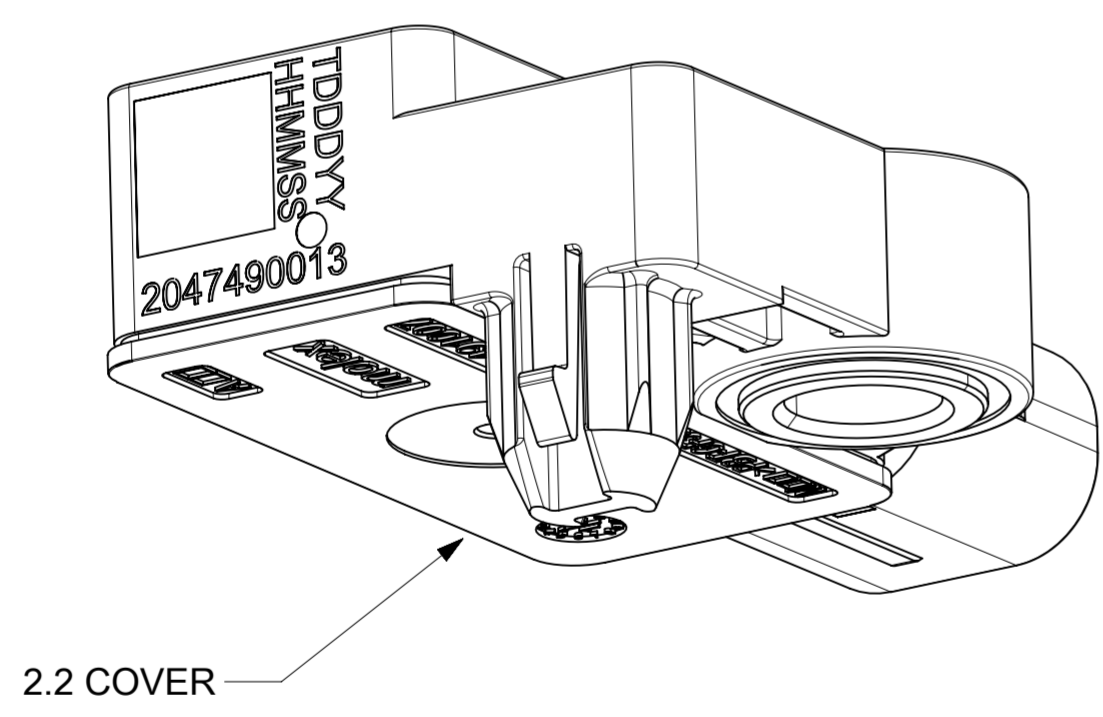
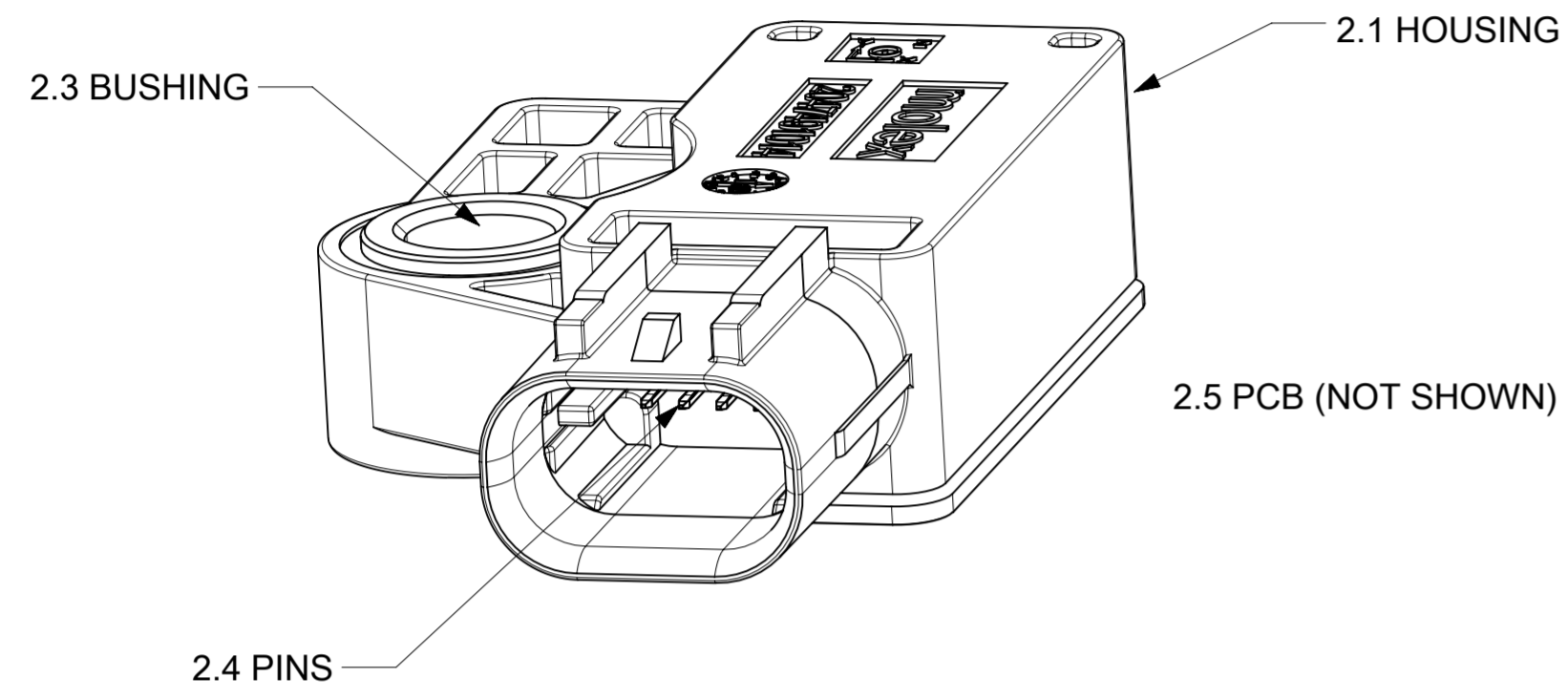


TABLE OF CONTENTS	
SHEET #	SHEET DESCRIPTION
1	NOTES, BOM TABLE AND TABLE OF CONTENTS
2	RNC SENSOR ASSEMBLY
3	RECOMMENDED PANEL LAYOUT



NOTES: VALID UNLESS OTHERWISE SPECIFIED

1. GENERAL:
- 1.1 APPLICATION SPECIFICATION SEE: 2047490000-AS
 - 1.2 PRODUCT SPECIFICATION SEE: 2047490000-PS
 - 1.3 PACKAGING SPECIFICATION PER MOLEX DRAWING: 2047490013-PK
 - 1.4 MATES WITH PART # 349674001 KEY A MINI50 SEALED 1x4 CONNECTOR OR PART # 349674051 WITH CIRCUITS 1 AND 2 PLUGGED. SEE MOLEX DRAWING 349674000 PSD.
 - 1.5 FOR USE WITH WIRE: 0.35 mm² UNSHIELDED JACKETED TWISTED CABLE WITH 100 OHM MATCHED IMPEDANCE, TWIST LAY LENGTH 20mm MIN TO 30mm MAX PER SAE-J3117 STANDARD.
 - 1.6 MATING TERMINAL: MOLEX CTX50 SEALED, Ag PLATED. RECEPTACLE TERMINAL. SEE MOLEX DRAWING 349050400.
 - 1.7 SENSOR DESIGNED TO BE SECURED TO PANEL WITH A M6 BOLT WITH FLAT WASHER ON TOP OF BUSHING. USE THE RECOMMENDED INSTALLATION TORQUE OF THE FASTENER SYSTEM BEING USED. TORQUE NOT TO EXCEED 20 N-m
 - 1.8 CLEARANCE WITH CUSTOMER PANEL IS REQUIRED FOR WIRE DRESS COVER SEE SHEET 3.
 - 1.9 ⊕ IS IMPORTANT PER FERRARI CHARACTERISTICS CLASSIFICATION IN Q.00314 ED: 5.

2. DESIGN - MATERIAL AND PLATING
-SEE BOM TABLE

3. DESIGN - MANUFACTURING:
- 3.1 VISUAL DEFECTS SHALL MEET COSMETIC STANDARD PS-45499-002 (CLASS B). FOR VISUAL DEFECTS IN THE WELD ZONE REFER TO 2047490000-AS
 - 3.2 ASSEMBLY LASER MARKED WITH 2D BAR CODE AND HUMAN READABLE NUMBERS PER PRODUCT SPECIFICATION: 2047490000-PS. 2D BAR CODE FORMAT DATA MATRIX ECC 200, 22 X 22 SYMBOL SIZE. MOLEX PART CODE: 000787497
 - 3.3 FOR SILVER PLATING: ELECTRICAL PERFORMANCE IS NOT AFFECTED BY GREY OR BLACK TARNISH ON THE SILVER PLATING SURFACE. ACCEPTABLE SILVER PIN SURFACES CAN INCLUDE GREY OR BLACK TARNISH.
 - 3.4 PROCESS COMPONENTS IN A LOW-SULFUR ENVIRONMENT AND AVOID CONTACT WITH MATERIALS THAT TRANSFER SULFUR TO THE ENVIRONMENT.
 - 3.5 COVER ORIENTATION IS NOT CONTROLLED DURING ASSEMBLY, IT MAY BE ROTATED 180 DEGREES FROM WHAT IS SHOWN. THIS IS ACCEPTABLE.
 - 3.6 COMMON AUTOMOTIVE GRADE COMPONENTS THAT MEET AEC-Q200 TESTING WILL BE MANAGED BY MOLEX CHANGE CONTROL, AND WILL BE VALIDATED WITH DESIGN USE TO USE MULTIPLE SUPPLIERS AND RUNNING CHANGES WITHOUT NOTIFICATION TO CUSTOMER. COMPONENTS CONSIDERED ACTIVE IN THE DESIGN (FETs, ICs, TRANSCEIVERS, ACCELEROMETERS, PRECISION DIODES) WILL FOLLOW PROTOCOL WITH NOTIFICATION TO THE CUSTOMER.

