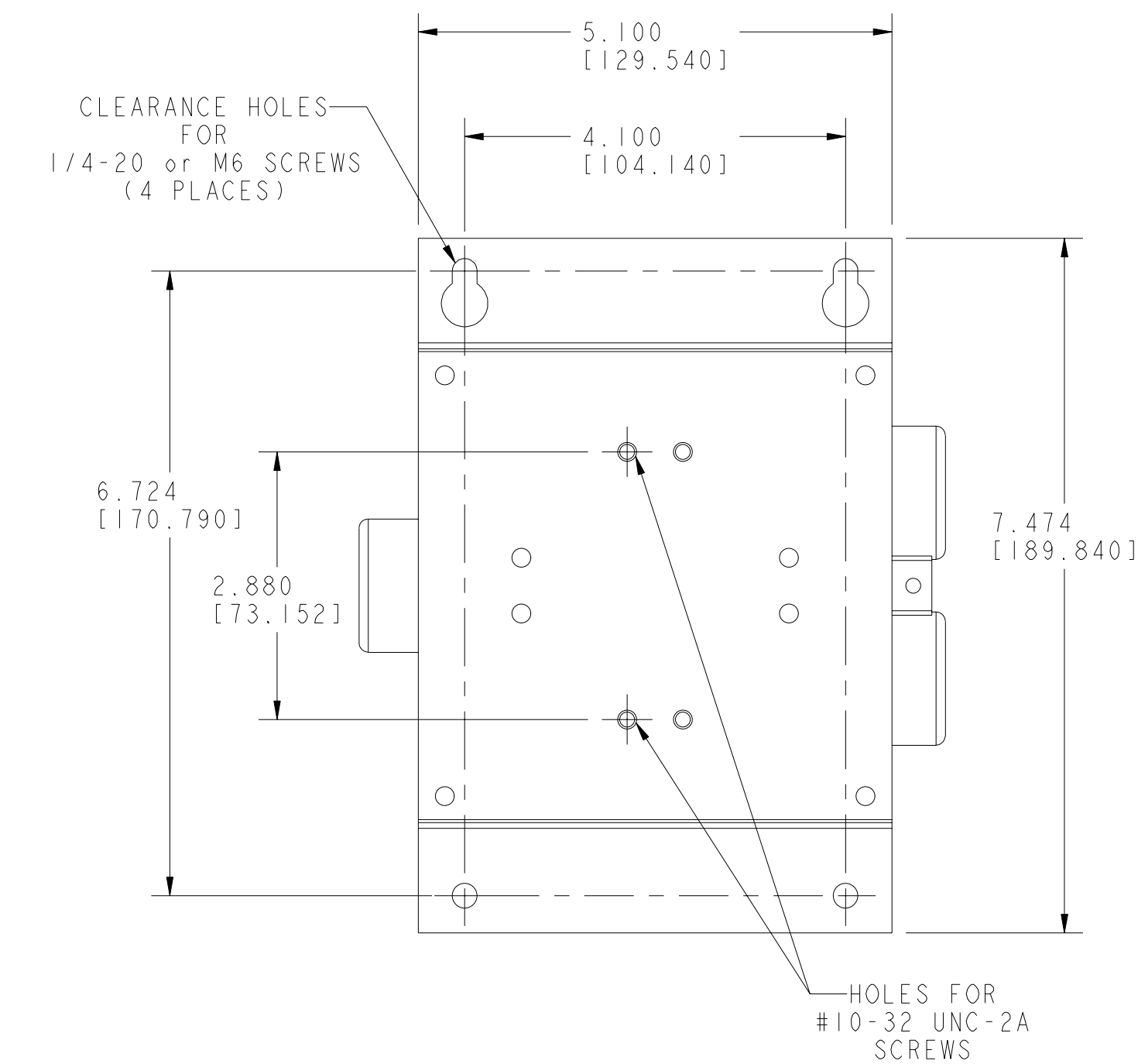
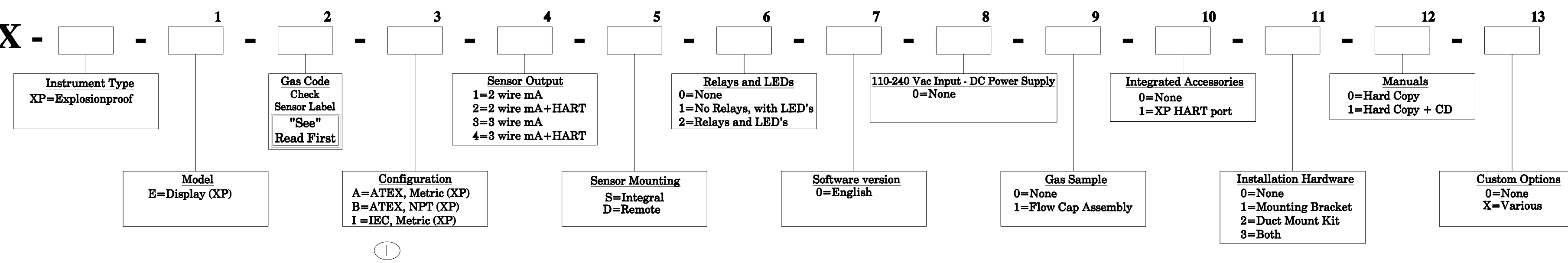


