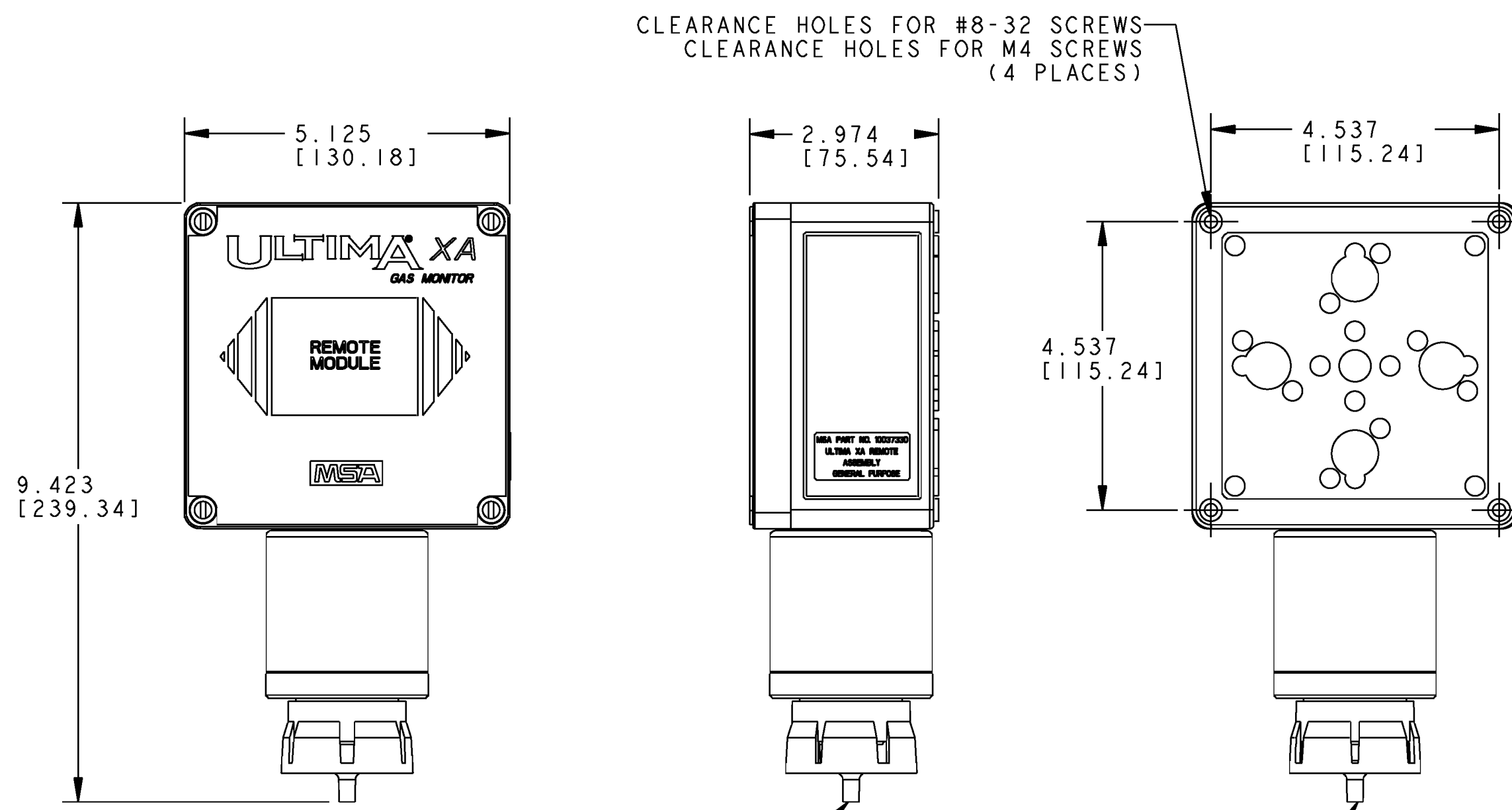
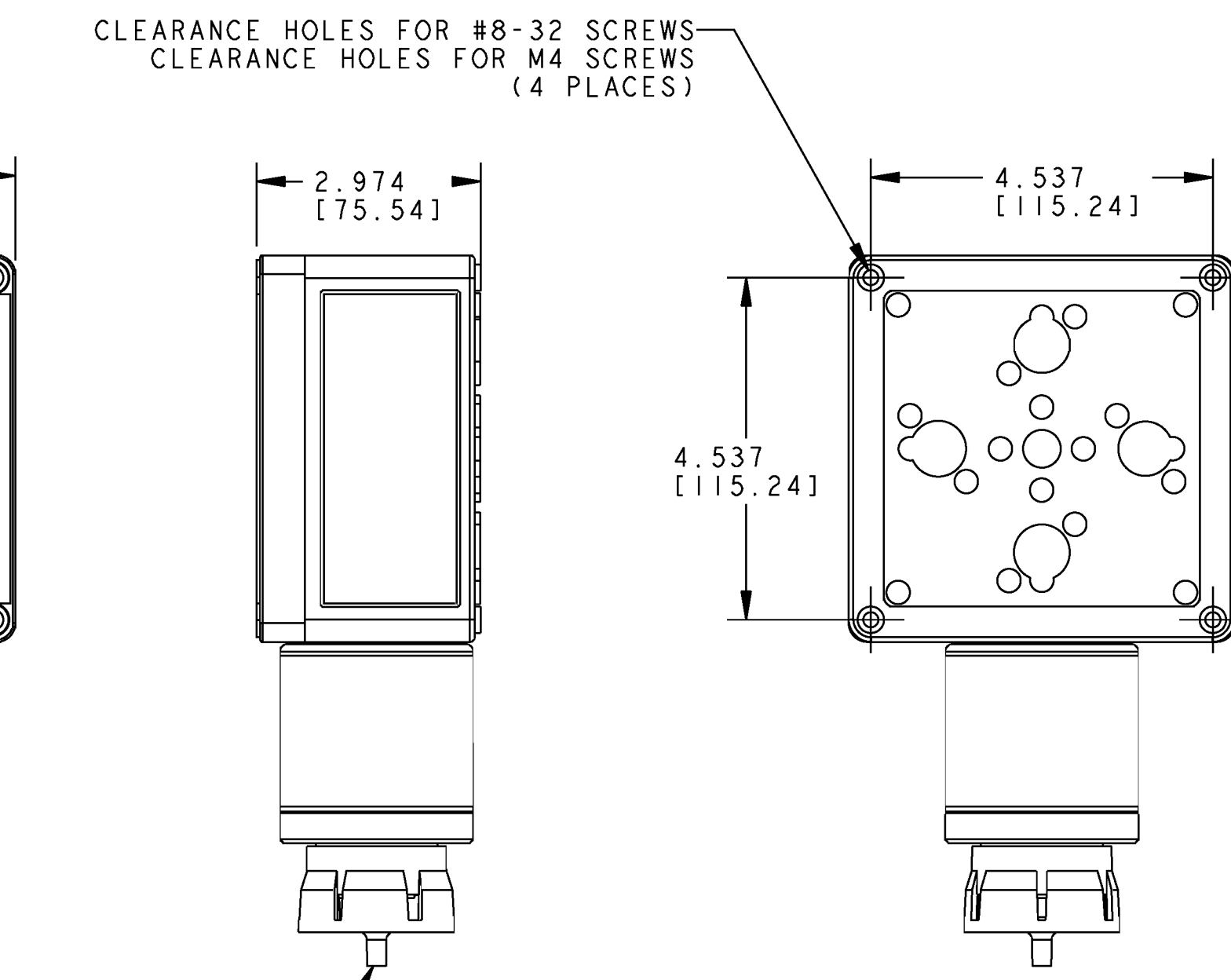