BOM TABLE			
ITEM #	DESCRIPTION	MATERIAL	PLATING
2.1	HOUSING	PBT GF 30%, COLOR: BLACK	N/A
2.2	COVER	PBT GF 30%, COLOR: BLACK	N/A
2.3	BUSHING	LOW CARBON STEEL	ZINC-NICKEL ALLOY
2.4	PINS	COPPER ALLOY	MATING SIDE TOP LAYER: Ag
2.5	PCB	FR4	N/A

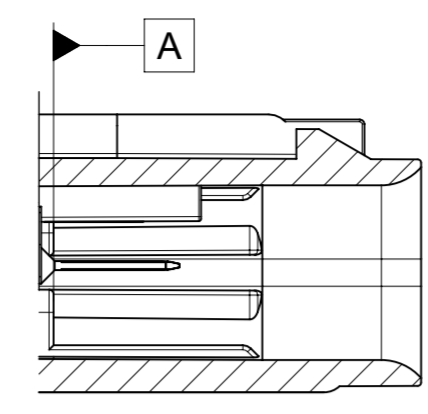
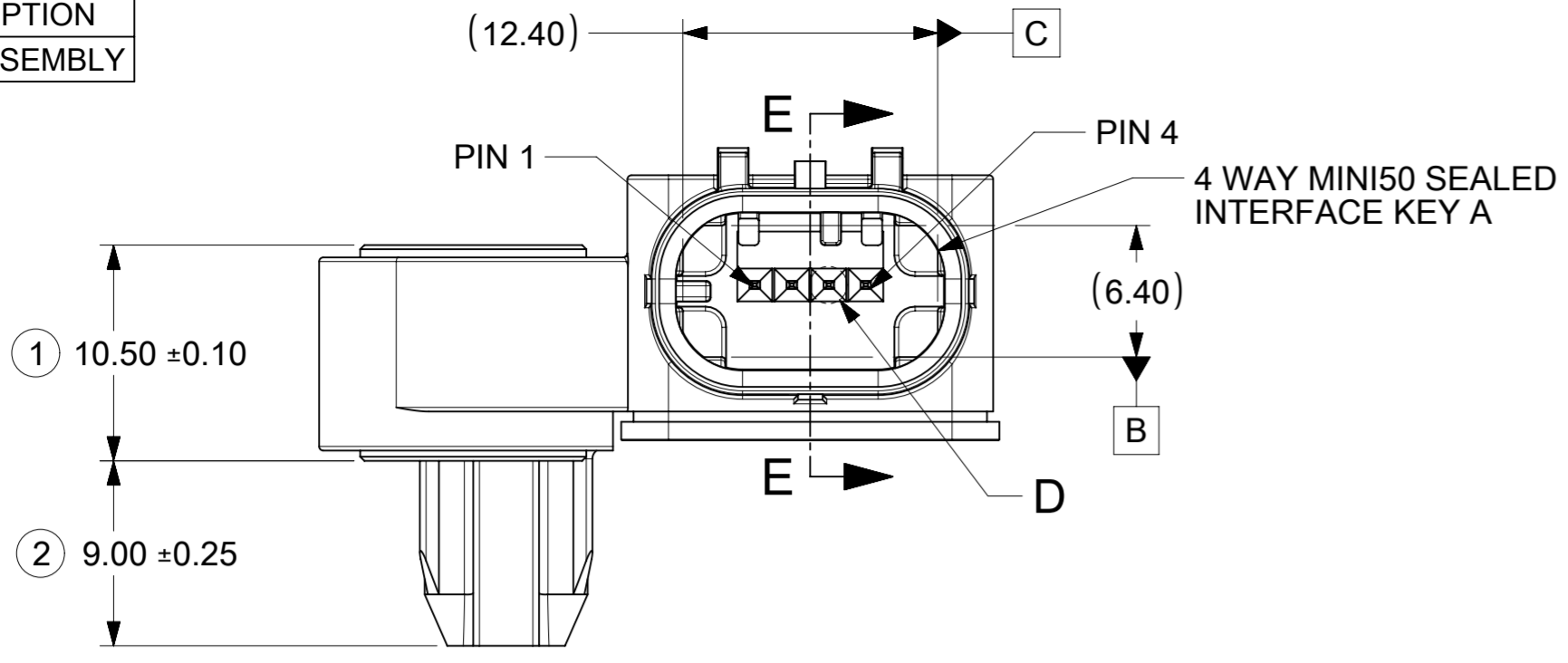
COMPANY	PART NUMBER
MOLEX	2047490013
FERRARI	787497
LEAR	E29372601

REVISION TABLE			
REVISION	DATE	ECN	DESCRIPTION
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2	12/15/2020		ADJUST DIM 11 TOL
A	7/30/2021	671917	ADD ALT. CUTOUT

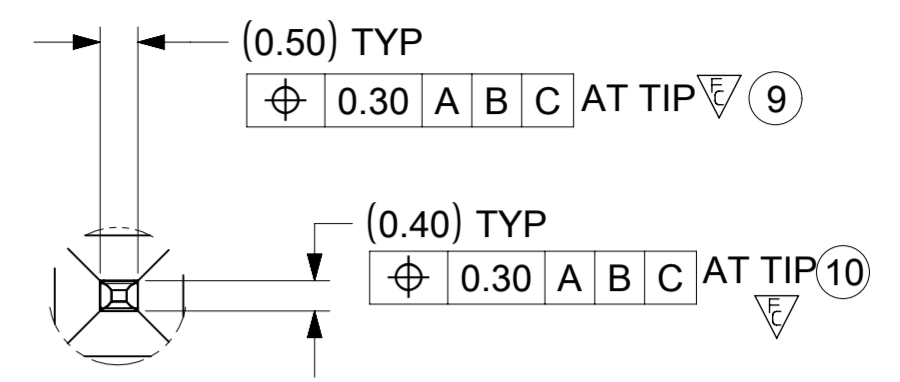
DOCUMENT STATUS	P1	RELEASE DATE	2021/08/03	15:45:19
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INSPECTION BALLOON NUMBER LOG
PER DRAWING REVISION:
LAST BALLOON NUMBER USED:14
ADD BALLOON NUMBERS:
REMOVED BALLOON NUMBERS:

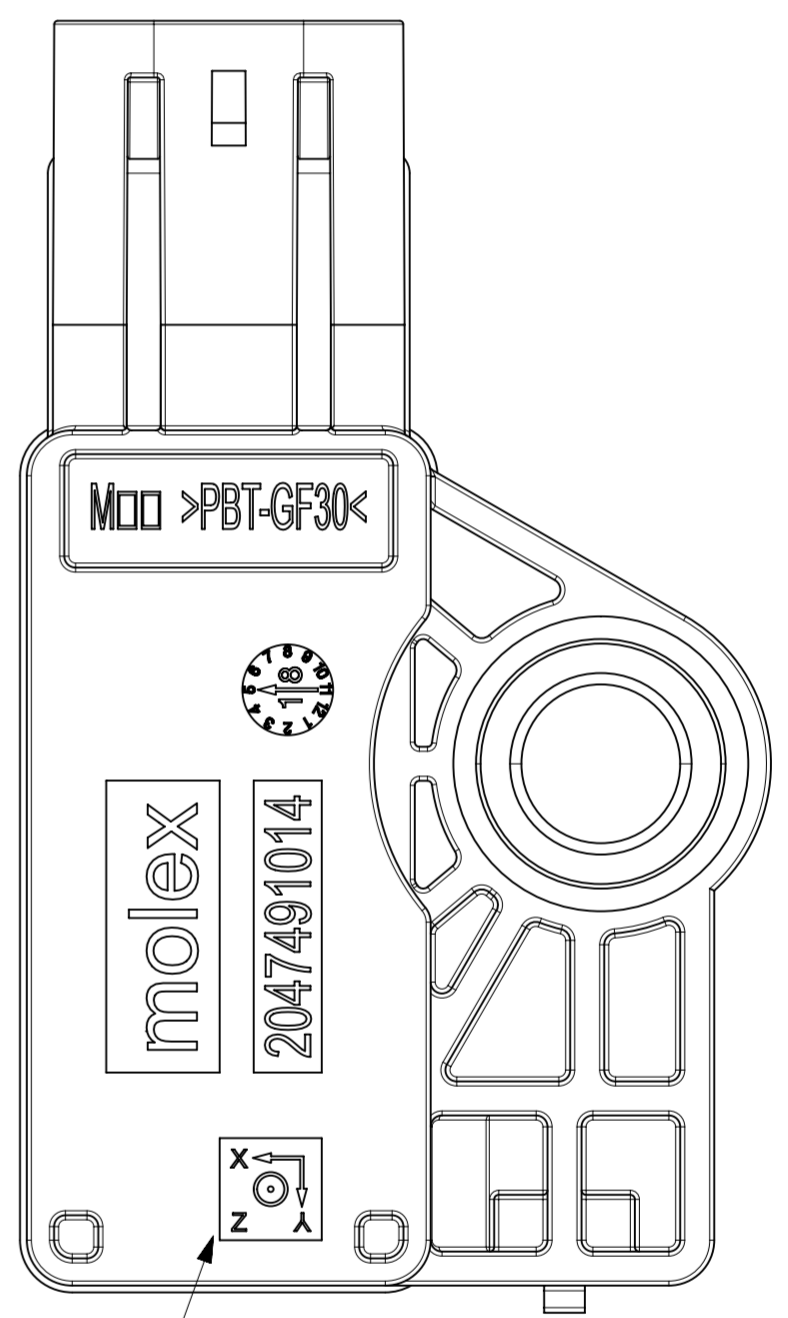
