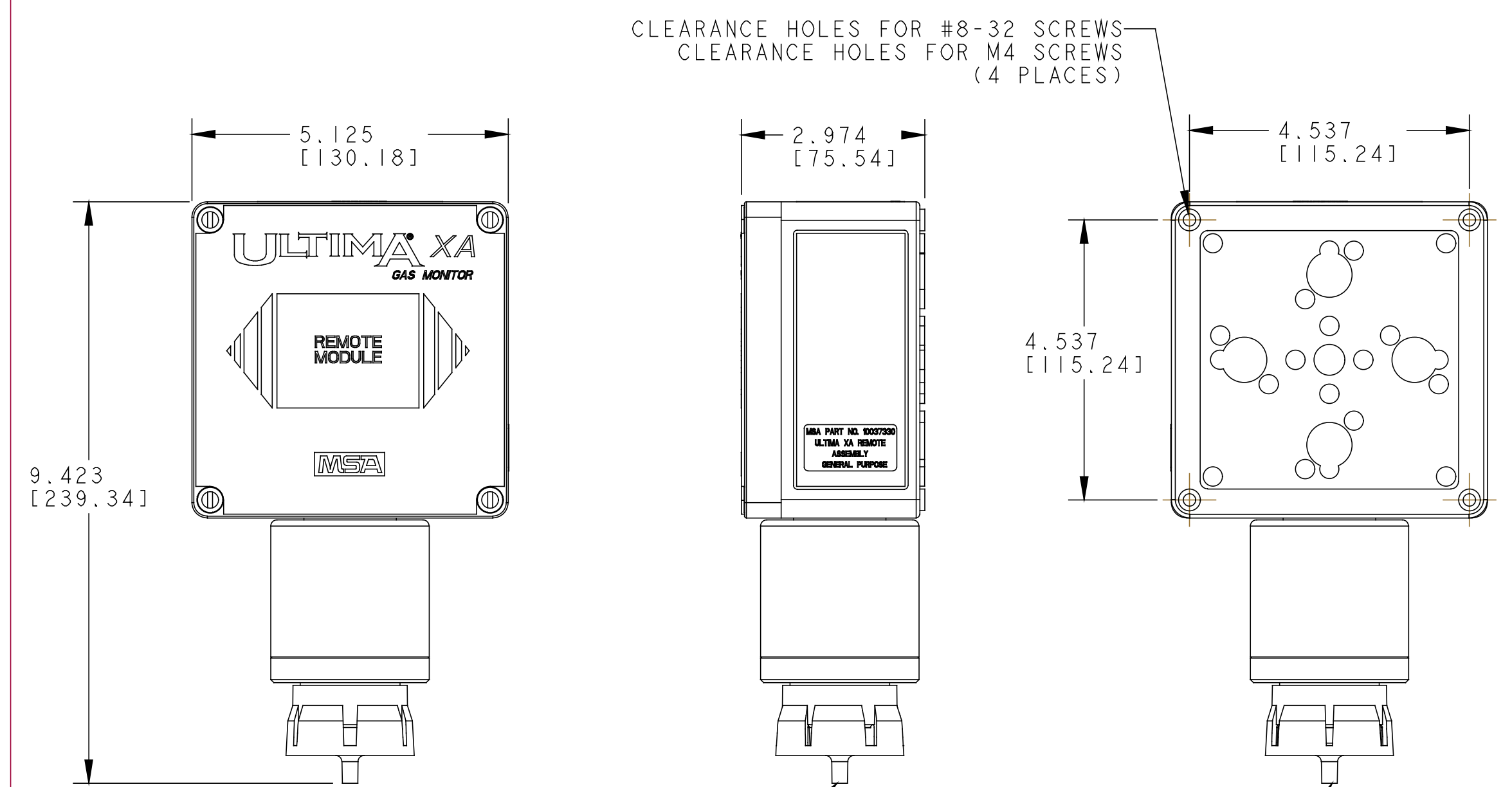
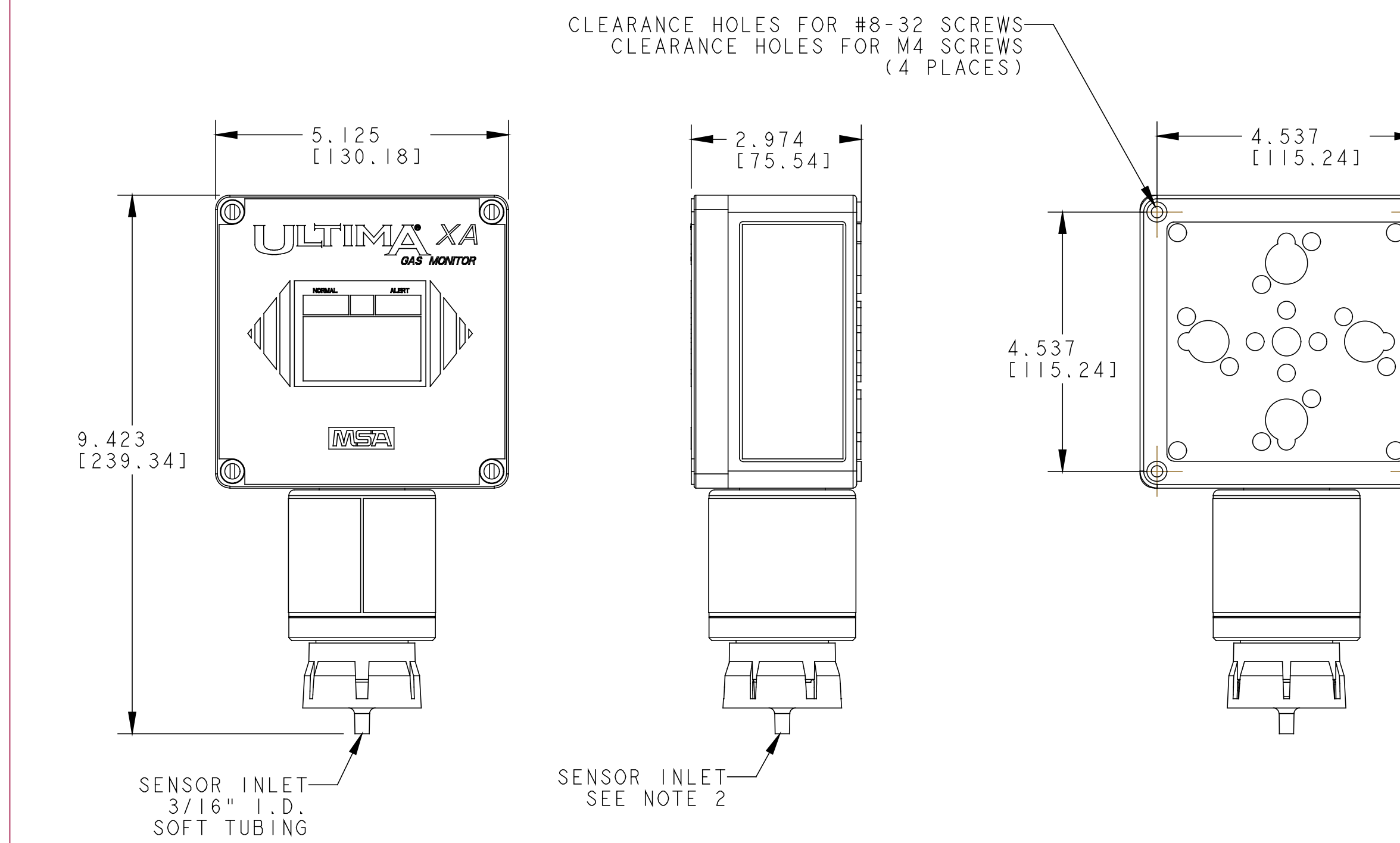