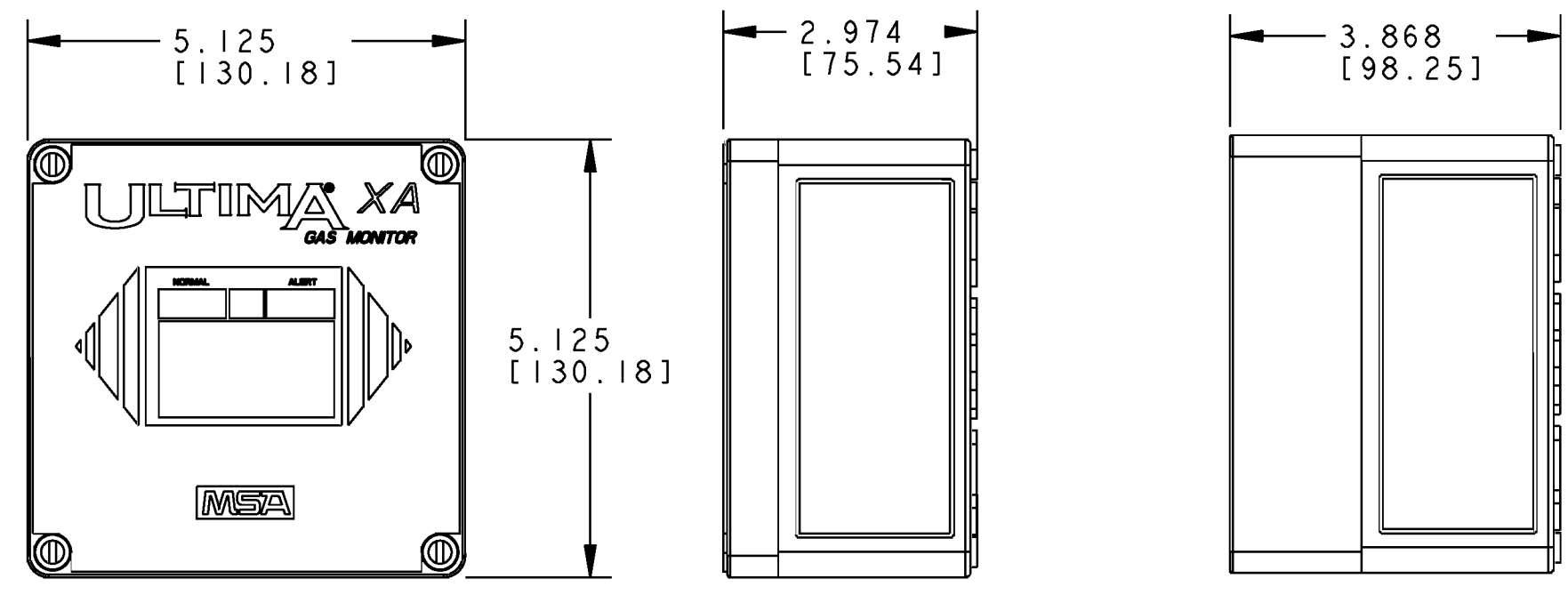
PARTS LIST			REVISIONS
ITEM NO.	MATERIAL MASTER NO.	QTY. REQD.	DESCRIPTION
			NOV 16 2004



