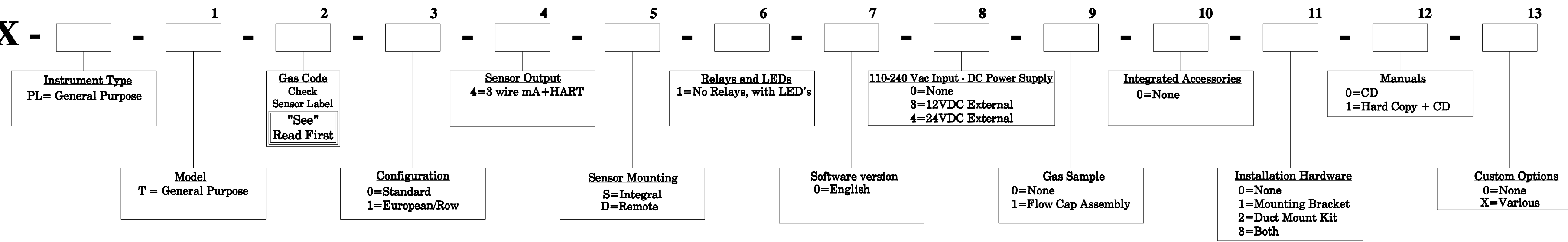
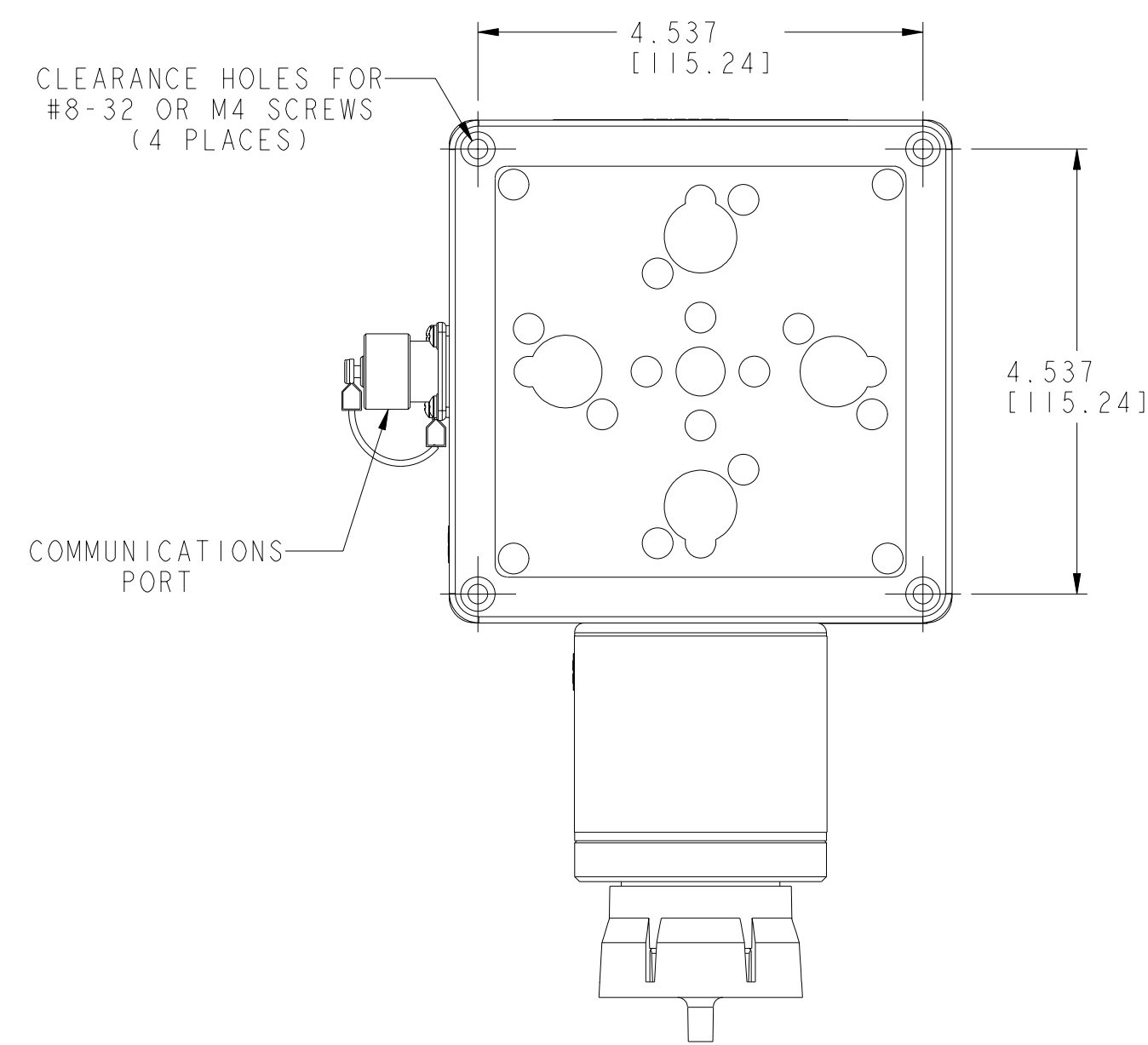