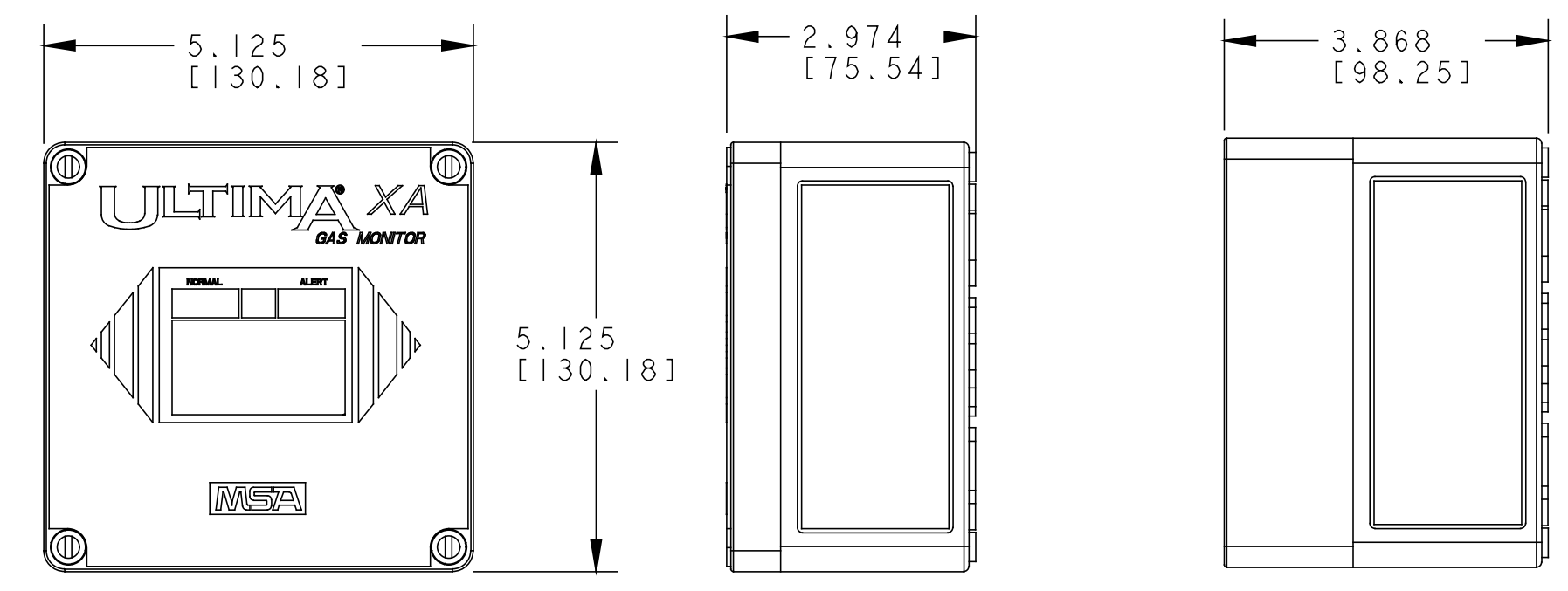
PARTS LIST			REVISIONS
ITEM NO.	MATERIAL MASTER NO.	QTY. REQD.	DESCRIPTION
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**MODULE "A"**  
**GENERAL PURPOSE REMOTE HOUSING**  
MATERIAL: POLYCARBONATE PLASTIC  
WEIGHT =

