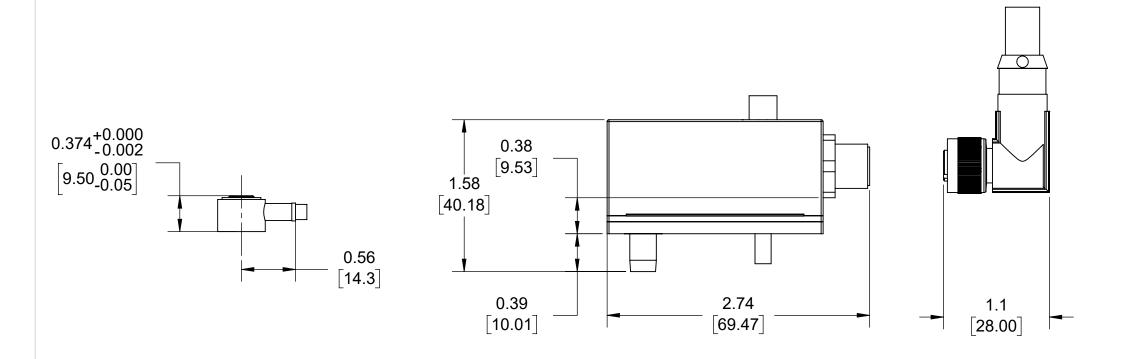
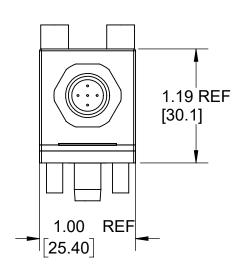
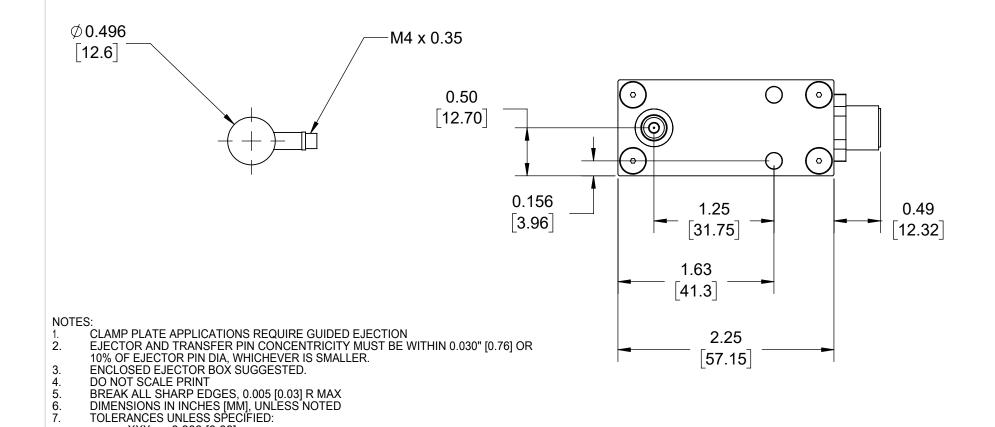
XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3° 30°

Single-Channel Piezoelectric 12.6 mm Sensor (9204) Installation—Dimensions





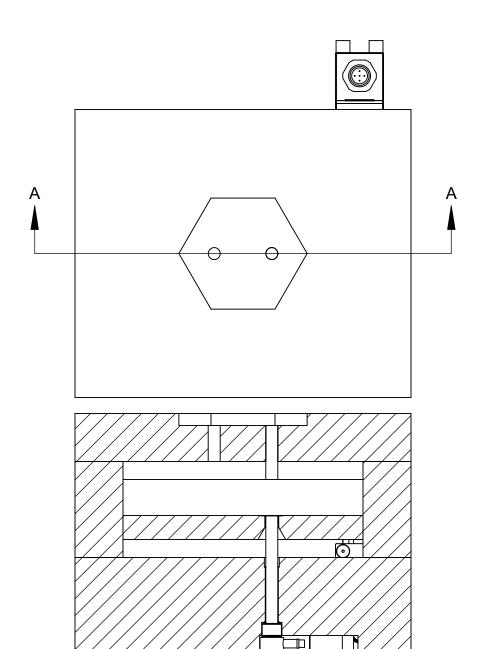


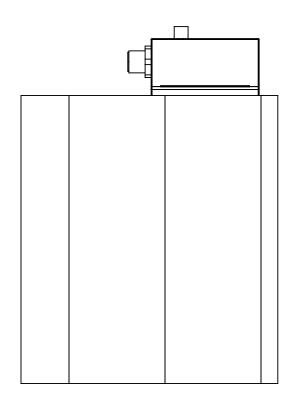


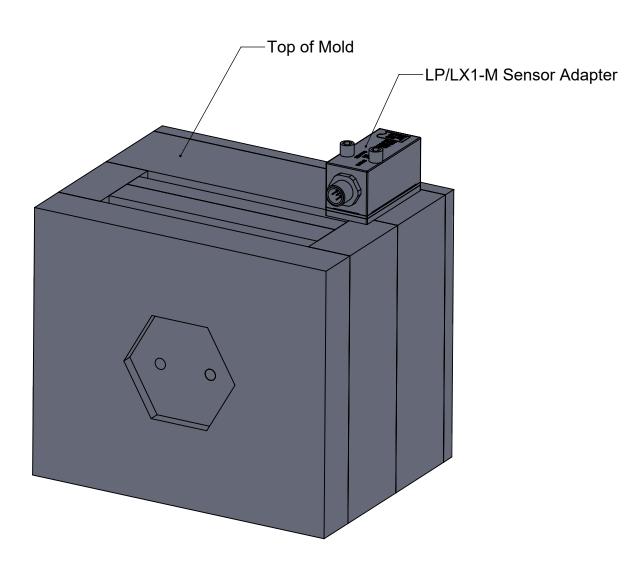
Description: 9204 Sensor Installation

Drawn: K.J.Brettschneider
Design:

Single-Channel 2.6 mm Piezoelectric Sensor (9204) Installation—Clamp Plate Installation **CLAMP PLATE INSTALLATIONS FOR PIN ≤ Ø0.25 [7.0]; PINS > Ø0.25 [7.0] USE HEAD-TO-HEAD INSTALLATION ON SHEET 9204-04 & -05.**







SECTION A-A SCALE 1 : 2

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 = $\pm 3^{\circ}$ 30°

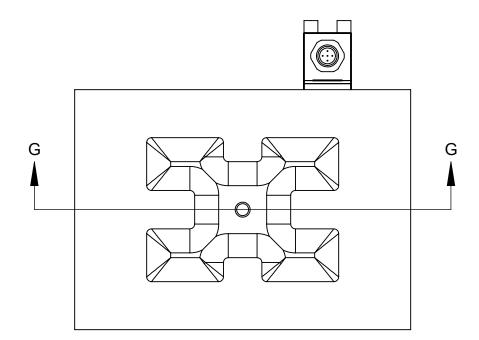


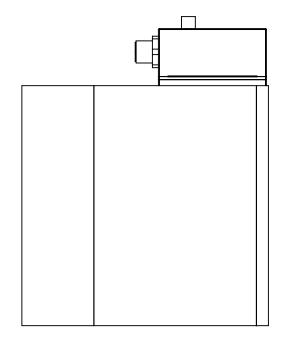
Drawing Title: 9204-03 Single-Channel Piezoelectric 12.6 mm Sensor (9204) Installation—Clamp Plate Installation **CLAMP PLATE INSTALLATIONS FOR PIN ≤ Ø0.25 [7.0]; PINS > Ø0.25 [7.0] USE HEAD-TO-HEAD INSTALLATION ON SHEET 9204-04 & -05.** 0.020 MIN B-Plate or Cavity Insert Part Thickness < 0.05 [1.5], 1/5 of Thickness 0.5 MIN Part Thickness > 0.05 [1.5], 0.01 [0.3] Per Side TABLE D Ejector Pin Ø 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] Ejector Retainer Plate 0.01 MIN 0.3 MIN Counterbore in Ejector Plate Transfer Pin Flush with Ejector Plate REFER TO TABLE D **Ejector Plate** Counterbore Ø = Pin Head Ø + 0.04 [1.0] MIN Lead-In Chamfer If Pin \emptyset < 0.12 [3.0], \emptyset + 0.04 [1.0] Ejector Pin Shoulder Ø and Transfer Pin Ø Equal If Pin $\emptyset > 0.12 [3.0]$, + 0.06 [1.5] **DETAIL B** SCALE 2.5:1 0.01 0.3 0.5 MIN [12 MIN] F Fit Must be 1/3 of Pin LEgnth, Else **Consider Head-to-Head Installation** 0.001 | [0.03] | F | $0.378^{+0.004}_{-0.000}$ 0.001 [0.03] $9.6^{+0.1}_{0.0}$ Clamp Plate Cover Plate 32HRC $0.504^{+0.004}_{-0.000}$ REFER TO TABLE E $\begin{bmatrix} 12.8 + 0.1 \\ 0.0 \end{bmatrix}$ **REFER TO** TABLE E 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. TABLE D Pin Ø MIN Plate Thickness DETAIL C SCALE 2.5:1 ENCLOSED EJECTOR BOX SUGGESTED. DO NOT SCALE PRINT 3/32-7/64" [2.5-3.0] 0.2 [5] Description: 9204 Sensor BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX DIMENSIONS IN INCHES [MM], UNLESS NOTED TOLERANCES UNLESS SPECIFIED: Installation 9/64"-5/8" [14.0-23.0] Drawn: K.J.Brettschneider 0.25 [6.0] XXX = ± 0.003 [0.08] XX = ± 0.01 [0.3] ANGLES = $\pm 3^{\circ} 30^{\circ}$

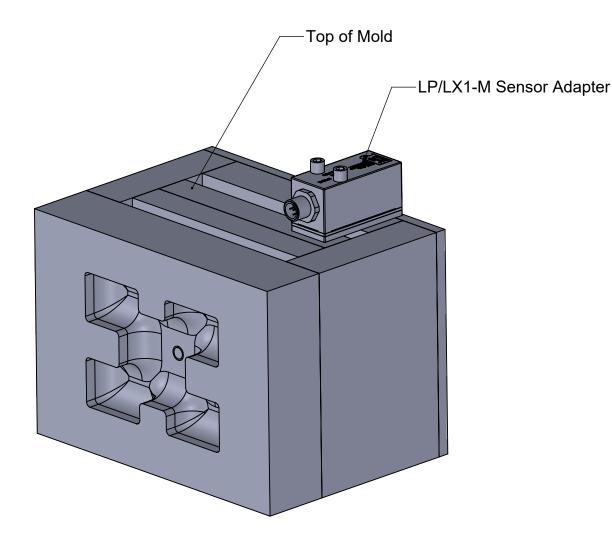
9111 Park Street Traverse City, MI 45696