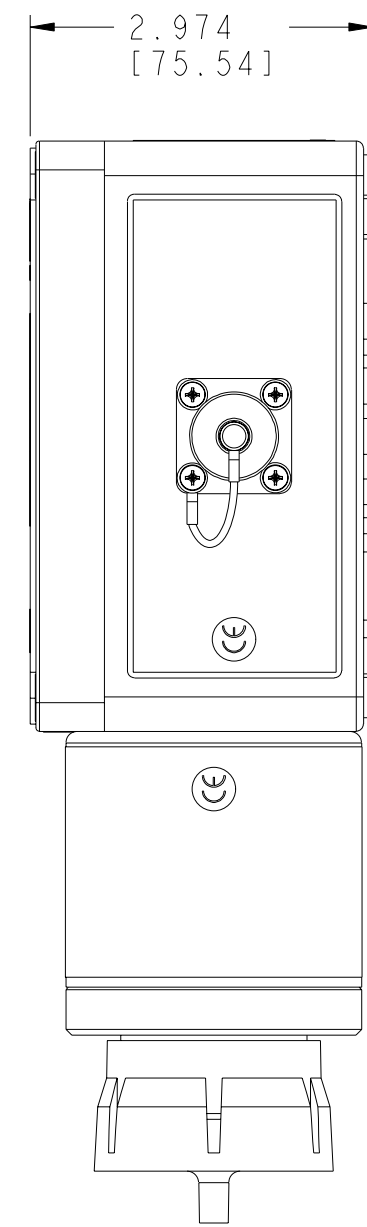
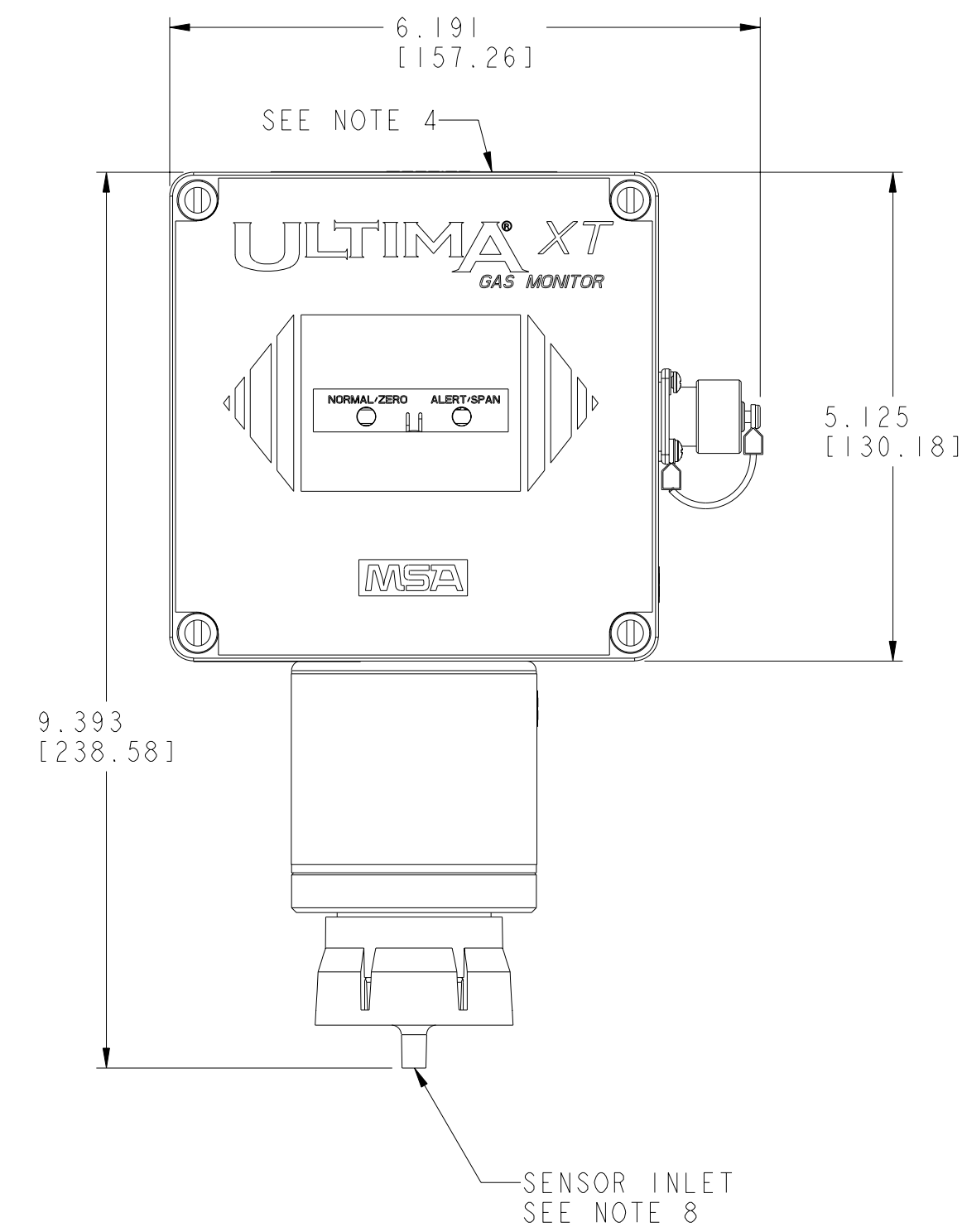