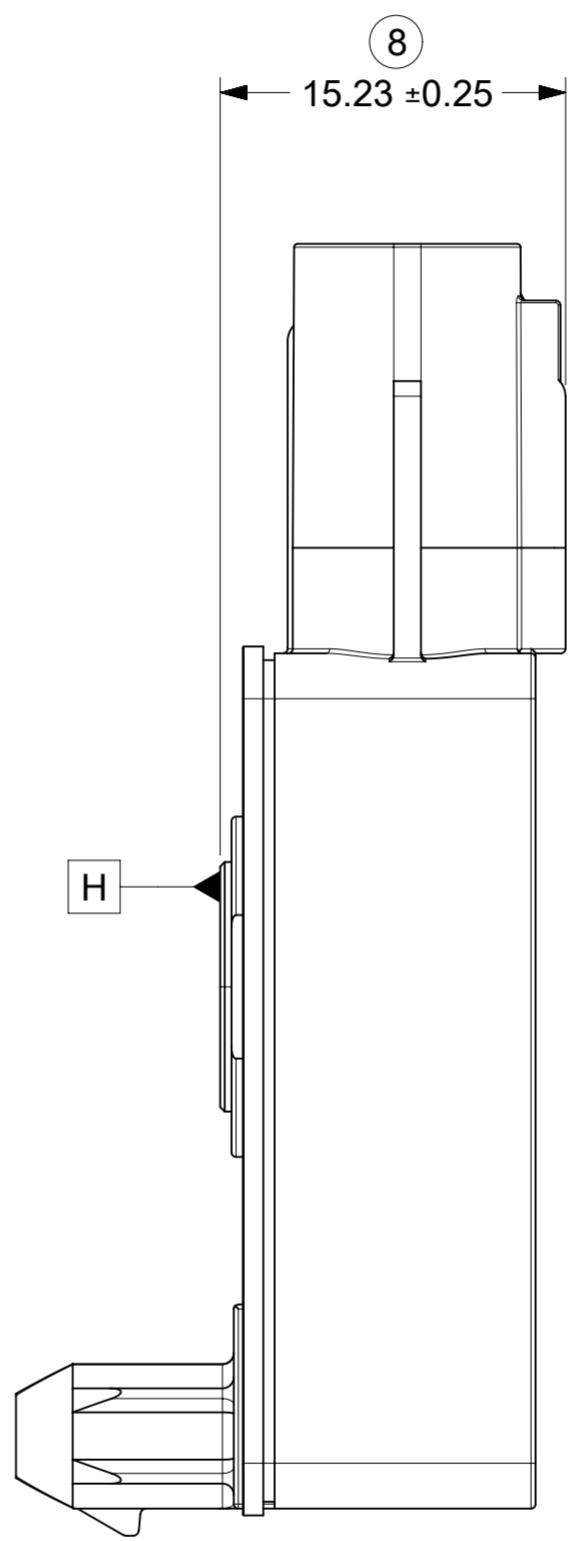
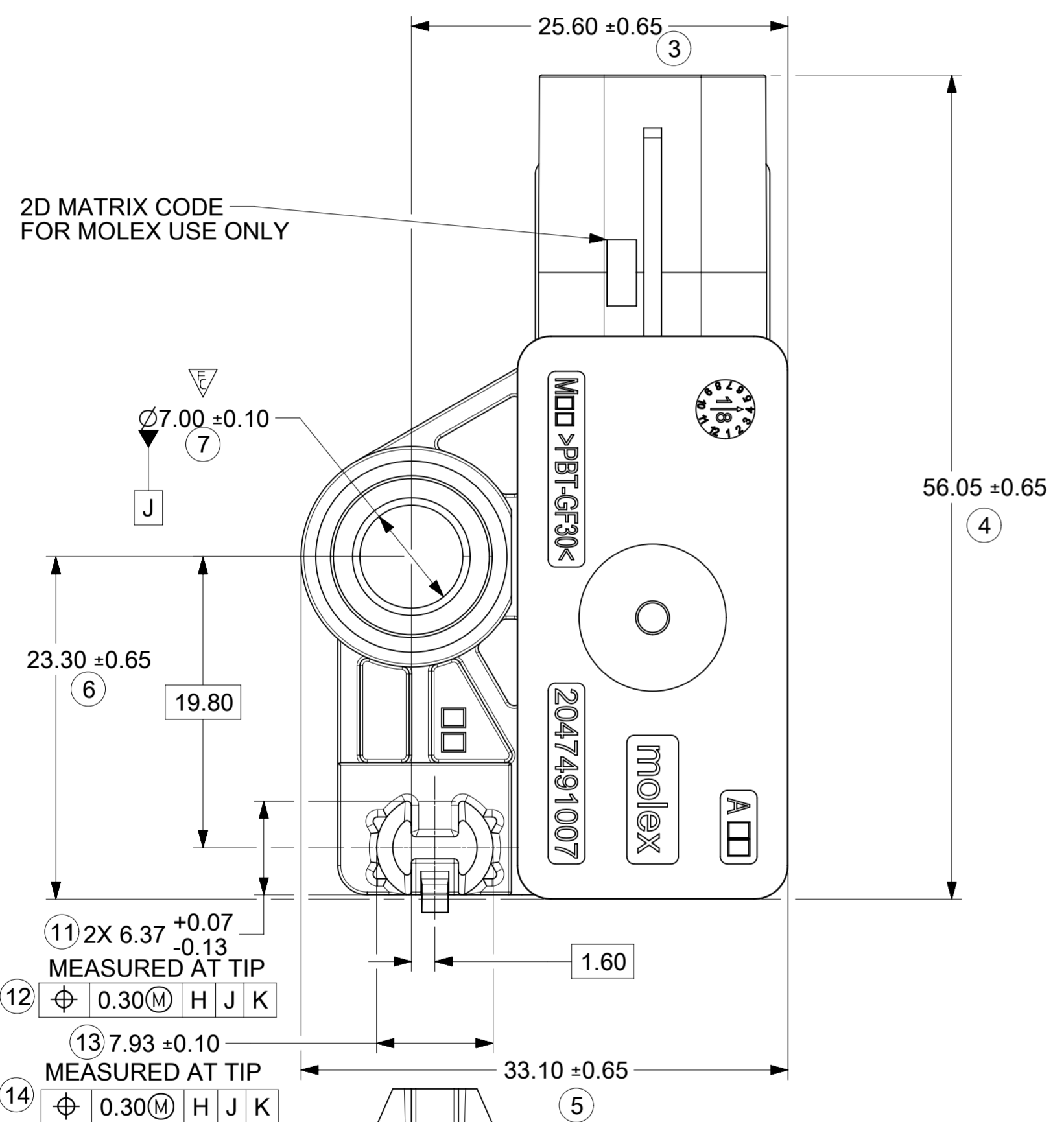
FUNCTIONAL SYMBOLS $\frac{E}{A} = 0$ $\frac{E}{C} = 0$ $\frac{E}{P} = 0$	DIMENSION UNITS: mm SCALE: 3:1	CURRENT REV DESC: ADD ALTERNATE HOLE CUTOUT, UPDATE NOTE 3.2, ADD FERRARI PART NUMBER			
	GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL ± 1.0° 4 PLACES ± 0.25 3 PLACES ± 0.25 2 PLACES ± 0.25 1 PLACE ± 0.38 0 PLACES ± 0.5	EC NO: 671917 DRWN: JBELL 2021/07/29 CHK'D: APROFFITT 2021/08/03 APPR: APROFFITT 2021/08/03			
	DIVISIONAL SYMBOLS	INITIAL REVISION: DRWN: JBELL 2020/10/15 APPR: APROFFITT 2021/08/03	DOCUMENT NUMBER: 2047490013-RSD DOC TYPE: PSD DOC PART: 000 REVISION: A		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	THIRD ANGLE PROJECTION	DRAWING: A2-SIZE SERIES: 204749	MATERIAL NUMBER: SEE CHART CUSTOMER: FERRARI	SHEET NUMBER: 1 OF 3	