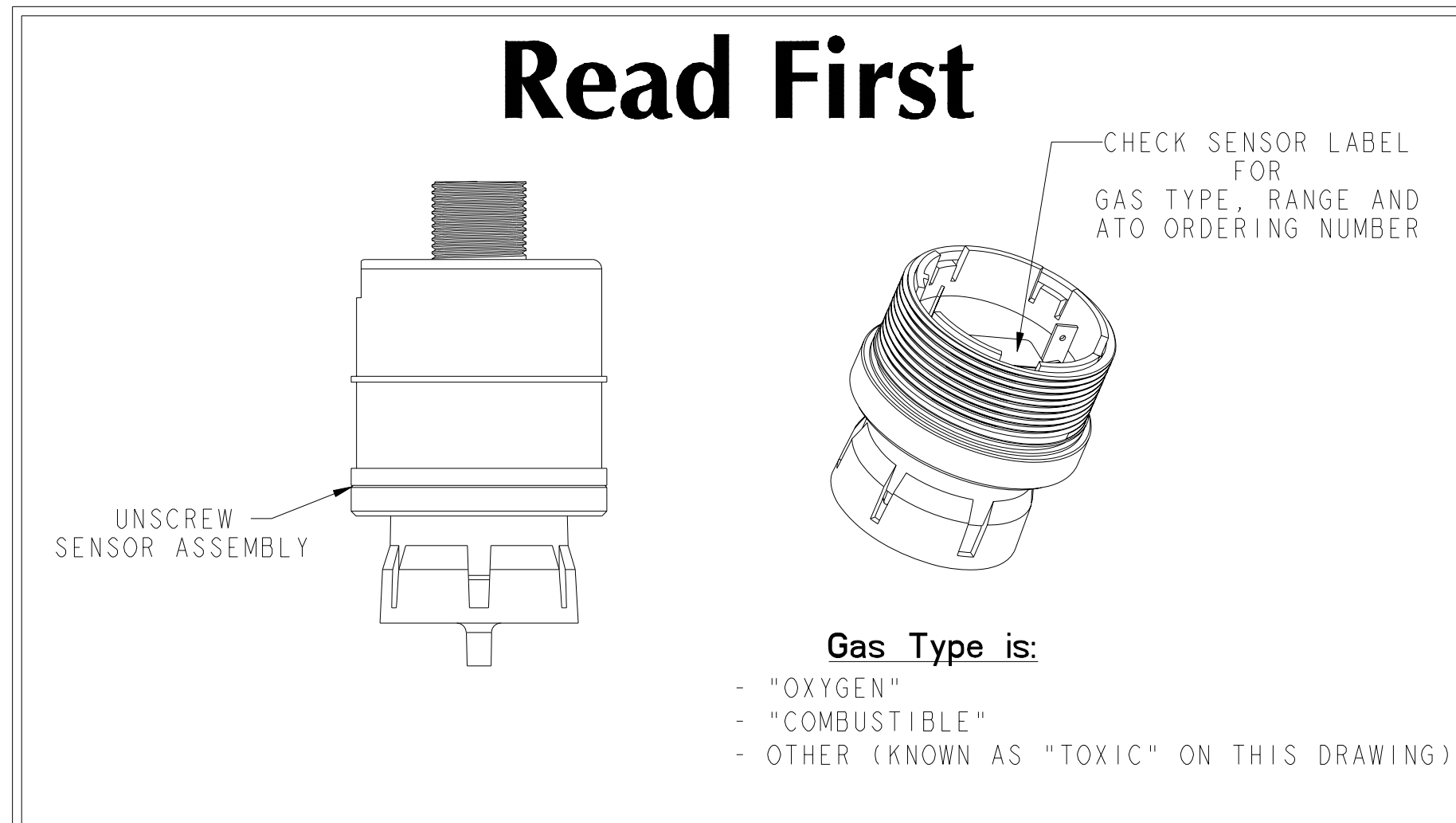
A - ULTIMAX



OPTIONAL MOUNTING BRACKET METHOD
(PART NUMBER 10047561)

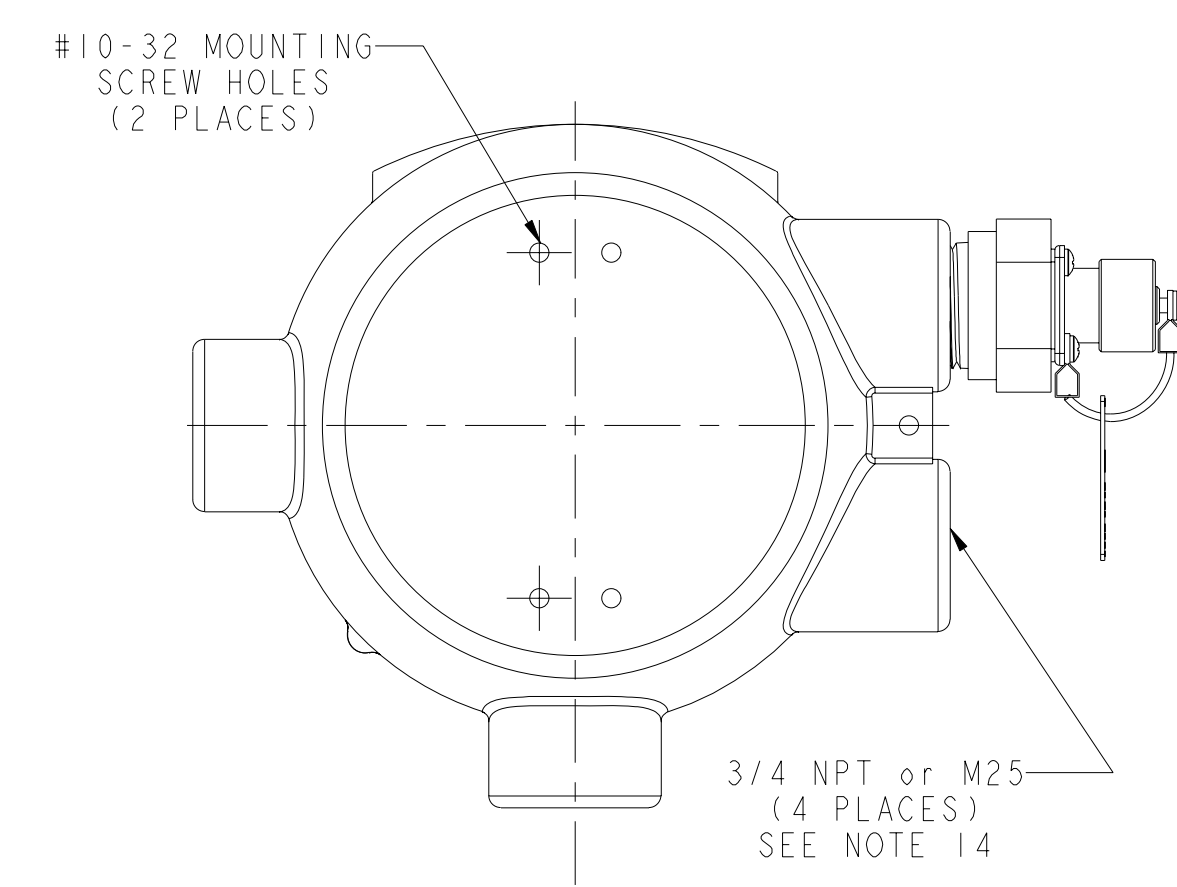
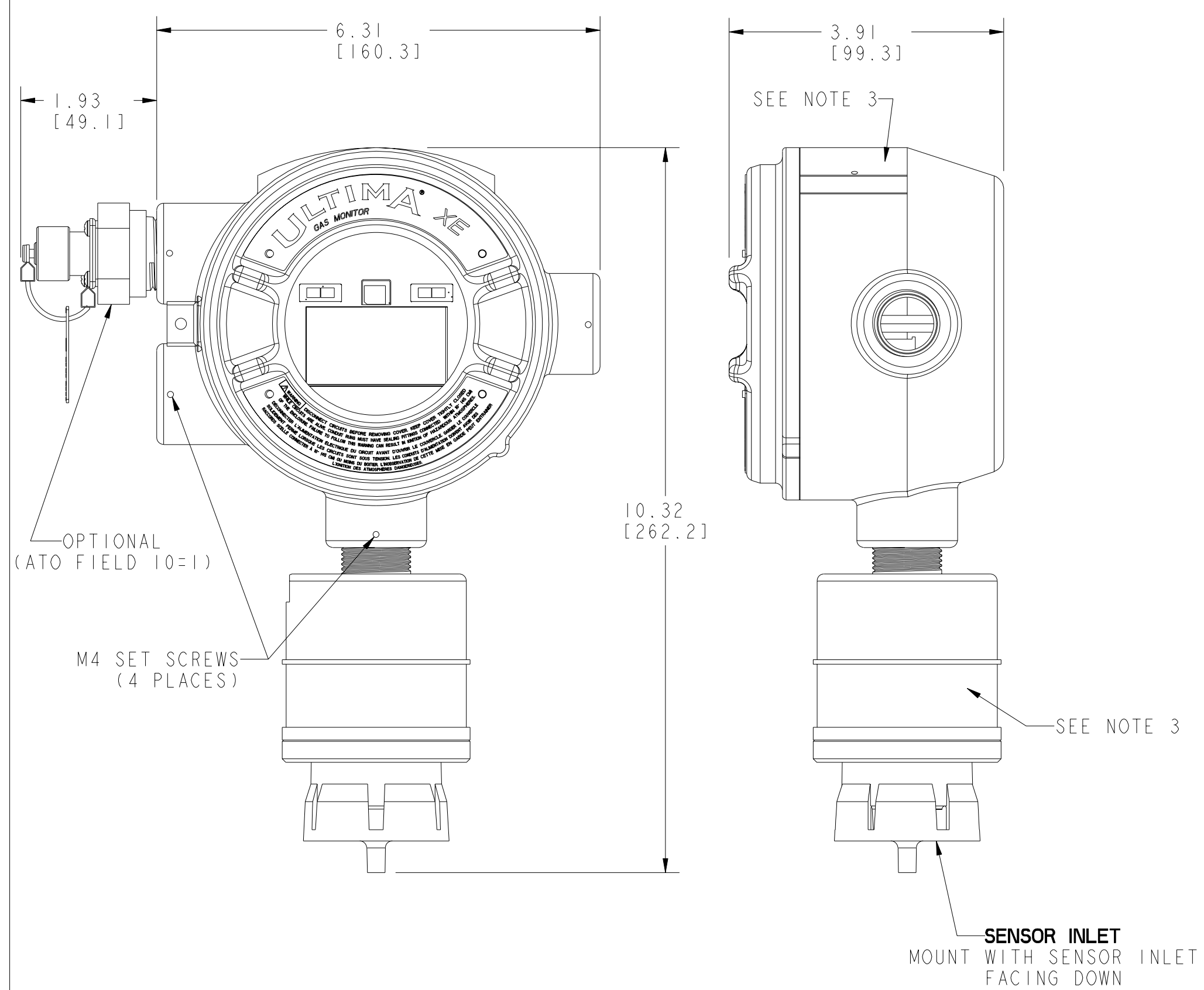
REVISIONS	
1	10-29-2008 DELETED "D2" AND ADDED "IEC" TO ATO ECO-7000002331A GJT CL
	OCT 29 2008