A - ULTIMAX -



REVISIONS

MAR 26 2007	10-29-2008
REPLACED OLD ATO MATRIX WITH NEW ONE	
ECO-70000002331A	
GJT	CL
OCT 29 2008	



CABLE LENGTH AND WIRE SIZE (COMBUSTIBLE GAS) SENSOR, 4-20 mA SIGNAL OUTPUT (THREE WIRE SENSOR)

WIRE SIZE	MAXIMUM CABLE LENGTH IN FEET @ 24 VDC	MAXIMUM LOAD RESISTANCE	MAXIMUM CABLE LENGTH IN FEET @ 12 VDC	MAXIMUM LOAD RESISTANCE
18 AWG (1.00 mm ²)	2500 FT. (762 m)	500 Ohms	900 FT. (274 m)	300 Ohms
16 AWG (1.50 mm ²)	4200 FT. (1280 m)		1400 FT. (427 m)	
12 AWG (2.50 mm ²)	10000 FT. (3048 m)		3600 FT. (1097 m)	

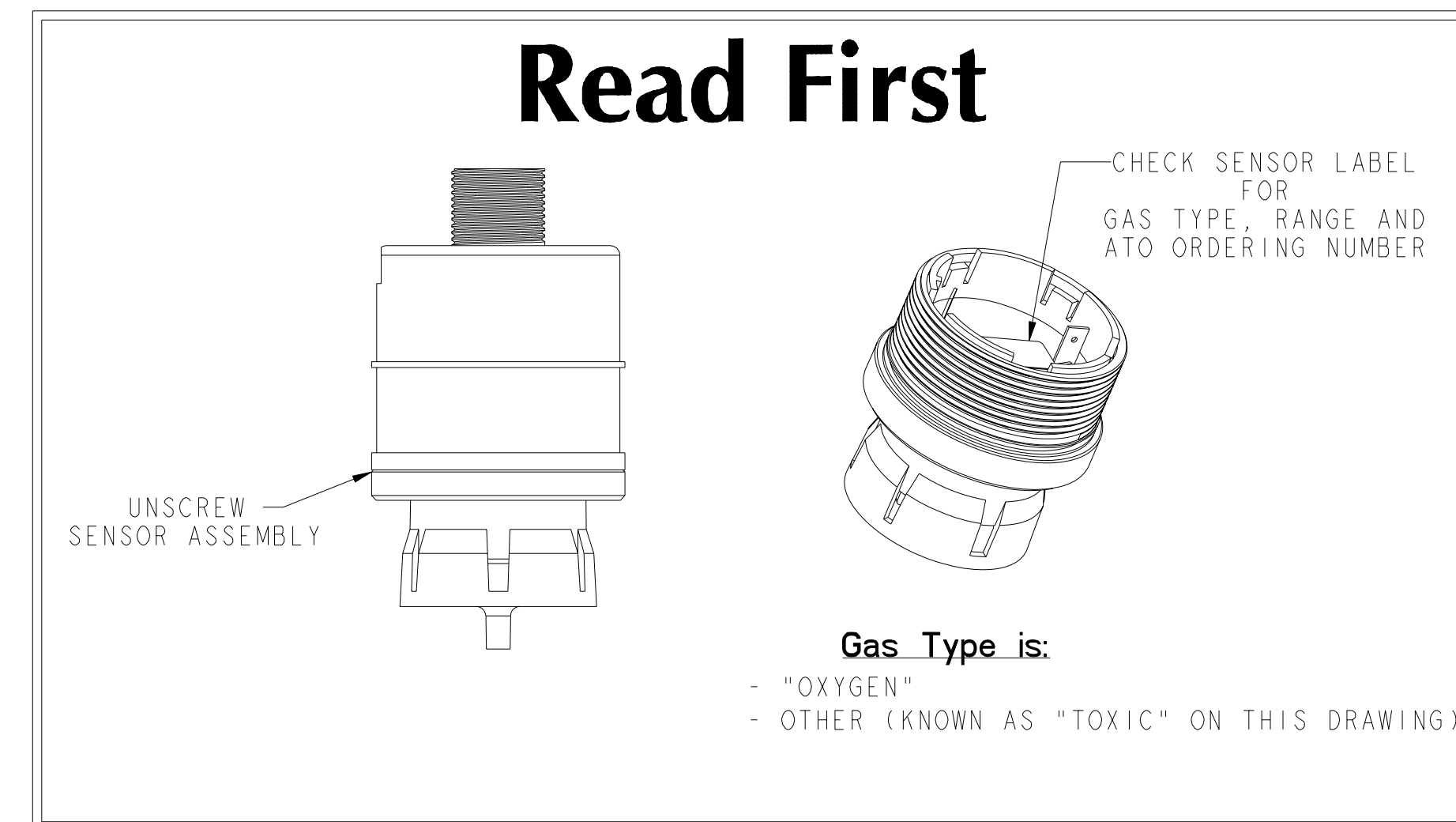
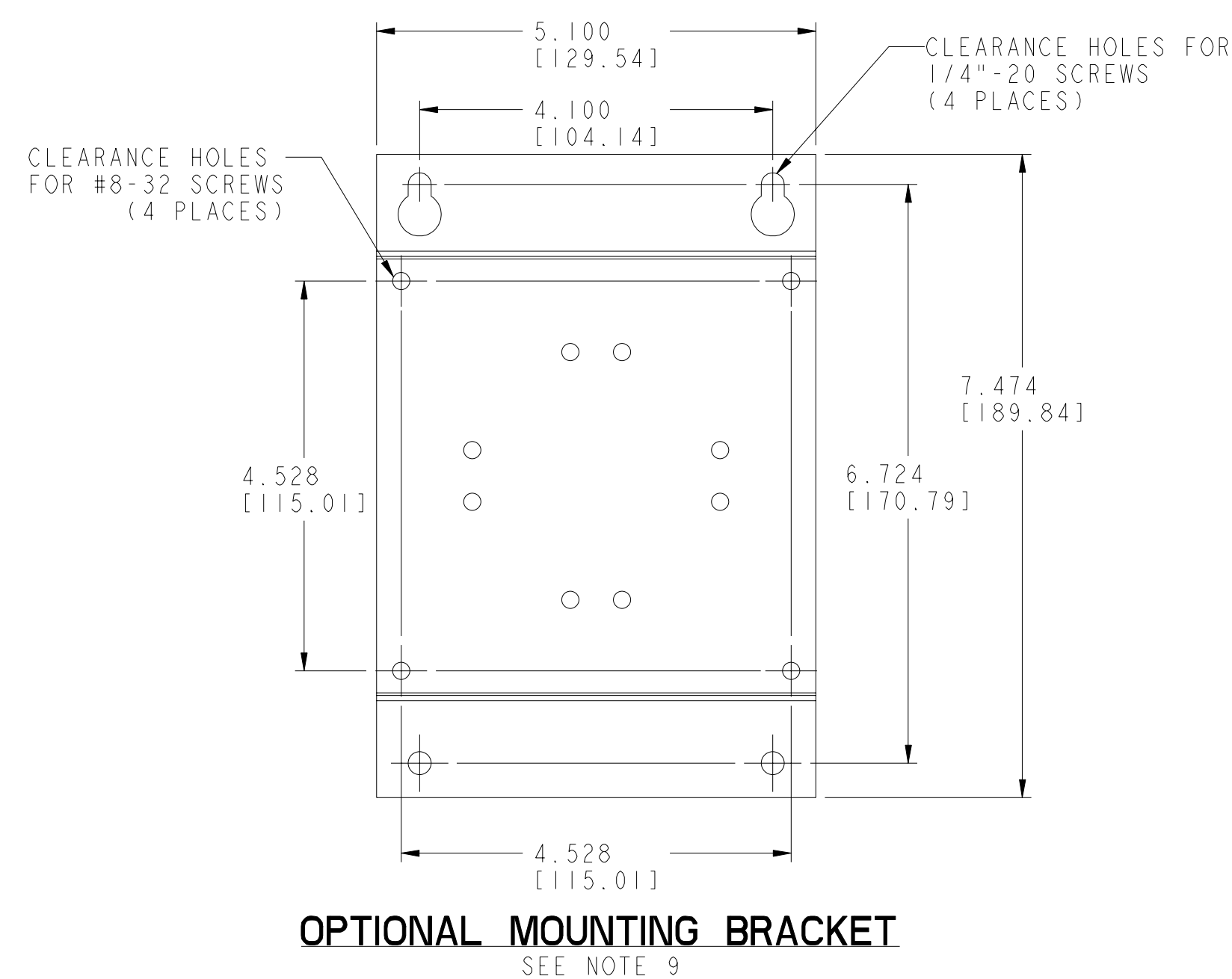
CABLE LENGTH AND WIRE SIZE (POWER SUPPLY 24 VDC) (TOXIC GAS OR OXYGEN) SENSOR, 4-20 mA SIGNAL OUTPUT (THREE WIRE SENSOR)