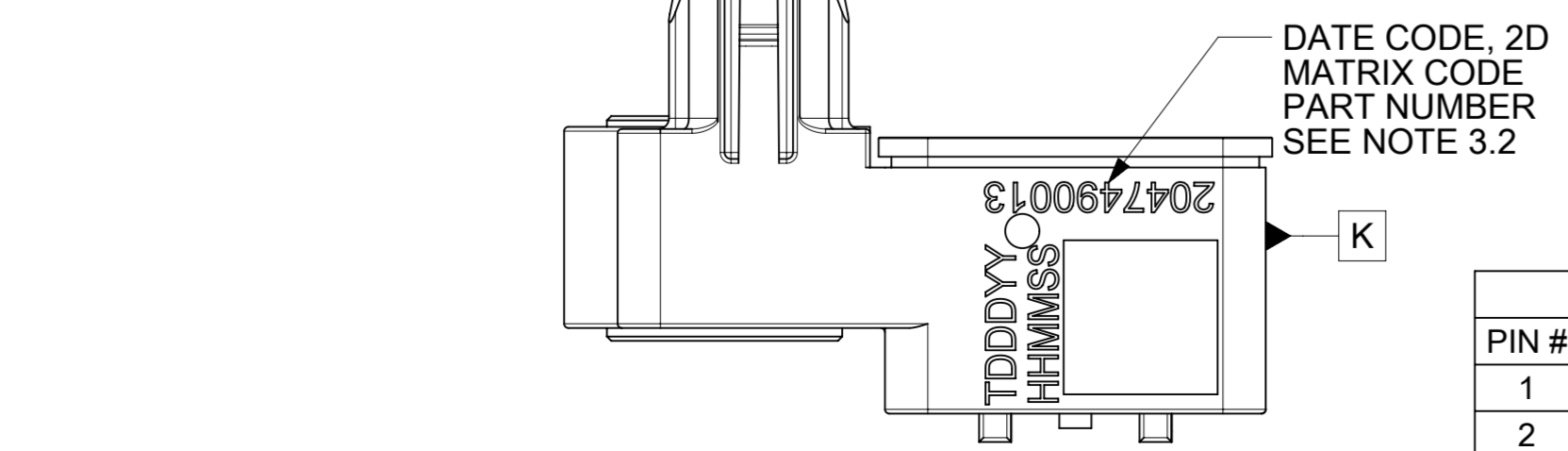
SECTION E-E



DETAIL D
SCALE 10:1

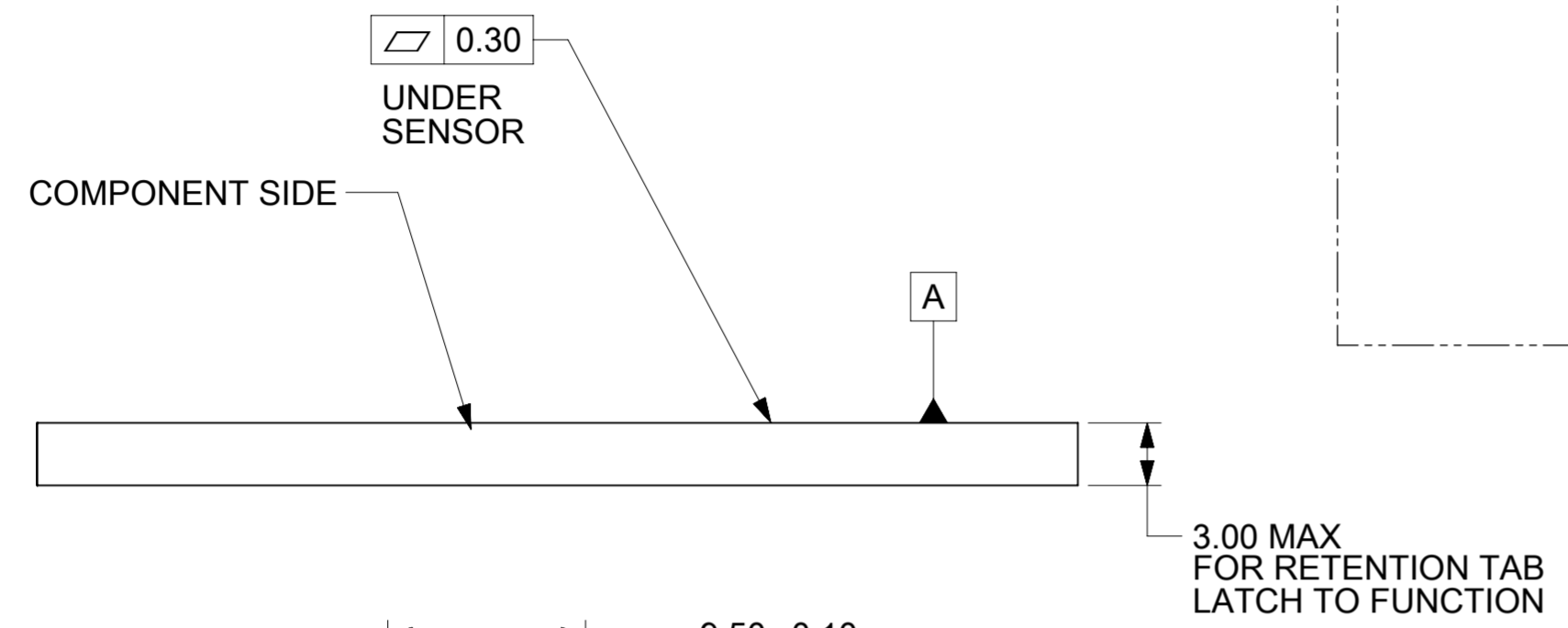


ACCELEROMETER AXIS ORIENTATION
Z AXIS IS POSITIVE OUT OF SCREEN

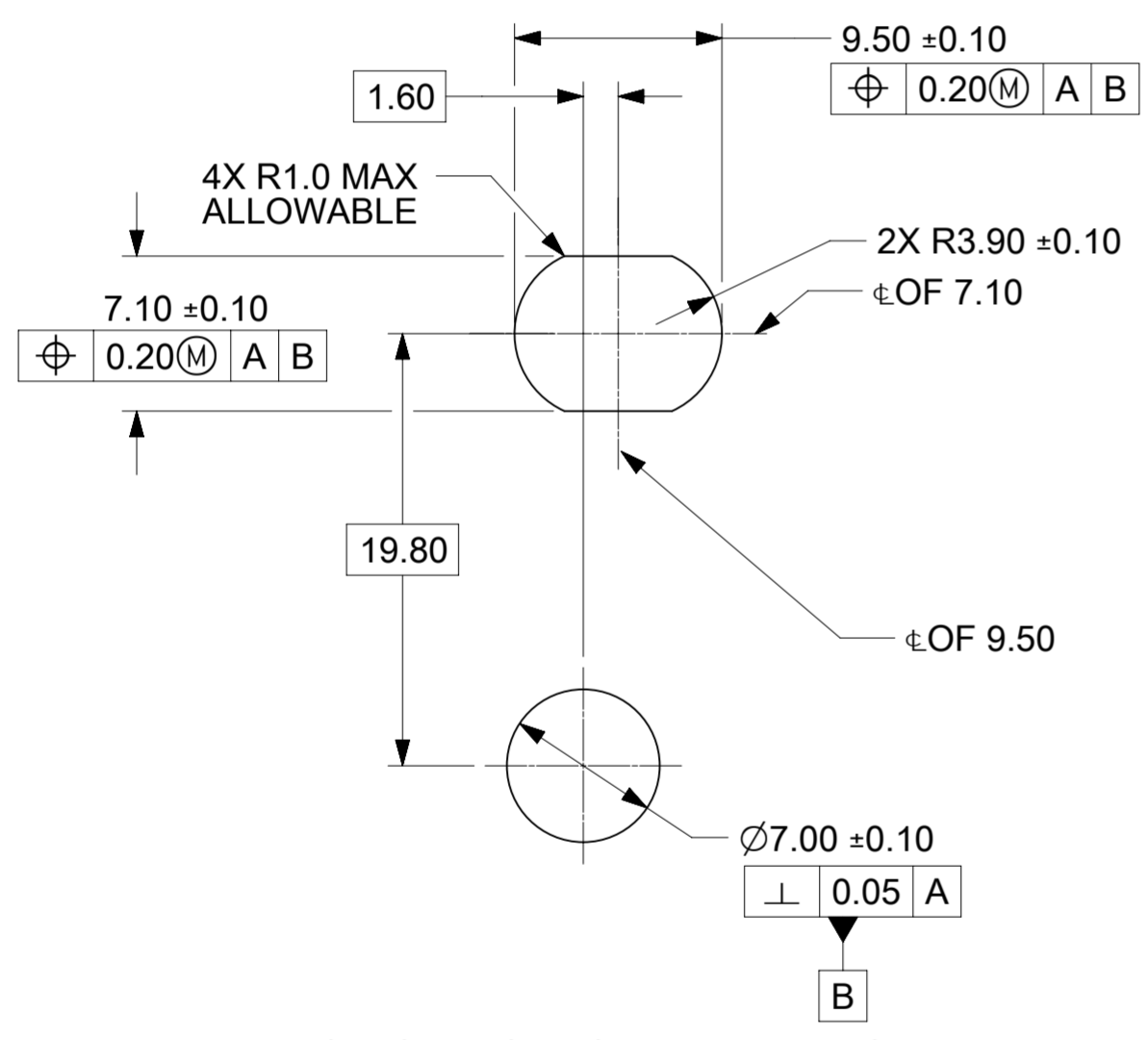
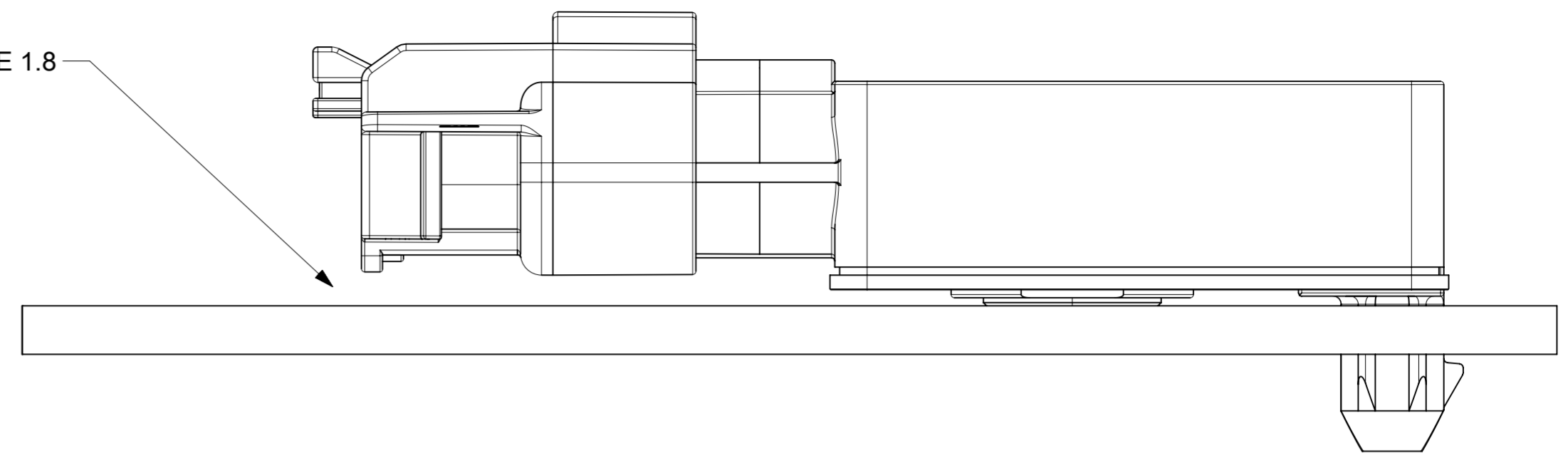


SENSOR PIN CONFIGURATION		
PIN #	NAME	FUNCTION
1	BN	DIFFERENTIAL PAIR GOING TOWARDS NEXT SLAVE. DISCONNECTED ON LAST SLAVE
2	BP	
3	AP	DIFFERENTIAL PAIR GOING TOWARDS MASTER
4	AN	

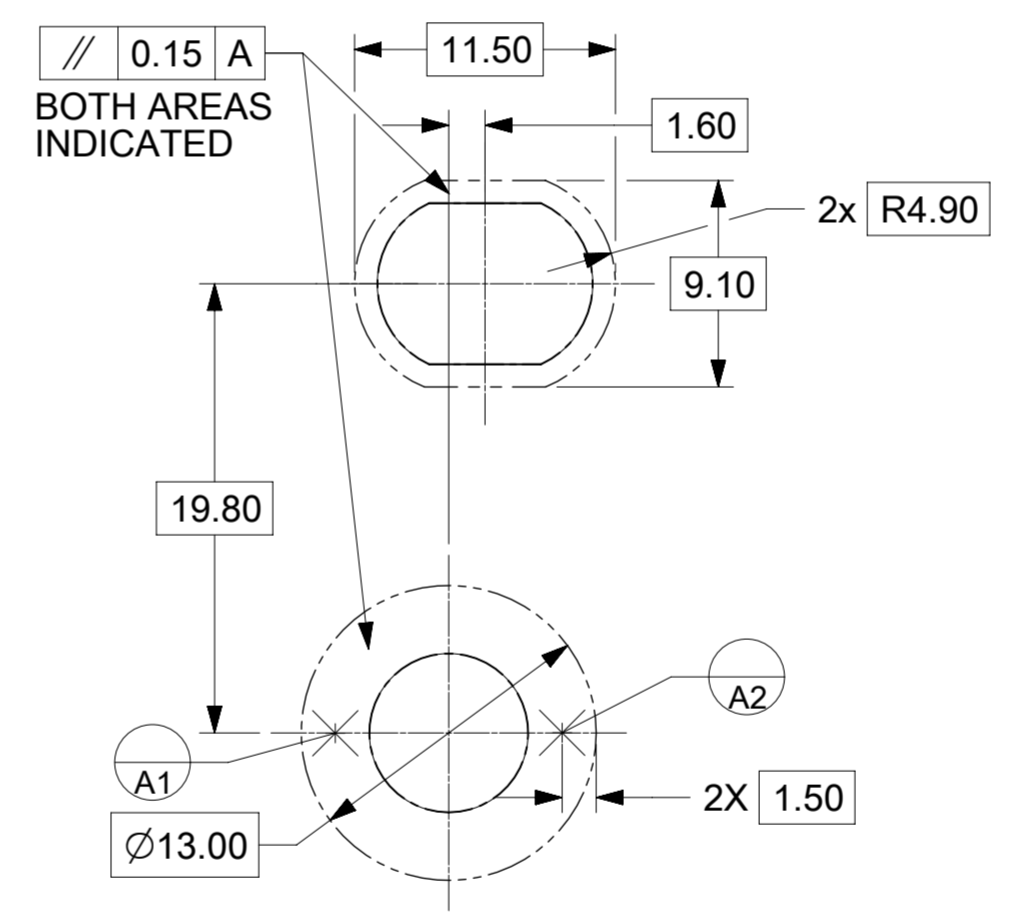
FUNCTIONAL SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION										
FA = 0	DIMENSION UNITS	SCALE	CURRENT REV DESC: ADD ALTERNATE HOLE CUTOUT, UPDATE NOTE 3.2, ADD FERRARI PART NUMBER								
FC = 5	mm	3:1	EC NO: 671917								
FP = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DRWN: JBELL 2021/07/29								RNC ELECTRONIC SENSOR ASSEMBLY
	ANGULAR TOL ± 1.0°		CHK'D: APROFFITT 2021/08/03								
	4 PLACES ± 0.25		APPR: APROFFITT 2021/08/03								PRODUCT CUSTOMER DRAWING
	3 PLACES ± 0.25		INITIAL REVISION:								DOCUMENT NUMBER
	2 PLACES ± 0.25		DRWN: JBELL 2020/10/15								2047490013-RSD
	1 PLACE ± 0.38		APPR: APROFFITT 2021/08/03								DOC TYPE
	0 PLACES ± 0.5		THIRD ANGLE PROJECTION								PSD
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER	SHEET NUMBER				
			A2-SIZE	204749	SEE CHART	FERRARI	2 OF 3				



