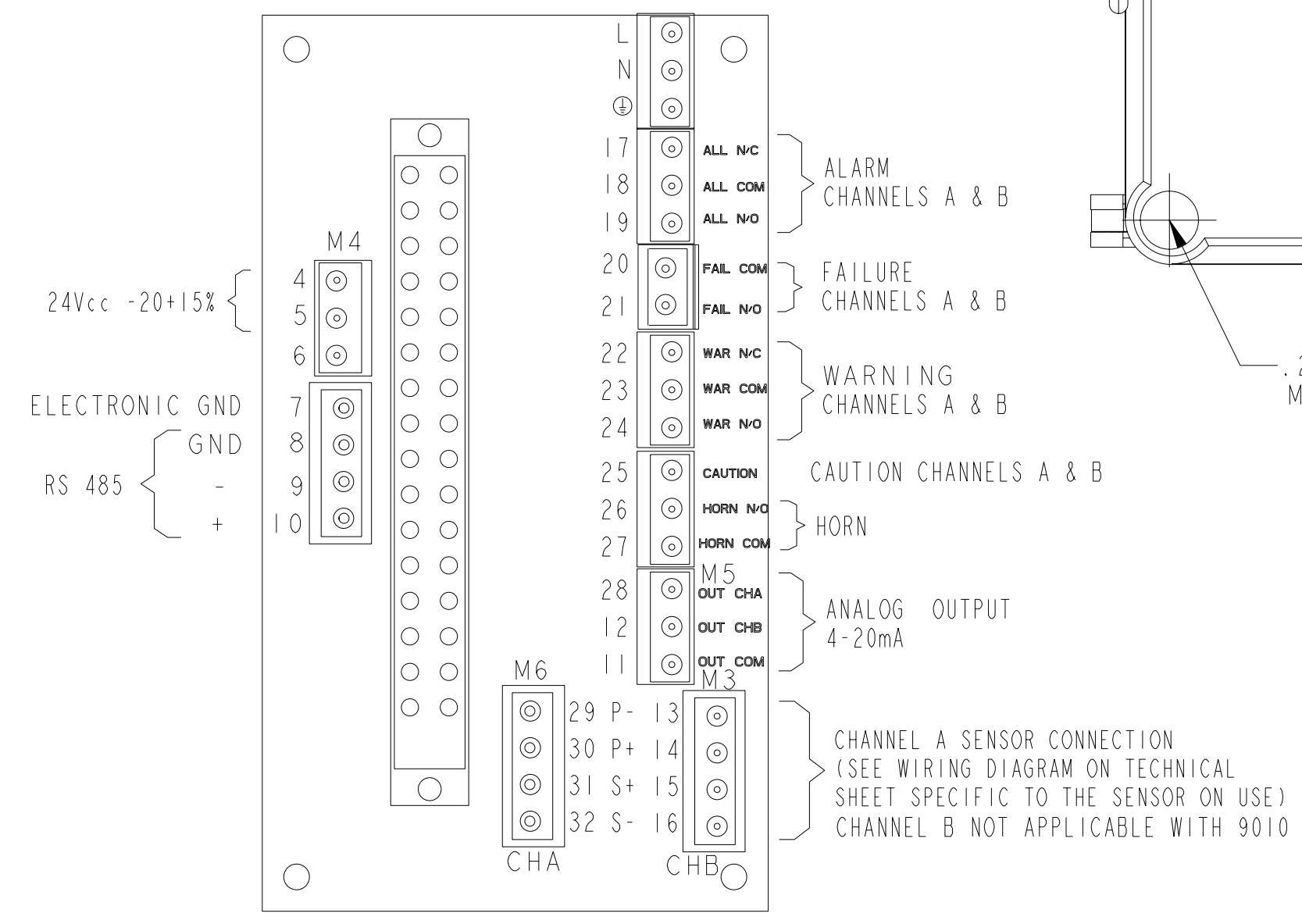
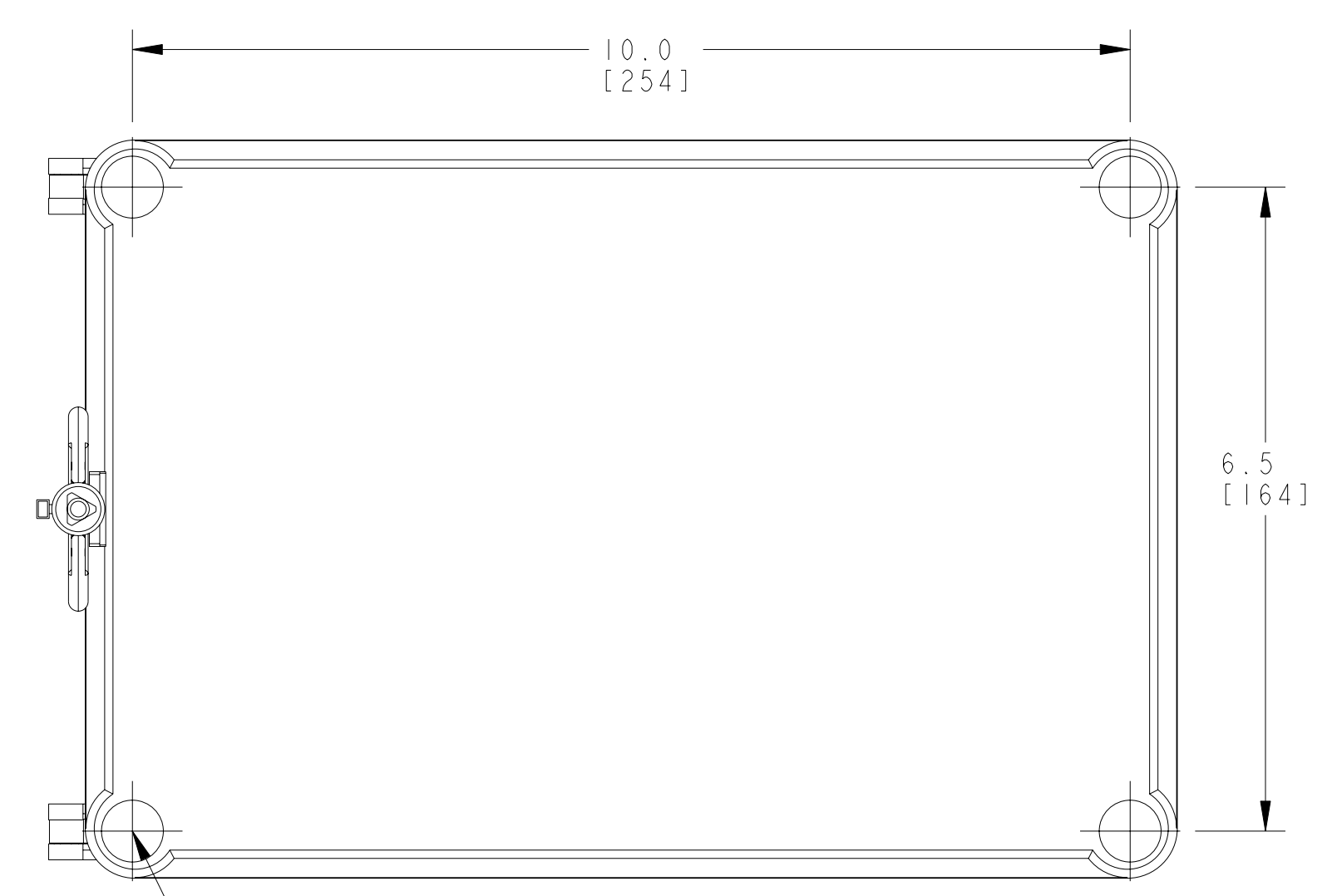