Read First



Gas Type	Sensor Output	DC Voltage Supply	Max Current Draw
Oxygen or Toxic	3 Wire	24 VDC	100 mA
Combustible	3 Wire	24 VDC	210 mA

Gas Type	Sensor Output	DC Voltage Supply	Wire Size	Max Cable Length		Max Load Resistance
				without HART/with HART Feet	Meters	
Oxygen or Toxic	2 Wire	24 VDC	1.5mm ²	23,000	7,010	500 Ohms
Oxygen or Toxic	3 Wire	24 VDC	1.5mm ²	8,800	2,680	600/500 Ohms
Combustible	3 Wire	24 VDC	1.0mm ²	2,500	762	500 Ohms
			1.5mm ²	4,200	1,200	500 Ohms
			3.0mm ²	10,000	3,000	500 Ohms



VIEW SHOWN WITH SENSOR REMOVED

Gas Type	Sensor Output	DC Voltage Supply	Wire Size	Max Cable Length		Max Load Resistance
				Feet	Meters	
Oxygen or Toxic	3 Wire	24 VDC	1.5mm ²	8,000	2,400	500 Ohms
Combustible	3 Wire	24 VDC	1.5mm ²	3,000	900	500 Ohms

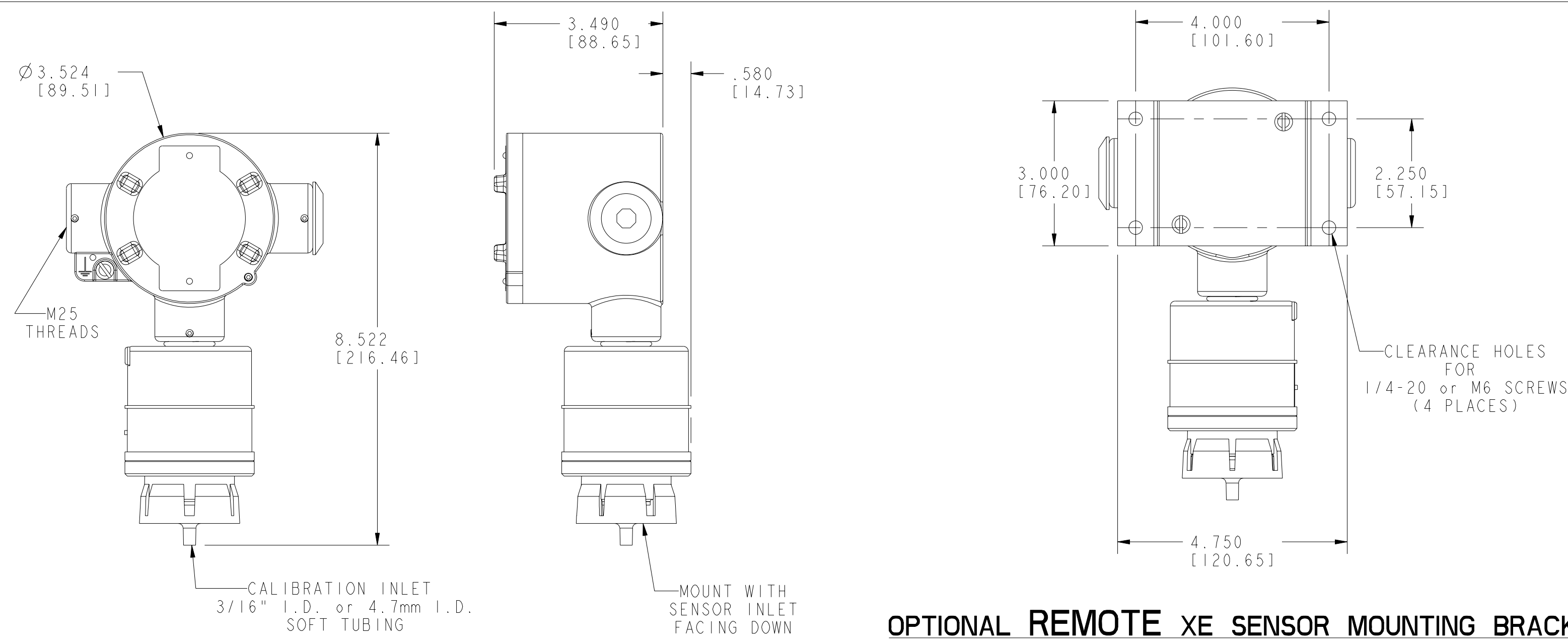
NOTES: 1. INSTRUMENT HOUSING IS MADE OF 316 STAINLESS STEEL.
2. DIMENSIONS SHOWN IN INCHES (MILLIMETERS).
3. CHECK TAG FOR AREA CLASSIFICATION.