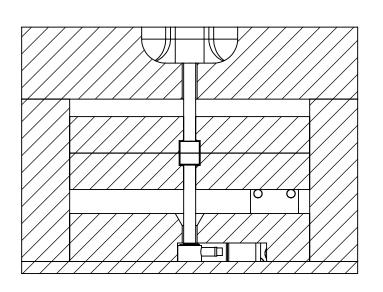
Single-Channel Piezoelectric 12.6 mm Sensor (9204) Installation—Head-to-Head Installation

CLAMP PLATE INSTALLATIONS FOR PIN ≤ Ø0.25 [7.0]; PINS > Ø0.25 [7.0] USE HEAD-TO-HEAD INSTALLATION.









SECTION G-G SCALE 1:2

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: 9204 Sensor

Drawn: K.J.Brettschneider

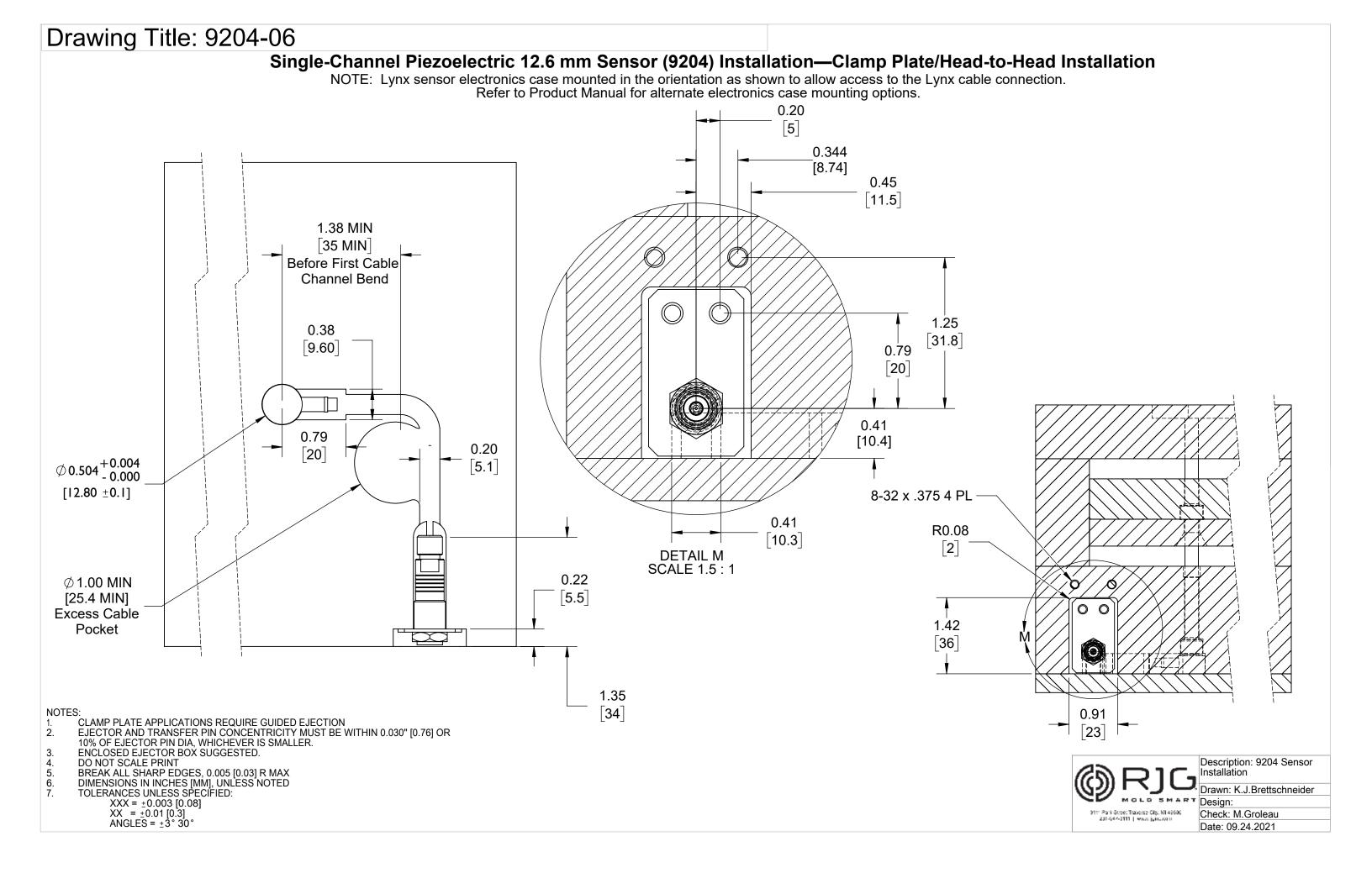
Drawing Title: 9204-05 Single-Channel Piezoelectric 12.6 mm Sensor (9204) Installation—Head-to-Head Installation **CLAMP PLATE INSTALLATIONS FOR PIN ≤ Ø0.25 [7.0]; PINS > Ø0.25 [7.0] USE HEAD-TO-HEAD INSTALLATION ON SHEET 9204-04 & -05.** Standard Fit 45° 0.02 MIN Part Thickness < 0.05 [1.5], 1/5 of Thickness **REFER TO** 0.5 MIN Part Thickness > 0.05 [1.5], 0.01 [0.3] **TABLE J** Per Side TABLE J Ejector Pin Ø Chamfer Length B-Plate or Cavity Insert 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] Ejector Pin Installed with Normal Slip-Fit Tolerances H7/q6 45° **REFER TO** 0.01 MIN **TABLE J** [0.3 MIN] Ejector Retainer Plate Counterbore in Ejector Plate Transfer Pin Flush with Ejector Plate H7/g6 for 0.02 MIN 0.5 MIN [12.0 MIN] 0.5 MIN Transfer Pin Ø Ejector Plate **DETAIL H** Per Side **SCALE 3:1** 0.04 IF < 0.12 [1.0 IF < 3.0] 0.5 MIN [12 MIN] 0.06 IF > 0.12 [1.5 IF > 3.0] Fit Must be 1/3 of Pin Length MIN 30° Chamfer Depth Equal to Pin Ø Ejector Pin Shoulder Ø and Transfer Pin Ø Equal 0.01 L $\left[0.3\right]$ 0.001 | [0.03] | L 0.378+0.004 0.001 | [0.03] Clamp Plate $9.6^{+0.1}_{0.0}$ Cover Plate 32HRC REFER TO TABLE K 0.504 + 0.004 - 0.000 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 $[12.80 \pm 0.1]$ DETAIL I SCALE 2 : 1 Description: 9204 Sensor

