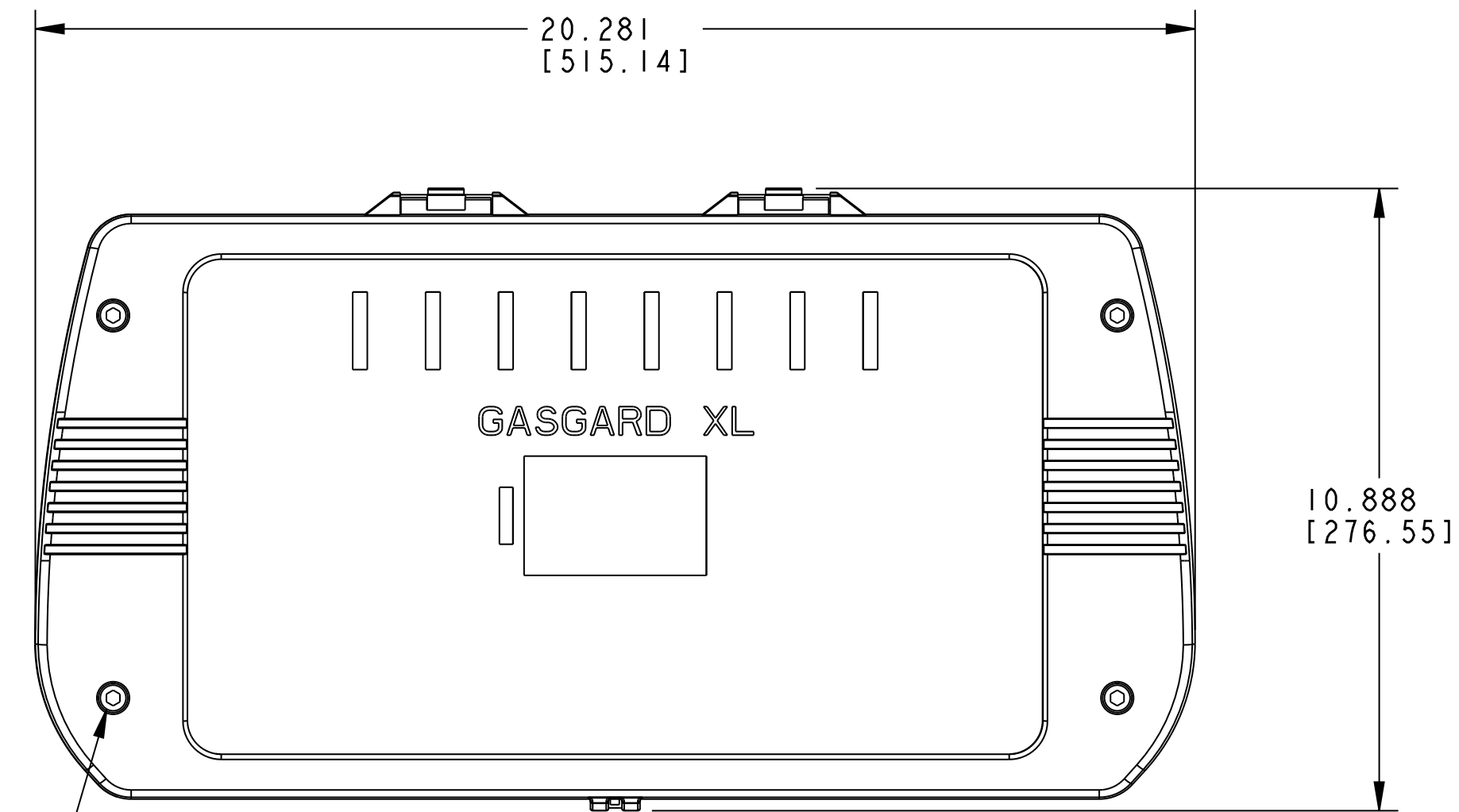
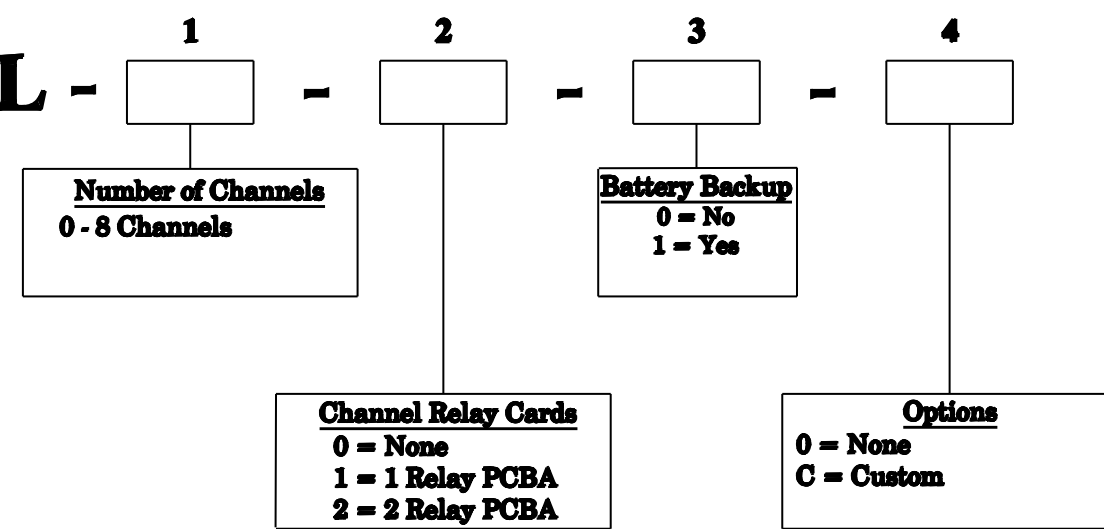
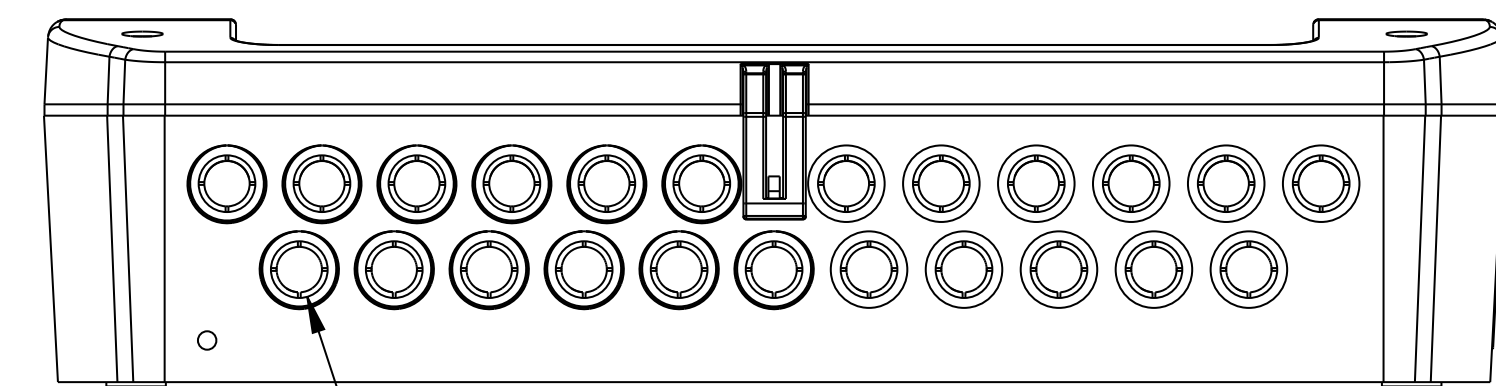