(CONTINUED ON SHEET 2)

STANDARD ULTIMA XE
WEIGHT: 10.4 LBS [4.72 kg]

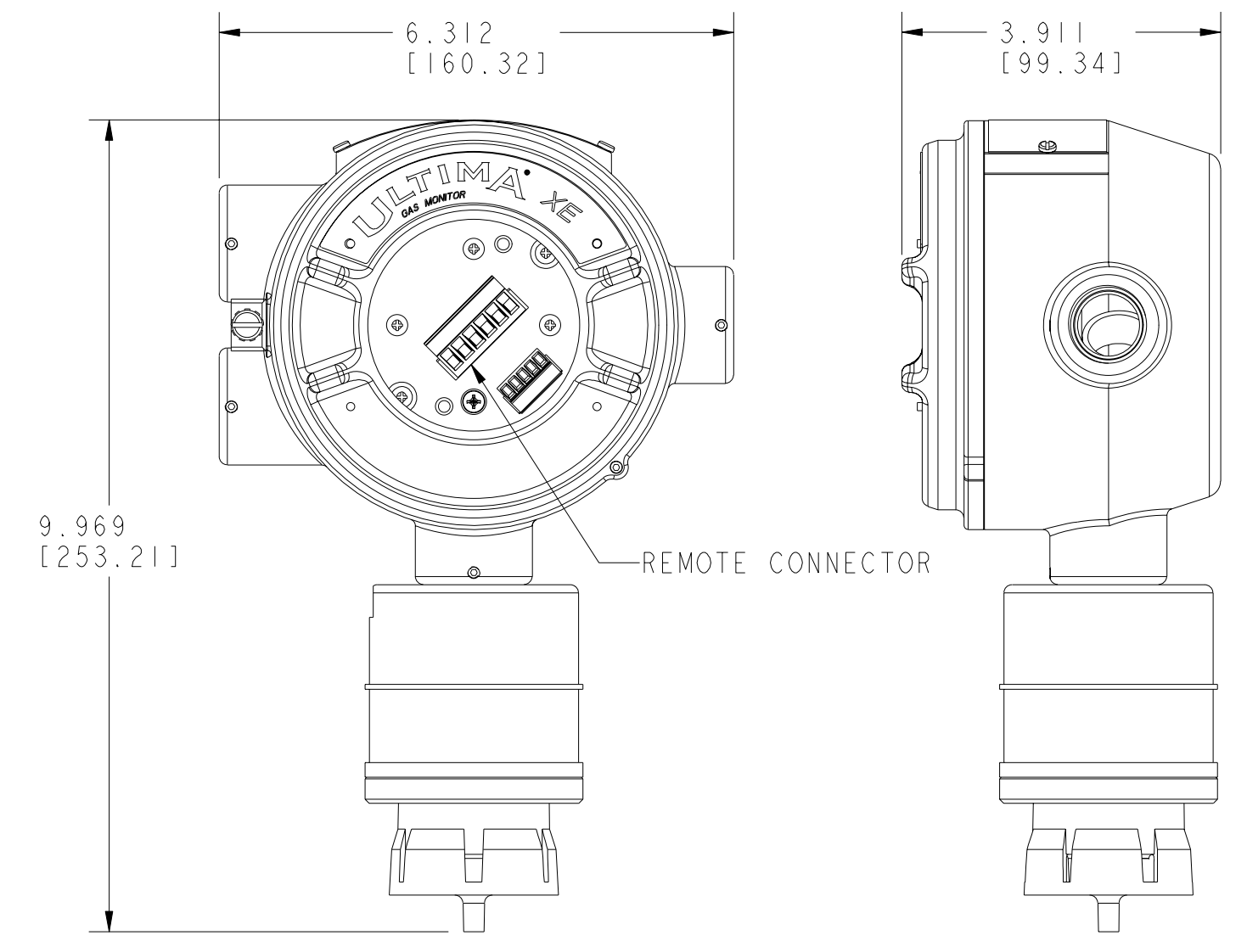
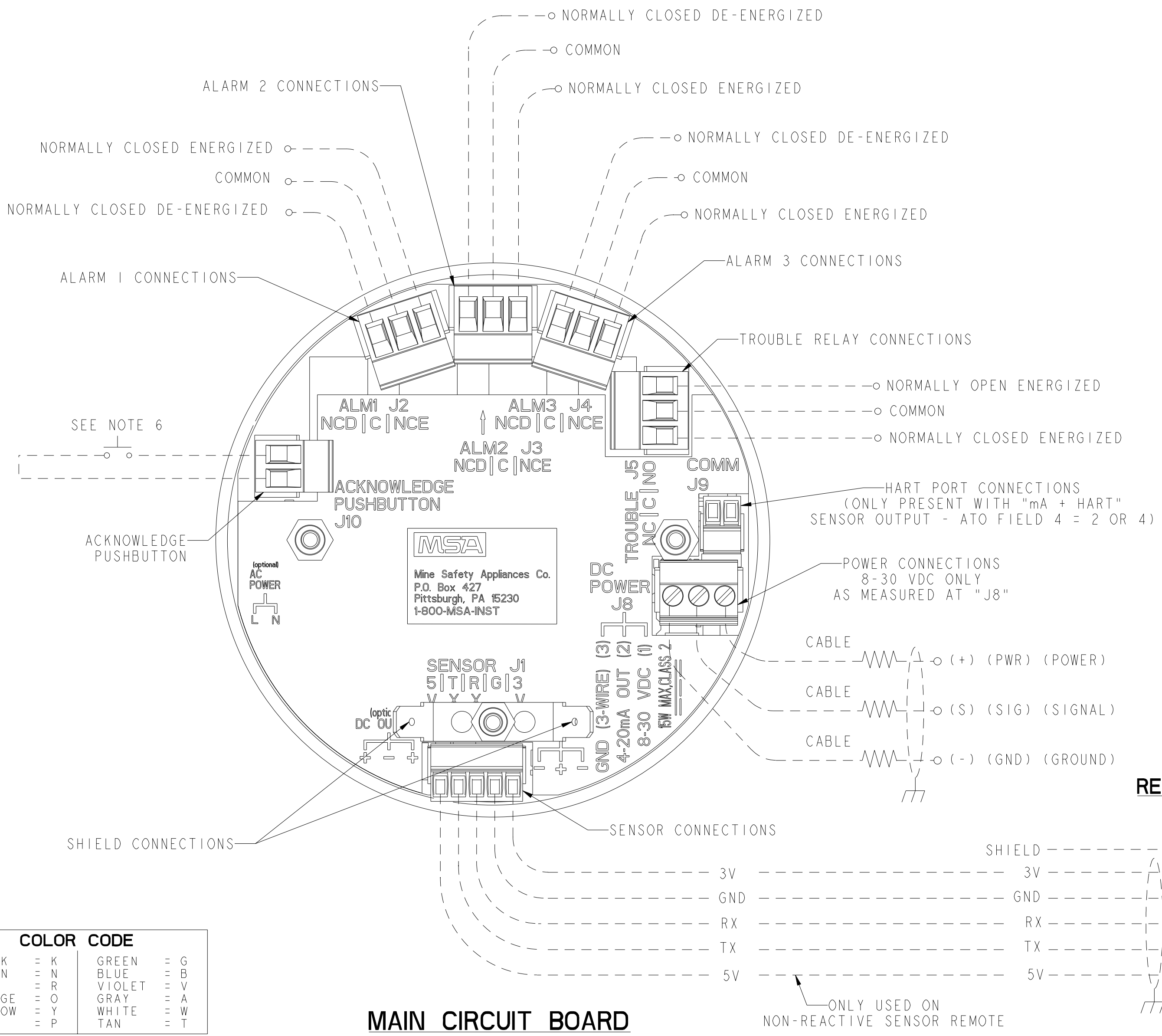
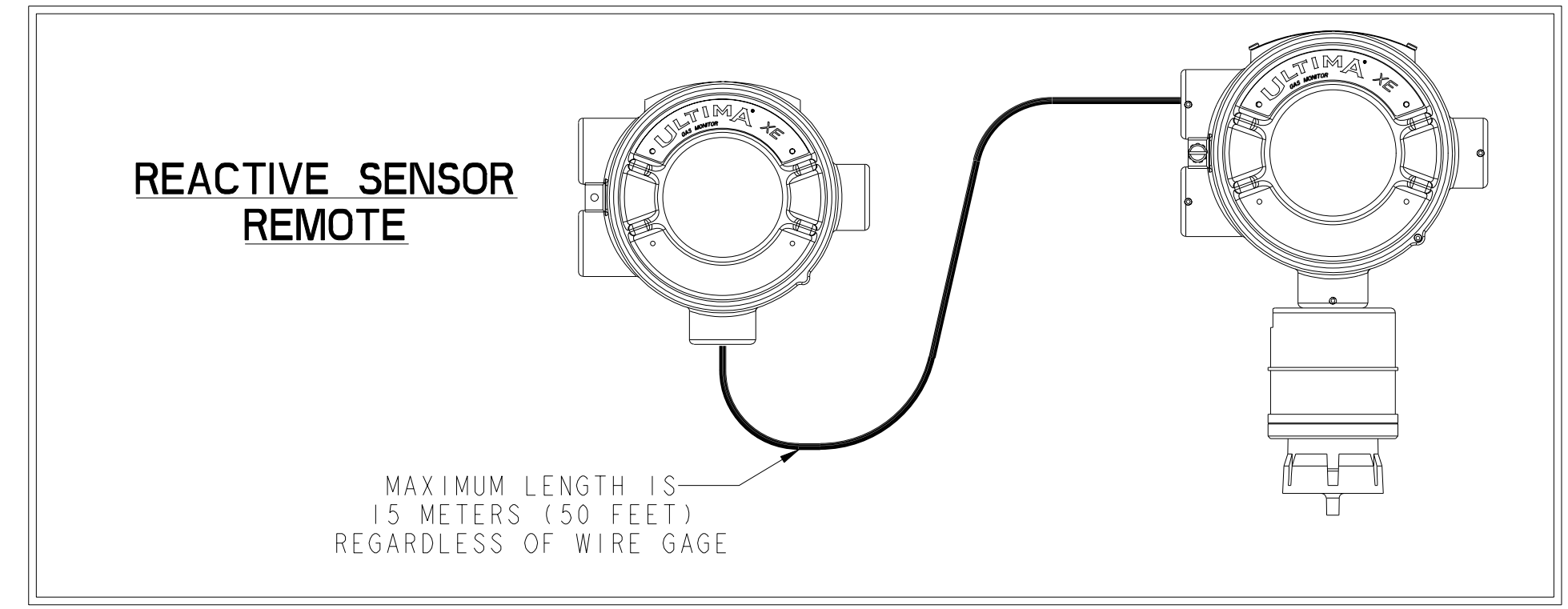
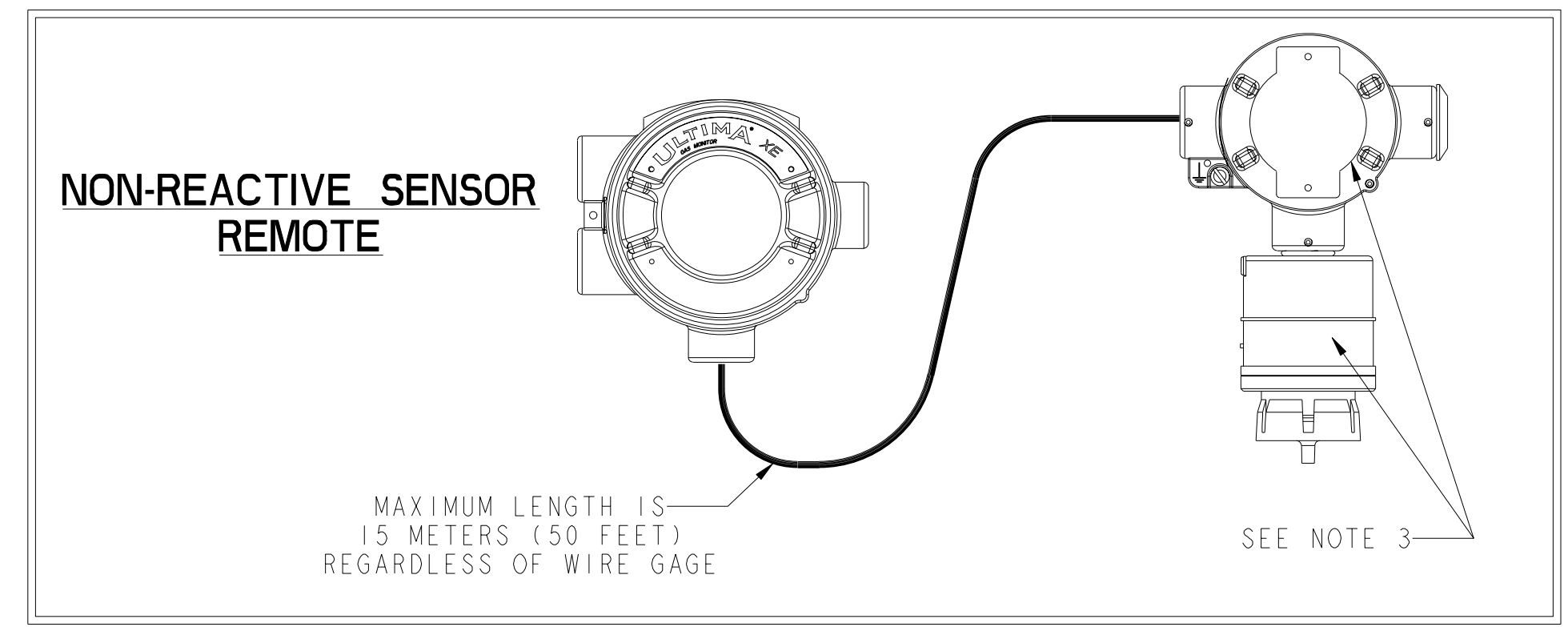
CUSTOMER _____
P.O. NO. _____
MSA NO. _____
LOCATION _____
TAG NO. _____
TOTAL NO. OF UNITS _____