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

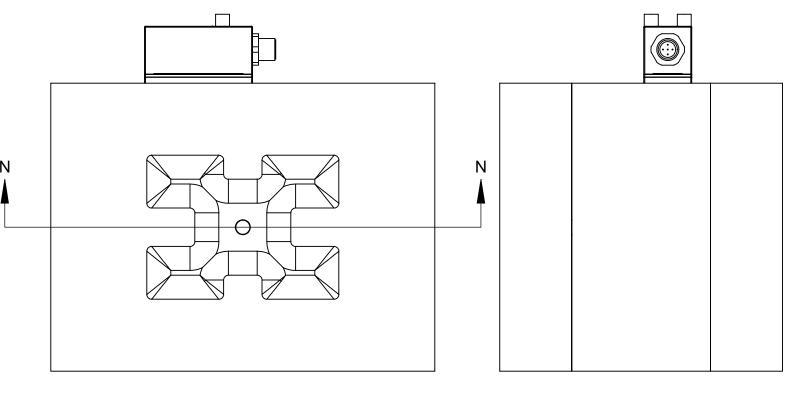
XXX = ± 0.003 [0.08] XX = ± 0.01 [0.3] ANGLES = $\pm 3^{\circ} 30^{\circ}$

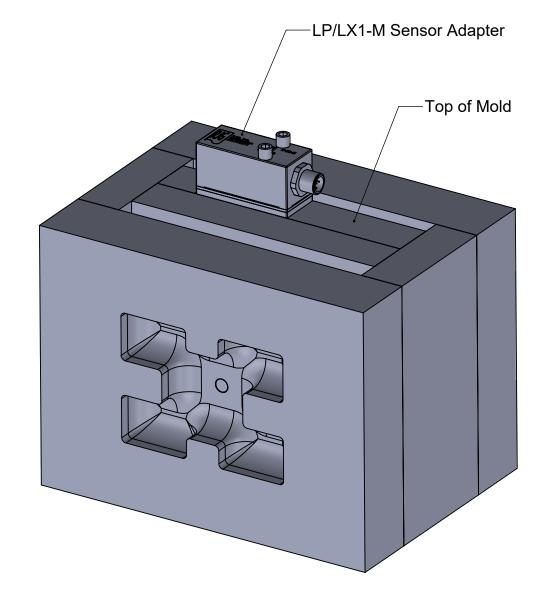
TABLE K		
Pin Ø	MIN Plate Thickness	
3/32–7/64" [2.5–3.0]	0.2 [5]	
9/64"–5/8" [14.0–23.0]	0.25 [6.0]	

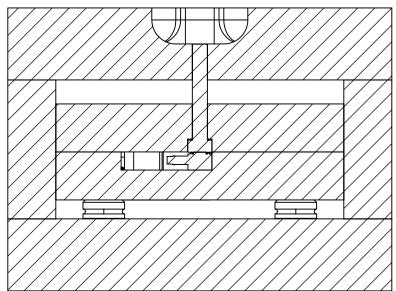
Drawn: K.J.Brettschneider 9111 Park Street Traverse City, MI 45696 Check: M.Groleau Date: 09.24.2021



Single-Channel Piezoelectric 12.6 mm Sensor (9204) Installation—Ejector Plate Installation







SECTION N-N SCALE 1 : 2

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]