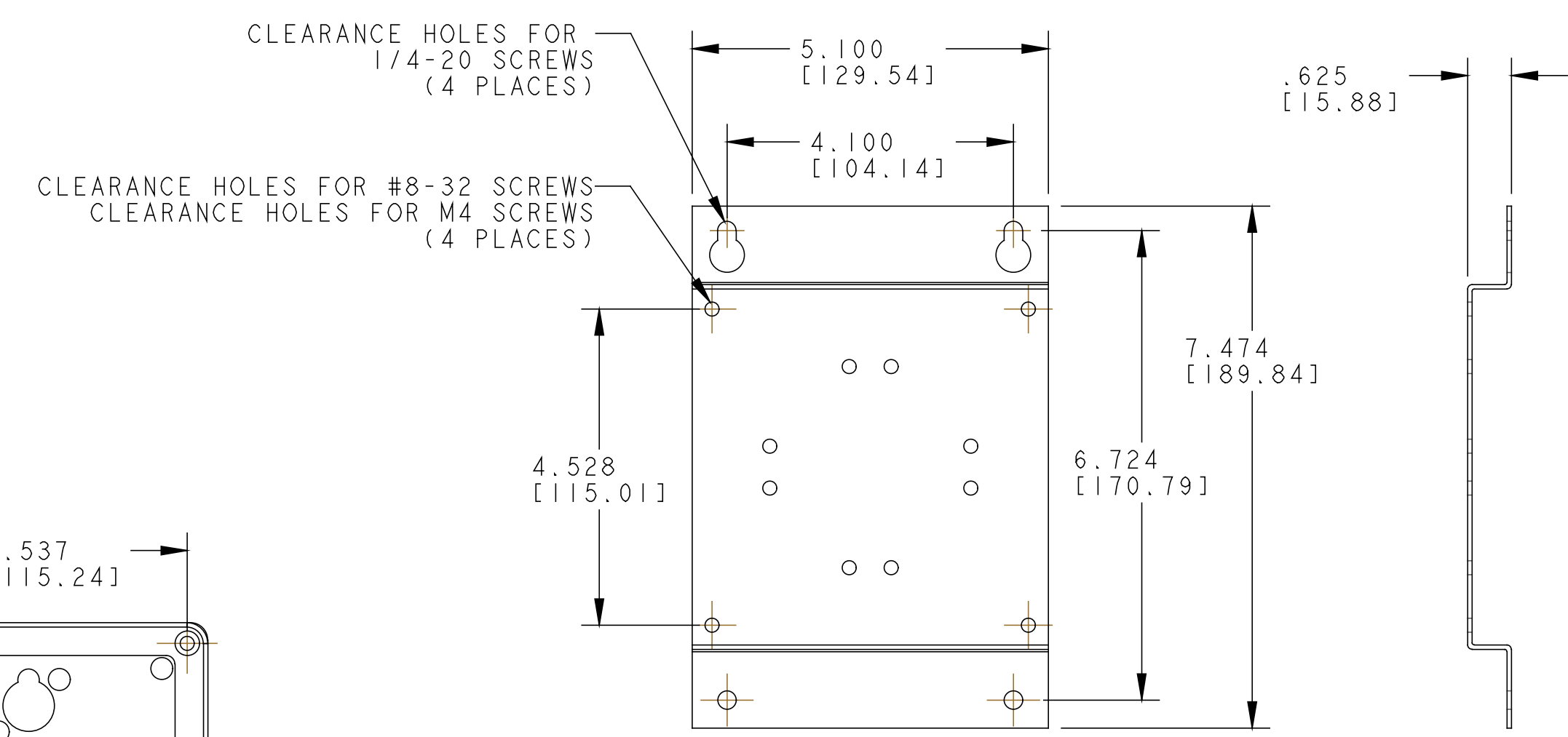


**ULTIMA XA TRANSMITTER**  
**WITH XE SENSOR ATTACHED**  
**(STANDARD CONFIGURATION)**  
WEIGHT =



**MODULE "B"**  
**GENERAL PURPOSE TRANSMITTER HOUSING**  
MATERIAL: POLYCARBONATE PLASTIC  
WEIGHT =

**MODULE "B"**  
**WITH INTERNAL POWER SUPPLY**  
**(OPTIONAL)**  
WEIGHT =



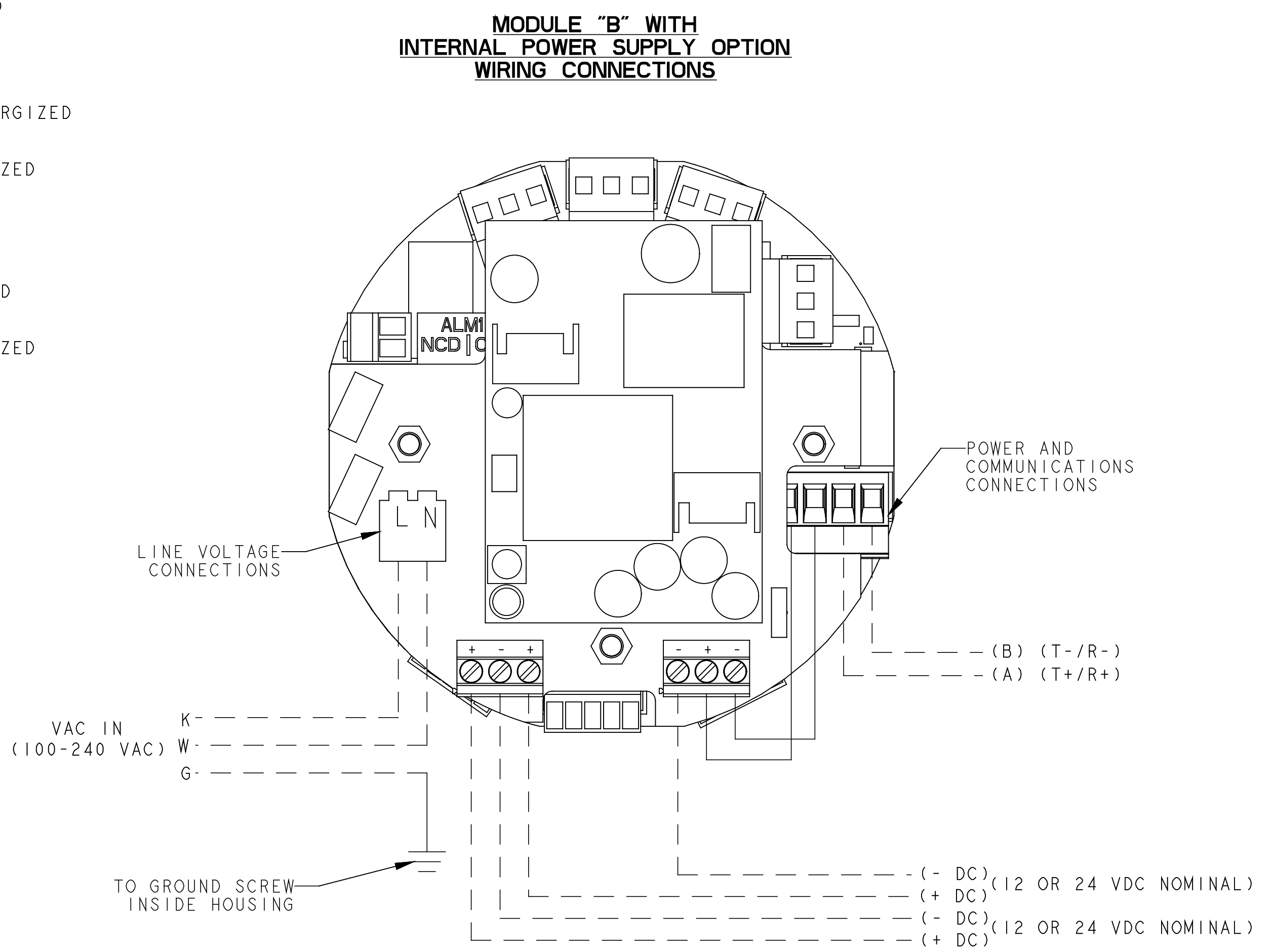
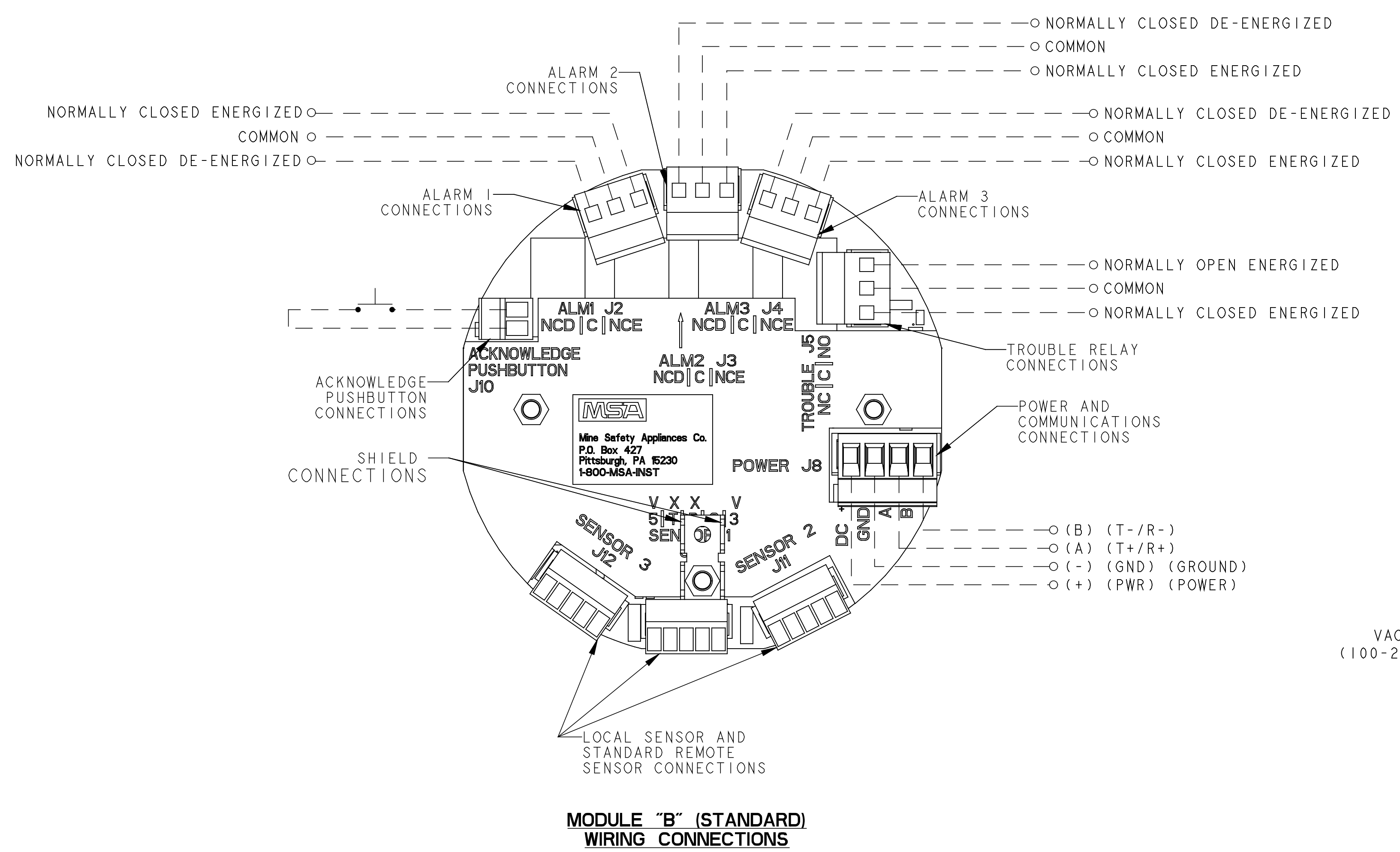
**MODULE "A" OR "B"**  
**MOUNTING STRAP METHOD**  
**(OPTIONAL)**  
SEE NOTE 3