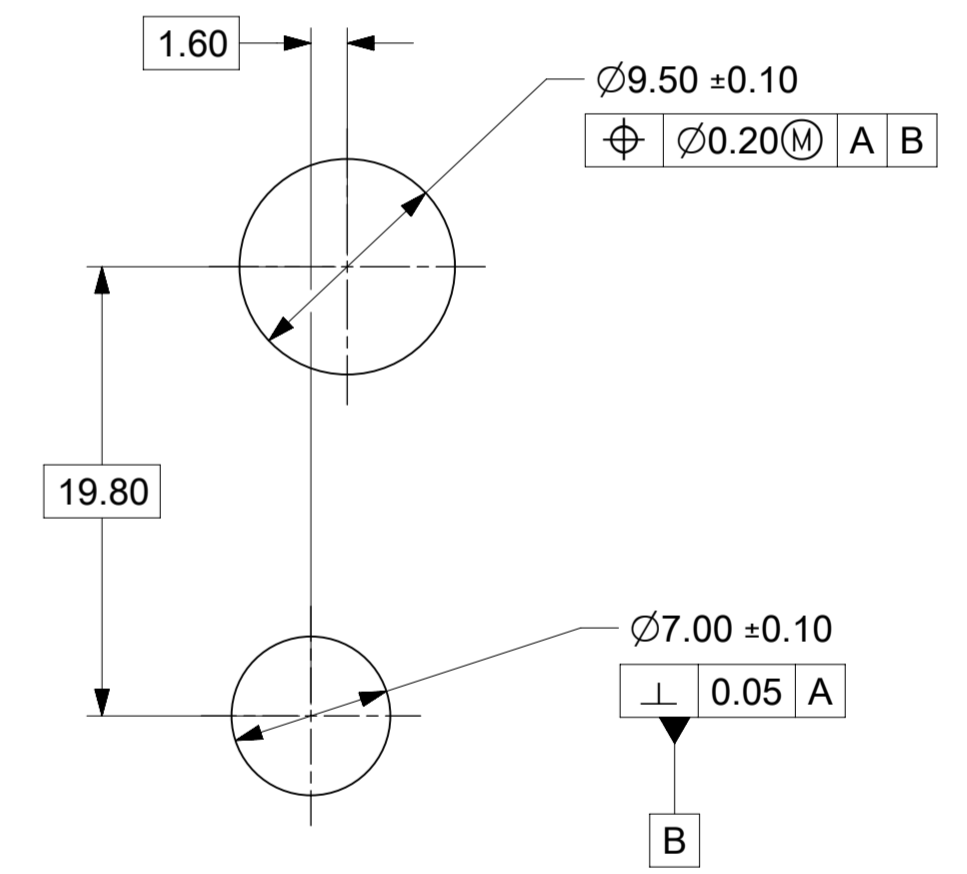
SEE NOTE 1.8



PANEL CUTOUT FOR BOLT AND NUT MOUNT VIEWED FROM COMPONENT SIDE



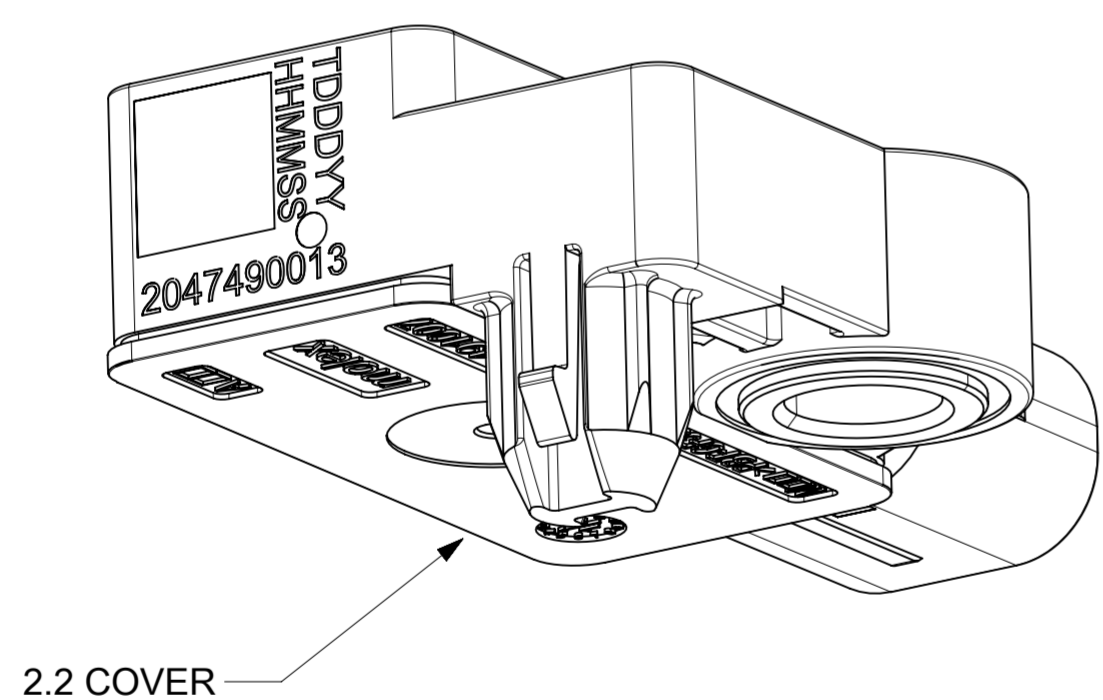
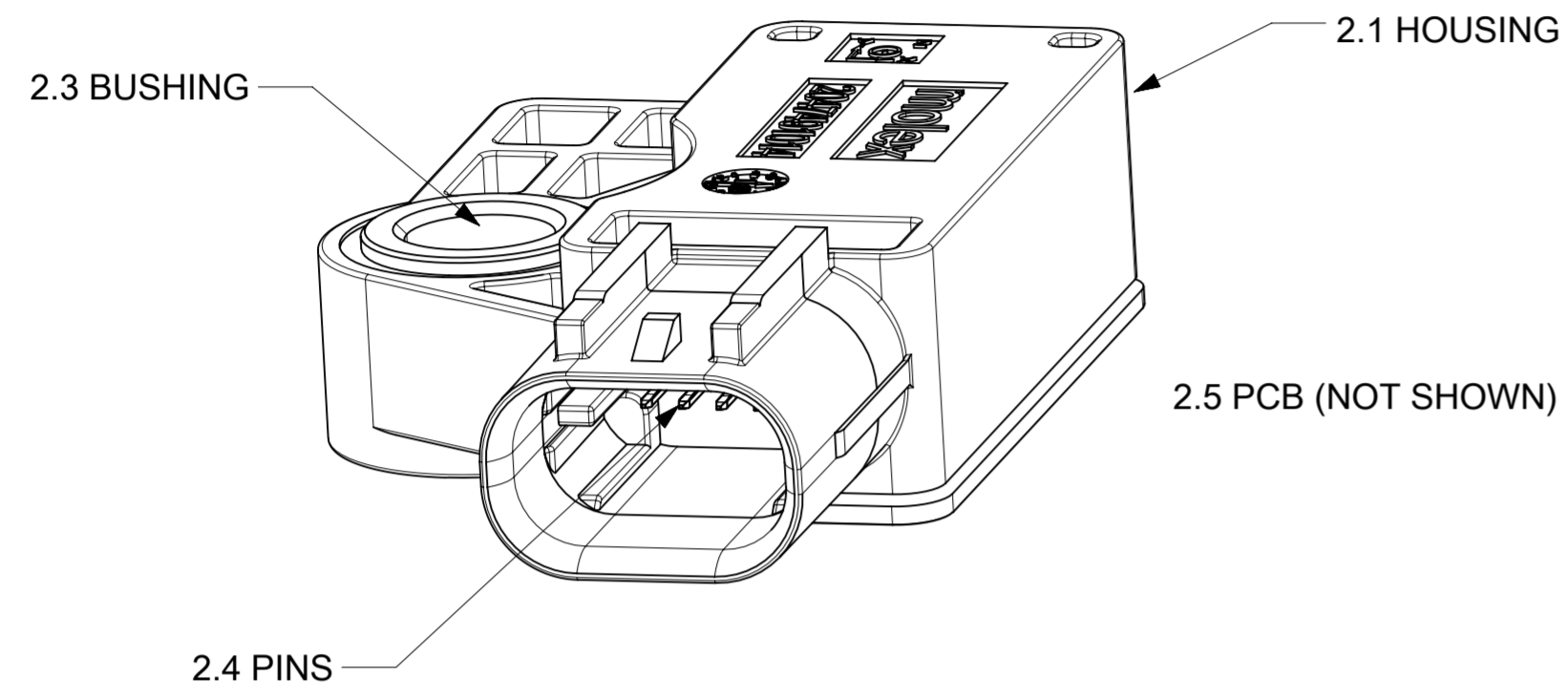
FLATNESS CONTROLLED AREA VIEWED FROM COMPONENT SIDE



ALTERNATE PANEL CUTOUT FOR BOLT AND NUT MOUNT VIEWED FROM COMPONENT SIDE RETENTION TAB LATCH WILL NOT FUNCTION FLATNESS REQUIREMENTS ARE THE SAME

FUNCTIONAL SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION										
	FA = 0	DIMENSION UNITS	SCALE	CURRENT REV DESC: ADD ALTERNATE HOLE CUTOUT, UPDATE NOTE 3.2, ADD FERRARI PART NUMBER							
FC = 0	mm	3:1	GENERAL TOLERANCES (UNLESS SPECIFIED)							RNC ELECTRONIC SENSOR ASSEMBLY	
FP = 0	ANGULAR TOL ± 1.0°		EC NO: 671917							PRODUCT CUSTOMER DRAWING	
DIVISIONAL SYMBOLS	4 PLACES ± 0.25		DRWN: JBELL 2021/07/29							DOCUMENT NUMBER	
	3 PLACES ± 0.25		CHK'D: APROFFITT 2021/08/03							2047490013-RSD	
	2 PLACES ± 0.25		APPR: APROFFITT 2021/08/03							DOC TYPE	
	1 PLACE ± 0.38		INITIAL REVISION:							PSD	
0 PLACES ± 0.5		DRWN: JBELL 2020/10/15		APPR: APROFFITT 2021/08/03		DOC PART		000			
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION		DRAWING		SERIES		MATERIAL NUMBER			
		A2-SIZE		204749		SEE CHART		CUSTOMER			
						FERRARI		SHEET NUMBER			
								3 OF 3			

TABLE OF CONTENTS	
SHEET #	SHEET DESCRIPTION
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NOTES: VALID UNLESS OTHERWISE SPECIFIED

1. GENERAL:
 - 1.1 APPLICATION SPECIFICATION SEE: 2047490000-AS
 - 1.2 PRODUCT SPECIFICATION SEE: 2047490000-PS
 - 1.3 PACKAGING SPECIFICATION PER MOLEX DRAWING: 2047490013-PK
 - 1.4 MATES WITH PART # 349674001 KEY A MINI50 SEALED 1x4 CONNECTOR OR PART # 349674051 WITH CIRCUITS 1 AND 2 PLUGGED. SEE MOLEX DRAWING 349674000 PSD.
 - 1.5 FOR USE WITH WIRE: 0.35 mm² UNSHIELDED JACKETED TWISTED CABLE WITH 100 OHM MATCHED IMPEDANCE, TWIST LAY LENGTH 20mm MIN TO 30mm MAX PER SAE-J3117 STANDARD.
 - 1.6 MATING TERMINAL: MOLEX CTX50 SEALED, Ag PLATED. RECEPTACLE TERMINAL. SEE MOLEX DRAWING 349050400.
 - 1.7 SENSOR DESIGNED TO BE SECURED TO PANEL WITH A M6 BOLT WITH FLAT WASHER ON TOP OF BUSHING. USE THE RECOMMENDED INSTALLATION TORQUE OF THE FASTENER SYSTEM BEING USED. TORQUE NOT TO EXCEED 20 N-m
 - 1.8 CLEARANCE WITH CUSTOMER PANEL IS REQUIRED FOR WIRE DRESS COVER SEE SHEET 3.