AUTHORIZED COUNTRY	MSA MINE SAFETY APPLIANCES CO. PITTSBURGH, PA 15230, USA	THIS DRAWING IS THE PROPERTY OF MSA AND IS MADE AVAILABLE TO YOU IN CONFIDENCE AND SUBJECT TO THE FOLLOWING: NO PERMISSION IS GRANTED TO PUBLISH, USE, REPRODUCE, TRANSMIT OR DISCLOSE THIS DRAWING, OR ANY INFORMATION CONTAINED THEREIN TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF MSA EXCEPT FOR THE MANUFACTURE OF ARTICLES FOR MSA. SCHÜTZVERMERK NACH DIN 34 BEACHTEN. MSA AUER GmbH.	DO NOT SCALE DWG.
MSA STANDARD SHOP PRACTICES APPLY	CODE SYMBOLS CRITICAL Δ MAJOR A Δ MAJOR B Δ 100% INSPECTION Δ TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONAL $\pm 1/64$ 2 PL DEC. ± 0.01 3 PL DEC. ± 0.005 ANGULAR ± 1 deg. SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES	JOB NO. 30009701 PH0718 DATE 6-11-2008 DRAWN BY GJT CHECKED BY S. TURNER PROJ. ENGR. C. LEHECKA QUALITY ASSURANCE J. DANNARDI MANUFACTURING A. POLOCHAK	APPROVAL AGENCY CODE: YES/INTOSH ATTR. DOC.:
INSTALLATION OUTLINE, EUROPEAN, ULTIMA XE		CADD REF: SK3015-1030	SCALE: 0.625
D.		SK3015-1030	SHEET 1 OF 3