CUSTOMER \_\_\_\_\_  
P.O. # \_\_\_\_\_  
MSA # \_\_\_\_\_  
LOCATION \_\_\_\_\_  
TAG # \_\_\_\_\_  
TOTAL NO. OF UNITS \_\_\_\_\_

- NOTE:
- DIMENSIONS SHOWN IN INCHES (MILLIMETERS).
  - SENSOR INLET MUST FACE DOWN.
  - P/N 10047561 IS OPTIONAL MOUNTING STRAP KIT.
  - CALIBRATION TUBING IS SUPPLIED IN CALIBRATION KIT.

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CRITICAL	△	DRAWN BY BP	DATE 10-21-2004	<b>INSTALLATION OUTLINE, MODBUS, ULTIMA XA</b>
MAJOR A	△	CHECKED BY		
MAJOR B	△	PROJ. ENGR.		
100 % INSPECTION	△	QUALITY ASSURANCE		
TOLERANCES UNLESS OTHERWISE SPECIFIED		MANUFACTURING		
FRACTIONAL	± 1/64			
2 PL DEC.	± 0.01			
3 PL DEC.	± 0.005			
ANGULAR	± 1 deg.			
SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES		DOCUMENT NO.	CADD REF: 10000021204	SCALE: 1:000
		<b>D SK</b>	<b>10000021204</b>	SHEET 1 OF 4

PARTS LIST			REVISIONS
ITEM NO.	MATERIAL MASTER NO.	QTY. REQD.	DESCRIPTION
			<b>REFERENCE ONLY</b>
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**TABLE I**  
TRANSMITTER POWER CONSUMPTION (7-30 VDC SUPPLY)

CONFIGURATION			MAX POWER	MAX POWER
CATALYTIC	XIR	ECEM	WITH RELAYS	WITHOUT RELAYS
0	0	3	2.5W	1.5W
0	2	1	9.5W	8.5W
0	1	2	7W	6W
1	0	2	6W	5W
1	1	1	6.5W	5.5W
2	0	1	8W	7W
3	0	0	10W	9W

**COLOR CODE**

BLACK = K	GREEN = G
BROWN = N	BLUE = B
RED = R	VIOLET = V
ORANGE = O	GRAY = A
YELLOW = Y	WHITE = W
PINK = P	TAN = T

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	MSA STANDARD SHOP PRACTICES APPLY	JOB NO. 30006240 PH0718	APPROVAL AGENCY CODE: NO   NIOSH ATTR. DOC.: .
	CODE SYMBOLS	DRAWN BY BP	DATE 10-21-2004
	CRITICAL Δ	CHECKED BY	
	MAJOR A Δ	PROJ. ENGR.	
	MAJOR B Δ	QUALITY ASSURANCE	
	100% INSPECTION Δ	MANUFACTURING	
	TOLERANCES UNLESS OTHERWISE SPECIFIED		
	FRACTIONAL ± 1/64		
	2 PL DEC. ± 0.01		
	3 PL DEC. ± 0.005		
	ANGULAR ± 1 deg.		
	SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES	DOCUMENT NO. D SK 10000021204	CADD REF: 10000021204
		SCALE: 1:000	SHEET 2 OF 4

