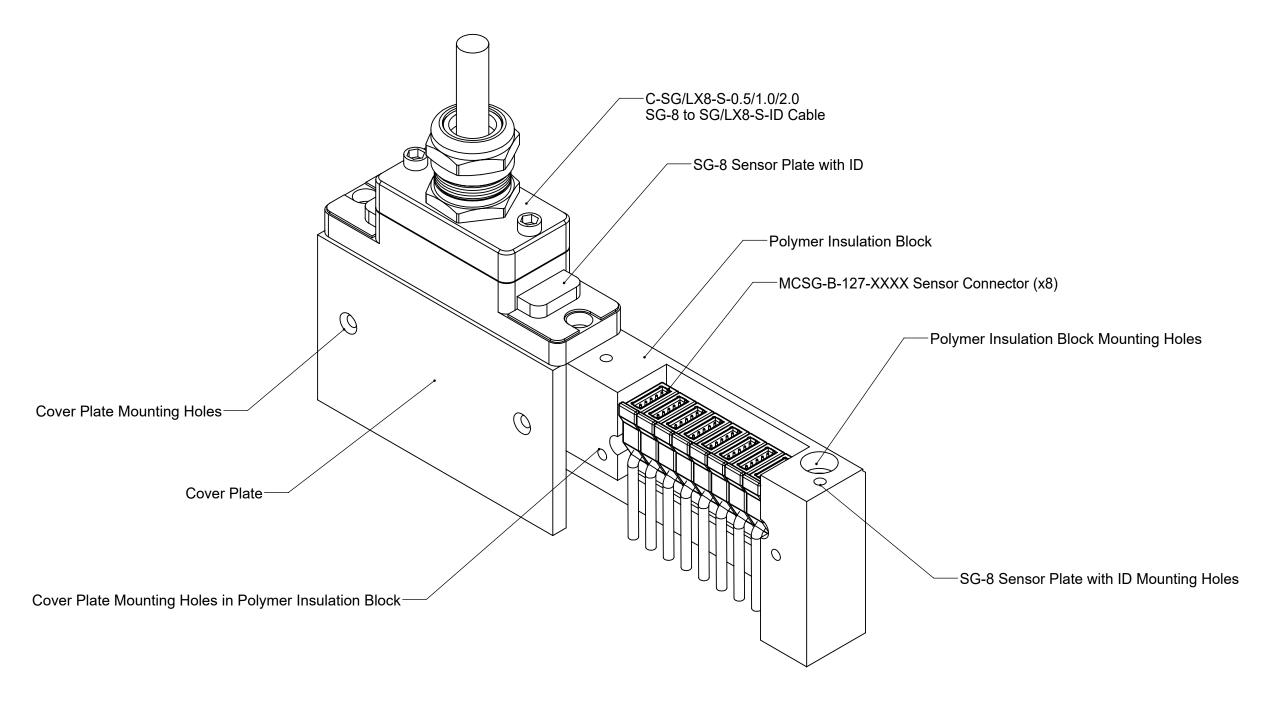
- EJECTOR AND TRANSFER PIN CONCENTRICITY MUST BE WITHIN 0.030" [0.76] OR 10% OF EJECTOR PIN DIA, WHICHEVER IS SMALLER. ENCLOSED EJECTOR BOX SUGGESTED. DO NOT SCALE PRINT BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX DIMENSIONS IN INCHES [MM], UNLESS NOTED TOLERANCES UNLESS SPECIFIED:

XXX =  $\pm 0.003$  [0.08] XX =  $\pm 0.01$  [0.3] ANGLES =  $\pm 3^{\circ} 30^{\circ}$ 



### Multi-Channel Strain Gage Sensor (MCSG-B-127-XXXX) Installation—High Temperature Installation

NOTE: The sensor electronics must be kept below 140 °F (60 °C) for all MCSG-B-127-XXXX sensor models. Refer to the drawing below as a guide; RJG does NOT provide polymer assembly pictured below—polymer assembly and design is responsibility of customer. Contact RJG Customer Support for assistance with high-temperature sensor protection designs.



#### NOTES

EJECTOR AND TRANSFER PIN CONCENTRICITY MUST BE WITHIN 0.030" [0.76] OR 10% OF EJECTOR PIN DIA, WHICHEVER IS SMALLER.

ENCLOSED EJECTOR BOX SUGGESTED.

DO NOT SCALE PRINT

BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX DIMENSIONS IN INCHES [MM], UNLESS NOTED

TOLERANCES UNLESS SPECIFIED: XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3° 30°



Description: MCSG-B-127-XXXX Sensor Installation