WIRE SIZE	MAXIMUM CABLE LENGTH IN FEET @ 24 VDC	MAXIMUM LOAD RESISTANCE
22 AWG (0.25 mm ²)	10000 FT. (3048 m)	500 Ohms

REMOTE MODULE WIRING AND PLACEMENT

SENSOR TYPE	MINIMUM WIRE SIZE	MAXIMUM CABLE LENGTH
TOXIC & OXYGEN	20 AWG (0.50 mm ²)	100 FT. (30 m)
CATALYTIC COMBUSTIBLE	18 AWG (1.00 mm ²)	50 FT. (15 m)
	16 AWG (1.50 mm ²)	100 FT. (30 m)

ULTIMA XT SENSOR TRANSMITTER



- NOTES:
1. INSTRUMENT WEIGHT = 1.74 LBS (0.79 KG).
 2. INSTRUMENT HOUSING IS MADE OF POLYCARBONATE PLASTIC.
 3. DIMENSIONS SHOWN IN INCHES (MILLIMETERS).
 4. CHECK TAG FOR AREA CLASSIFICATION.
 5. CUSTOMER TO CUT WIRE ENTRY HOLE IN INSTRUMENT BOX.
 6. - - - - - INDICATES FIELD CONNECTIONS BY OTHERS.
 8. MOUNT UNIT WITH SENSOR INLET FACING DOWN.
 9. P/N 10047561 IS OPTIONAL MOUNTING BRACKET.