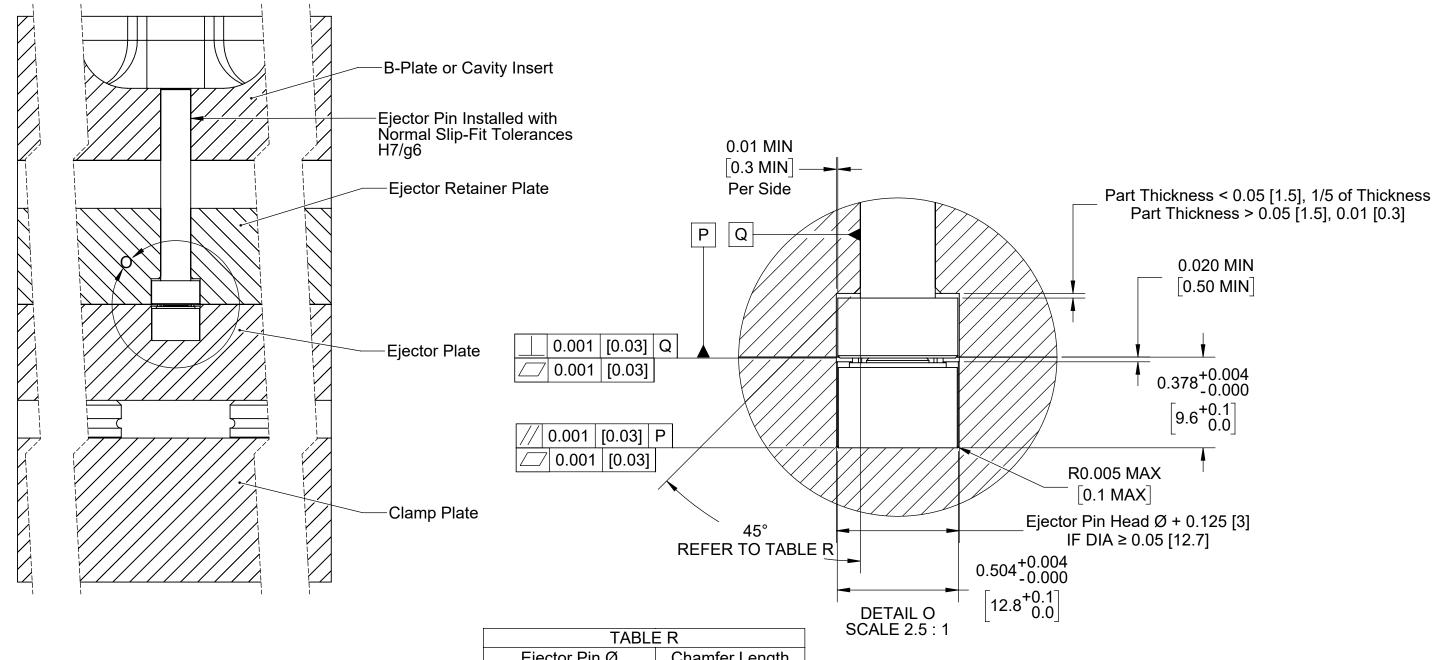
XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3° 30°



Description: 9204 Sensor Installation

Drawn: K.J.Brettschneider

Single-Channel Piezoelectric 12.6 mm Sensor (9204) Installation—Ejector Plate Installation



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:

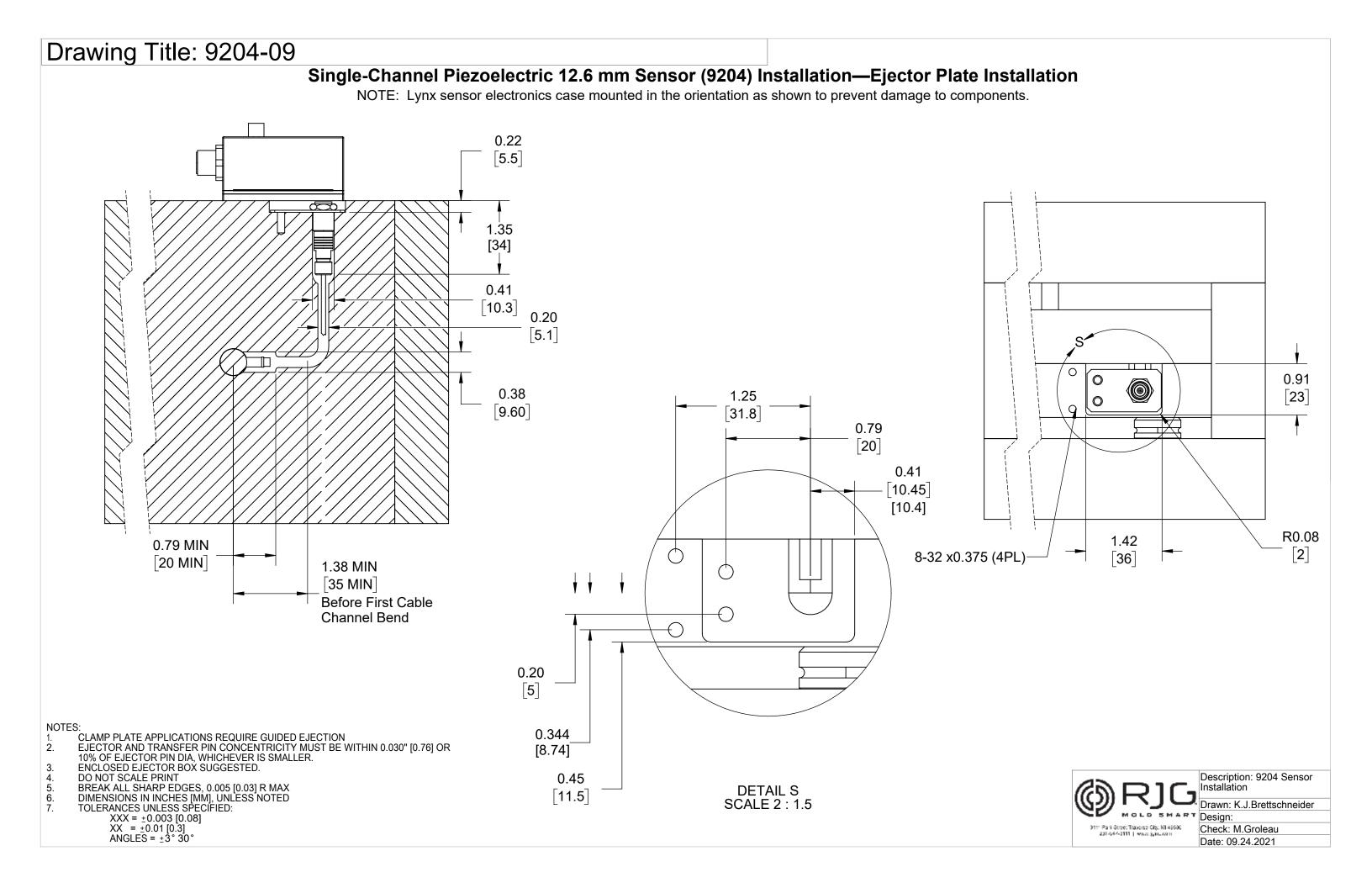
XXX = ± 0.003 [0.08] XX = ± 0.01 [0.3] ANGLES = $\pm 3^{\circ} 30^{\circ}$