2. DESIGN - MATERIAL AND PLATING
-SEE BOM TABLE

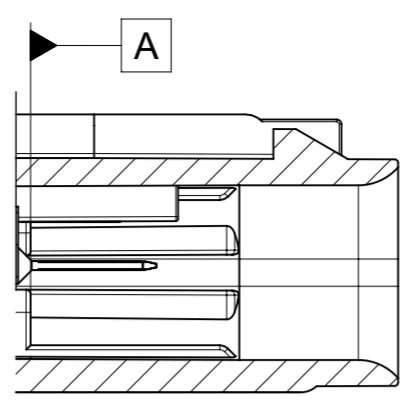
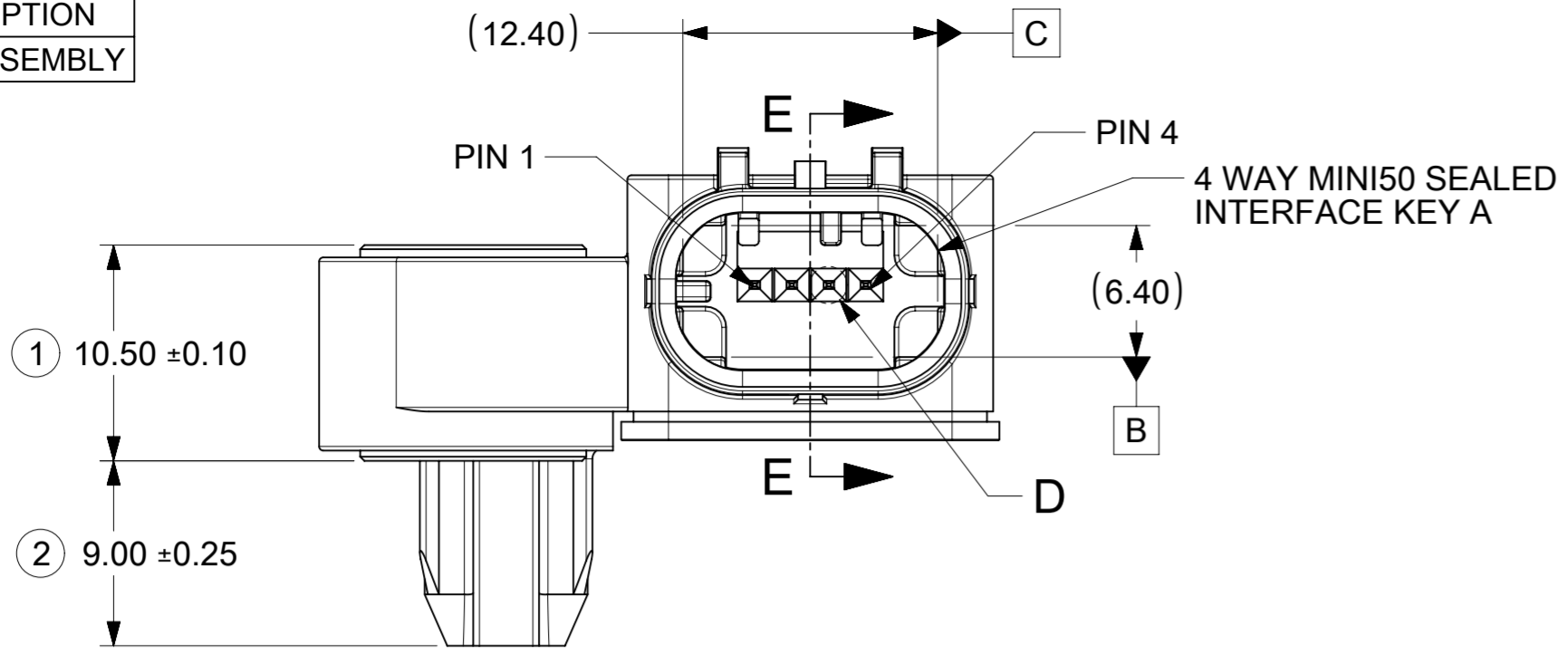
3. DESIGN - MANUFACTURING:
 - 3.1 VISUAL DEFECTS SHALL MEET COSMETIC STANDARD PS-45499-002 (CLASS B). FOR VISUAL DEFECTS IN THE WELD ZONE REFER TO 2047490000-AS
 - 3.2 ASSEMBLY LASER MARKED WITH 2D BAR CODE AND HUMAN READABLE NUMBERS PER PRODUCT SPECIFICATION: 2047490000-PS. 2D BAR CODE FORMAT DATA MATRIX ECC 200, 22 X 22 SYMBOL SIZE
 - 3.3 FOR SILVER PLATING: ELECTRICAL PERFORMANCE IS NOT AFFECTED BY GREY OR BLACK TARNISH ON THE SILVER PLATING SURFACE. ACCEPTABLE SILVER PIN SURFACES CAN INCLUDE GREY OR BLACK TARNISH.
 - 3.4 PROCESS COMPONENTS IN A LOW-SULFUR ENVIRONMENT AND AVOID CONTACT WITH MATERIALS THAT TRANSFER SULFUR TO THE ENVIRONMENT.
 - 3.5 COVER ORIENTATION IS NOT CONTROLLED DURING ASSEMBLY, IT MAY BE ROTATED 180 DEGREES FROM WHAT IS SHOWN. THIS IS ACCEPTABLE.
 - 3.6 COMMON AUTOMOTIVE GRADE COMPONENTS THAT MEET AEC-Q200 TESTING WILL BE MANAGED BY MOLEX CHANGE CONTROL, AND WILL BE VALIDATED WITH DESIGN USE TO USE MULTIPLE SUPPLIERS AND RUNNING CHANGES WITHOUT NOTIFICATION TO CUSTOMER. COMPONENTS CONSIDERED ACTIVE IN THE DESIGN (FETs, ICs, TRANSCEIVERS, ACCELEROMETERS, PRECISION DIODES) WILL FOLLOW PROTOCOL WITH NOTIFICATION TO THE CUSTOMER.

BOM TABLE			
ITEM #	DESCRIPTION	MATERIAL	PLATING
2.1	HOUSING	PBT GF 30%, COLOR: BLACK	N/A
2.2	COVER	PBT GF 30%, COLOR: BLACK	N/A
2.3	BUSHING	LOW CARBON STEEL	ZINC-NICKEL ALLOY
2.4	PINS	COPPER ALLOY	MATING SIDE TOP LAYER: Ag
2.5	PCB	FR4	N/A

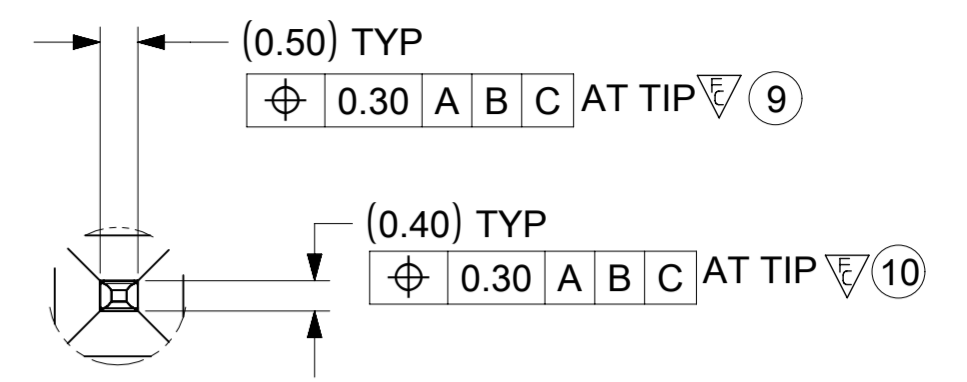
FUNCTIONAL SYMBOLS $\nabla_A = 0$ $\nabla_C = 0$ $\nabla_P = 0$	DIMENSION UNITS: mm SCALE: 3:1	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
	GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL $\pm 1.0^\circ$ 4 PLACES ± 0.25 3 PLACES ± 0.25 2 PLACES ± 0.25	CURRENT REV DESC: UPDATE DIM 11 TOLERANCE, ADD MEASUREMENT POINT TO DIM 11 & 13. EC NO: 651292 DRWN: JBELL 2020/12/10 CHK'D: APROFFITT 2020/12/15 APPR: APROFFITT 2020/12/15	 RNC ELECTRONIC SENSOR ASSEMBLY PRODUCT CUSTOMER DRAWING	
	DIVISIONAL SYMBOLS 1 PLACE ± 0.38 0 PLACES ± 0.5	INITIAL REVISION: DRWN: JBELL 2019/03/27 APPR: APROFFITT 2020/07/17		
INSPECTION BALLOON NUMBER LOG PER DRAWING REVISION:A3 LAST BALLOON NUMBER USED:14 ADD BALLOON NUMBERS: 9 TO 14 REMOVED BALLOON NUMBERS:	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS 	DRAWING: A2-SIZE SERIES: 204749	DOCUMENT NUMBER: 2047490013-SD DOC TYPE: PSD DOC PART: 000 REVISION: A3	
MATERIAL NUMBER: 2047490013 CUSTOMER: GENERAL MARKET		SHEET NUMBER: 1 OF 3		

REVISION TABLE			
REVISION	DATE	ECN	DESCRIPTION
1	3/27/2019		INITIAL RELEASE
2	3/13/2020		REVISE NOTES, ADD TABLES
A	7/16/2020	641684	ADD RIBS, CHG HEIGHT
A1	8/13/2020	643356	ADD TOLERANCES
A2	8/21/2020	643835	ADD DIM 9 TO 14
A3	12/14/2020	651292	ADJUST DIM 11 TOL