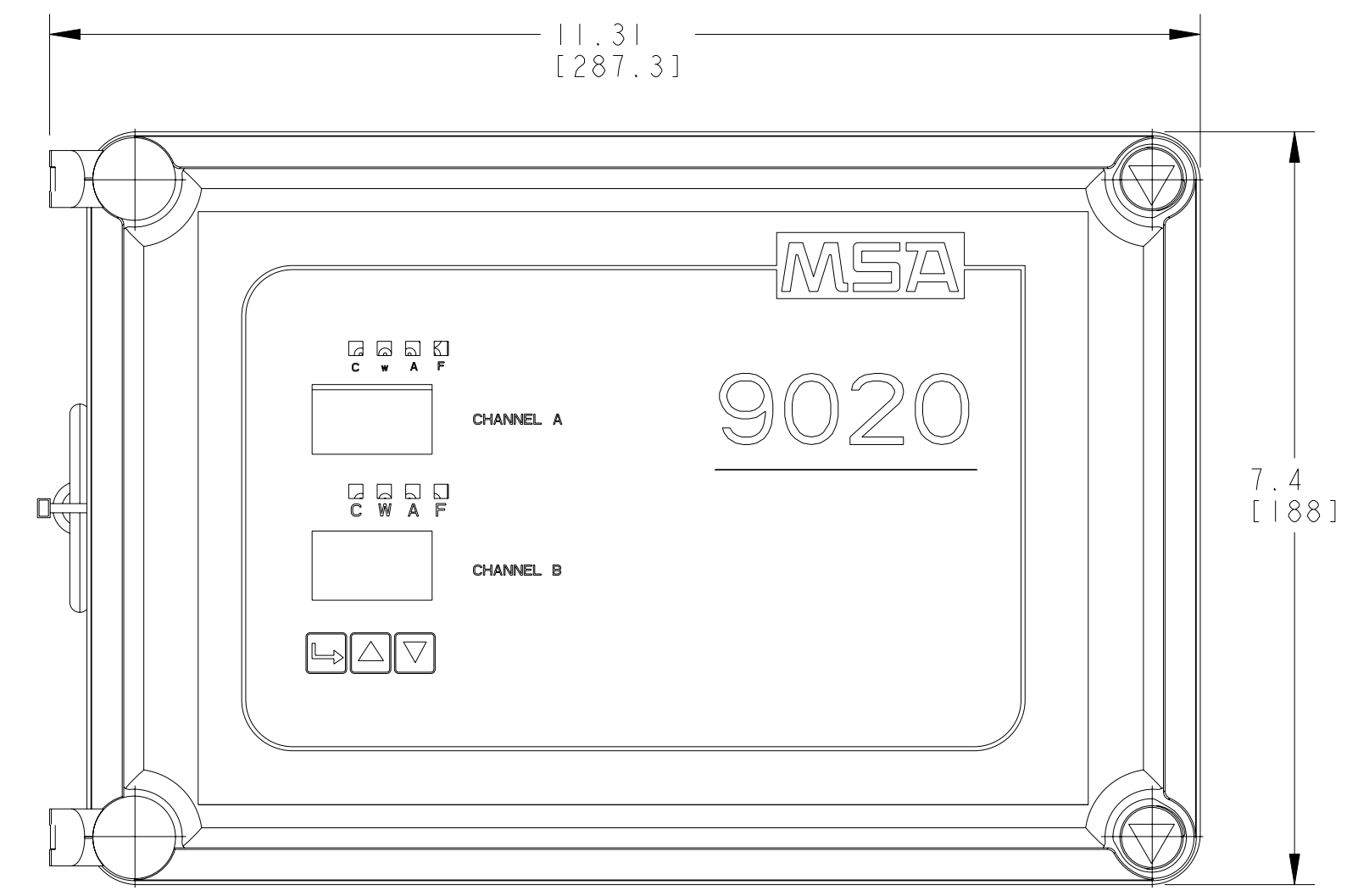