TABLE R	
Ejector Pin Ø	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]



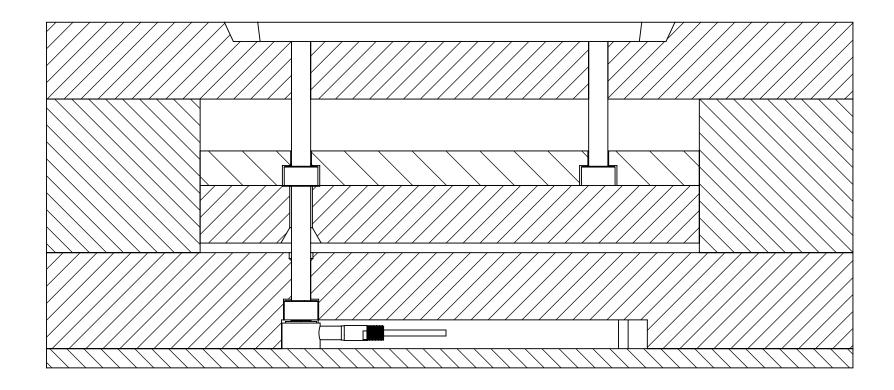
Description: 9204 Sensor

Drawn: K.J.Brettschneider

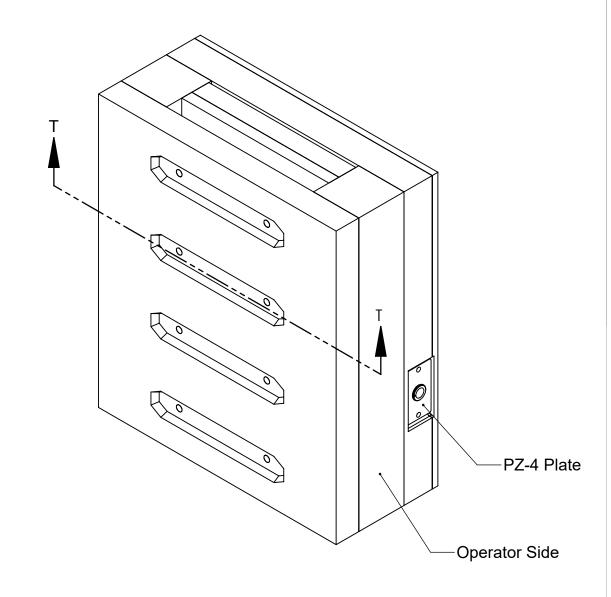


Four-Channel Piezoelectric 12.6 mm Sensor (9204) Installation

NOTE: REFER TO PAGES 9204-03 FOR CLAMP PLATE INSTALLATION, 9204-05 FOR CLAMP PLATE (HEAD-TO-HEAD INSTALLATION, AND 9204-08 FOR EJECTOR PLATE INSTALLATION.



