



SERIES 2000 MONITOR w/ SENTINEL LED
FOR USE WITH WATER OR FOAM
PRESSURE TRANSDUCER PVC

**** INSTALLATION INSTRUCTION MANUAL ****

**** topics ****

page#

1. MONITOR INSTALLATION INSTRUCTIONS -----	2
2. WIRING INSTRUCTIONS -----	4
3. CABLE CONNECTION INSTRUCTIONS-----	5
4. REMOTE DISPLAYS-----	8
5. MINI 4 LIGHT DISPLAY INSTALLATION-----	7
6. MONITOR & CONTROL CABLE SPECIFICATIONS-----	6
7. SENSOR SPECIFICATIONS-----	6
8. CONNECTOR SPECIFICATIONS-----	7
9. SERIES 2000 SENSOR AIR RELIEF VALVE-----	8
10. SERIES 2000 CALIBRATION INSTRUCTIONS-----	9



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****MONITOR INSTALLATION INSTRUCTIONS****

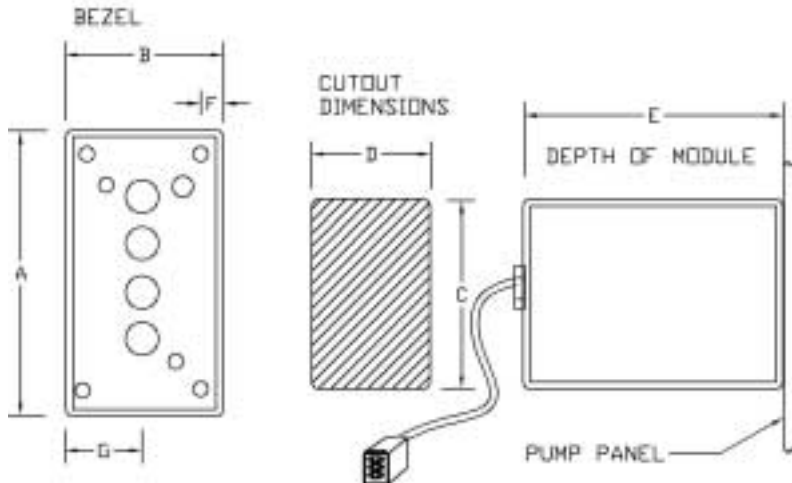
STEP 1

FROM THE CHART BELOW, DETERMINE THE CUTOUT DIMENSIONS FOR YOUR TYPE OF DISPLAY. MOUNT UNIT INTO CUTOUT WITH SUPPLIED SCREWS OR A NUT/BOLT COMBINATION THAT BEST FITS YOUR APPLICATION.

STEP 2

CLEAN INDENT ON LOWER FRONT OF BEZEL. APPLY SUPPLIED GALLONAGE TAG INTO INDENT. TRIM TAG TO FIT INDENT. IF YOU **DID NOT** RECEIVE THIS TAG, CONTACT MC PRODUCTS.

NOTE: IF YOU ARE MOUNTING THE UNIT FROM BEHIND THE PANEL REFER TO NEXT PAGE FOR CUTOUT DIMENSIONS. ALSO, MAKE SURE THE ARROW ON THE FRONT OF THE MODULE UNIT IS POINTING UP!