MODULE "A"
GENERAL PURPOSE REMOTE HOUSING
 MATERIAL: POLYCARBONATE PLASTIC
 WEIGHT =

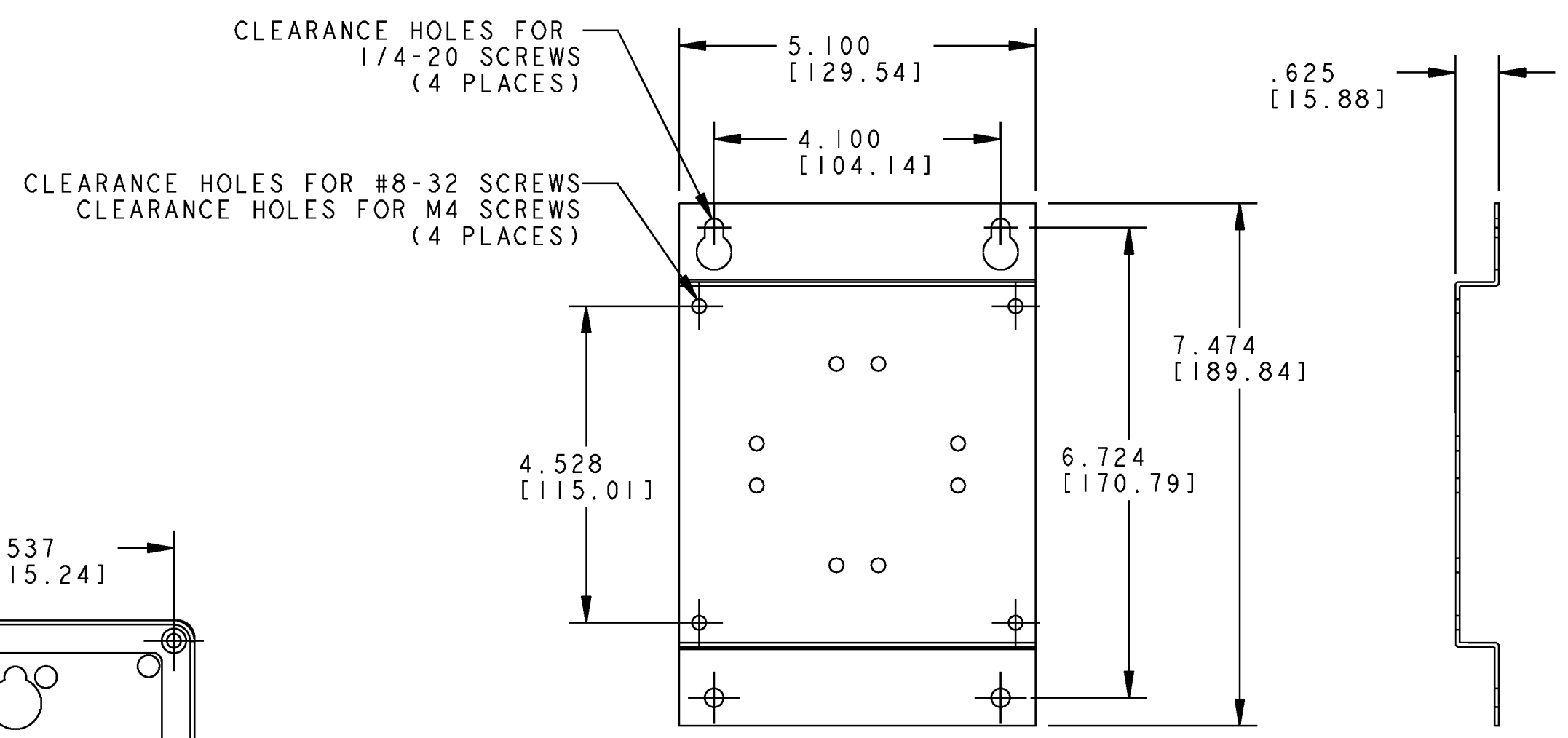


ULTIMA XA TRANSMITTER
WITH XE SENSOR ATTACHED
(STANDARD CONFIGURATION)
 WEIGHT =



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

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CODE SYMBOLS	CRITICAL Δ	MINOR (NO MARK)	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		
DRAWN BY DATE		BP 10-21-2004	CHECKED BY	D. BRUCE 11-12-2004
PROJ. ENGR.		S. TURNER 11-12-2004	QUALITY ASSURANCE	J. DANNHARDT 11-12-2004
MANUFACTURING		D. ALWARD 11-12-2004	CADD REF: 10000021204	SCALE: 1.000
DOCUMENT NO.		D SK 10000021204	SHEET 1 OF 4	