SECTION T-T SCALE 4:5



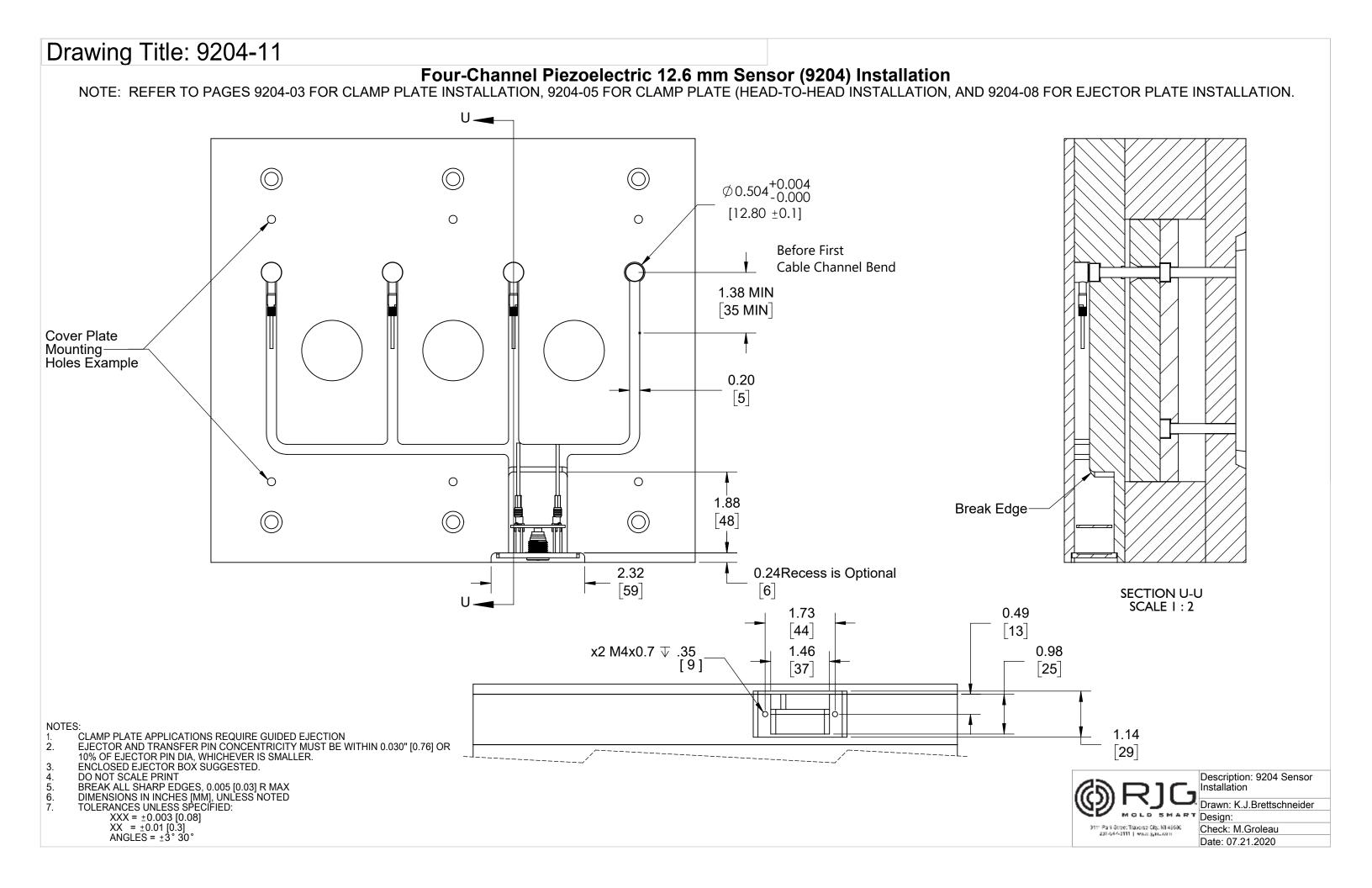
NOTES:

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:

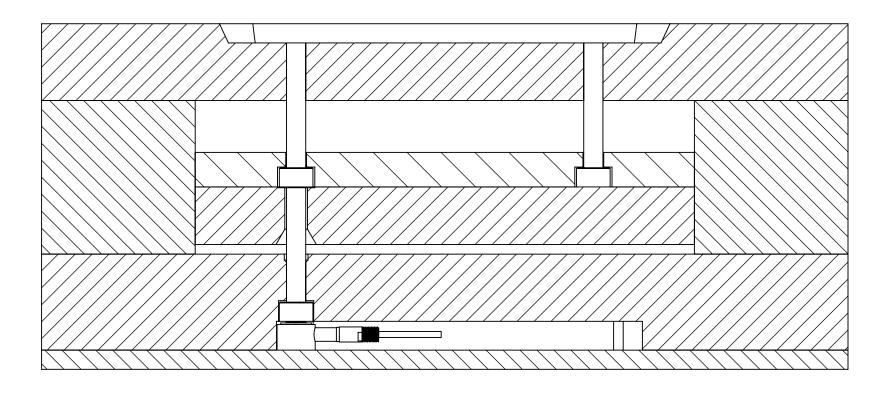
XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3°30°



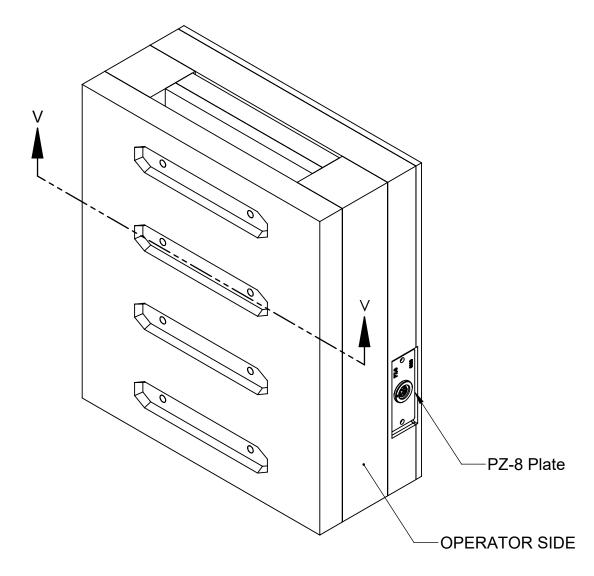


Eight-Channel Piezoelectric 12.6 mm Sensor (9204) Installation

NOTE: REFER TO PAGES 9204-03 FOR CLAMP PLATE INSTALLATION, 9204-05 FOR CLAMP PLATE (HEAD-TO-HEAD INSTALLATION, AND 9204-08 FOR EJECTOR PLATE INSTALLATION.