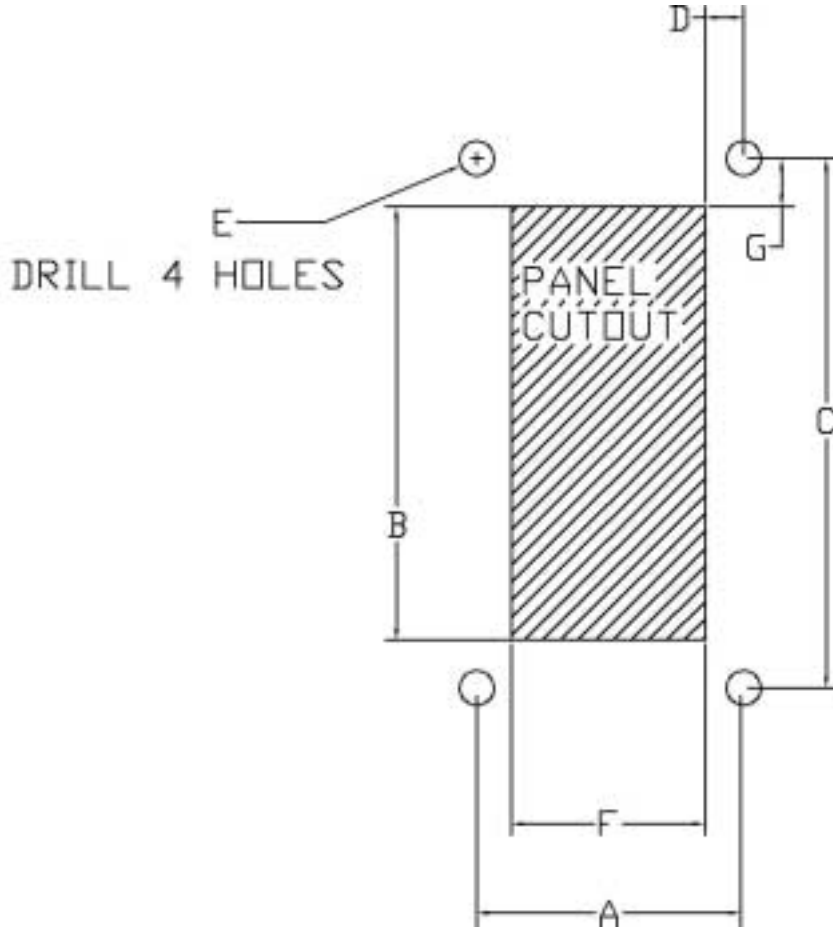


TYPE UNIT	A	B	C	D	E	F	G
4 LIGHT	5.70"	2.63"	4.00"	2.15"	3.00"	.312"	1.315"
5 LIGHT (QUINT)	6.63"	2.63"	5.00"	2.15"	3.00"	.312"	1.315"
MINI 4 LIGHT	4.31"	1.80"	3.45"	1.275"	1.25"	.300"	1.310"



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(CUTOUT DIMENSIONS FOR BEHIND PANEL MOUNTING)



TYPE UNIT	A	B	C	D	E	F	G
4 LIGHT	2.01"	3.58"	5.07"	.139"	.220"	1.728"	.253"
5 LIGHT (QUINT)	2.01"	5.50"	6.01"	.139"	.220"	1.728"	.253"
MINI 4 LIGHT	1.20"	3.00"	3.71"	.760"	.200"	.500"	.355"