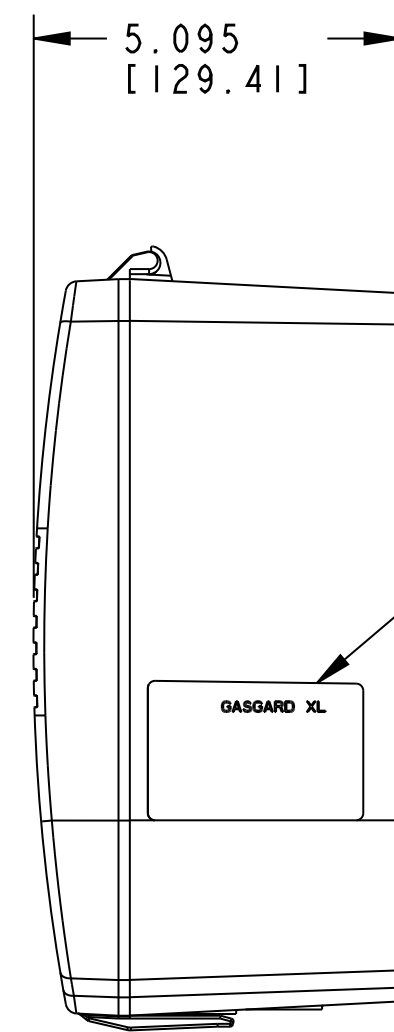
A - GASGARDXL



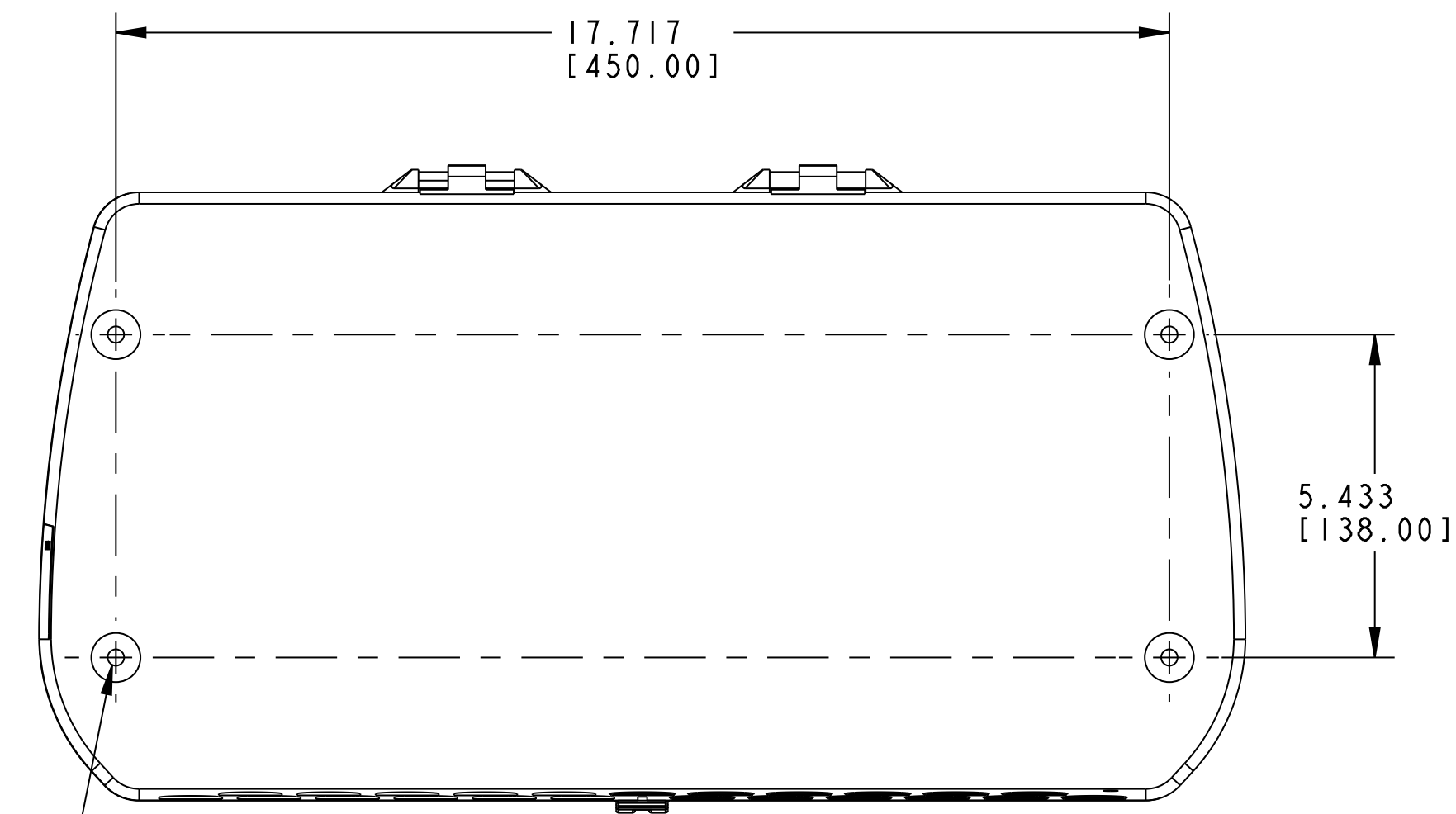
M8 BOLTS (4 PLACES)
USE METRIC ALLEN
WRENCH #6 TO REMOVE



KNOCK-OUTS FOR M20 CABLE GRIPS
(HOLE Ø .790") 23 PLACES



SEE NOTE 3



CLEARANCE HOLES FOR
1/4-20 OR M6 SCREWS
(4 PLACES)

NOTE:

1. DIMENSIONS SHOWN IN INCHES [MILLIMETERS].
2. INSTRUMENT HOUSING IS MADE OF ABS PLASTIC.
3. CHECK TAG FOR AREA CLASSIFICATION.
4. - - - - INDICATES FIELD CONNECTIONS BY OTHERS.