SECTION V-V SCALE 4 : 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:

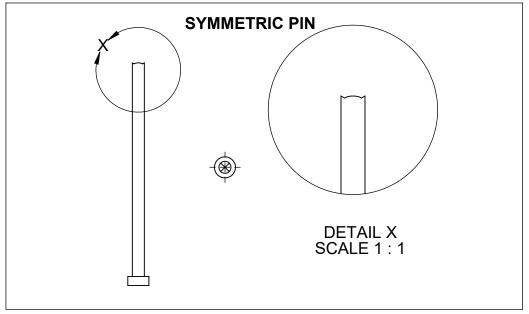
XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3°30°

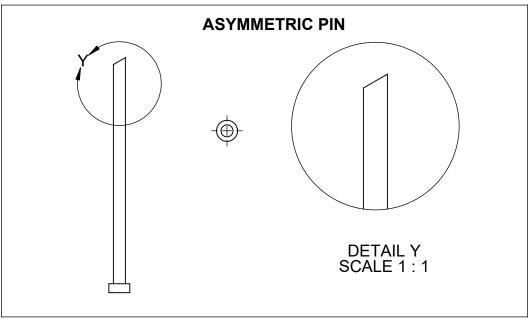


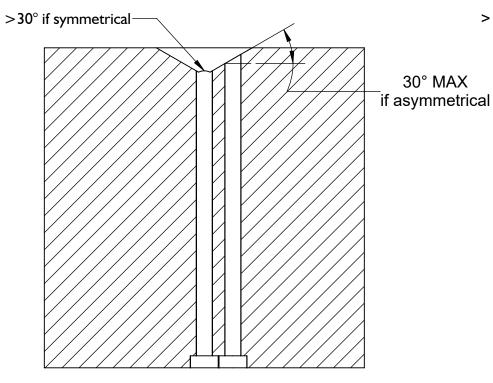
Drawing Title: 9204-13 Eight-Channel Piezoelectric 12.6 mm Sensor (9204) Installation NOTE: REFER TO PAGES 9204-03 FOR CLAMP PLATE INSTALLATION, 9204-05 FOR CLAMP PLATE (HEAD-TO-HEAD INSTALLATION, AND 9204-08 FOR EJECTOR PLATE INSTALLATION. \emptyset 0.504 $^{+0.004}_{-0.000}$ $[12.80 \pm 0.1]$ 0 0 1.38 MIN Before First Cable [35 MIN] Channel Bend **Cover Plate** Mounting-Holes Example 0.20 5 0 0 1.9 Break Edge-48 2.95 0.49 0.2 MINRecess is Optional [75] [13] **SECTION W-W** 6 MIN SCALE 1:2 0.98 25 1.06 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. [27] 2.09 $x2 M4x0.7 \ T$.35 53 [9] DO NOT SCALE PRINT BREAK ALL SHARP EDGES, 0.005 [0.03] R MAX DIMENSIONS IN INCHES [MM], UNLESS NOTED TOLERANCES UNLESS SPECIFIED: Description: 9204 Sensor 2.36 60 Drawn: K.J.Brettschneider XXX = ±0.003 [0.08] XX = ±0.01 [0.3] ANGLES = ±3°30° 9111 Park Street Traverse City, MI 48696 Check: M.Groleau Date: 07.21.2020

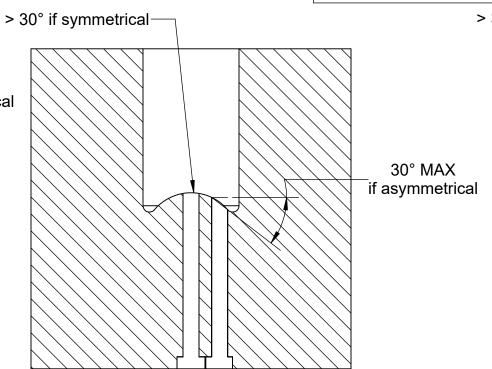
9204 Sensor Installation—Contoured Pin Angle Specification

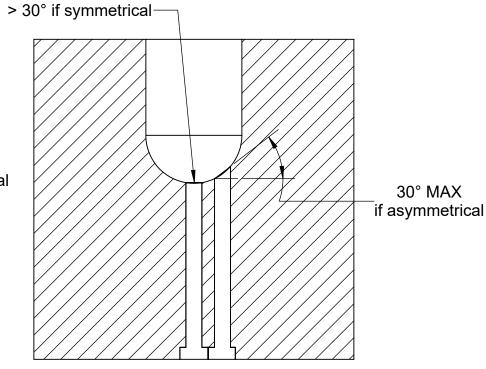
NOTE: Contoured/angled pins (asymmetric) not to exceed 30° MAX unless pin design is symmetrical to provide even, downward pressure across pin surface to loading of sensor. Contact RJG Customer Support for assistance in verification of contoured/angled pin use.











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]

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



Description: 9204 Sensor

Drawn: K.J.Brettschneider