- ①A ① MATRIX REVISION LEVEL
- ③A ①B ① ENCLOSURE TYPE:
- R - Rack Mount
 - P - General Purpose Plastic
 - MS - Nema 4X Metal, 5 card
 - MD - Nema 4X Metal, 10 card
 - XS - XP Single Board
 - XD - XP Dual Board
 - SS - Nema 4X Stainless Steel, 5 card
 - SD - Nema 4X Stainless Steel, 10 card
 - Z - No Enclosure (Replacement Modules Only)
- ② No. OF 9020 SENSOR CHANNEL 2-WIRE BOARDS (Dual Channel) *
- ③ No. OF 9010 SENSOR CHANNEL 2-WIRE BOARDS (Single Channel) *
- ④ No. OF 9020 SENSOR CHANNEL 3-WIRE BOARDS FOR 3-WIRE SENSORS (Dual Channel)
- ⑤ No. OF 9010 SENSOR CHANNEL 3-WIRE BOARDS FOR 3-WIRE SENSORS (Single Channel)
- ⑥ POWER SUPPLY VOLTAGE:
- 1 - 110 VAC
 - 2 - 220 VAC
 - 3 - 24VDC
- ⑦ TLV STEL AND TWA FUNCTIONS:
- 0 = NONE
 - 1 = YES
- ⑧ CUSTOM:
- C