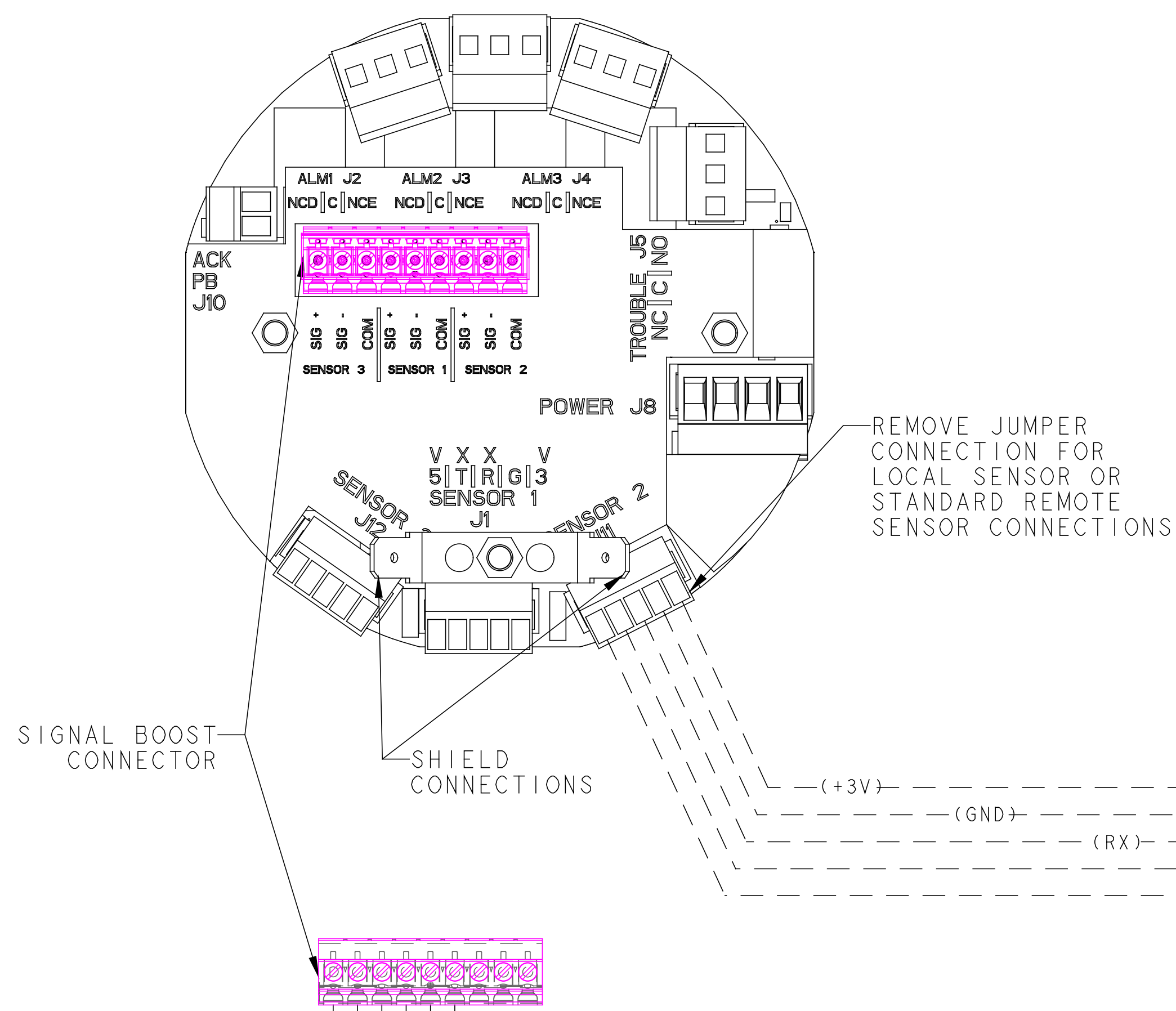
**INSTALLATION OUTLINE, MODBUS, ULTIMA XA**



PARTS LIST			REVISIONS
ITEM NO.	MATERIAL MASTER NO.	QTY. REQD.	DESCRIPTION
			<b>REFERENCE ONLY</b>

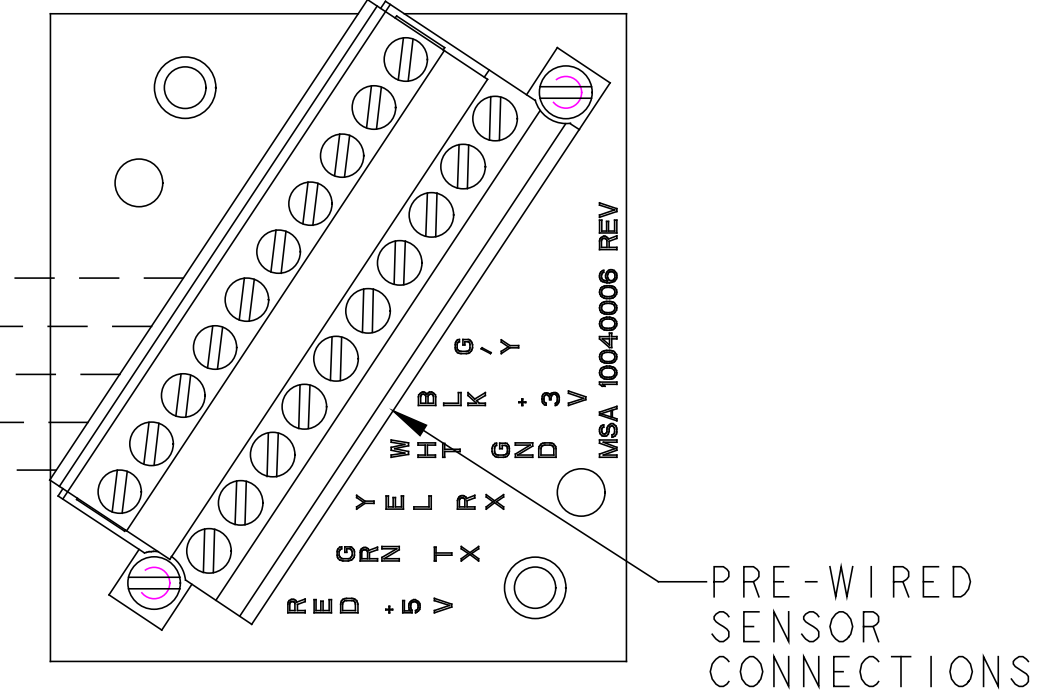
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**MODULE "B" (SIGNAL BOOST OPTION)  
WIRING CONNECTIONS**