(CONTINUED ON SHEET 2)

REVISIONS	
①	10-22-2008 INITIAL RELEASE FlameGard was SharpEye on SHEET 4 NOTE 11 and VIEW GJT
	OCT 29 2008
②	3-24-2010 REVISED NOTES 7, 8 & 9 ECO#7000002398A LRB JS
	MAR 24 2010

LIFECYCLE STATE	REVISION
Production	2

CUSTOMER _____

P.O. NO. _____

MSA NO. _____

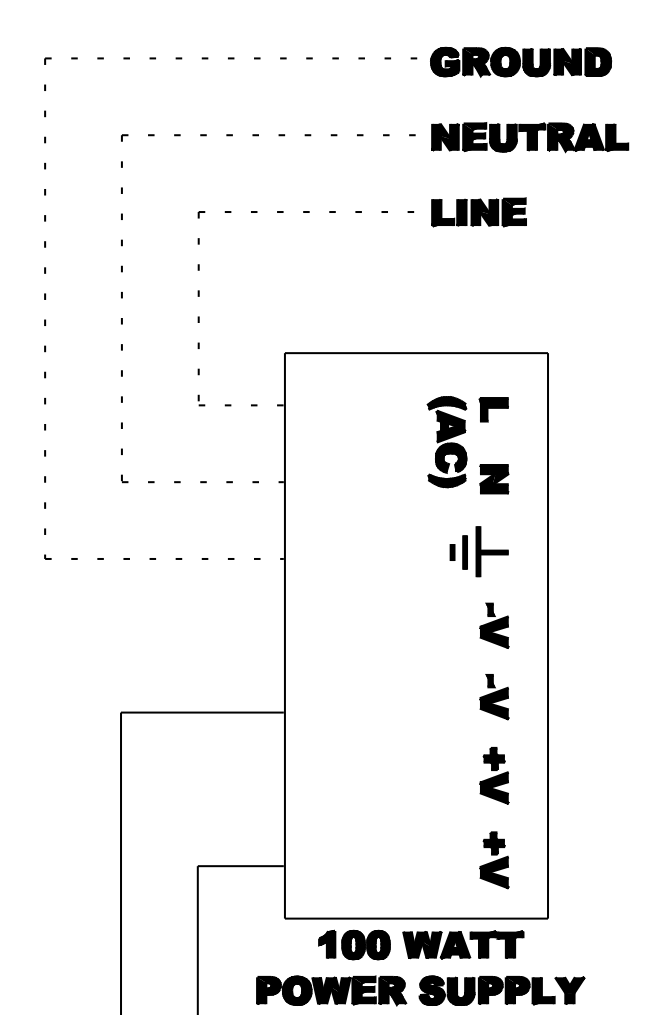
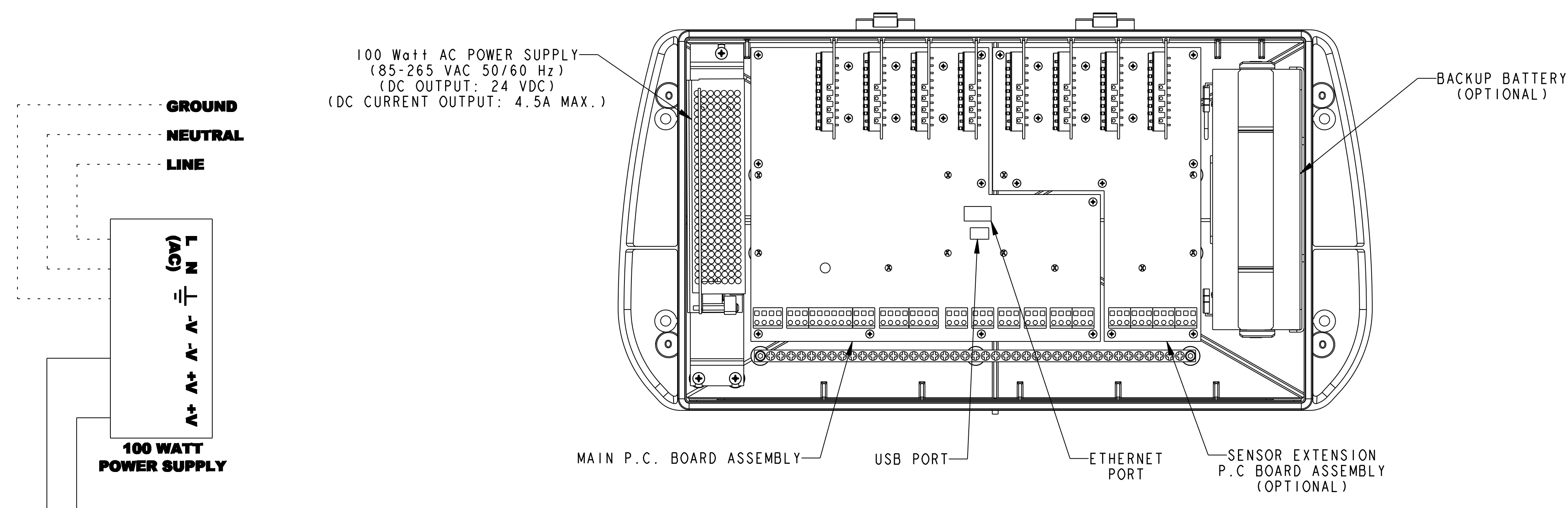
LOCATION _____

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	APPROVAL AGENCY CODE: YES NIOSH ATTR. DOC.: .	
	CODE SYMBOLS	JOB NO. 30009741 PH0703	
	CRITICAL Δ	DRAWN BY DATE	
	MAJOR A Δ	GT 10-2-2008	
	MAJOR B Δ (NO MARK)	CHECKED BY	
	100% INSPECTION Δ	J. DILEO 10-28-08	
	TOLERANCES UNLESS OTHERWISE SPECIFIED	PROJ. ENGR.	
	FRACTIONAL $\pm 1/64$	S. TURNER 10-28-08	
	2 PL DEC. ± 0.01	QUALITY ASSURANCE	
	3 PL DEC. ± 0.005	J. DANNHARDT 10-28-08	
	ANGULAR ± 1 deg.	MANUFACTURING	
	SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES	A. POLOCHAK 10-28-08	
		CADD REF: SK3015-1021	SCALE: 1:000
		D.	SK3015-1021
			SHEET 1 OF 4

INSTALLATION OUTLINE, GASGARD XL



100 Watt AC POWER SUPPLY
 (85-265 VAC 50/60 Hz)
 (DC OUTPUT: 24 VDC)
 (DC CURRENT OUTPUT: 4.5A MAX.)

BACKUP BATTERY
 (OPTIONAL)

MAIN P.C. BOARD ASSEMBLY USB PORT ETHERNET PORT SENSOR EXTENSION P.C. BOARD ASSEMBLY (OPTIONAL)

MAIN P.C. BOARD ASSEMBLY

Main		Battery		Sensor 1		Sensor 2		Sensor 3		Sensor 4		Reset		Acknowledge		RS485				Alarm1			Alarm2			Horn1			Horn2			Fault									
-24V	GND	-24V	GND	-24V/K	IN/0	GND/D	IN/0	-24V/K	IN/0	GND/D	IN/0	-24V/K	IN/0	GND/D	IN/0	-24V	IN	-24V	IN	VDD	A	B	GND	NO	COM	NC	NO	COM	NC	NO	COM	NC	NO	COM	NC	NC	COM	NO	NO	COM	NC
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42

SENSOR EXTENSION P.C. BOARD ASSEMBLY

Sensor 5		Sensor 6		Sensor 7		Sensor 8	
-24V/K	IN/0	GND/D	IN/0	-24V/K	IN/0	GND/D	IN/0
43	44	45	46	47	48	49	50
51	52	53	54				

FERRITE FILTER

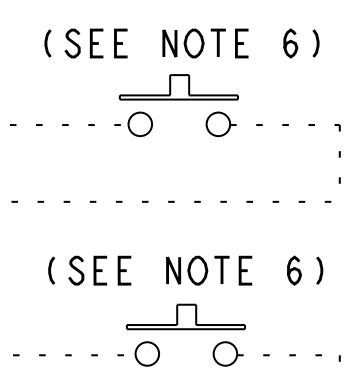
(GND) GROUND
 (IN) 4-20mA
 (+24V) +24 VDC
 (TYPICAL)
 FOR ALL SENSORS
 SEE SHEET 4