INSTALLATION OUTLINE,
MODBUS, ULTIMA XA

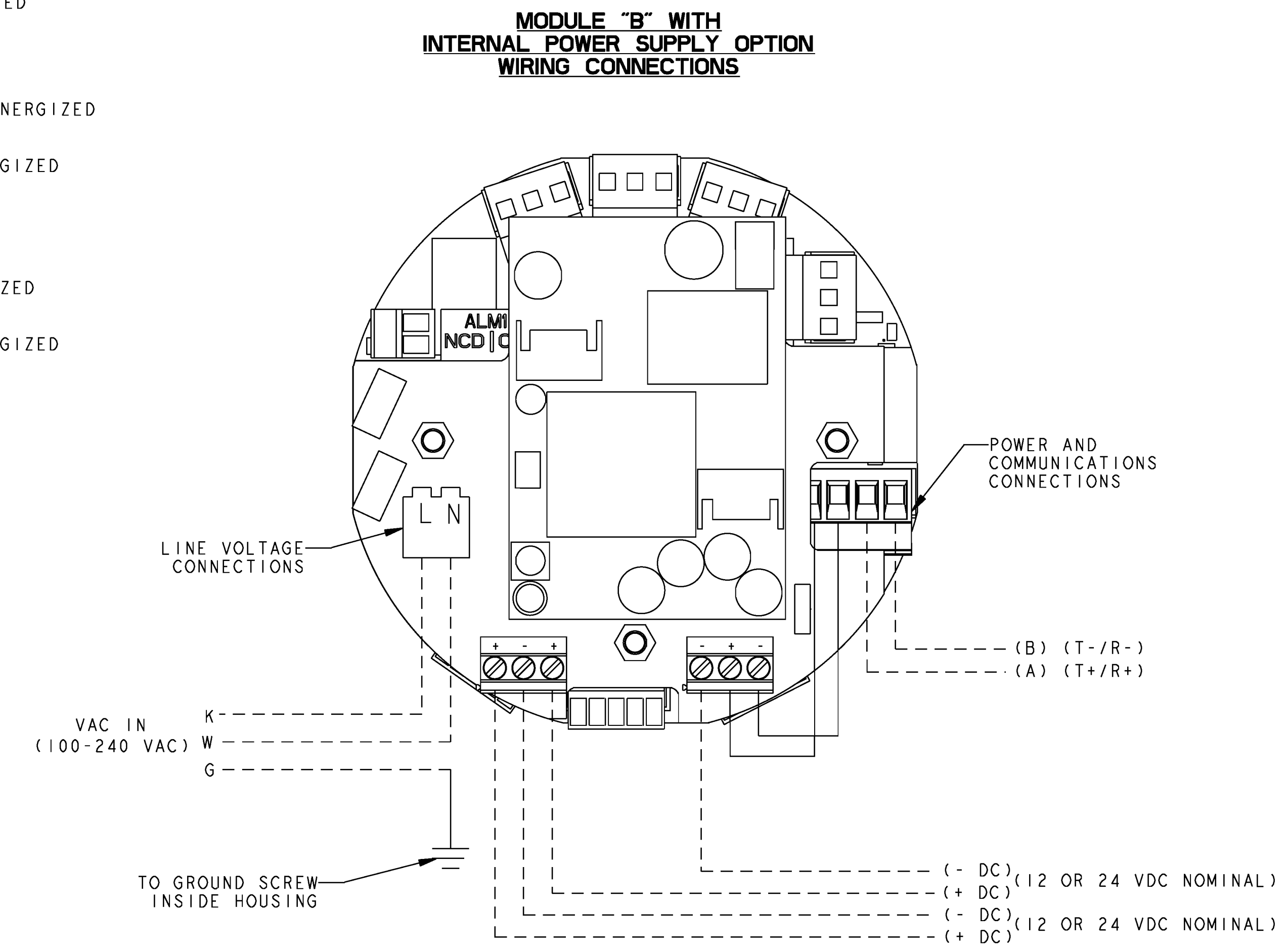
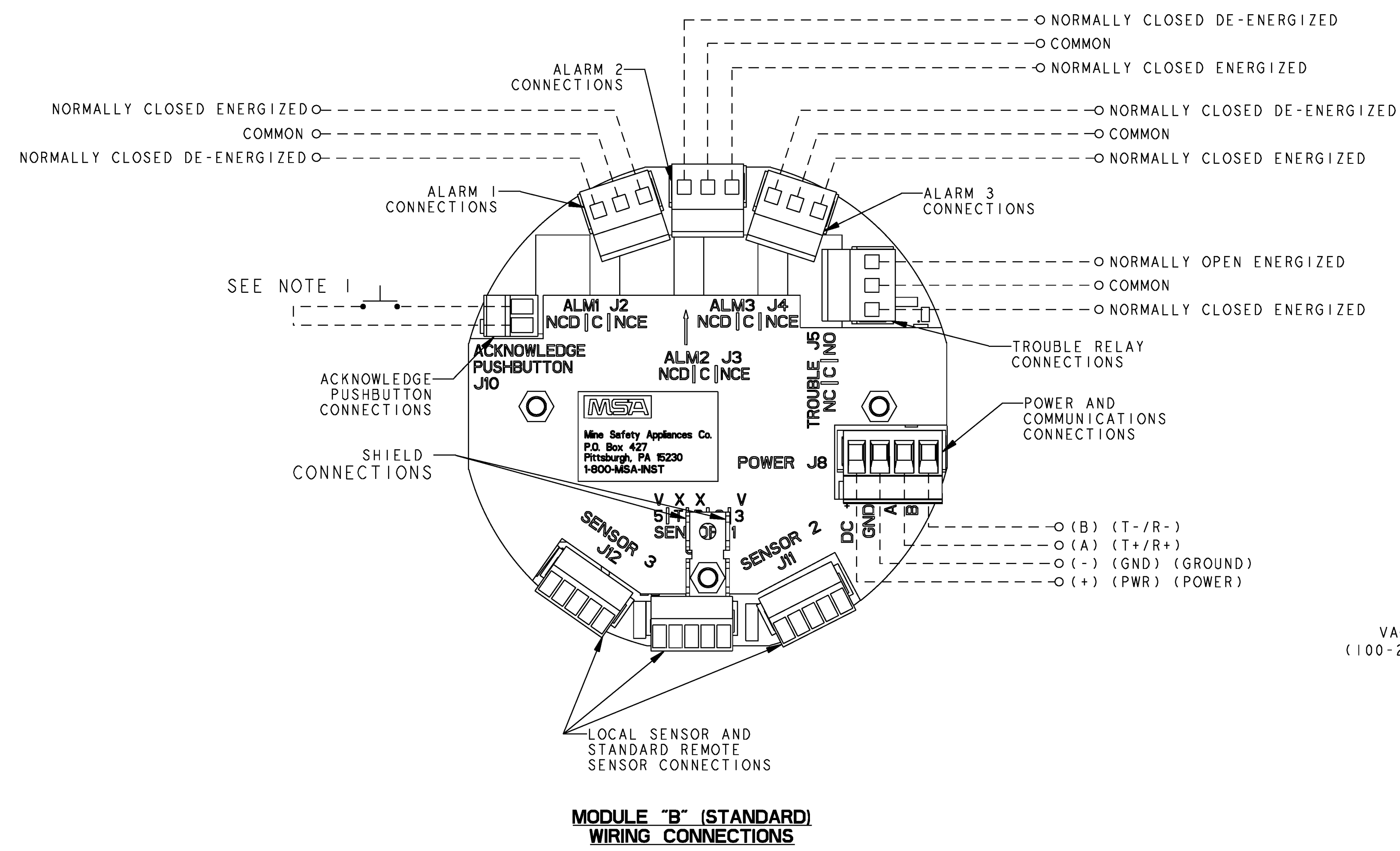