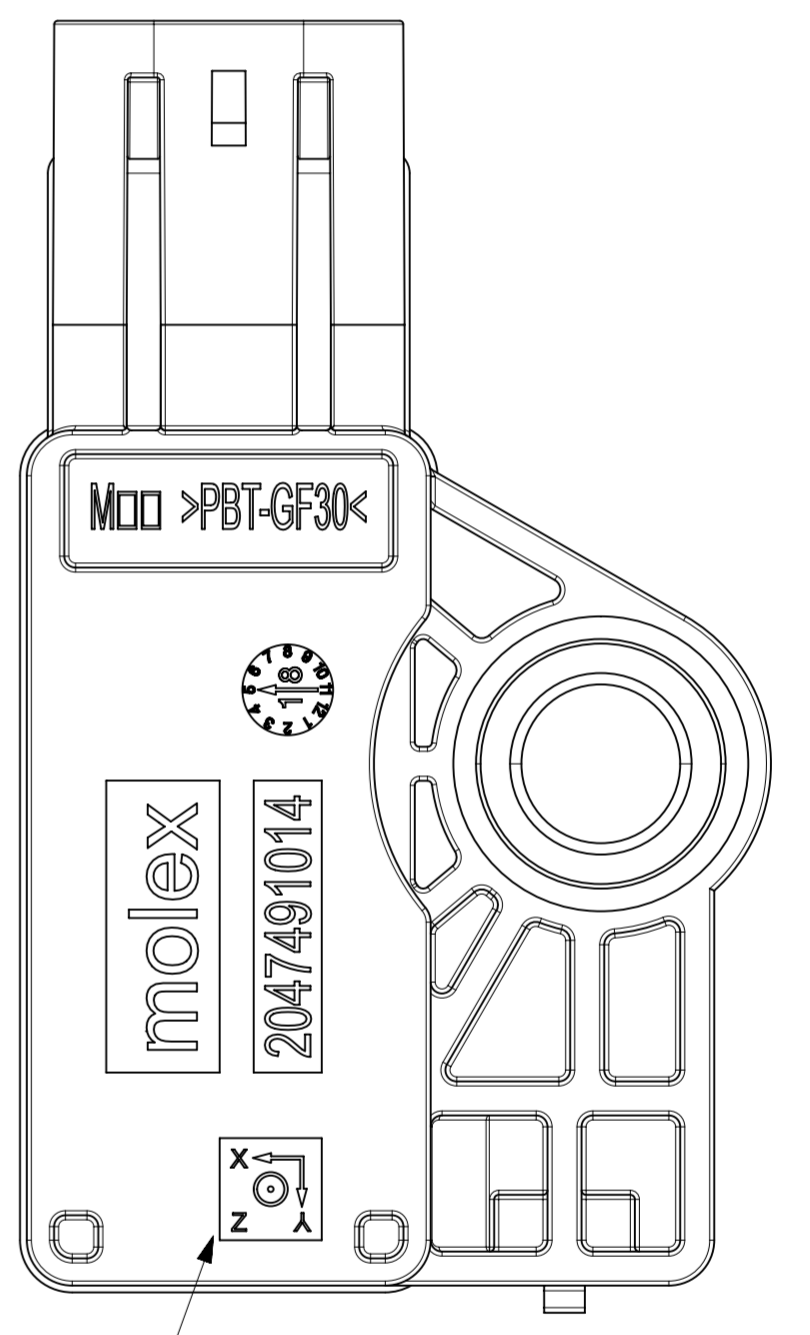
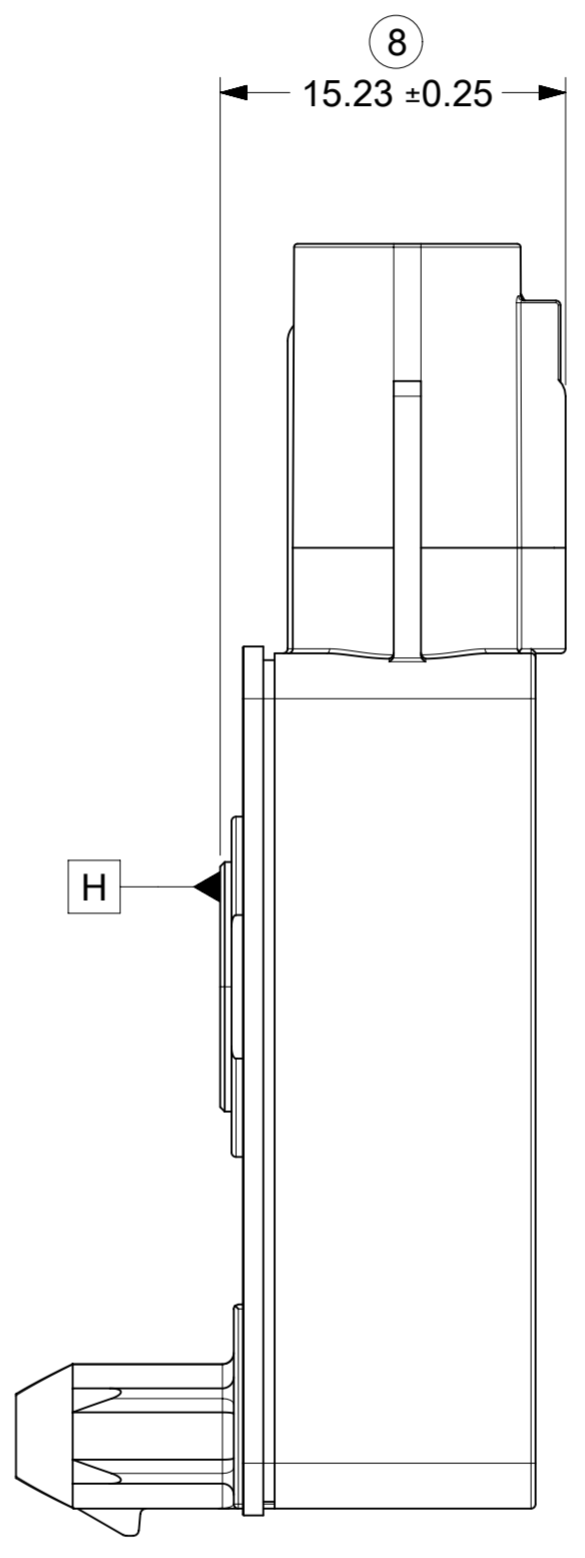
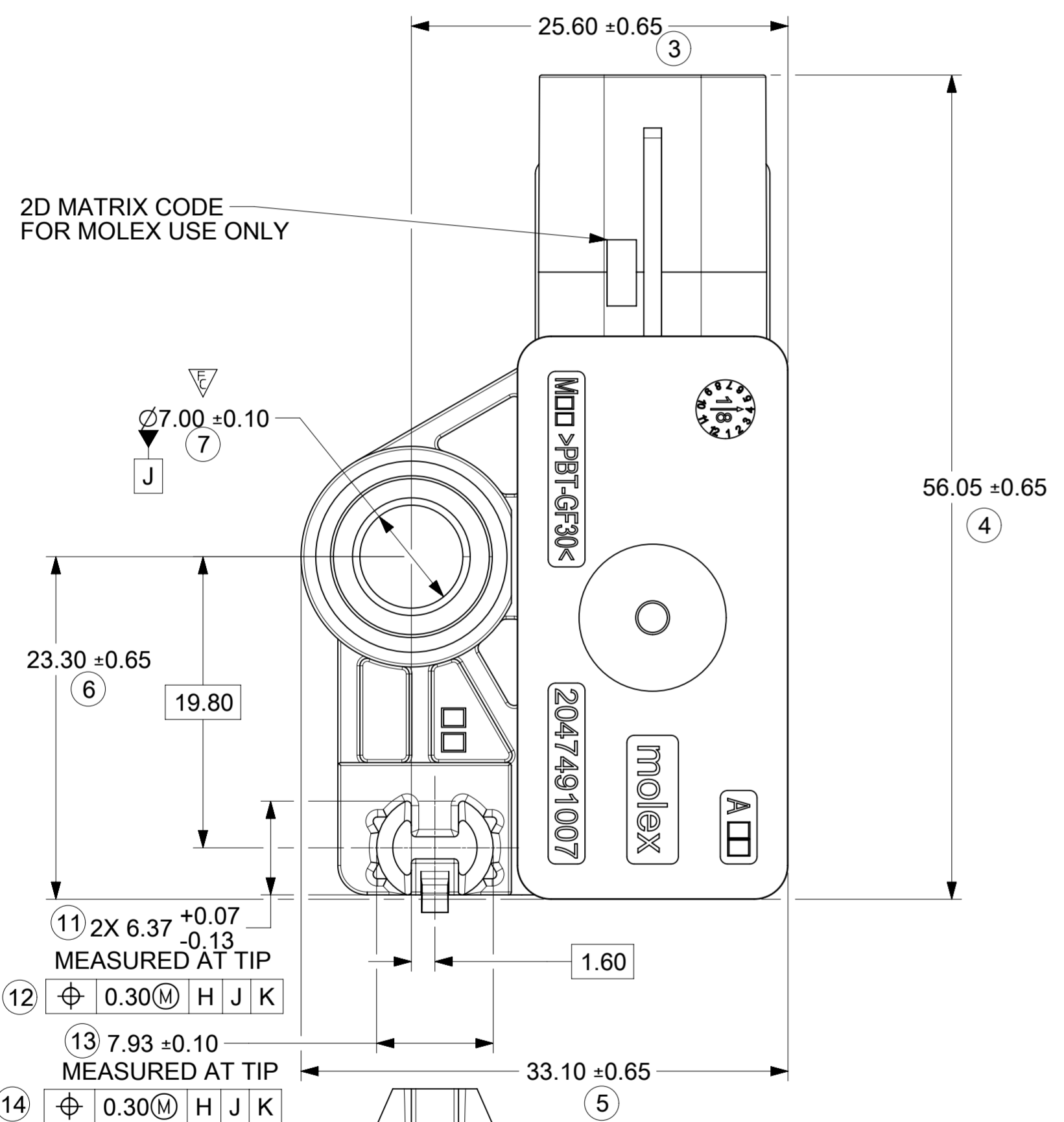
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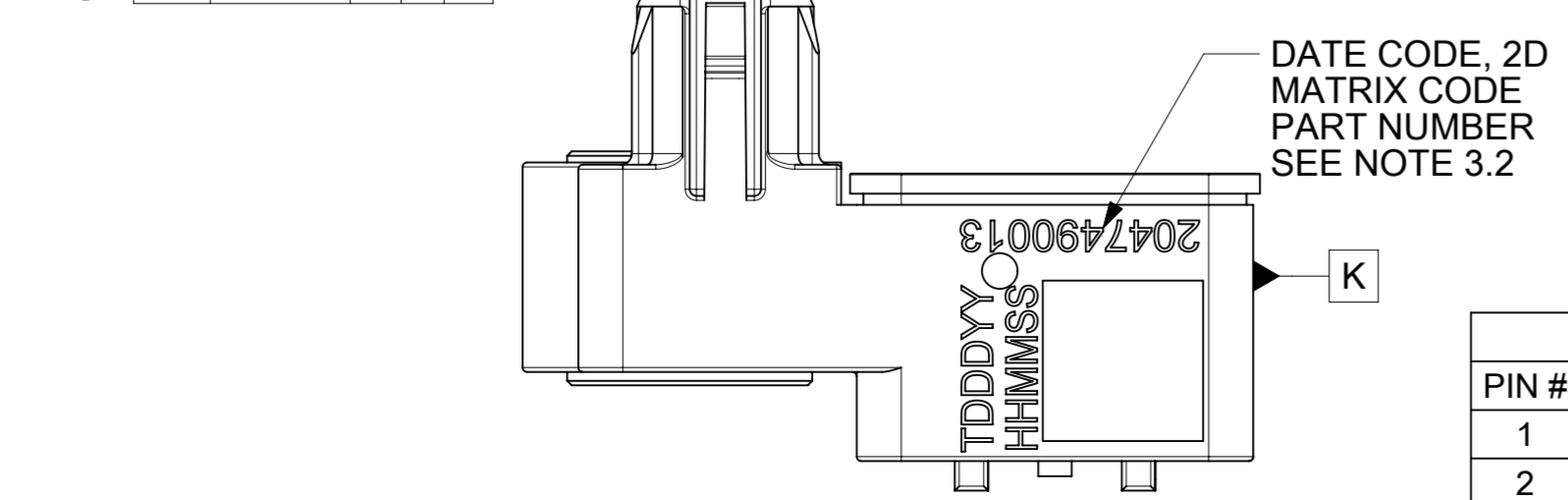
SECTION E-E



DETAIL D
SCALE 10:1



ACCELEROMETER AXIS ORIENTATION
Z AXIS IS POSITIVE OUT OF SCREEN

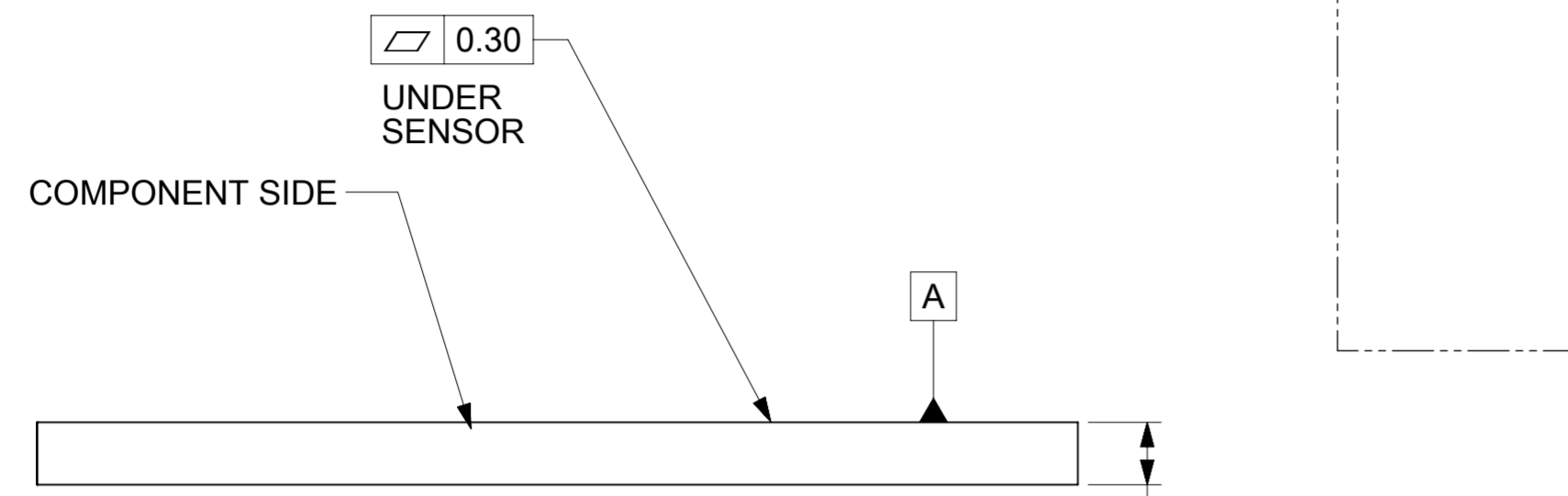


SENSOR PIN CONFIGURATION		
PIN #	NAME	FUNCTION
1	BN	DIFFERENTIAL PAIR GOING TOWARDS NEXT SLAVE. DISCONNECTED ON LAST SLAVE
2	BP	
3	AP	DIFFERENTIAL PAIR GOING TOWARDS MASTER
4	AN	