NORMALLY CLOSED
 COMMON
 NORMALLY OPEN
 (TYPICAL)
 ALARM AND HORN RELAYS
 (SEE NOTE 7)

NORMALLY CLOSED
 COMMON
 NORMALLY OPEN
 COMMON
 NORMALLY OPEN
 COMMON
 NORMALLY CLOSED
 (SEE NOTE 8)

BACKUP BATTERY
 (SEE NOTE 5)

RED
 BLACK
 THESE TWO WIRES
 SUPPLIED WITH BATTERY
 AND
 INSTALLED BY CUSTOMER



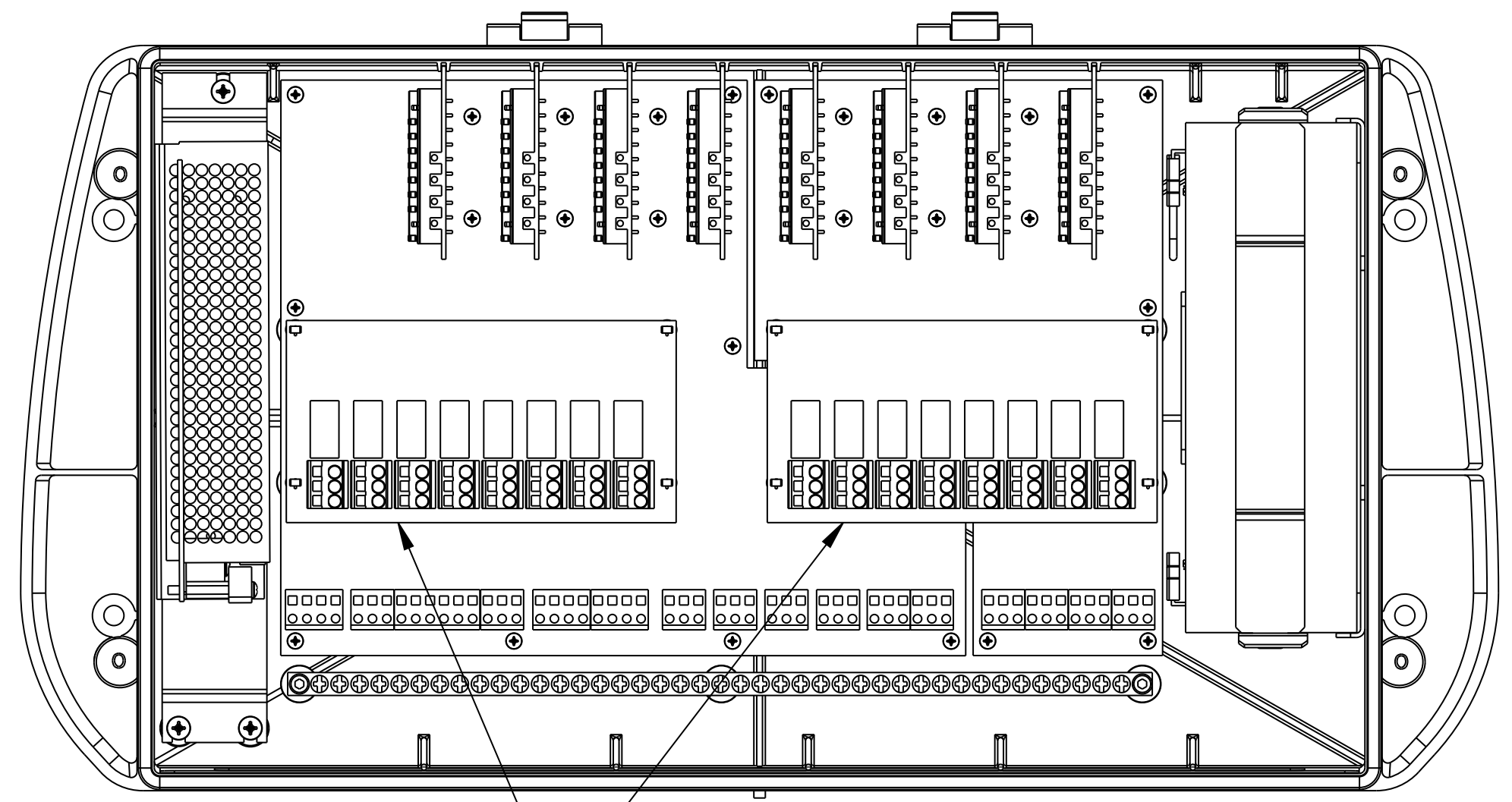
NOTE: (CONTINUED FROM SHEET 1)

- BATTERY IS SHIPPED DISCONNECTED. CONNECT DURING INSTALLATION OF THE GASGARD XL. UNIT MUST BE CONFIGURED FOR BATTERY BACKUP THROUGH THE PC SOFTWARE. (SEE MANUAL FOR DETAILS)
 - CUSTOMER INSTALLED (NO) NORMALLY OPEN PUSH BUTTON SWITCH.
 - RELAY IS (SPDT) SINGLE POLE DOUBLE THROW.
CONTACT RATING: 5A@250VAC RESISTIVE or 5A@24VDC RESISTIVE
 - RELAY IS (DPDT) DOUBLE POLE DOUBLE THROW.
CONTACT RATING: 5A@250VAC RESISTIVE or 5A@24VDC RESISTIVE
- (CONTINUED ON SHEET 3)