TABLE 1
TRANSMITTER POWER CONSUMPTION (7-30 VDC SUPPLY)

CONFIGURATION			MAX POWER WITH RELAYS	MAX POWER WITHOUT RELAYS
CATALYTIC	XIR	ECEM		
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

NOTE:
1. NORMALLY OPEN PUSH BUTTON SWITCH (OPTIONAL).

COLOR CODE

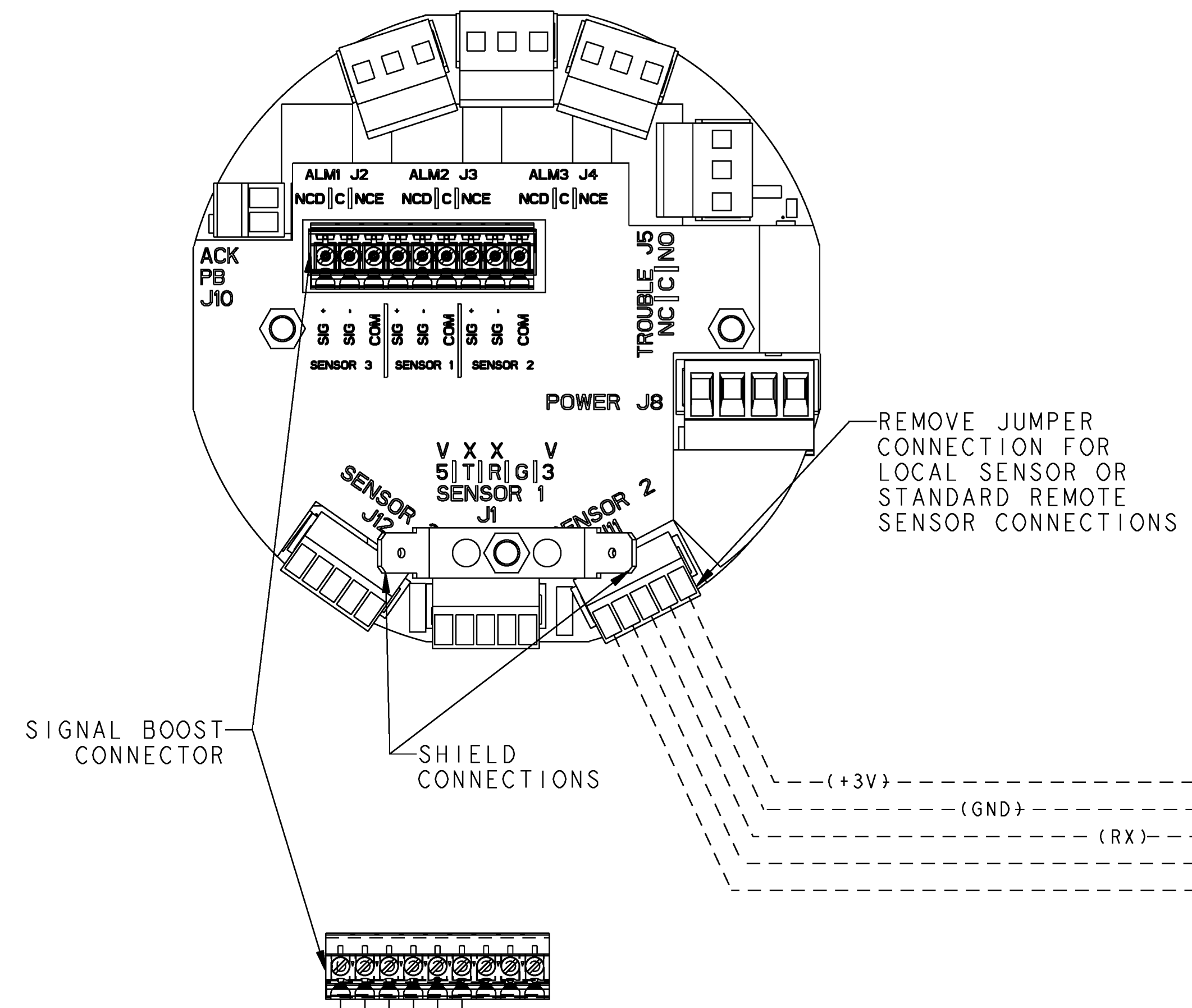
BLACK = K	GREEN = G
BROWN = N	BLUE = B
RED = R	VIOLET = V
ORANGE = O	GRAY = A
YELLOW = Y	WHITE = W
PINK = P	TAN = T