OPTIONAL REMOTE XE SENSOR MOUNTING BRACKET

EXPLOSION-PROOF HOUSING
 MATERIAL: 316 STAINLESS STEEL
OPTIONAL REMOTE ULTIMA XE SENSOR UNIT
 (ATO Box 5 = D for REMOTE UNIT)

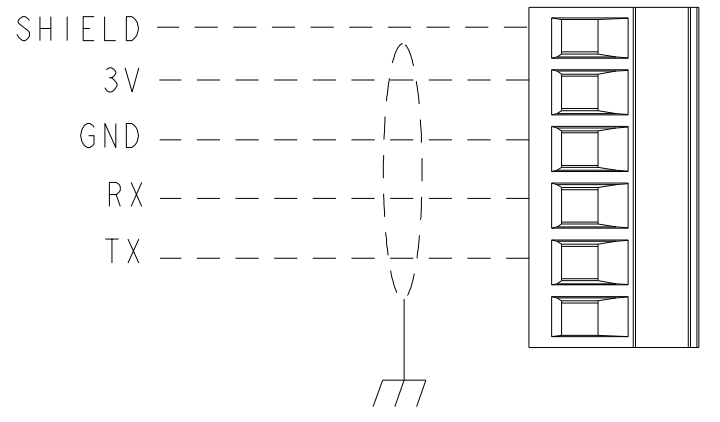
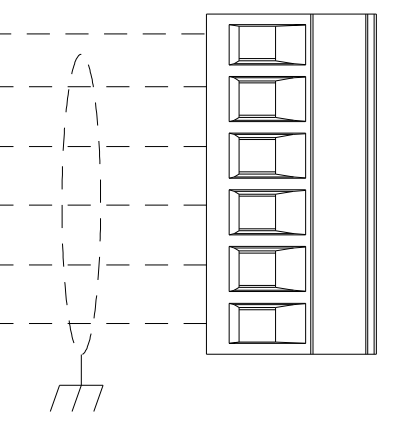


REACTIVE SENSOR REMOTE

(CONTINUED FROM SHEET 1)
 NOTES: 4. GROUND SHIELD AT POWER SUPPLY AND TERMINATE THROUGH RC NETWORK AT FAR END.
 5. - - - - - INDICATES FIELD CONNECTIONS BY OTHERS.
 6. CUSTOMER INSTALLED NORMALLY OPEN CERTIFIED PUSH BUTTON SWITCH.

REMOTE CONNECTOR NON-REACTIVE

REMOTE CONNECTOR REACTIVE

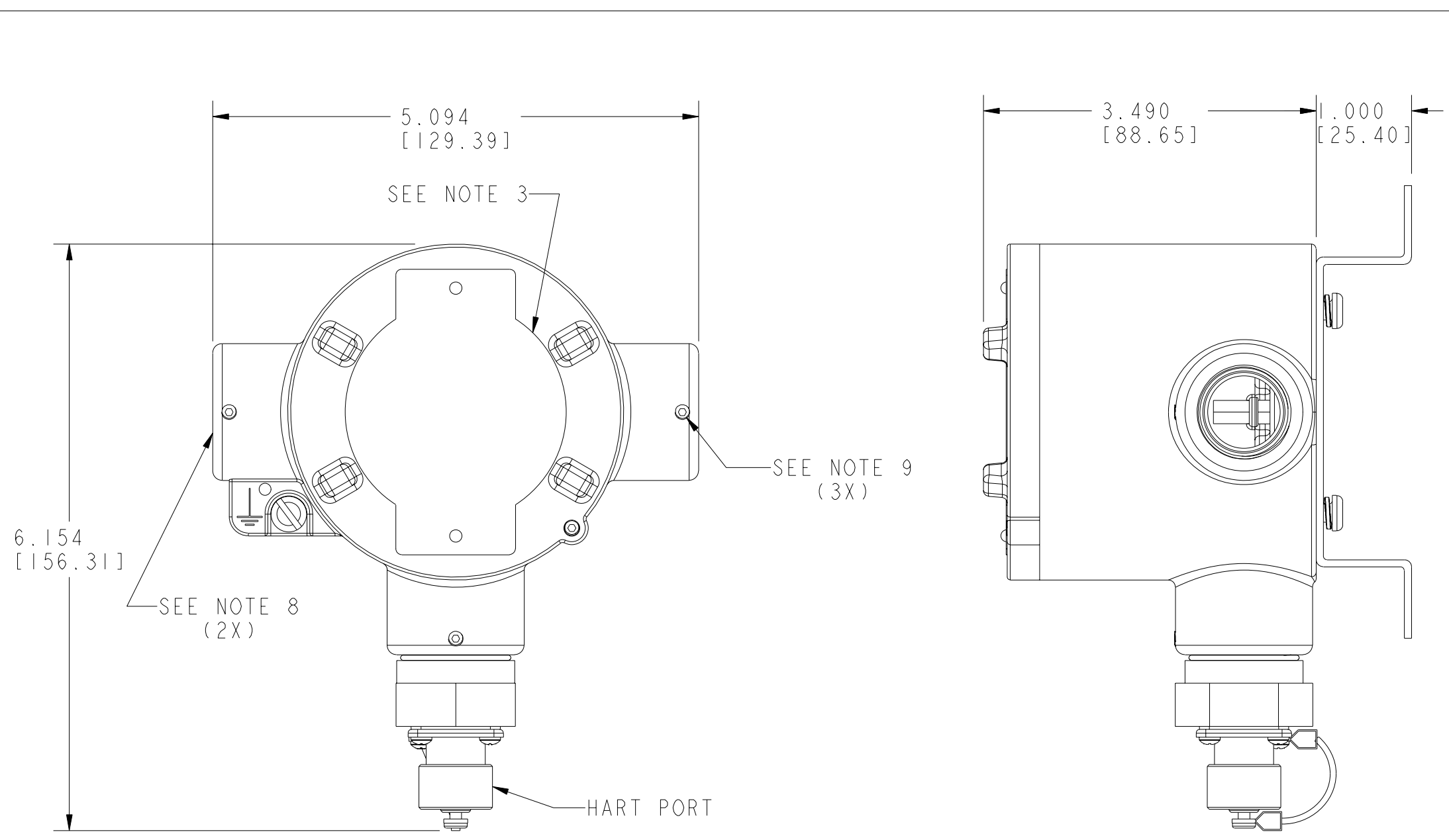


(CONTINUED ON SHEET 3)