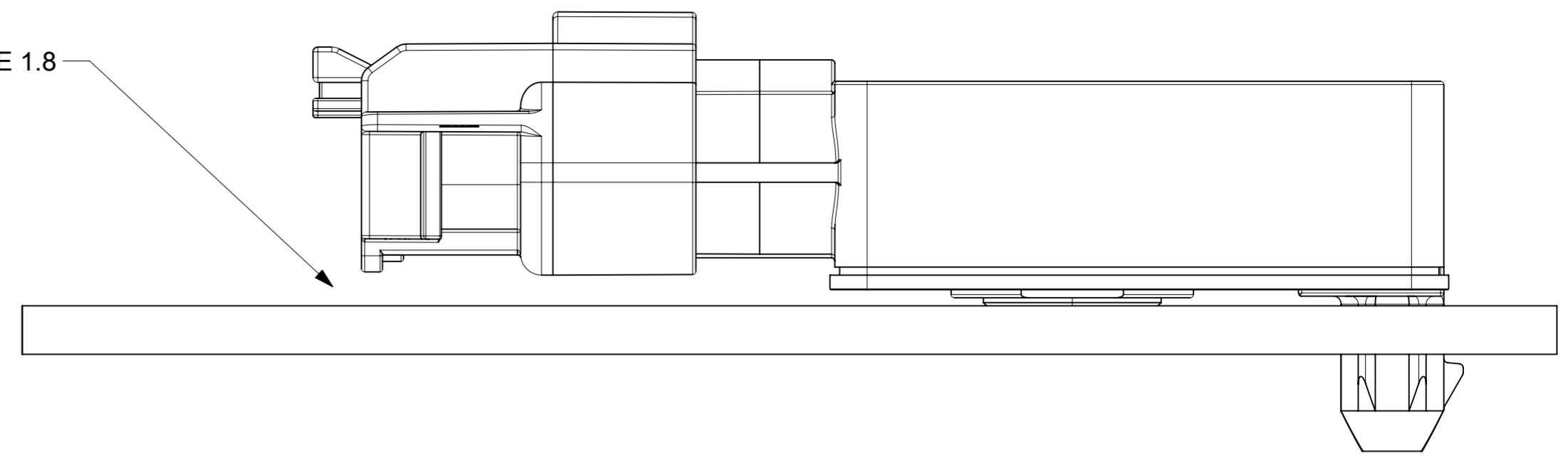
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\sqrt{Rz} = 5	mm	3:1	GENERAL TOLERANCES (UNLESS SPECIFIED)		EC NO: 651292						
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DIVISIONAL SYMBOLS			3 PLACES ± 0.25		CHK'D: APROFFITT 2020/12/15					PRODUCT CUSTOMER DRAWING	
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			1 PLACE ± 0.38		INITIAL REVISION:					DOC TYPE	
			0 PLACES ± 0.5		DRWN: JBELL 2019/03/27					DOC PART	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			THIRD ANGLE PROJECTION		DRAWING		SERIES		REVISION		
			A2-SIZE		204749		2047490013		A3		
			MATERIAL NUMBER		CUSTOMER		SHEET NUMBER				
			2047490013		GENERAL MARKET		2 OF 3				

SHEET DESCRIPTION
RECOMENDED PANEL LAYOUT

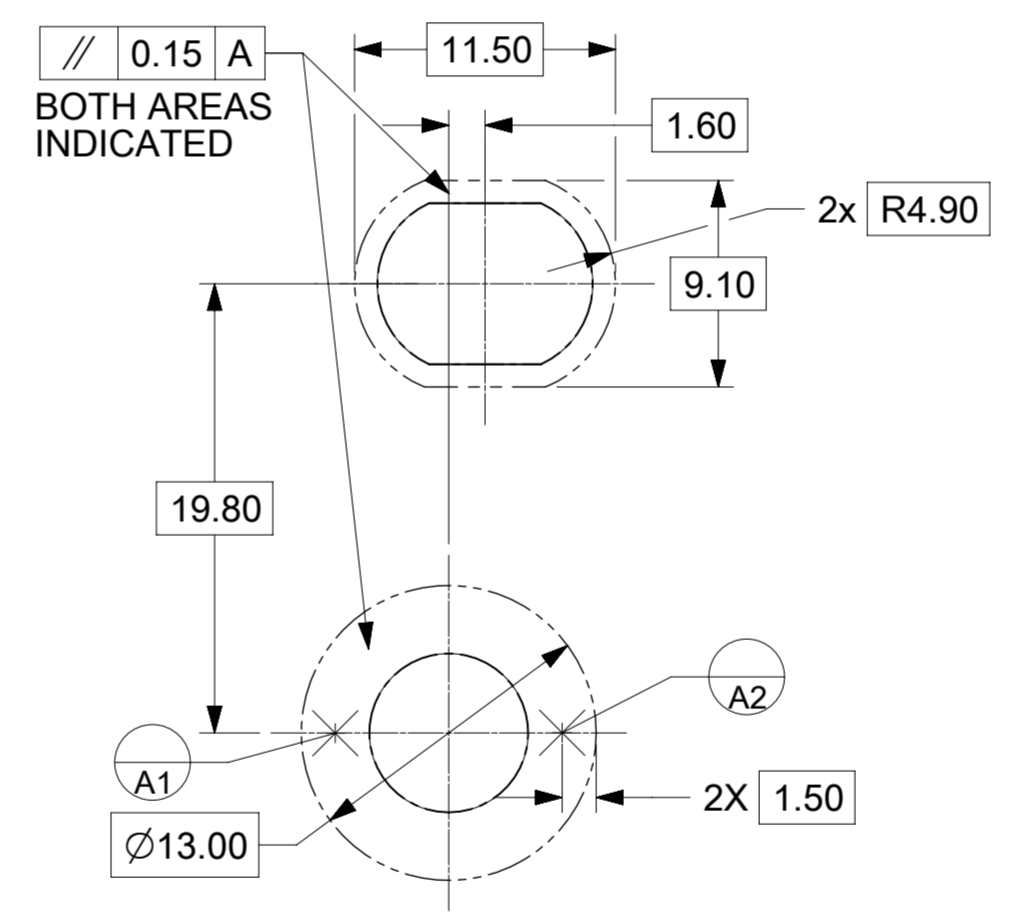
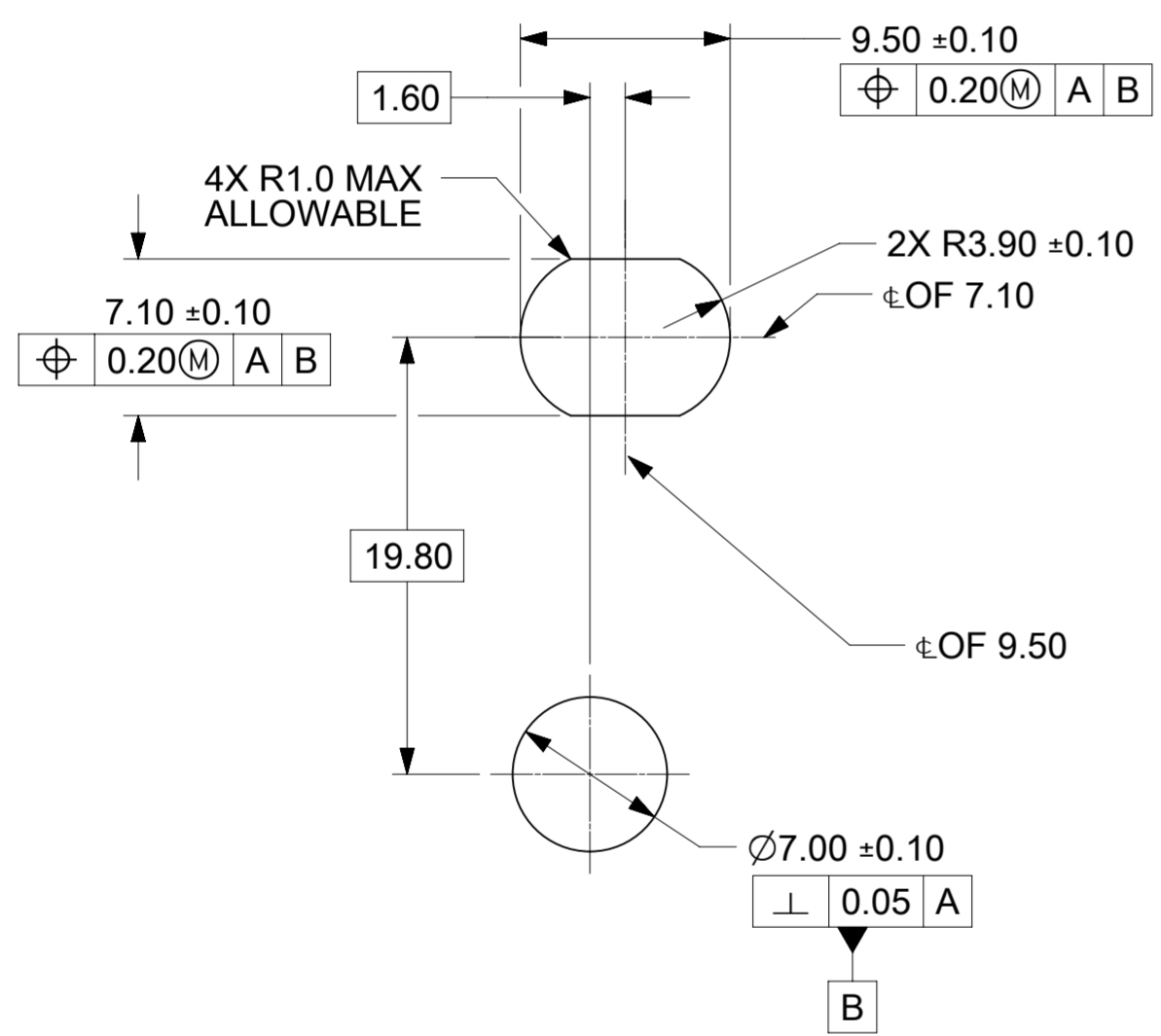
SENSOR WITH CONNECTOR AND CUSTOMER PANEL



SEE NOTE 1.8



3.00 MAX
FOR RETENTION TAB
TO FUNCTION



PANEL CUTOUT FOR BOLT AND NUT MOUNT
VIEWED FROM COMPONENT SIDE

FLATNESS CONTROLLED AREA
VIEWED FROM COMPONENT SIDE

FUNCTIONAL SYMBOLS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION												
	DIMENSION UNITS	SCALE	CURRENT REV DESC: UPDATE DIM 11 TOLERANCE, ADD MEASUREMENT POINT TO DIM 11 & 13.							molex			
$\nabla_A = 0$	mm	3:1										RNC ELECTRONIC SENSOR ASSEMBLY	
$\nabla_C = 0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		EC NO: 651292							PRODUCT CUSTOMER DRAWING			
$\nabla_P = 0$	ANGULAR TOL ± 1.0°		4 PLACES ± 0.25							DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
DIVISIONAL SYMBOLS	3 PLACES ± 0.25		DRWN: JBELL 2020/12/10							2047490013-SD	PSD	000	A3
	2 PLACES ± 0.25		CHK'D: APROFFITT 2020/12/15										
	1 PLACE ± 0.38		APPR: APROFFITT 2020/12/15										
	0 PLACES ± 0.5		INITIAL REVISION:										
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIRD ANGLE PROJECTION		DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER	SHEET NUMBER				
					A2-SIZE	204749	2047490013	GENERAL MARKET	3 OF 3				