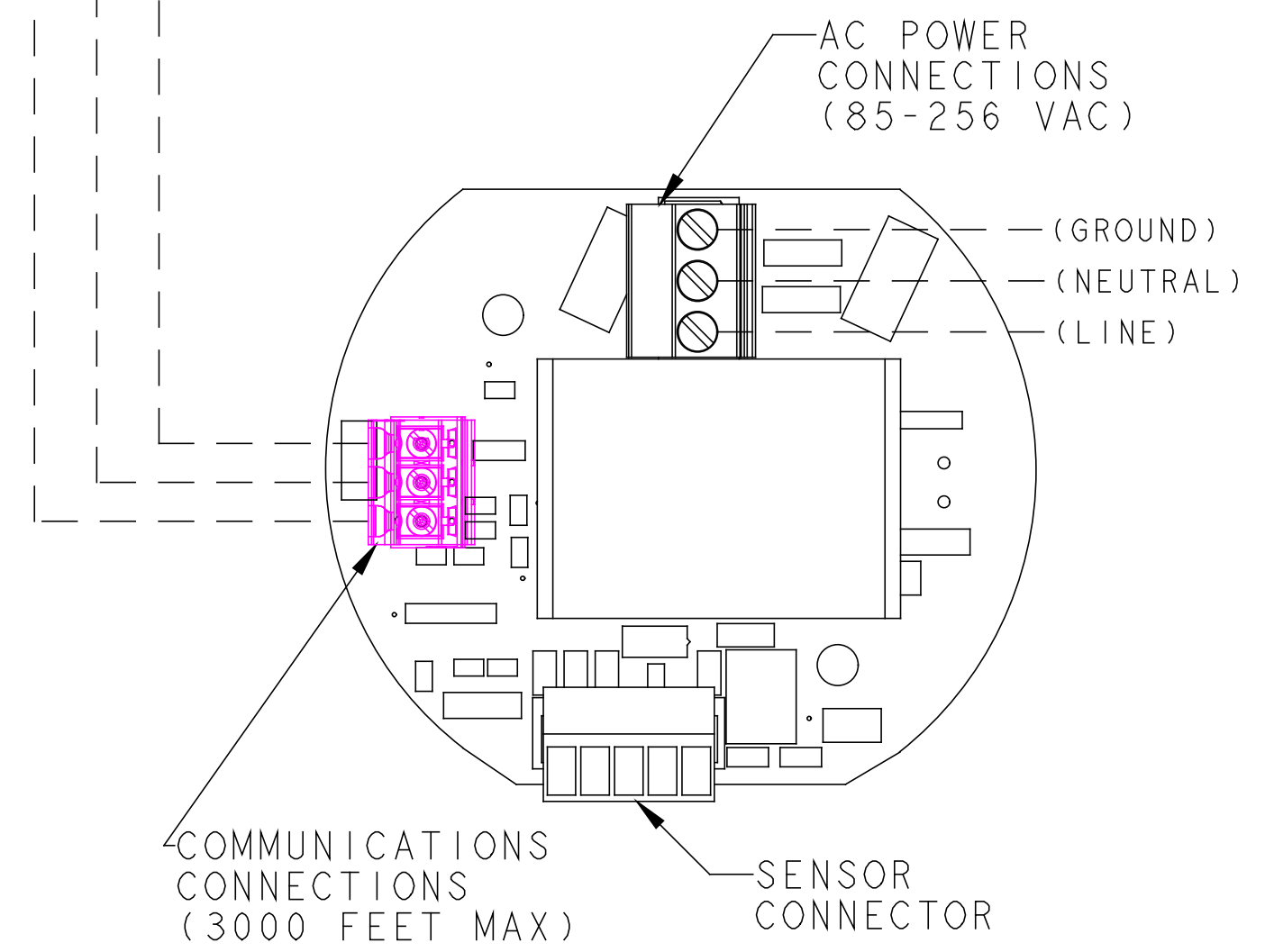


**TABLE 2**  
REMOTE SENSOR POWER CONSUMPTION  
(AC OR DC VERSION)

SENSOR TYPE	MAXIMUM POWER CONSUMPTION
CATALYTIC	4.5 WATTS
Xlr	5 WATTS
E-CHEM	1.5 WATTS

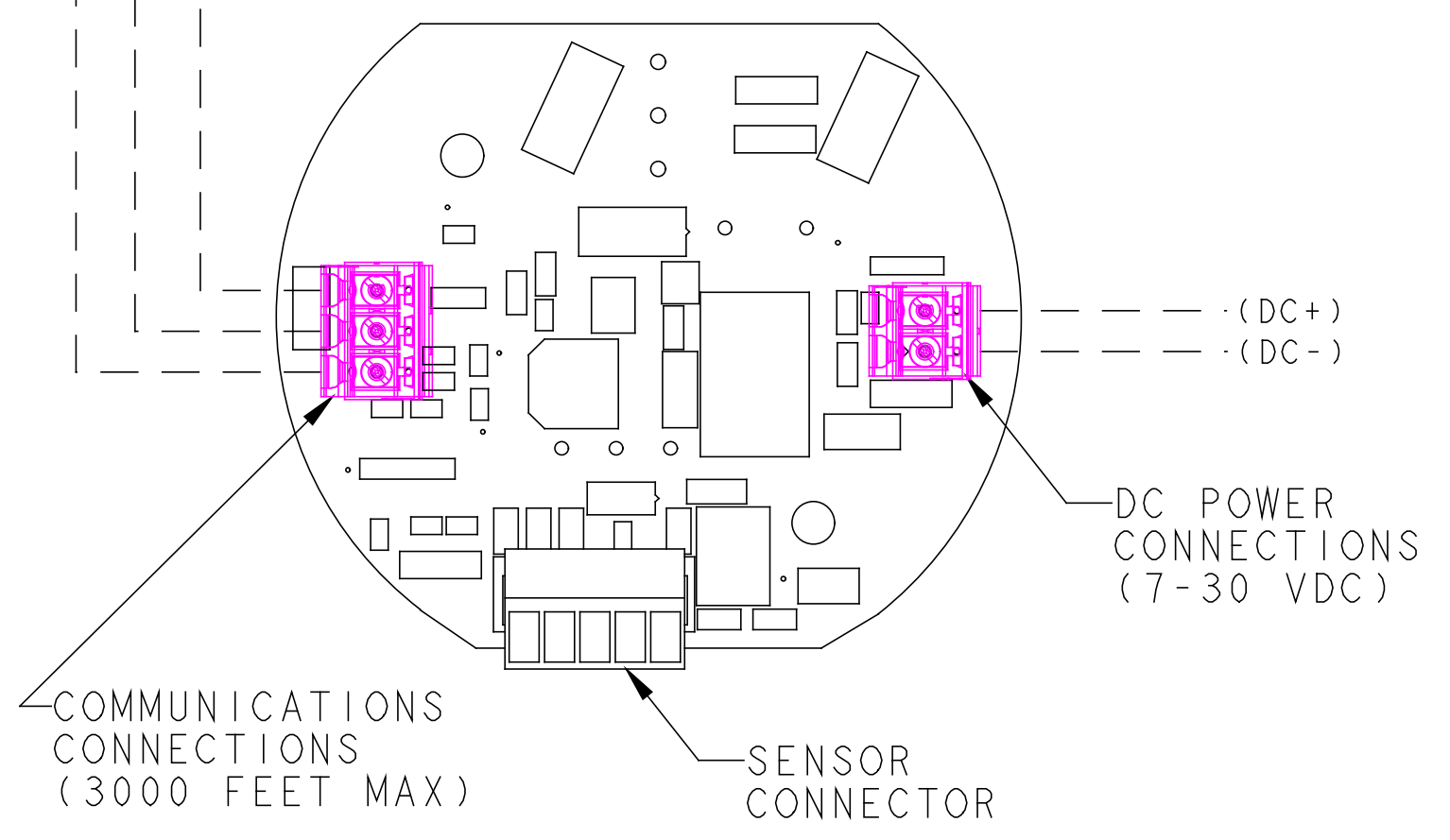


**MODULE "A" (STANDARD REMOTE)  
WIRING CONNECTIONS (100 FEET MAX)  