CUSTOMER _____

P.O. NO. _____

MSA NO. _____

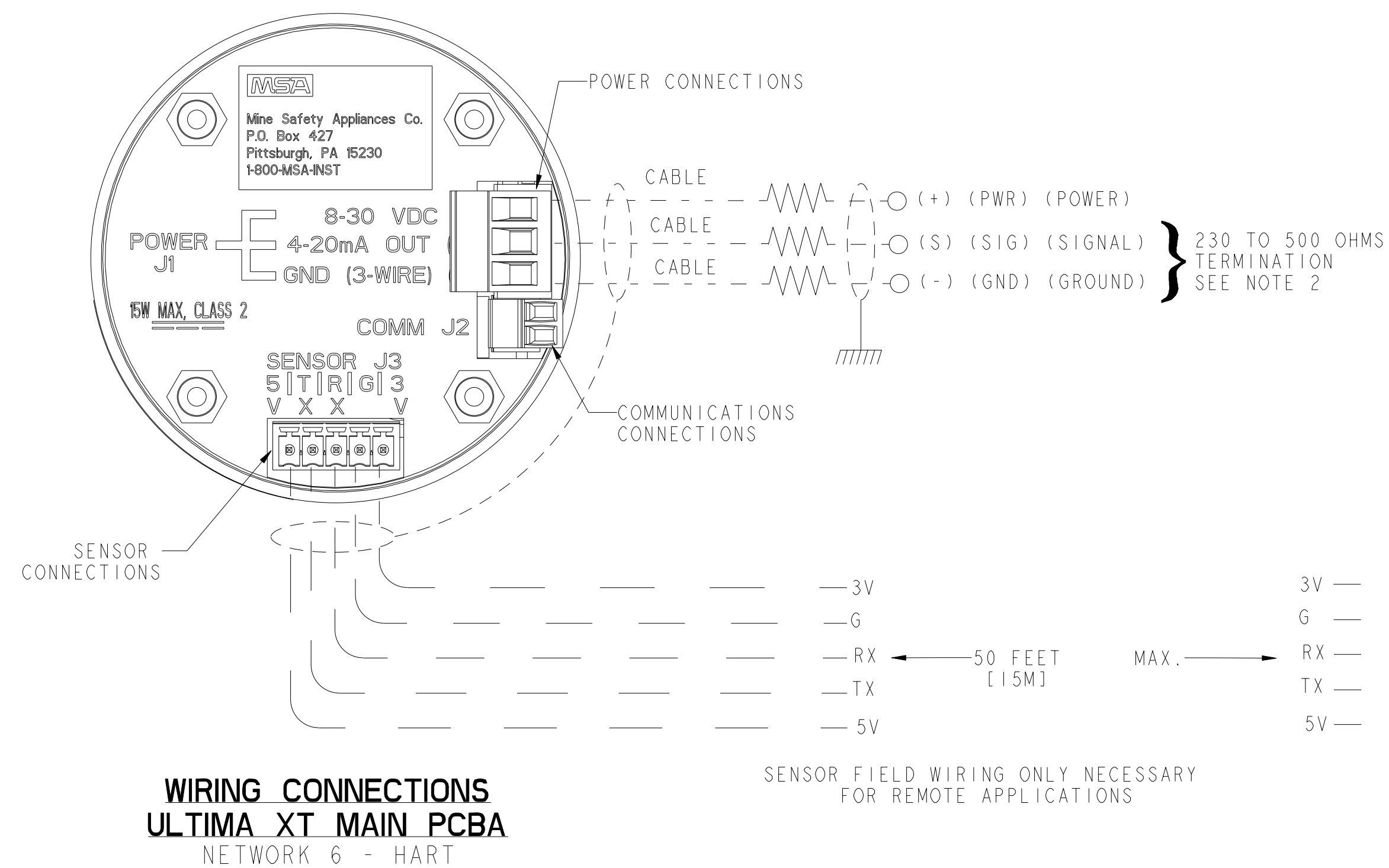