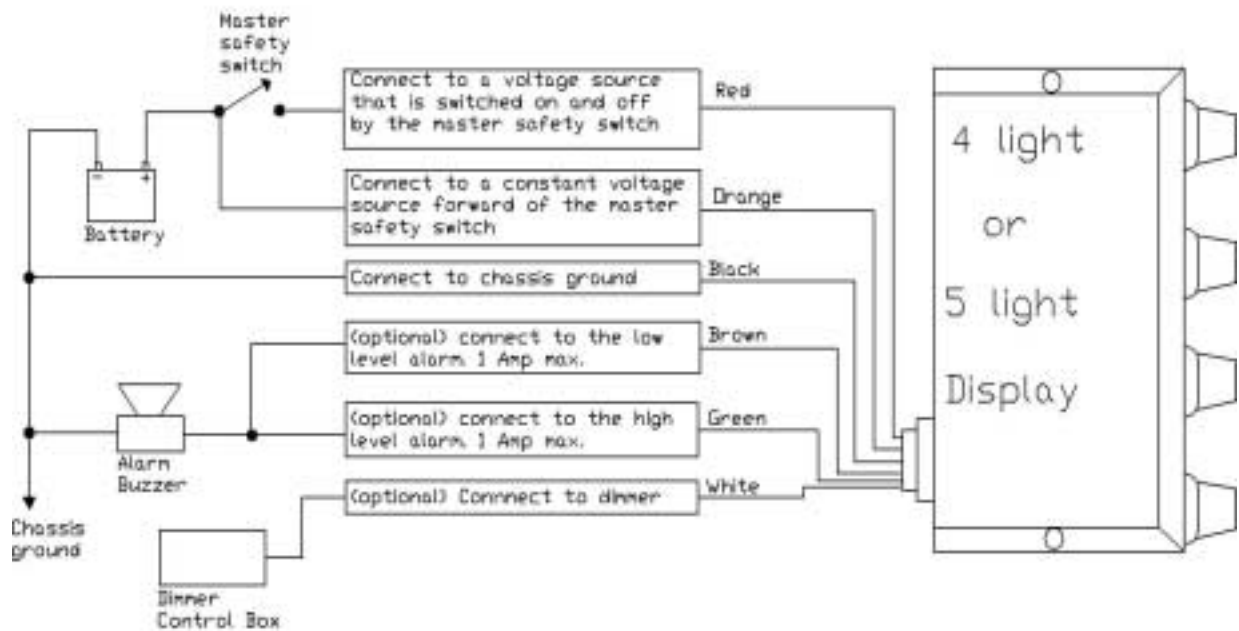


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Series 2000 Wiring Instructions



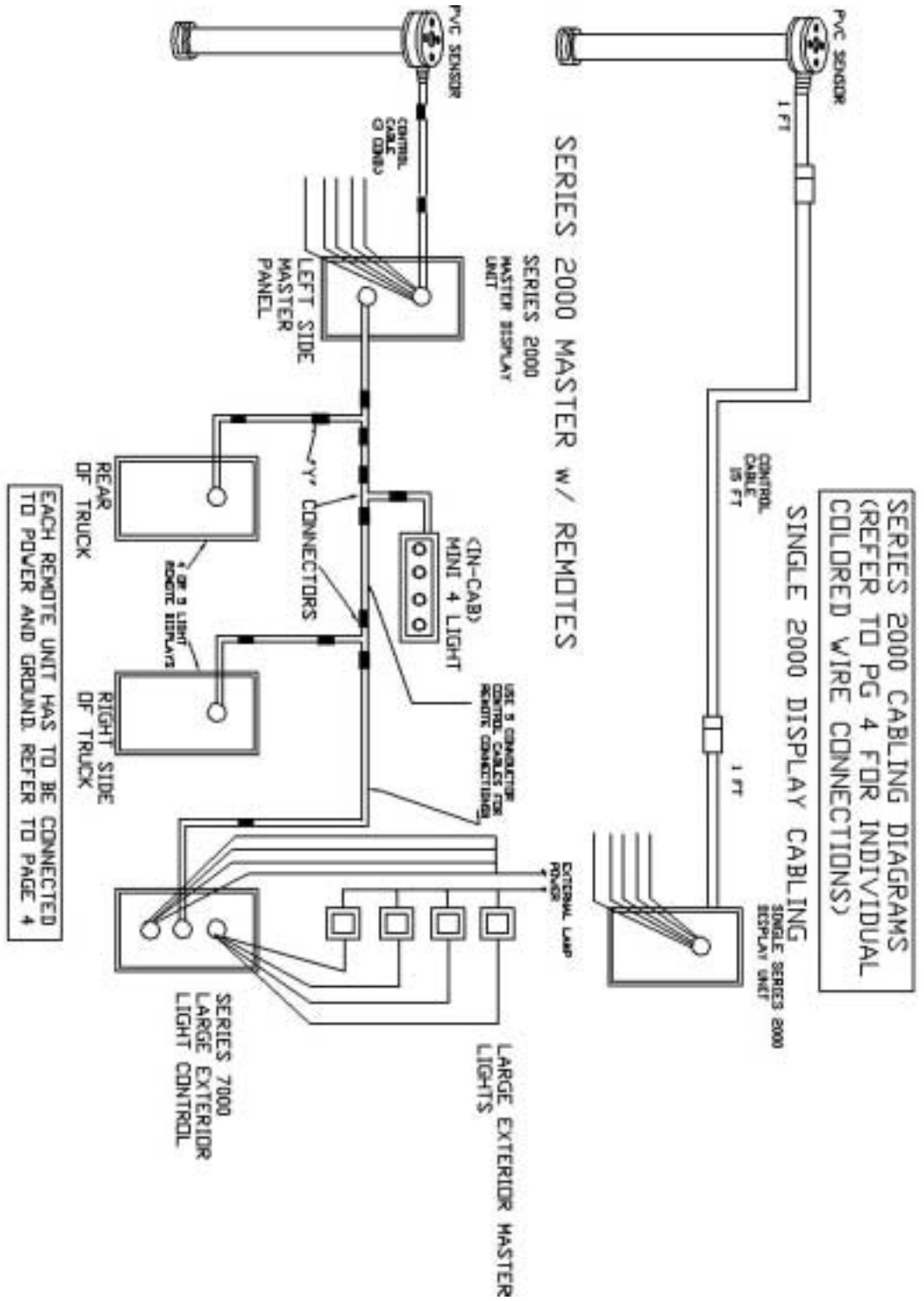
Note: If you have a positive ground system, contact MC Products for wiring instructions.