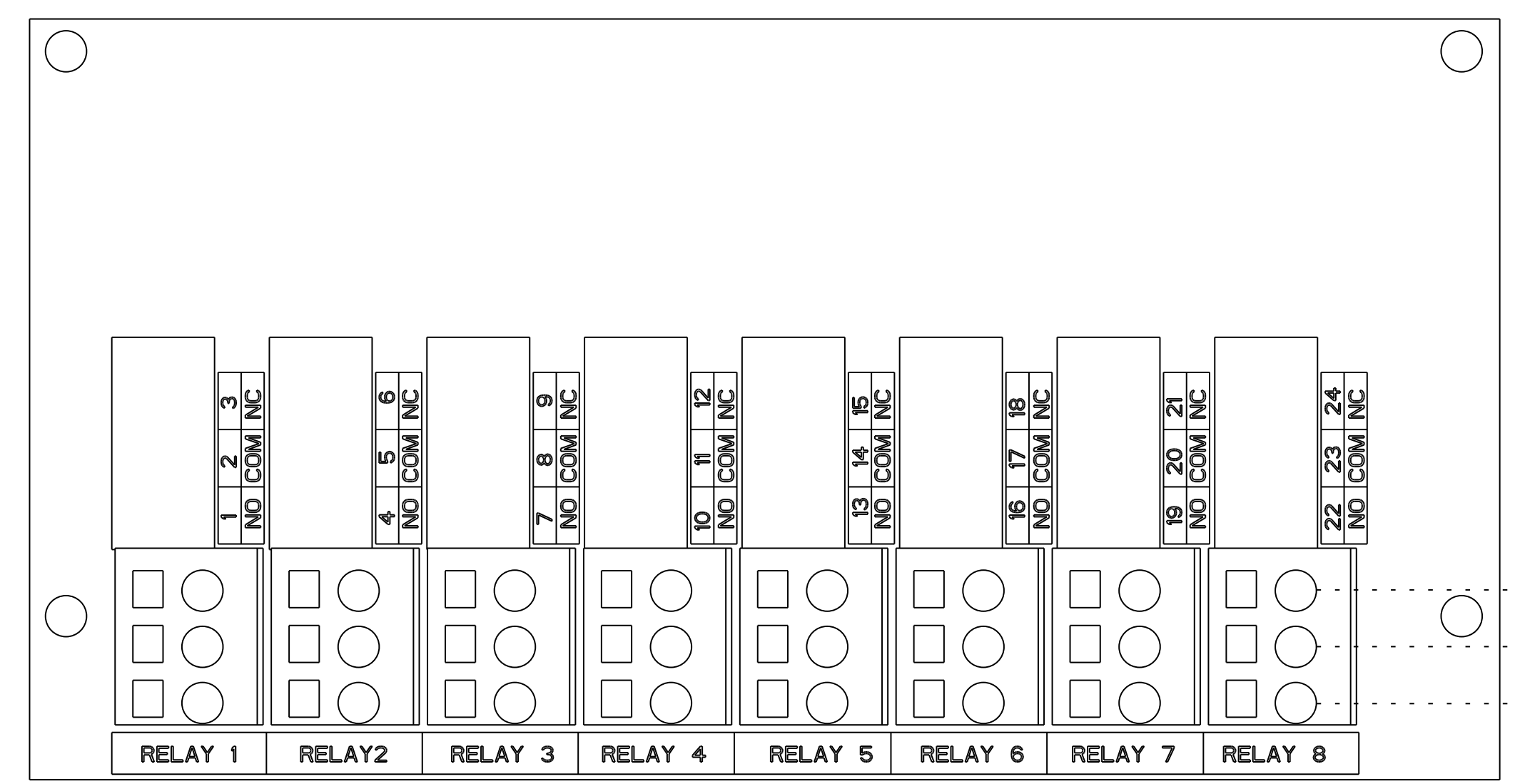
AUTHORIZED COUNTRY	MSA	MINE SAFETY APPLIANCES CO. PITTSBURGH, PA 15230, USA	THIS DRAWING IS THE PROPERTY OF MSA AND IS MADE AVAILABLE TO YOU IN CONFIDENCE AND SUBJECT TO THE FOLLOWING: NO PERMISSION IS GRANTED TO PUBLISH, USE, REPRODUCE, TRANSMIT OR DISCLOSE THIS DRAWING, OR ANY INFORMATION CONTAINED 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. 30009741 PH0703	APPROVAL AGENCY CODE: YES NIOSH ATTR. DOC.: .	REVISION 2
CRITICAL	MAJOR A	MAJOR B	100% INSPECTION	
CODE SYMBOLS	MINOR (NO MARK)	DATE 10-2-2008	PROJ. ENGR. S. TURNER 10-28-08	
TOLERANCES UNLESS OTHERWISE SPECIFIED		CHECKED BY J. DILEO 10-28-08	QUALITY ASSURANCE J. DANNHARDT 10-28-08	
FRACTIONAL ± 1/64		MANUFACTURING A. POLOCHAK 10-28-08	CADD REF: SK3015-1021	SCALE: 1:000
2 PL DEC. ± 0.01				
3 PL DEC. ± 0.005				
ANGULAR ± 1 deg.				
SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES				
D.			SK3015-1021	SHEET 2 OF 4

**INSTALLATION OUTLINE,
 GASGARD XL**

REVISIONS	
REV. 1	
OCT 29 2008	
REV. 2	
MAR 24 2010	



CHANNEL RELAY
P.C. BOARD ASSEMBLIES
(OPTIONAL)



NORMALLY CLOSED
COMMON
NORMALLY OPEN } TYPICAL WIRING FOR RELAYS 1-8 (SEE NOTE 9)

NOTE: (CONTINUED FROM SHEET 2)

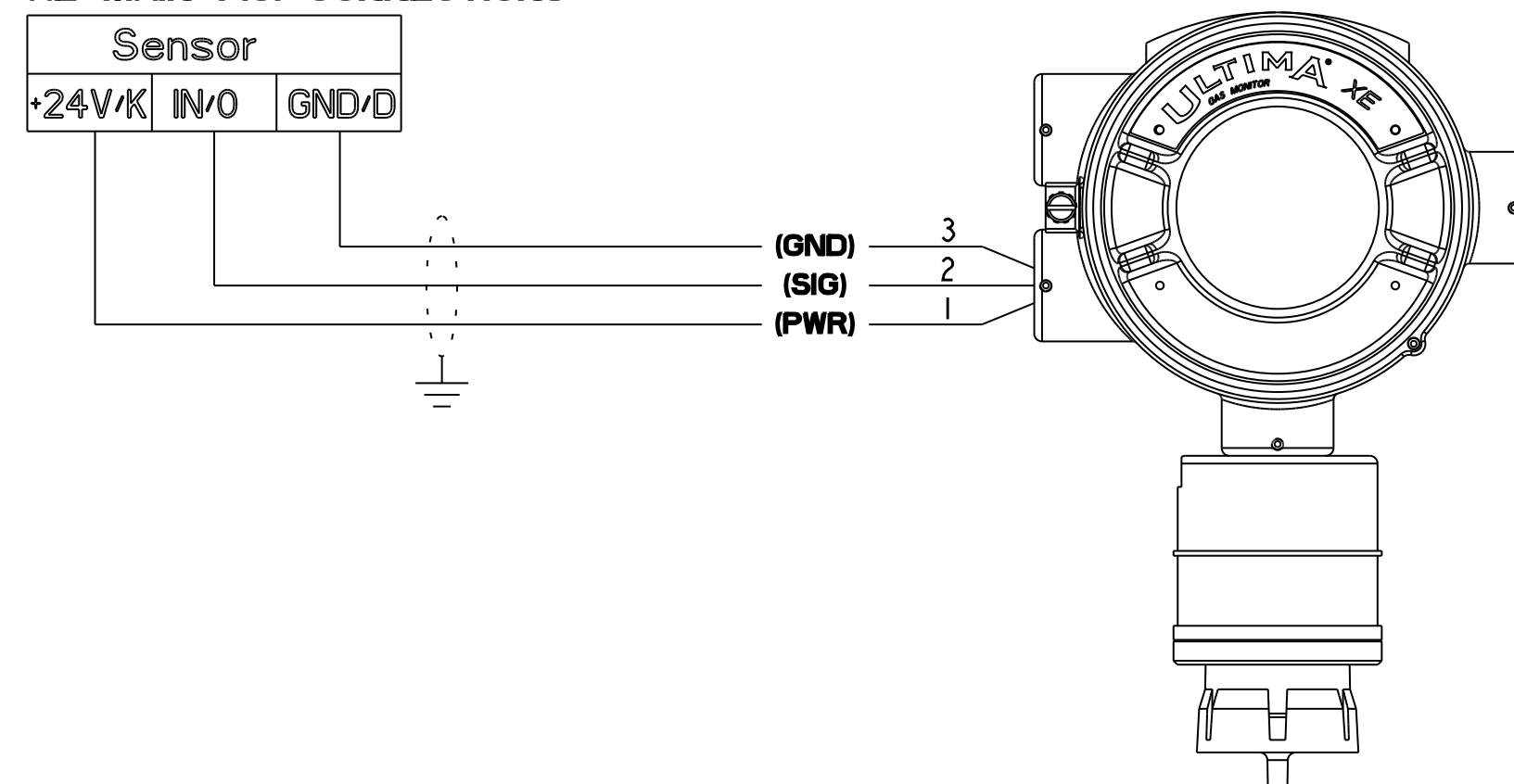
9. RELAYS ARE (SPDT) SINGLE POLE DOUBLE THROW. CONTACT RATING: 5A@250VAC RESISTIVE or 5A@24VDC RESISTIVE