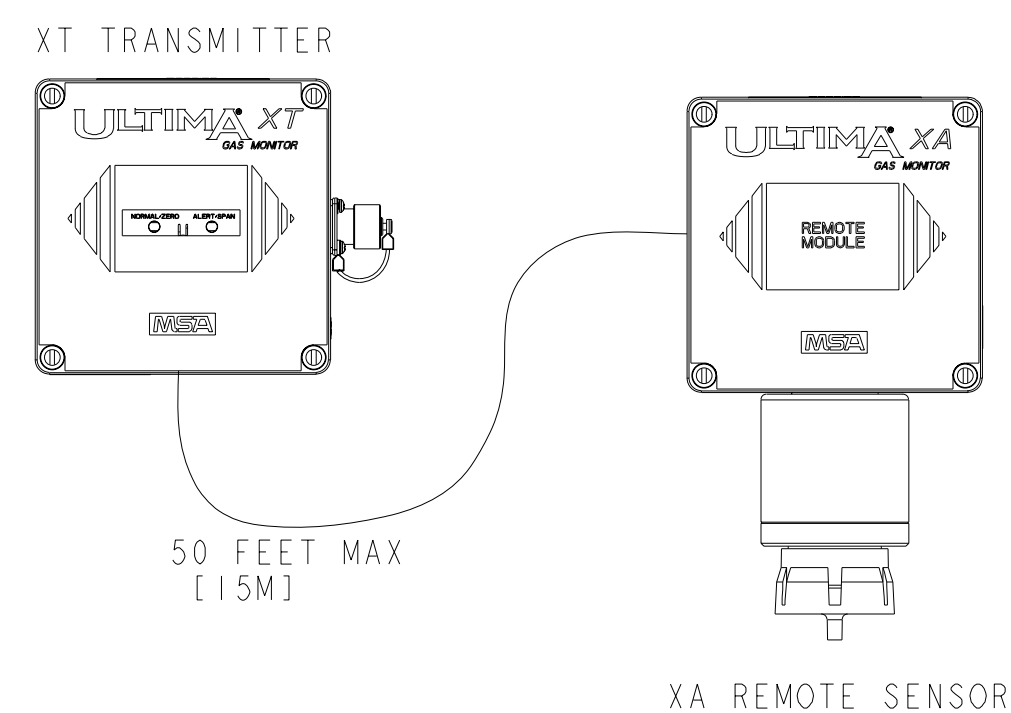
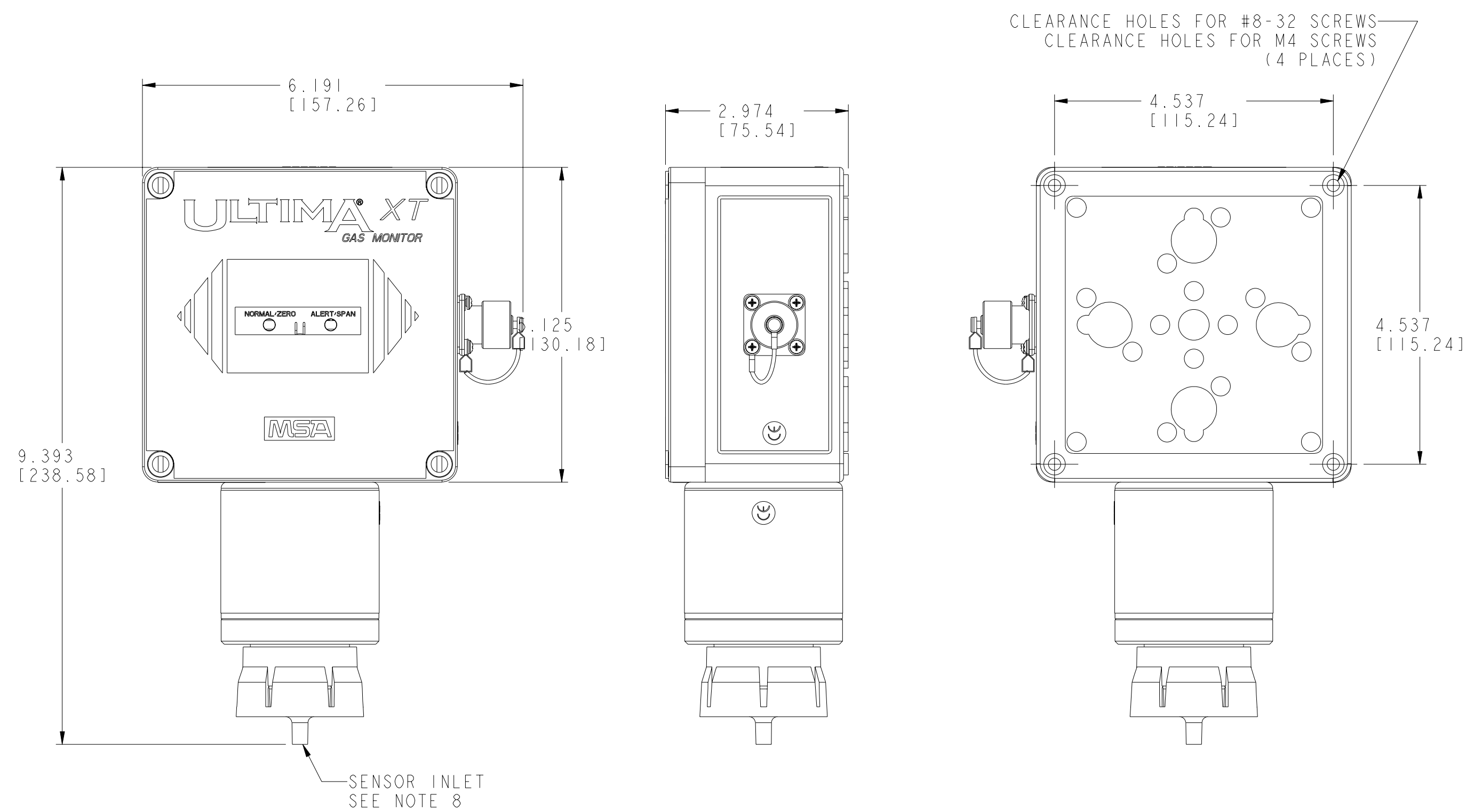
LOCATION _____