SEE NOTE 2**

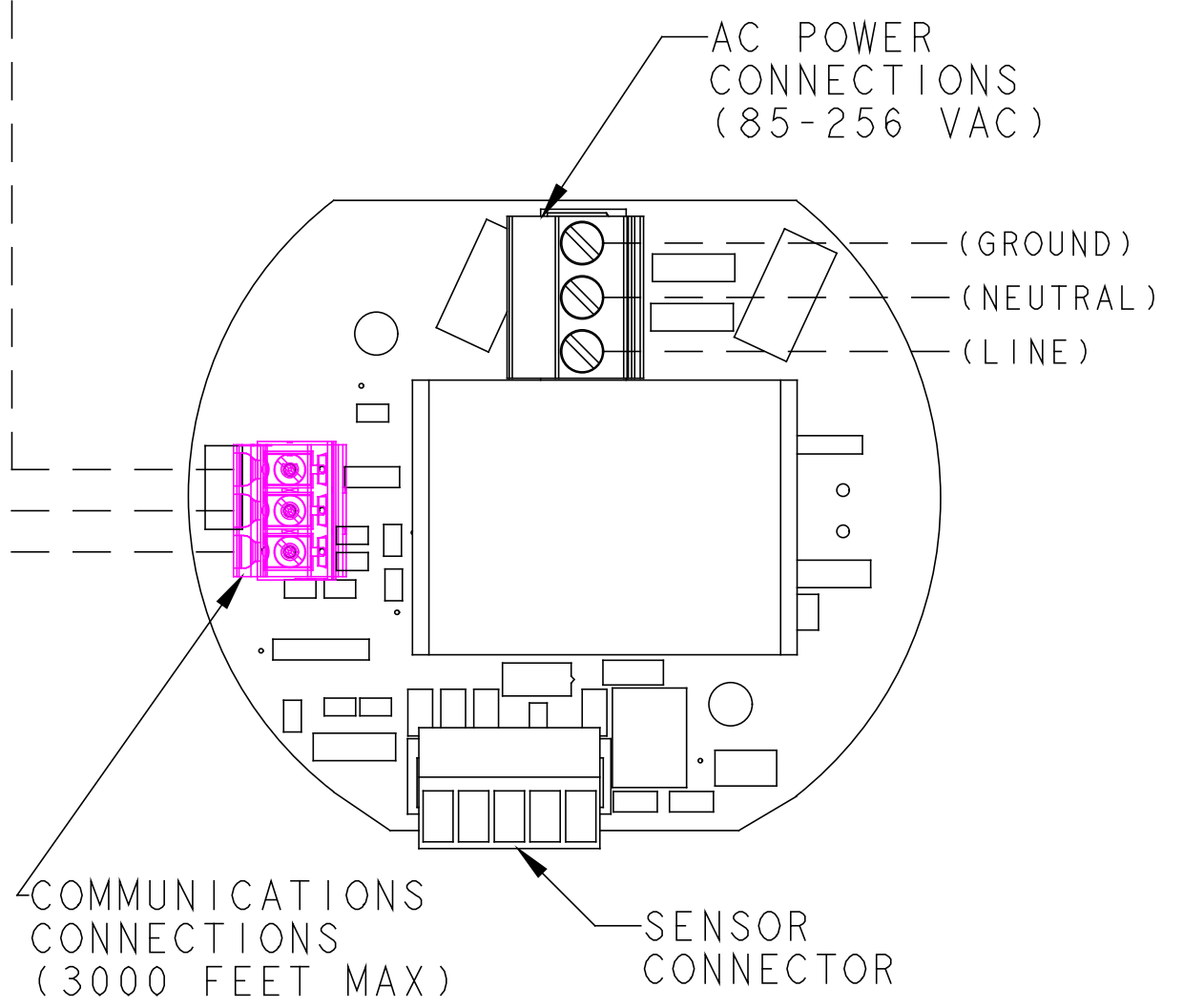


- NOTE:
- INDICATES FIELD CONNECTIONS BY OTHERS.
  - MAXIMUM TRANSMITTER-SENSOR DISTANCE IS 100 FT WITHOUT THE SIGNAL BOOST OPTION.
  - USE OF THIS OPTION REQUIRES THE SENSOR TO BE POWERED LOCALLY.