(CONTINUED ON SHEET 4)

LIFECYCLE STATE	REVISION
Production	2

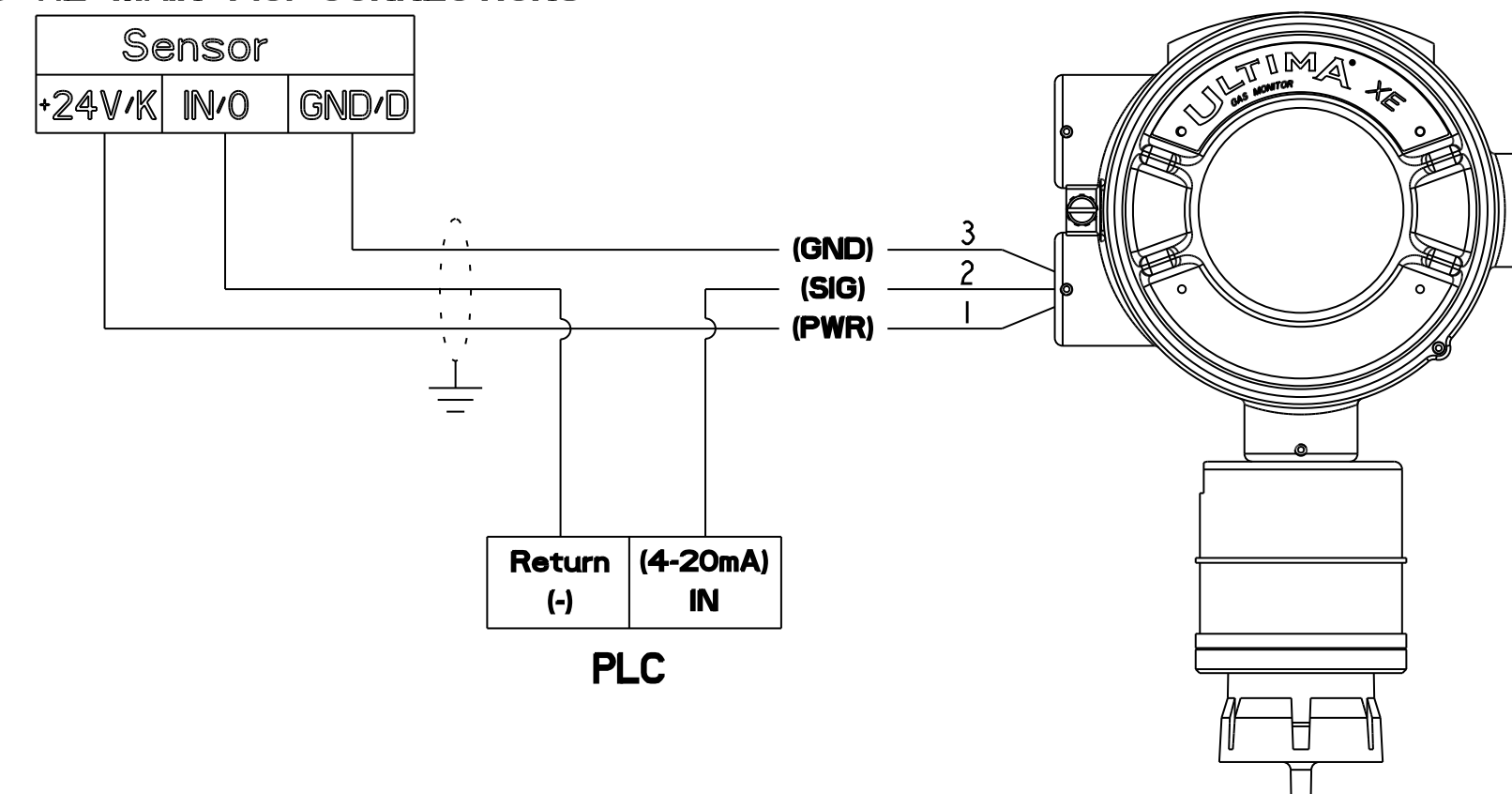
AUTHORIZED COUNTRY	MSA	MINE SAFETY APPLIANCES CO. PITTSBURGH, PA 15230, USA	THIS DRAWING IS THE PROPERTY OF MSA AND IS MADE AVAILABLE TO YOU IN CONFIDENCE AND SUBJECT TO THE FOLLOWING: NO PERMISSION IS GRANTED TO PUBLISH, USE, REPRODUCE, TRANSMIT OR DISCLOSE THIS DRAWING, OR ANY INFORMATION CONTAINED 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. 30009741 PH0703	APPROVAL AGENCY CODE: YES NIOSH ATTR. DOC.:	
CODE SYMBOLS	CRITICAL Δ	MINOR (NO MARK)	100% INSPECTION Δ	TOLERANCES UNLESS OTHERWISE SPECIFIED
MAJOR A Δ	MAJOR B Δ	100% INSPECTION Δ	FRACTIONAL $\pm 1/64$	2 PL DEC. ± 0.01
MAJOR B Δ	100% INSPECTION Δ	100% INSPECTION Δ	3 PL DEC. ± 0.005	ANGULAR ± 1 deg.
100% INSPECTION Δ	100% INSPECTION Δ	100% INSPECTION Δ	SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES	
DRAWN BY DATE		CHECKED BY DATE		INSTALLATION OUTLINE, GASGARD XL
GT 10-2-2008		J. DILEO 10-28-08		
S. TURNER 10-28-08		J. DANNHARDT 10-28-08		CADD REF: SK3015-1021 SCALE: 1:000 SK3015-1021
A. POLOCHAK 10-28-08		D.		
				SHEET 3 OF 4