- * IF ① = R, ② & ③ & ④ & ⑤ ≤ 10
 - * IF ① = P, ② & ③ & ④ & ⑤ ≤ 1
 - * IF ① = MS, ② & ③ & ④ & ⑤ ≤ 5
 - * IF ① = MD, ② & ③ & ④ & ⑤ ≤ 10
 - * IF ① = XS, ② & ③ & ④ & ⑤ ≤ 1
 - * IF ① = XD, ② & ③ & ④ & ⑤ ≤ 2
 - * IF ① = SS, ② & ③ & ④ & ⑤ ≤ 5
 - * IF ① = SD, ② & ③ & ④ & ⑤ ≤ 10
- ⑤



TYPICAL ELECTRICAL CONNECTIONS

WIRE SIZE	MAXIMUM CABLE LENGTH IN FEET @ 24 VDC	MAXIMUM LOAD RESISTANCE
22 AWG	7000	600 Ohms

WIRE SIZE	MAXIMUM CABLE LENGTH IN FEET @ 24 VDC	MAXIMUM LOAD RESISTANCE
22 AWG	1000	600 Ohms
18 AWG	2500	
16 AWG	4200	
12 AWG	10000	

WIRE SIZE	MAXIMUM CABLE LENGTH IN FEET @ 24 VDC	MAXIMUM LOAD RESISTANCE
22 AWG	12000	600 Ohms

SENSOR TYPE	POWER SUPPLY VOLTAGE	WIRE SIZE	MAXIMUM CABLE LENGTH (IN FEET)	MAXIMUM LOAD RESISTANCE (mA OUTPUT ONLY)
CATALYTIC COMBUSTIBLE	12 VDC	16 AWG	900	300 Ohms
	24 VDC		3000	600 Ohms
TOXIC OR OXYGEN	12 VDC		2500	300 Ohms
TOXIC OR OXYGEN	24 VDC		8000	600 Ohms

POWER SUPPLY	24 VOLTS	
CONFIGURATION	NO RELAYS	RELAYS INSTALLED
18 AWG CABLE (6.6 OHMS/1000 FT.)	2000 FT.	1500 FT.
16 AWG CABLE (4.2 OHMS/1000 FT.)	3500 FT.	2500 FT.
14 AWG CABLE (2.6 OHMS/1000 FT.)	5000 FT.	4000 FT.
MAXIMUM LOAD ON 4-20 mA SIGNAL	600 OHMS	

CUSTOMER _____

P.O.# _____

MSA# _____

LOCATION _____

TAG# _____

TOTAL NO. OF UNITS _____

NOTES: 1. DIMENSIONS SHOWN IN INCHES AND (MILLIMETERS).

WEIGHT: APPROX. WEIGHT 4 LBS. (1.8 KG.)

MATERIAL: POLYCARBONATE

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. 30006520PH0705	APPROVAL AGENCY CODE: NO NIOSH ATTR. DOC.:	
	CODE SYMBOLS	DATE 1-14-05		
	CRITICAL Δ	DRAWN BY GT		
	MAJOR A Δ (NO MARK)	CHECKED BY W. BARBISH 11-9-06		
	MAJOR B Δ	PROJ. ENGR. W. BARBISH 11-9-06		
	100% INSPECTION Δ	PROJ. ENGR. J. DANNHARDT 11-29-06		
	TOLERANCES UNLESS OTHERWISE SPECIFIED	QUALITY ASSURANCE		
	FRACTIONAL ± 1/64	MANUFACTURING		
	2 PL DEC. ± 0.01	H. TRACHSEL 12-5-06	CADD REF: SK3015-1002	SCALE: 0.625
	3 PL DEC. ± 0.005			
	ANGULAR ± 1 deg.			
	SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES			
		DOCUMENT NO. D. SK3015-1002		SHEET 1 OF 1

INSTALLATION OUTLINE, PLASTIC, GENERAL PURPOSE, MODEL 9010/9020

REVISIONS

① 7-21-2005
INITIAL RELEASE
A. REVISED MATRIX CODE 0
B. REVISED MATRIX CODE 1 ALL OPTIONS, ADDED OPTIONS SS & SD
BJP WLB

② 8-18-2006
INITIAL RELEASE
REMOVED "TYPICAL SENSOR CONFIGURATIONS" TABLE
GJT WLB

③ 8-28-2006
INITIAL RELEASE
A. REVISED MATRIX CODE 1, OPTION P:
General Purpose Plastic WAS Nema 4X Plastic
B. REVISED DWG. TITLE, GENERAL PURPOSE WAS NEMA 4X
GJT WLB

④ 9-28-2006
INITIAL RELEASE
A. MATRIX CODE 1, ADDED OPTION Z
B. MATRIX CODE 2, ADDED OPTIONS 0 & 1
WJE WLB

⑤ 11-2-2006
INITIAL RELEASE
REVISED IF STATEMENTS TO ADD OPTIONS SS & SD AND ADD MATRIX CODES 4 & 5
WJE WLB

DEC 05 2006