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CRITICAL Δ	CODE SYMBOLS	DATE 10-21-2004	INSTALLATION OUTLINE, MODBUS, ULTIMA XA	
MAJOR A Δ	(NO MARK)	DRAWN BY BP		
MAJOR B Δ		CHECKED BY D. BRUCE		
100% INSPECTION Δ		PROJ. ENGR. S. TURNER		
TOLERANCES UNLESS OTHERWISE SPECIFIED		11-12-2004	QUALITY ASSURANCE J. DANNHARDT	
FRACTIONAL ± 1/64		11-12-2004	MANUFACTURING D. ALWARD	
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

ITEM NO.	MATERIAL MASTER NO.	QTY. REQD.	DESCRIPTION
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NOV 16 2004

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

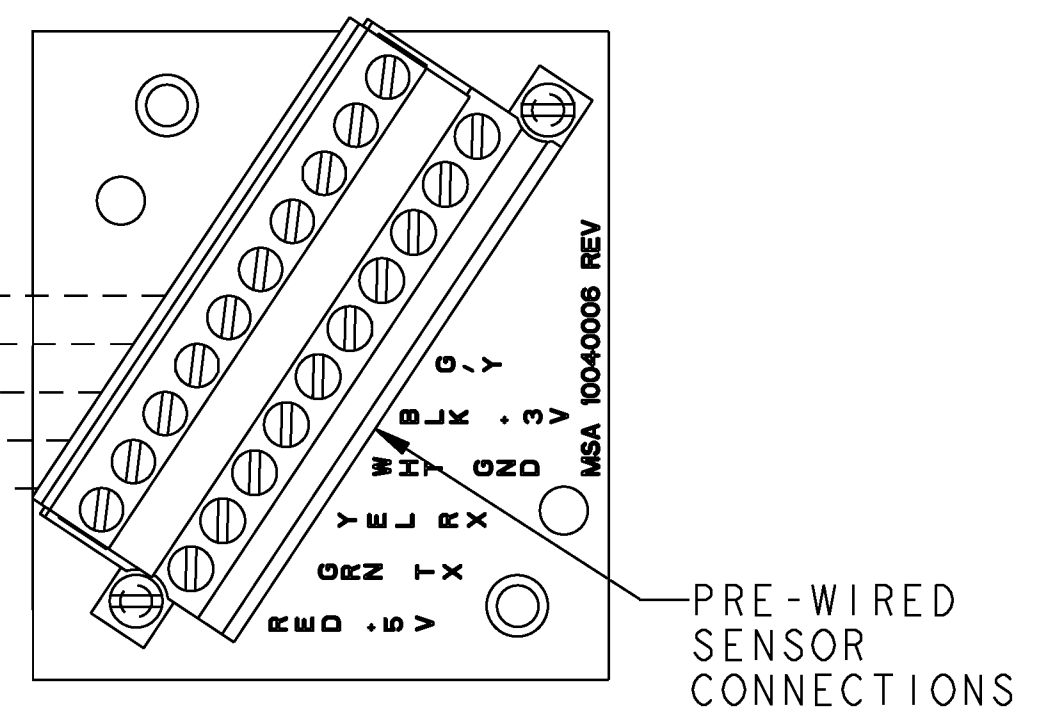


**TABLE 2
REMOTE SENSOR POWER CONSUMPTION
(AC OR DC VERSION)**

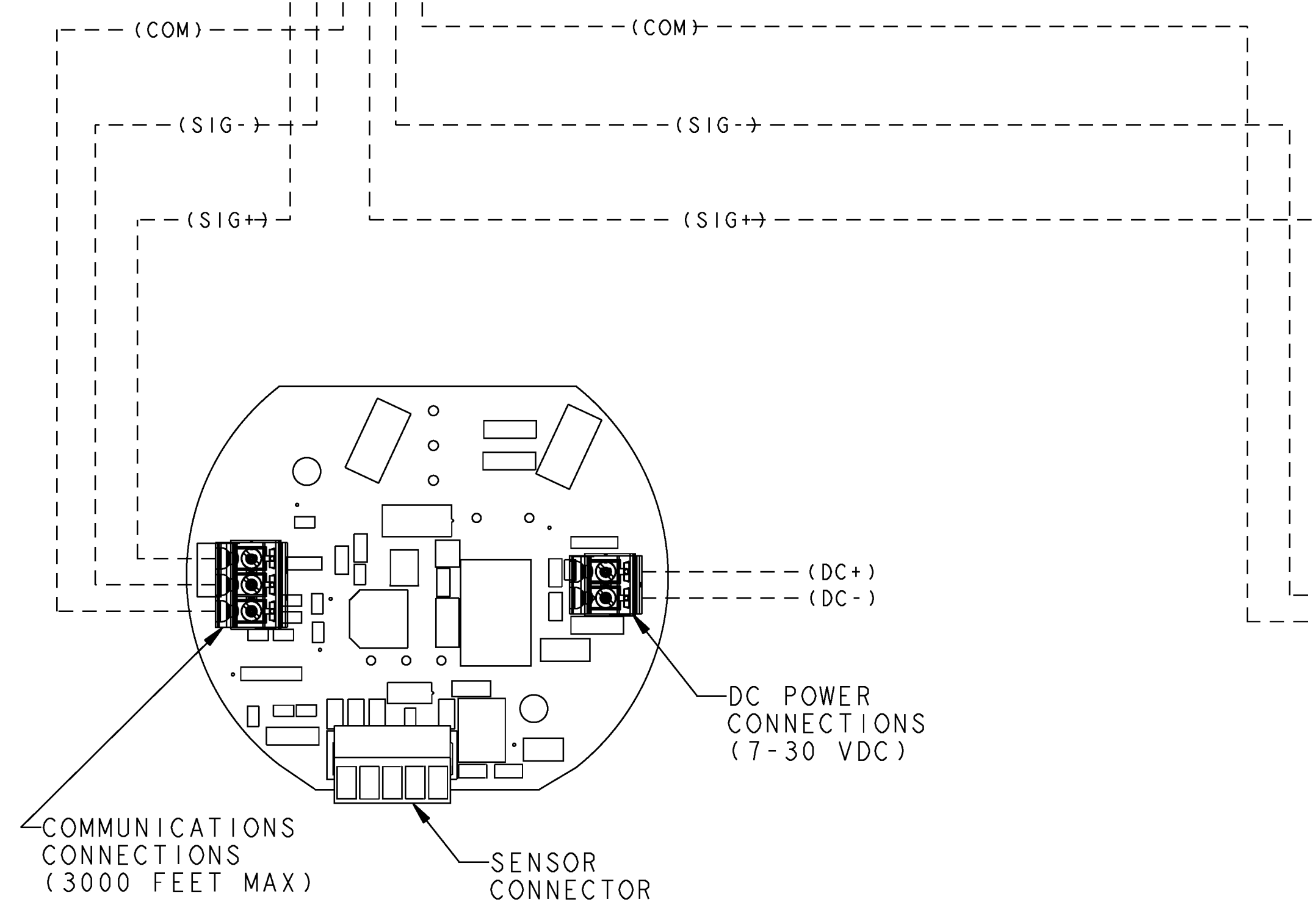
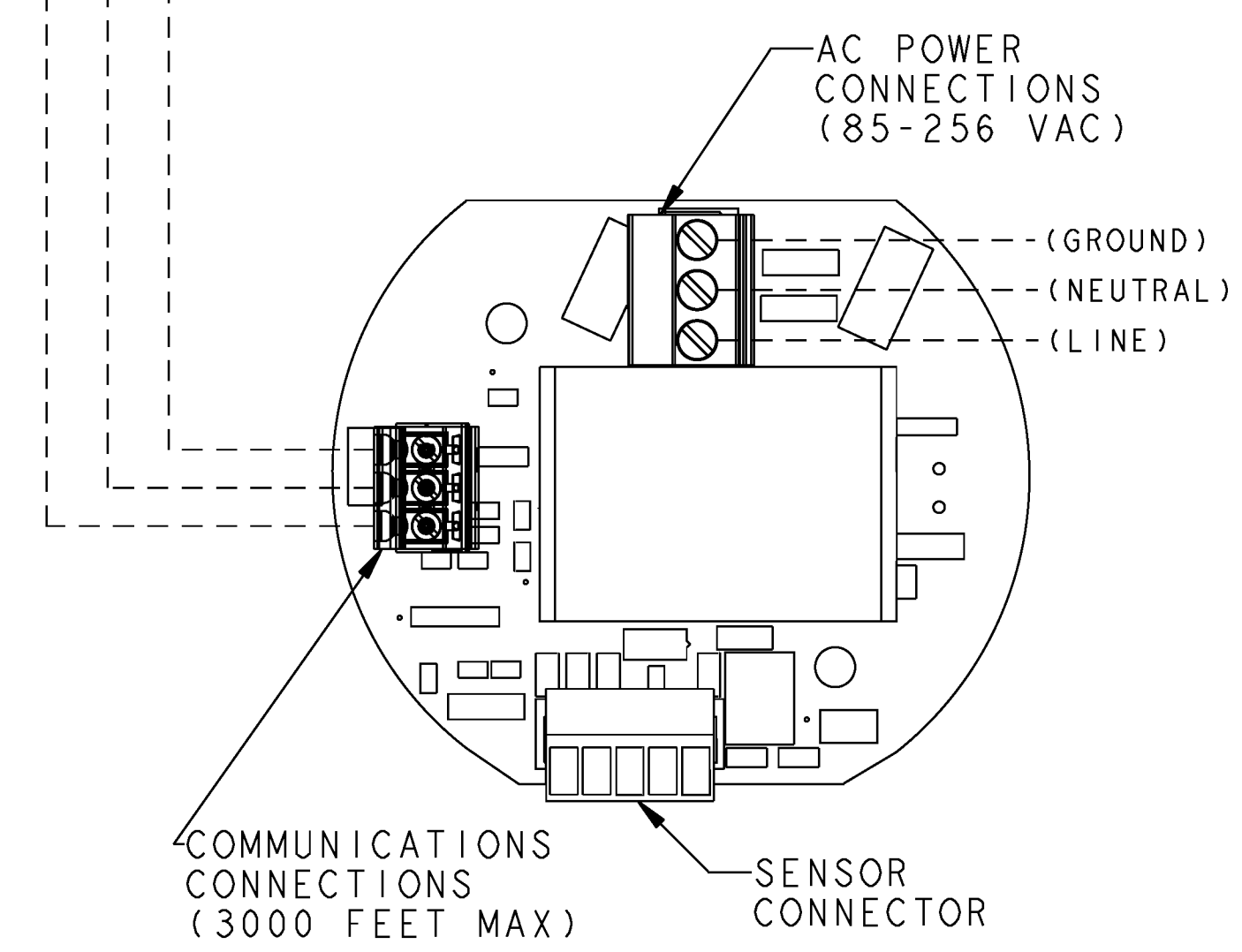
SENSOR TYPE	MAXIMUM POWER CONSUMPTION
CATALYTIC	4.5 WATTS
Xlr	5 WATTS
E-CHEM	1.5 WATTS

**TABLE 4
TRANSMITTER POWER CONSUMPTION**

TRANSMITTER WITHOUT RELAYS	0.5 WATTS
TRANSMITTER WITH RELAYS	1.5 WATTS



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



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

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

- 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.