GASGARD XL MAIN P.C. CONNECTIONS



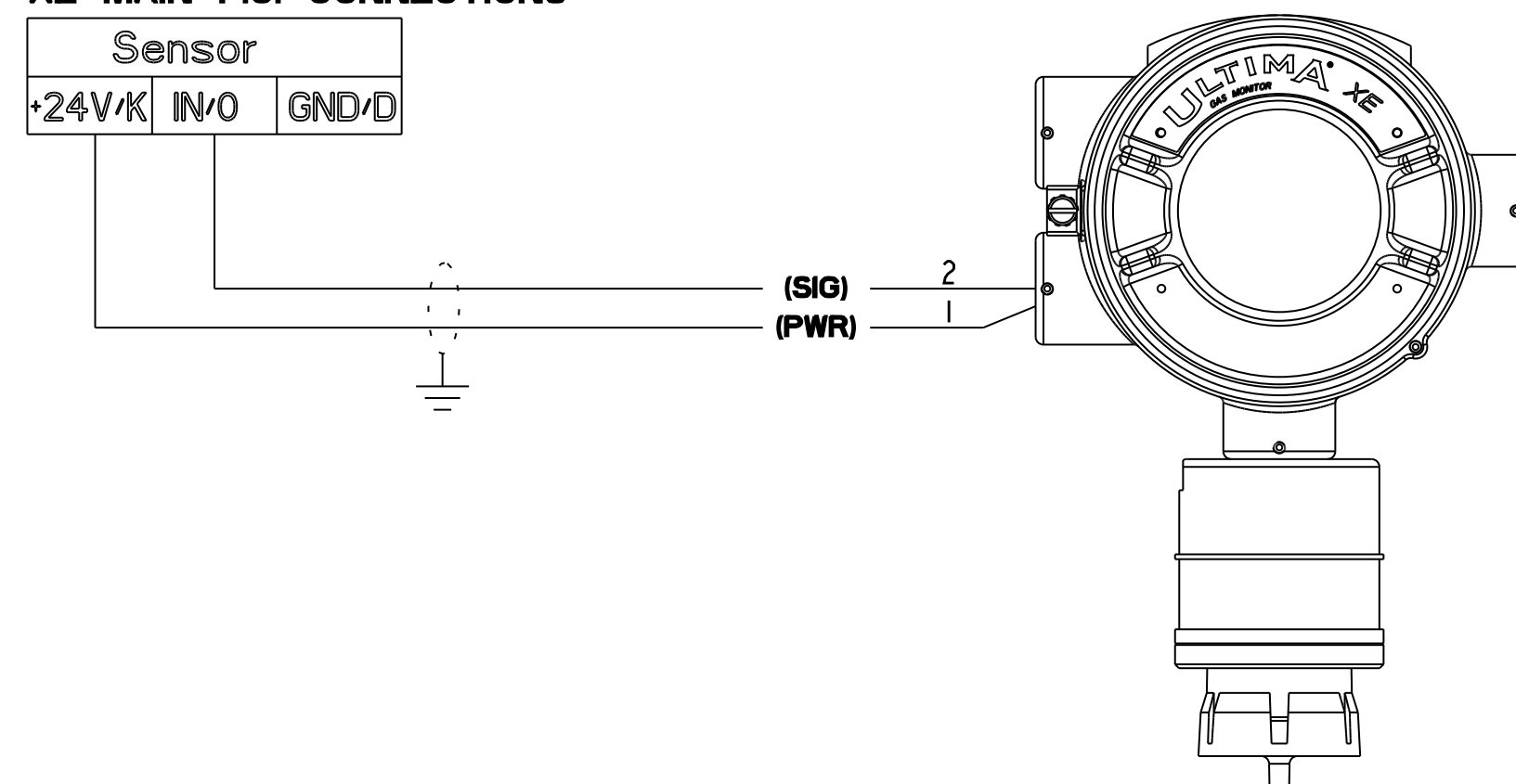
ULTIMA XE or XIR (3 WIRE)
(SEE NOTE 10)

GASGARD XL MAIN P.C. CONNECTIONS



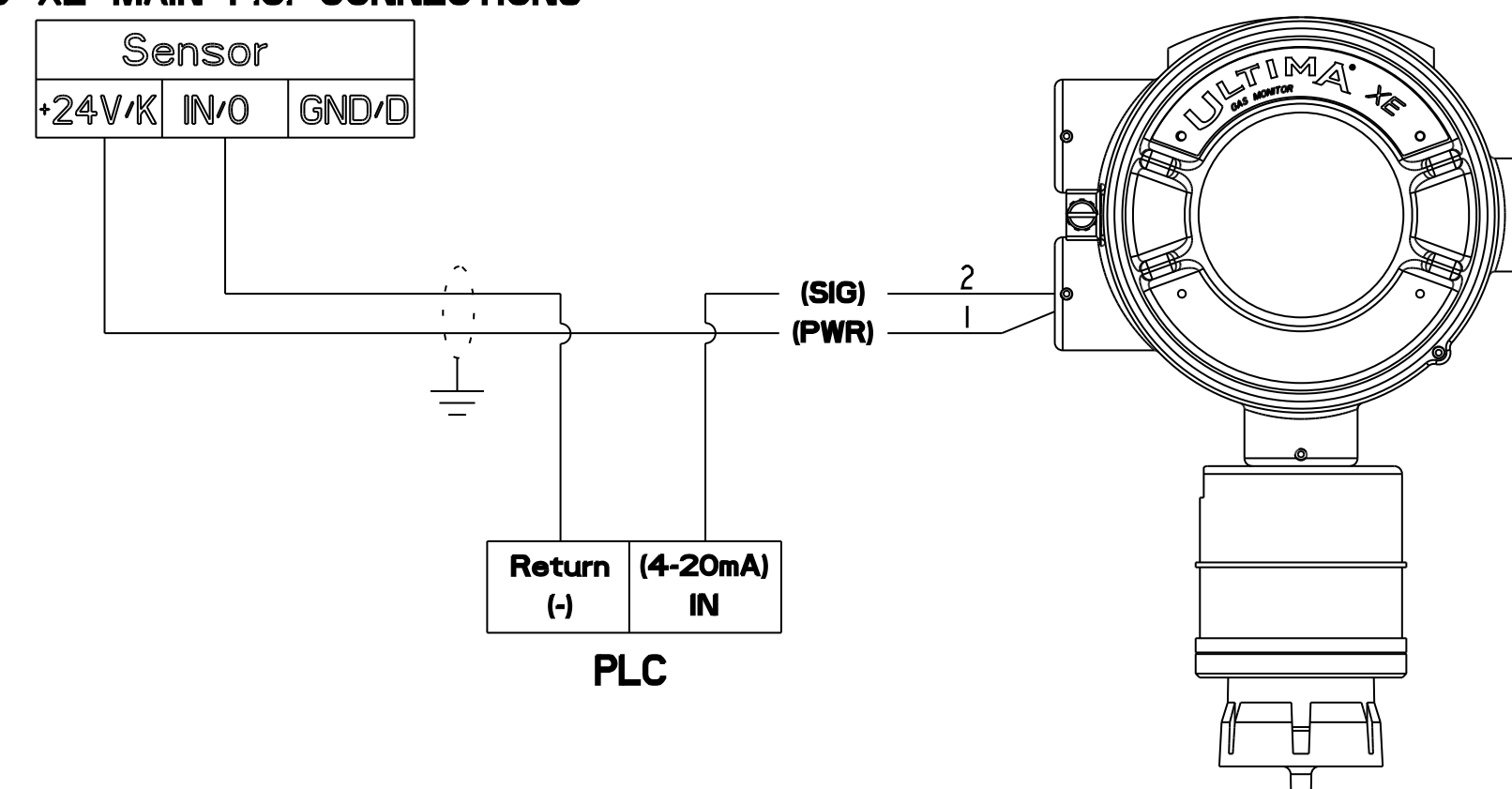
CONNECTIONS TO PLC (3 WIRE)
(SEE NOTE 13)