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. SCHUTZVERMERK NACH DIN 34 BEACHTEN. MSA AUER GmbH.	DO NOT SCALE DWG.
MSA STANDARD SHOP PRACTICES APPLY		JOB NO. 30007082 PH0730	APPROVAL AGENCY CODE: NO NOSH ATTR. DOC.:	
CRITICAL	MAJOR A	MAJOR B	100 % INSPECTION	TOLERANCES UNLESS OTHERWISE SPECIFIED
DATE	2-13-2007	CHECKED BY	D. MAST	3-22-07
PROJ. ENGR.	S. TURNER	3-22-07	QUALITY ASSURANCE	J. DANNHARDT
MANUFACTURING	H. TRACHSEL	3-26-07	CADD REF: SK3015-1016	SCALE: 1:000
D.			SK3015-1016	SHEET 1 OF 2

INSTALLATION OUTLINE, ULTIMA XT



- NOTE:
- THREE-WIRE ULTIMA X SERIES MONITORS OPERATE IN THE CURRENT SOURCE MODE.
 - THE HART COMMUNICATIONS REQUIRE THE LOAD ON THE 4-20 mA TO BE BETWEEN 230 TO 500 OHMS.
 - THE ULTIMA X SERIES MONITOR HAS A FIVE-WIRE TERMINAL TO ACCOMMODATE UP TO #16 AWG (1.32mm²) CONDUCTORS. CABLES LARGER THAN #16 AWG (1.32 mm²) WILL REQUIRE A SPLICE OF SMALLER CABLE TO FIT THE CONNECTOR.
 - INCOMING POWER AND SIGNAL CABLE SHIELD SHOULD BE EARTH GROUNDED AT THE POWER SOURCE. CONNECT POWER AND REMOTE SENSOR CABLE SHIELDS TOGETHER IN THE MAIN HOUSING. PROVIDE SHIELD TERMINATIONS INSIDE THE SENSOR HOUSING.
 - REMOTE CABLES MAX. 50 FT. [15M] OF 18 AWG (1mm²) OR 100 FT. [30M] OF 16 AWG (1.50mm²) CABLE. 12 AWG OR LARGER WIRE MUST HAVE AN ADAPTER TO 16 AWG TO CONNECT TO J3 ON MAIN CIRCUIT BOARD. FOR EUROPEAN INSTALLATIONS, 15 METERS MAXIMUM DISTANCE.

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	MSA STANDARD SHOP PRACTICES APPLY		APPROVAL AGENCY CODE: NO INTOSH ATTR. DOC.:	
	CODE SYMBOLS	JOB NO. 30007082 PH0730	DATE	
	CRITICAL Δ	DRAWN BY WJE	2-13-2007	
	MAJOR A Δ	CHECKED BY D.MAST	3-22-07	
	MAJOR B Δ	PROJ. ENGR. S.TURNER	3-22-07	
	100% INSPECTION Δ	QUALITY ASSURANCE J.DANNHARDT	3-22-07	
	TOLERANCES UNLESS OTHERWISE SPECIFIED	MANUFACTURING H.TRACHSEL	3-26-07	
	FRACTIONAL $\pm 1/64$			
	2 PL DEC. ± 0.01			
	3 PL DEC. ± 0.005			
	ANGULAR $\pm 1 \text{ deg.}$			
	SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES			
		INSTALLATION OUTLINE, ULTIMA XT		
		CADD REF: SK3015-1016	SCALE: 1:000	
		SK3015-1016		SHEET 2 OF 2