**MODULE "A" (SIGNAL BOOST REMOTE)  
WIRING CONNECTIONS (DC VERSION)  
SEE NOTE 3**



**MODULE "A" (SIGNAL BOOST REMOTE)  
WIRING CONNECTIONS (AC VERSION)  
SEE NOTE 3**



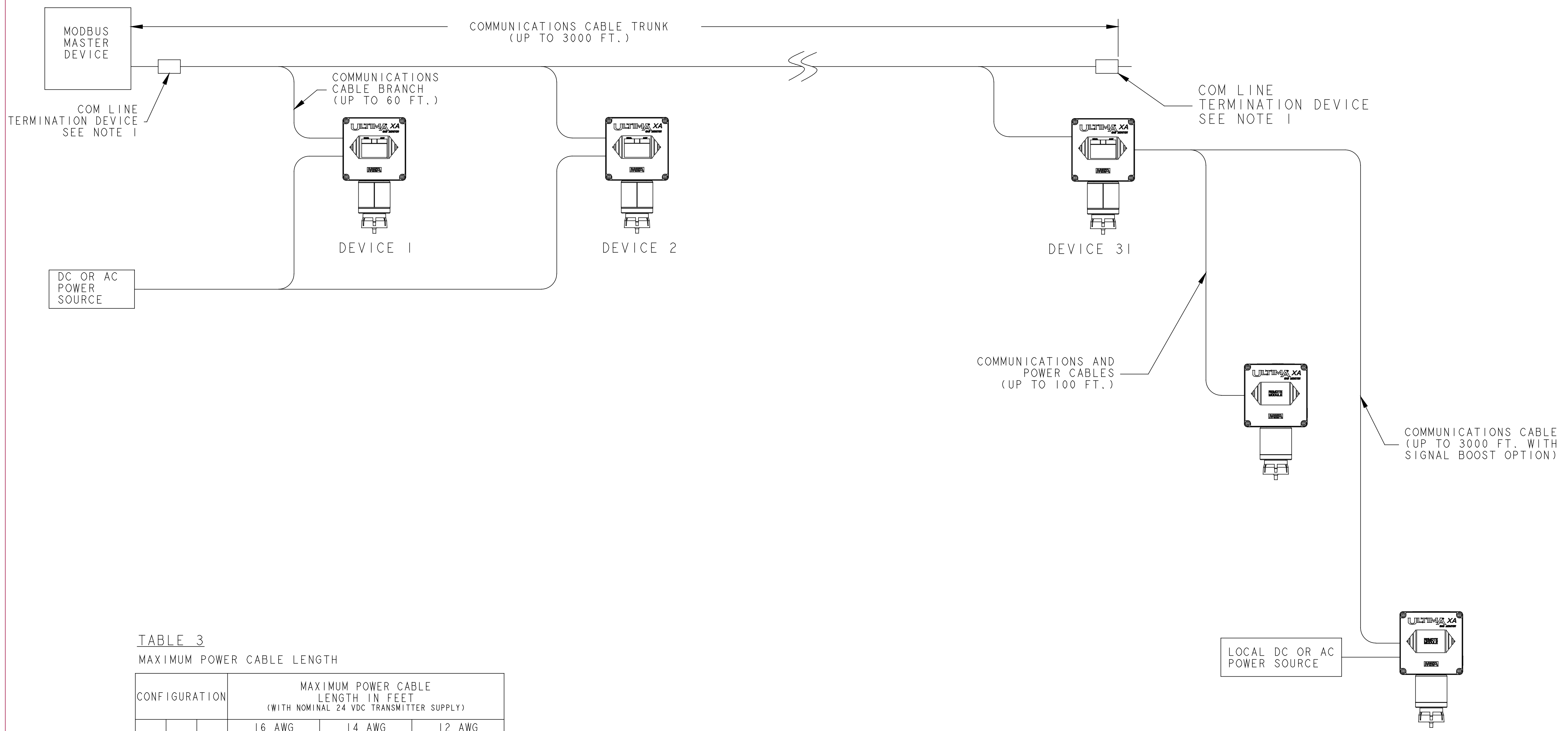
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CRITICAL	CODE SYMBOLS	DRAWN BY BP	DATE 10-21-2004
MAJOR A	MINOR (NO MARK)	CHECKED BY	PROJ. ENGR.
MAJOR B			QUALITY ASSURANCE
100% INSPECTION			MANUFACTURING
TOLERANCES UNLESS OTHERWISE SPECIFIED			
FRACTIONAL ± 1/64			
2 PL DEC. ± 0.01			
3 PL DEC. ± 0.005			
ANGULAR ± 1 deg.			
SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES			
		CADD REF: 10000021204	
		SCALE: 1.000	
		DOCUMENT NO. D SK 10000021204	SHEET 3 OF 4

**INSTALLATION OUTLINE,  
MODBUS, ULTIMA XA**

PARTS LIST			REVISIONS
ITEM NO.	MATERIAL MASTER NO.	QTY. REQD.	DESCRIPTION

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 WITHOUT CHANGE TO REVISION LEVEL

**TYPICAL ModBUS NETWORK TOPOGRAPHY**



**TABLE 3**  
 MAXIMUM POWER CABLE LENGTH

CONFIGURATION			MAXIMUM POWER CABLE LENGTH IN FEET (WITH NOMINAL 24 VDC TRANSMITTER SUPPLY)					
CATA- LYTIC	XIR	E- CHEM	16 AWG CABLE (4.2 OHM PER 1K FT.)		14 AWG CABLE (2.6 OHM PER 1K FT.)		12 AWG CABLE (1.8 OHM PER 1K FT.)	
			NO RELAYS	RELAYS OPTION	NO RELAYS	RELAYS OPTIONS	NO RELAYS	RELAYS OPTION
0	0	3	4500	3500	7200	5500	10000	7500
0	2	1	2000	1500	2750	2500	4000	3500
0	1	2	3000	2250	4500	3500	6250	5000
1	0	2	3500	2750	5500	4250	7500	6000
1	1	1	2000	1500	2750	2500	4000	3500
2	0	1	2500	1750	3500	3000	5000	4000
3	0	0	2000	1500	2750	2500	3750	3500

- NOTE:  
 1. LINE TERMINATION DEVICE MUST MATCH COM LINE (TYPICALLY 120 OHMS).  
 2. TYPICAL RS485 COMMUNICATIONS WIRING SCHEME IS 3 WIRE CABLE, 22 AWG, LABELED (A) T+/R+, (B) T-/R- AND (C) COMMON.

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CODE SYMBOLS	CRITICAL $\Delta$	MINOR (NO MARK)	DATE 10-21-2004	<b>INSTALLATION OUTLINE, MODBUS, ULTIMA XA</b>
MAJOR A $\Delta$	MAJOR B $\Delta$	100% INSPECTION $\Delta$	CHECKED BY	
TOLERANCES UNLESS OTHERWISE SPECIFIED	FRACTIONAL $\pm 1/64$	2 PL DEC. $\pm 0.01$	3 PL DEC. $\pm 0.005$	
ANGULAR $\pm 1$ deg.	SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES			
D SK		DOCUMENT NO. 10000021204	CADD REF: 10000021204	SCALE: 1:000
				SHEET 4 OF 4