GASGARD XL MAIN P.C. CONNECTIONS



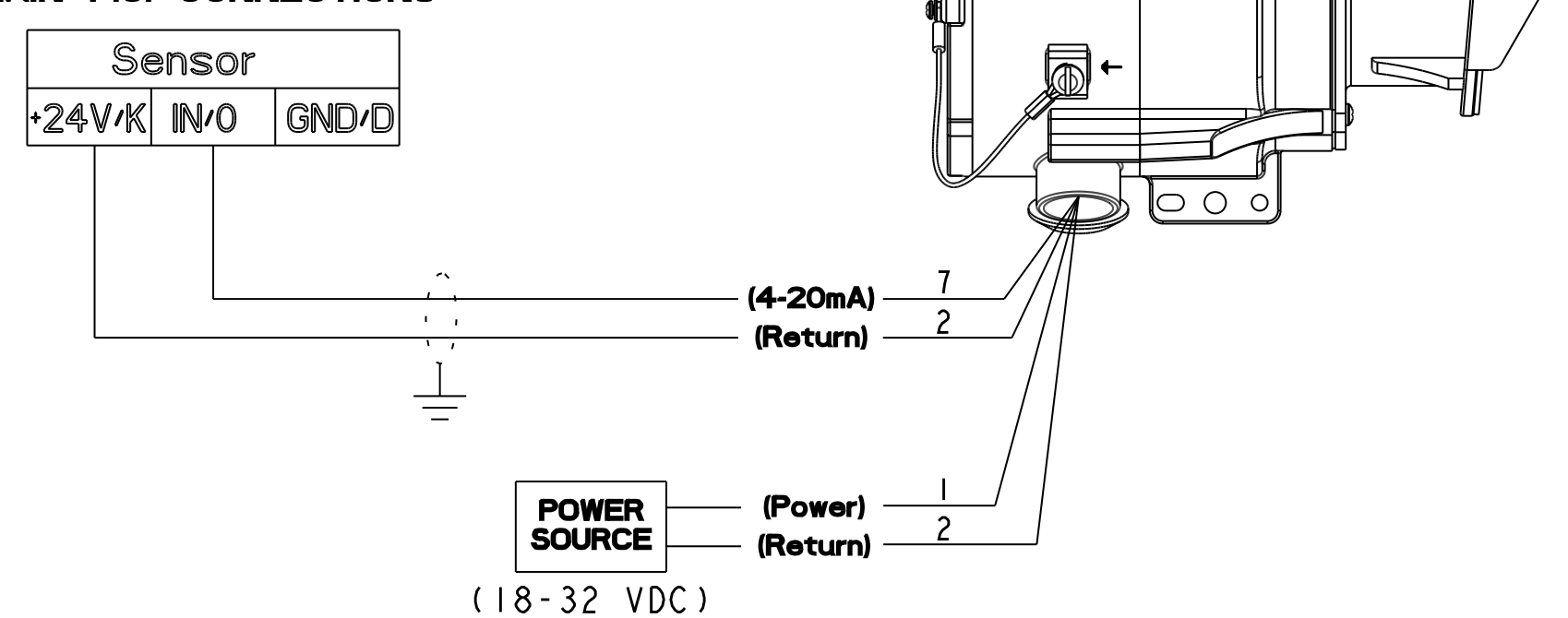
ULTIMA XE (2 WIRE)
(SEE NOTE 10)

GASGARD XL MAIN P.C. CONNECTIONS



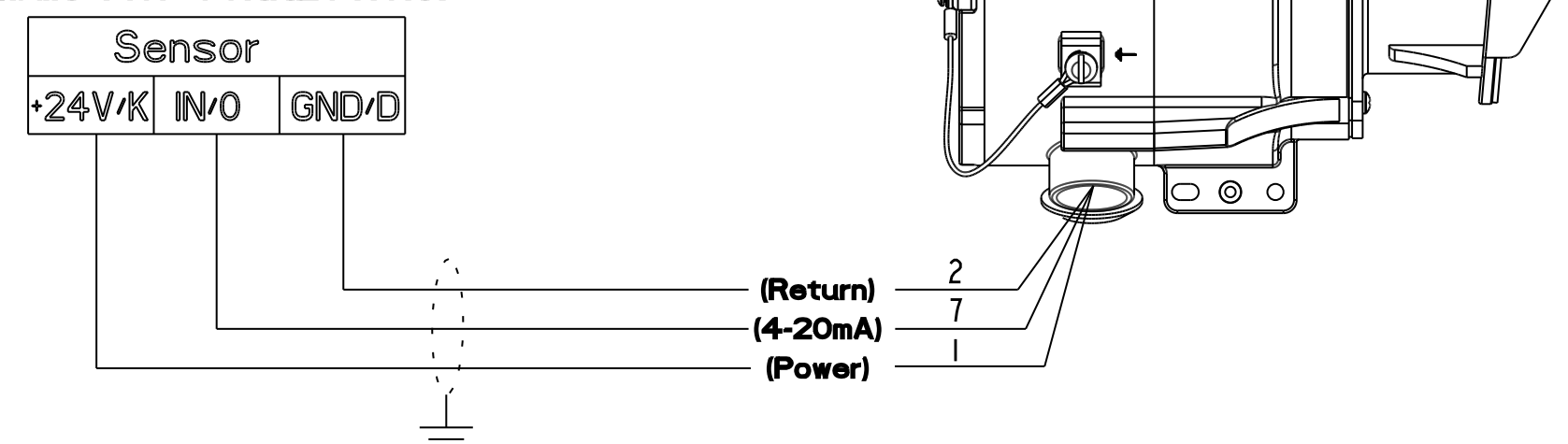
CONNECTIONS TO PLC (2 WIRE)
(SEE NOTE 13)

GASGARD XL MAIN P.C. CONNECTIONS



SafEye
(SEE NOTE 12)

GASGARD XL MAIN P.C. CONNECTIONS



FlameGard ①
(SEE NOTE 11)

NOTE: (CONTINUED FROM SHEET 3)

10. SEE ULTIMA X MANUAL and INSTALLATION OUTLINE DRAWINGS FOR MORE DETAILS.
- ① 11. SEE FlameGard MANUAL FOR MORE DETAILS.
12. SEE SafEye MANUAL FOR MORE DETAILS.
13. MAX. LOOP RESISTANCE WITH PLC and GASGARD XL NOT TO EXCEED 600 Ohms. THE PLC 4-20mA INPUT MUST BE ISOLATED FROM GROUND.

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	MSA STANDARD SHOP PRACTICES APPLY	JOB NO. 30009741 PH0703	APPROVAL AGENCY CODE: YES NIOSH ATTR. DOC.:	REVISION 2
	CODE SYMBOLS	DRAWN BY DATE		
	CRITICAL Δ	GT 10-2-2008		
	MAJOR A Δ (NO MARK)	CHECKED BY		
	MAJOR B Δ	J. DILEO 10-28-08		
	100% INSPECTION Δ	PROJ. ENGR.		
	TOLERANCES UNLESS OTHERWISE SPECIFIED	S. TURNER 10-28-08		
	FRACTIONAL $\pm 1/64$	QUALITY ASSURANCE		
	2 PL DEC. ± 0.01	J. DANNHARDT 10-28-08		
	3 PL DEC. ± 0.005	MANUFACTURING		
	ANGULAR ± 1 deg.	A. POLOCHAK 10-28-08		
	SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES			
		D.	CADD REF: SK3015-1021	SCALE: 1:000
			INSTALLATION OUTLINE, GASGARD XL	SHEET 4 OF 4
			SK3015-1021	