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	CRITICAL Δ	DRAWN BY DATE BP 10-21-2004	INSTALLATION OUTLINE, MODBUS, ULTIMA XA	
	MAJOR A Δ (NO MARK)	CHECKED BY D. BRUCE 11-12-2004		
	MAJOR B Δ	PROJ. ENGR. S. TURNER 11-12-2004		
	100% INSPECTION Δ	QUALITY ASSURANCE J. DANNHARDT 11-12-2004	CADD REF: 10000021204	SCALE: 1.000
	TOLERANCES UNLESS OTHERWISE SPECIFIED	MANUFACTURING D. ALWARD 11-12-2004	DOCUMENT NO. D SK 10000021204	SHEET 3 OF 4
	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			

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

REVISIONS	
NOV 16 2004	

TYPICAL ModBUS NETWORK TOPOGRAPHY

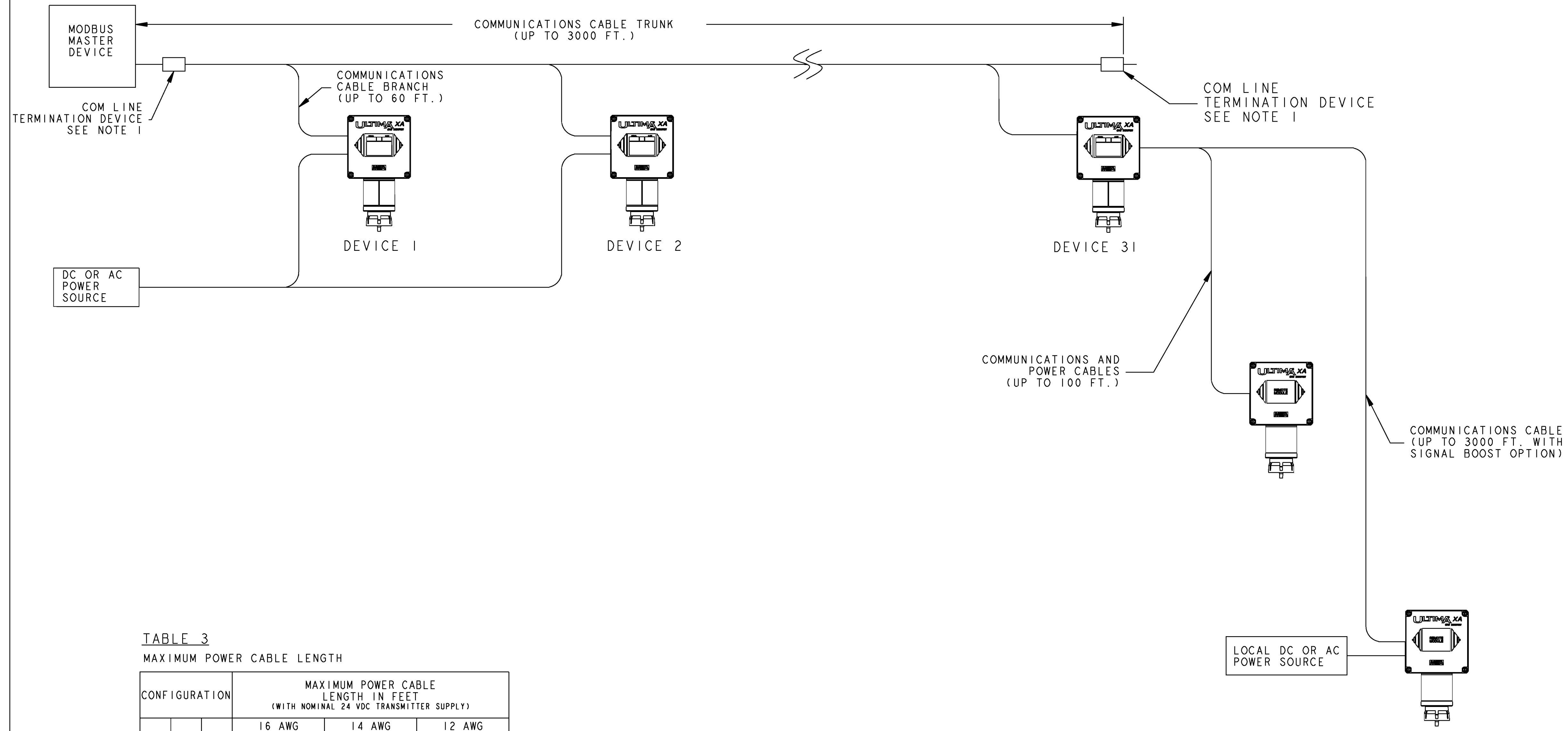


TABLE 3
MAXIMUM POWER CABLE LENGTH

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 OPTION	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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CRITICAL	MAJOR A	MAJOR B	100% INSPECTION	
CODE SYMBOLS		DATE 10-21-2004	DRAWN BY BP	
TOLERANCES UNLESS OTHERWISE SPECIFIED		CHECKED BY D. BRUCE	DATE 11-12-2004	
FRACTIONAL	± 1/64	PROJ. ENGR. S. TURNER	DATE 11-12-2004	
2 PL DEC.	± 0.01	QUALITY ASSURANCE J. DANNHARDT	DATE 11-12-2004	
3 PL DEC.	± 0.005	MANUFACTURING D. ALWARD	DATE 11-12-2004	
ANGULAR	± 1 deg.	CADD REF: 10000021204	SCALE: 1:000	
SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES		DOCUMENT NO. D SK 10000021204	SHEET 4 OF 4	

INSTALLATION OUTLINE, MODBUS, ULTIMA XA