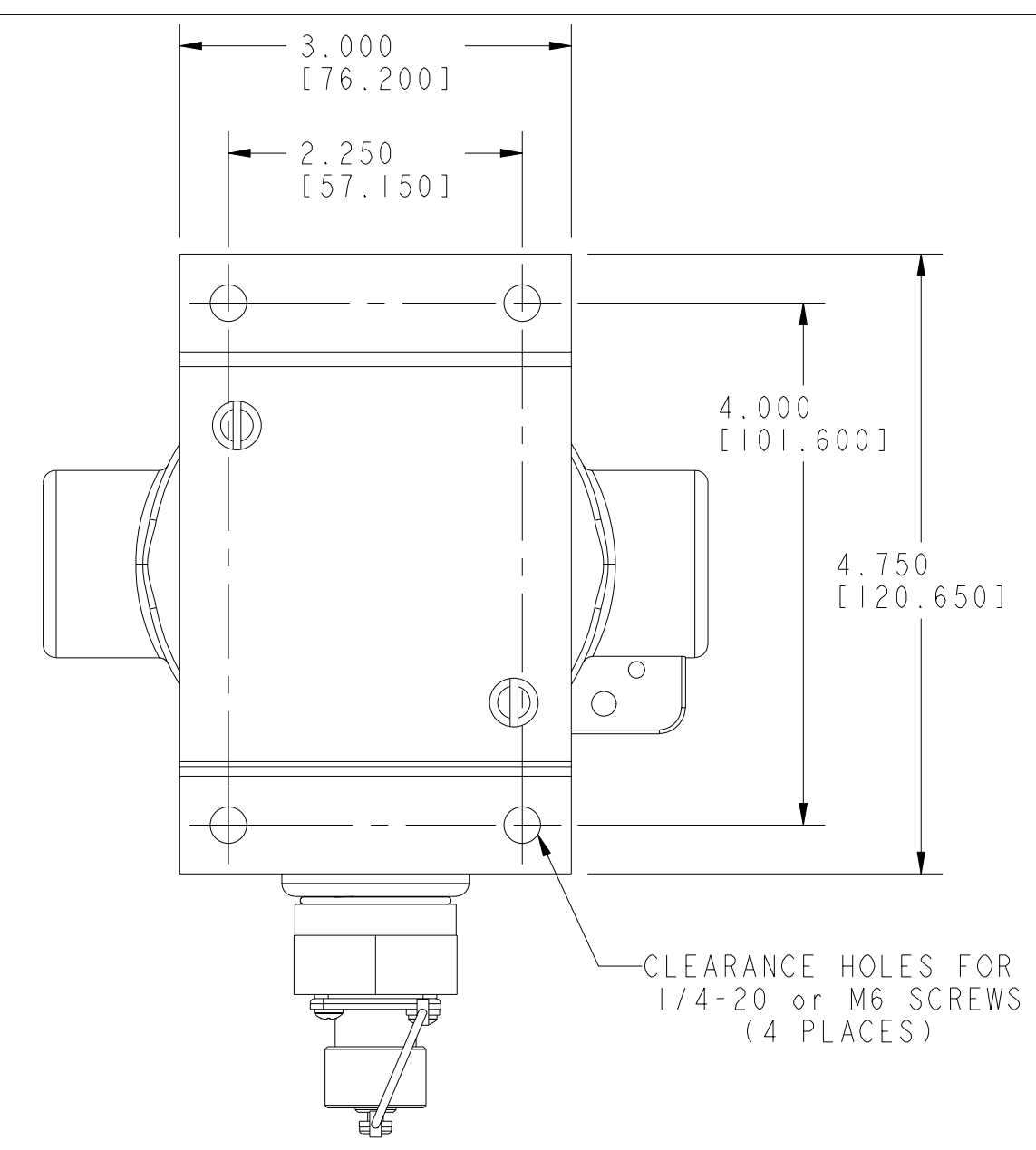
AUTHORIZED COUNTRY	MSA	MINE SAFETY APPLIANCES CO. PITTSBURGH, PA 15230, USA	THIS DRAWING IS THE PROPERTY OF MSA AND IS MADE AVAILABLE TO YOU IN CONFIDENCE AND SUBJECT TO THE FOLLOWING: NO PERMISSION IS GRANTED TO PUBLISH, USE, REPRODUCE, TRANSMIT OR DISCLOSE THIS DRAWING, OR ANY INFORMATION CONTAINED THEREIN TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF MSA EXCEPT FOR THE MANUFACTURE OF ARTICLES FOR MSA. SCHUTZVERMERK NACH DIN 34 BEACHTEN. MSA AUER GmbH.	DO NOT SCALE DWG.
MSA STANDARD SHOP PRACTICES APPLY		JOB NO. 30009701 PH0718	APPROVAL AGENCY CODE: YES NTOSH ATTR. DOC.:	
CRITICAL	MAJOR A	MAJOR B	100% INSPECTION	TOLERANCES UNLESS OTHERWISE SPECIFIED
DATE	6-11-2008	6-20-08	6-18-08	6-18-08
DRAWN BY	GJT	CHECKED BY	S. TURNER	PROJ. ENGR.
			C. LEHECKA	QUALITY ASSURANCE
			J. DANNARDT	MANUFACTURING
2 PL DEC.	± 0.01	3 PL DEC.	± 0.005	ANGULAR ± 1 deg.
SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES				
D.			SK3015-1030	SCALE: 0.625
				SHEET 2 OF 3

INSTALLATION OUTLINE, EUROPEAN, ULTIMA XE

CADD REF: SK3015-1030



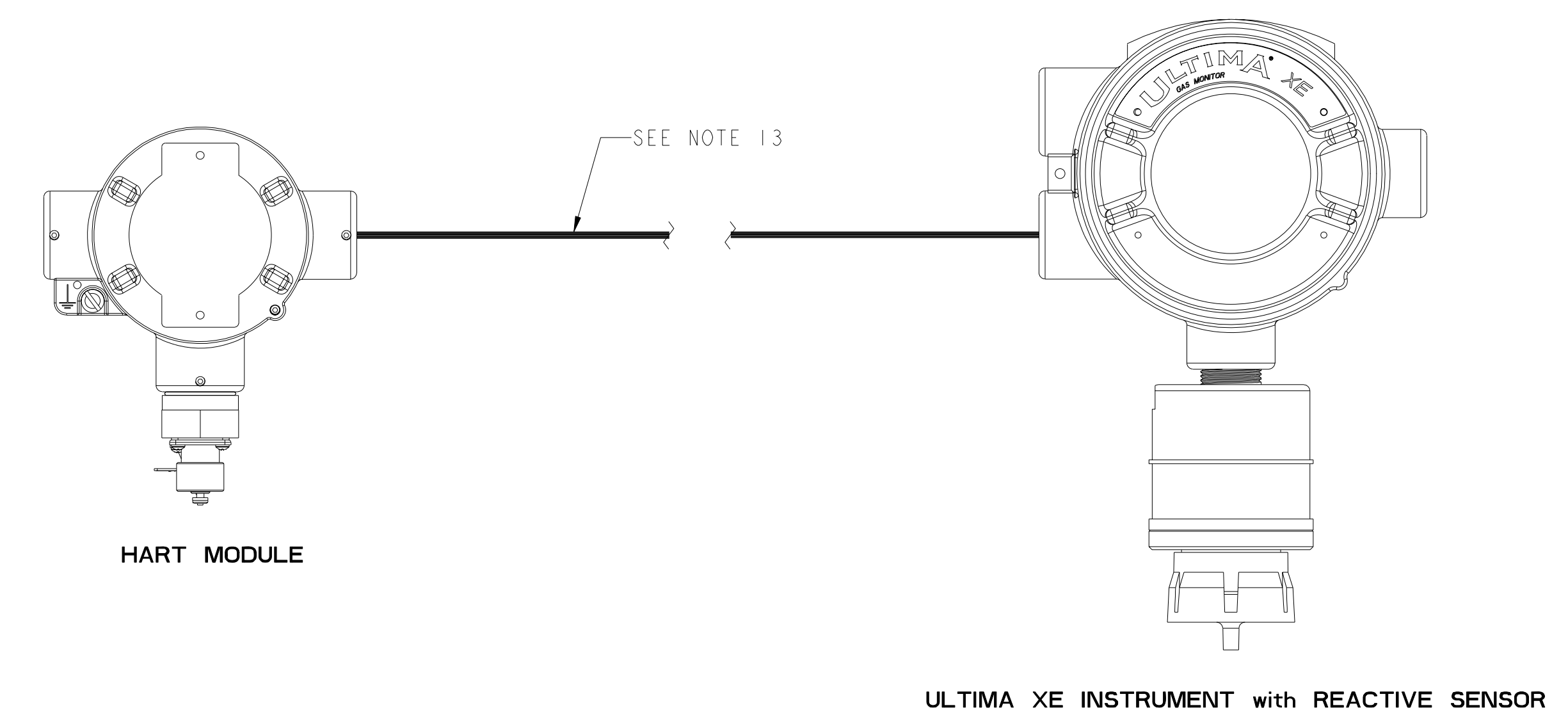
HART MODULE
MATERIAL: CAST 316 STAINLESS STEEL



HART MODULE
WITH OPTIONAL MOUNTING BRACKET SHOWN
(P/N 10047562)

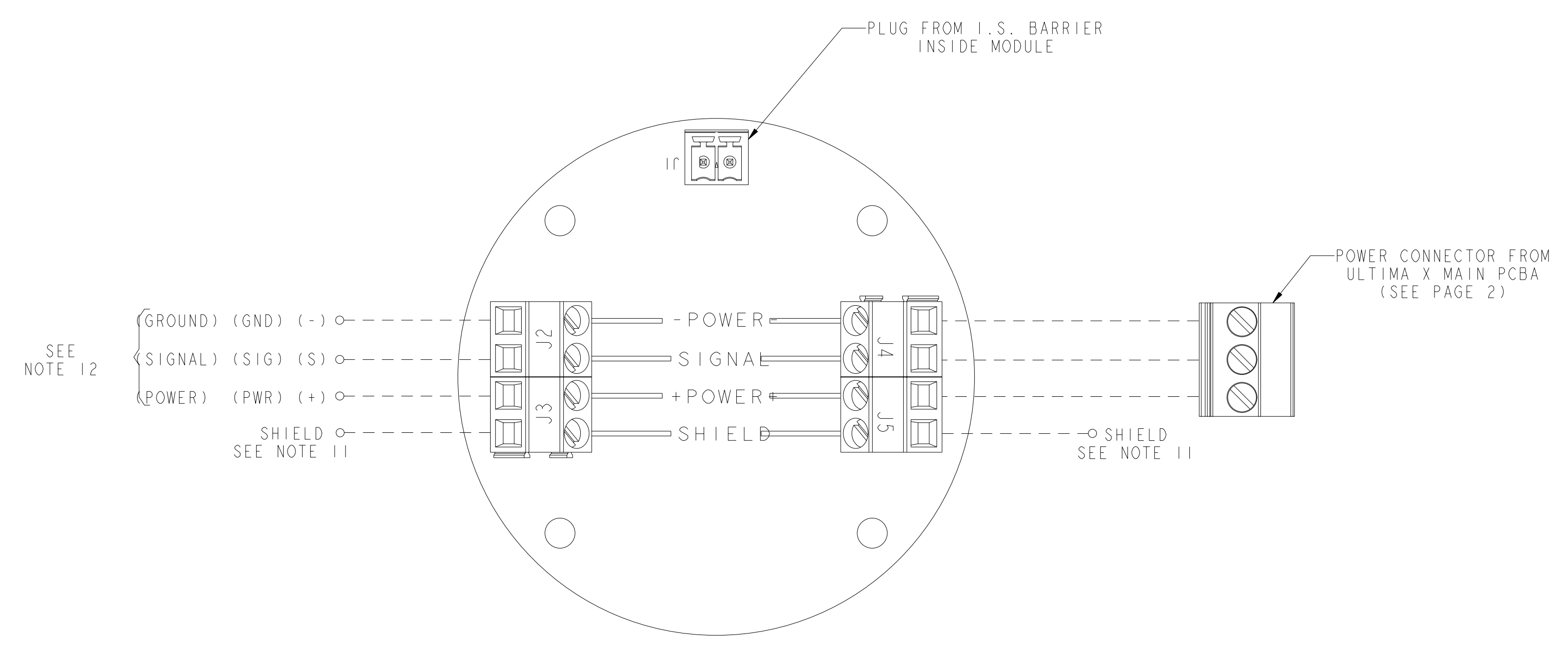
Area Classification	Other Fields	Control Drawing See CD or www.MSAnet.com
Zone 2	Gas Codes: 13, 14, 31-33, 38-39	SK3098-1108
Zone 2	Gas Codes: All other gases except 13, 14, 31-33, 38-39, 51-53, 58-59	SK3098-1072
Zone 1	HART port or HART Module included	SK3098-1057
Zone 1	No XP HART port	No control drawing required

HART MODULE ONLY INCLUDED UNDER CERTAIN ATO CONFIGURATIONS



HART MODULE

ULTIMA XE INSTRUMENT with REACTIVE SENSOR



HART MODULE TERMINAL BOARD
SCALE 2.000

(CONTINUED FROM SHEET 2)

NOTES:

- ATEX NPT MODULES INCLUDE: ONE (1) 3/4 NPT to M25 ADAPTER, ATEX METRIC MODULES HAVE M25 X 1.5 THREADED ENTRIES.
- M4 SET SCREWS ONLY ON MODULES WITH M25 THREADED ENTRIES.
- TIE CABLE SHIELD TO ULTIMA X MAIN P.C BOARD ASSEMBLY OR POWER SOURCE SHIELD, NOT BOTH.
- TWO WIRE UNITS: ONLY USE POWER AND SIGNAL CONNECTIONS
- SEE CABLE LENGTH TABLES ON SHEET 1.
- CERTIFIED STOPPING PLUGS OR CABLE GLANDS SHALL BE INSTALLED AT ALL THREADED ENTRIES AT INSTALLATION.

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MSA STANDARD SHOP PRACTICES APPLY		JOB NO. 30009701 PH0718	APPROVAL AGENCY CODE: YES NOSH ATTR. DOC.:	
CODE SYMBOLS	CRITICAL Δ	MINOR (NO MARK)	DRAWN BY GJT	DATE 6-11-2008
MAJOR A Δ	MAJOR B Δ	100% INSPECTION Δ	CHECKED BY S. TURNER	6-20-08
TOLERANCES UNLESS OTHERWISE SPECIFIED	FRACTIONAL $\pm 1/64$	2 PL DEC. ± 0.01	PROJ. ENGR. C. LEHECKA	6-18-08
3 PL DEC. ± 0.005	ANGULAR $\pm 1 \text{ deg.}$	SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES	QUALITY ASSURANCE J. DANNARDT	6-18-08
MANUFACTURING A. POLOCHAK			6-18-08	CADD REF: SK3015-1030
D.			SK3015-1030	
SCALE: 0.625			SHEET 3 OF 3	