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SERIES 2000 CABLING DIAGRAMS
(REFER TO PG 4 FOR INDIVIDUAL
COLORED WIRE CONNECTIONS)

SINGLE 2000 DISPLAY CABLING
SERIES 2000 SINGLE SERIES 2000
DISPLAY UNIT

EACH REMOTE UNIT HAS TO BE CONNECTED
TO POWER AND GROUND. REFER TO PAGE 4



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THIS PVC SENSOR USES A DIFFERENTIAL PRESSURE TRANSDUCER TO MEASURE THE HEAD PRESSURE OF THE FLUID IN THE TANK. ON THE MOUNTING FLANGE, YOU WILL SEE A ROUND WHITE MEMBRANE MATERIAL, THIS COMPENSATES FOR ATMOSPHERIC PRESSURE ON ONE SIDE OF THE TRANSDUCER. THE TRANSDUCER'S ORIFICE IS ISOLATED FROM THE FLUID BEING MEASURED BY AN EPT DIAPHRAGM, WHICH ENCAPSULATES AN OIL USED TO TRANSFER THE PRESSURE TO THE TRANSDUCER. BOTH TOP & SIDE MOUNT UNITS ARE CONSTRUCTED THIS WAY.

*** MONITOR SPECIFICATIONS***

////////////////////	4 LIGHT	5 LIGHT (QUINT)	4 LIGHT MINI
CURRENT LOAD	1.25A	1.25A	.1A
SUPPLY VOLTAGE	12V/24V	12V/24V	12V/24V
SYSTEM GROUND	NEG	NEG	NEG
SENTINEL LOAD	.05A	.05A	N/A

****SERIES 2000 PVC SENSOR SPECIFICATIONS****

SENSOR TYPE	CABLE LENGTH	MALE CONNECTOR	FLANGE DIAMETER	LENGTH
TOP MOUNT 4 BOLT	1 ft.	GRAY DEUTSCH 4 PIN CONNECTOR (MALE) DT04-4P	2.5"	CUSTOM SIZED
TOP MOUNT 6 BOLT GEM	1 ft.	GRAY DEUTSCH 4 PIN CONNECTOR (MALE) DT04-4P	4.5"	CUSTOM SIZED
SIDE MOUNT	1 ft.	GRAY DEUTSCH 4 PIN CONNECTOR (MALE) DT04-4P	2.5"	6"

BLACK CANNON BARREL CONNECTORS WERE USED PRIOR TO 8/01 ADAPTORS ARE AVAILABLE FOR CONVERTING CANNON CONNECTORS TO DEUTSCH CONNECTORS. CALL MC PRODUCTS TO PLACE YOUR ORDER.

(SEE TABLE BELOW):

****CONTROL CABLE SPECIFICATIONS****

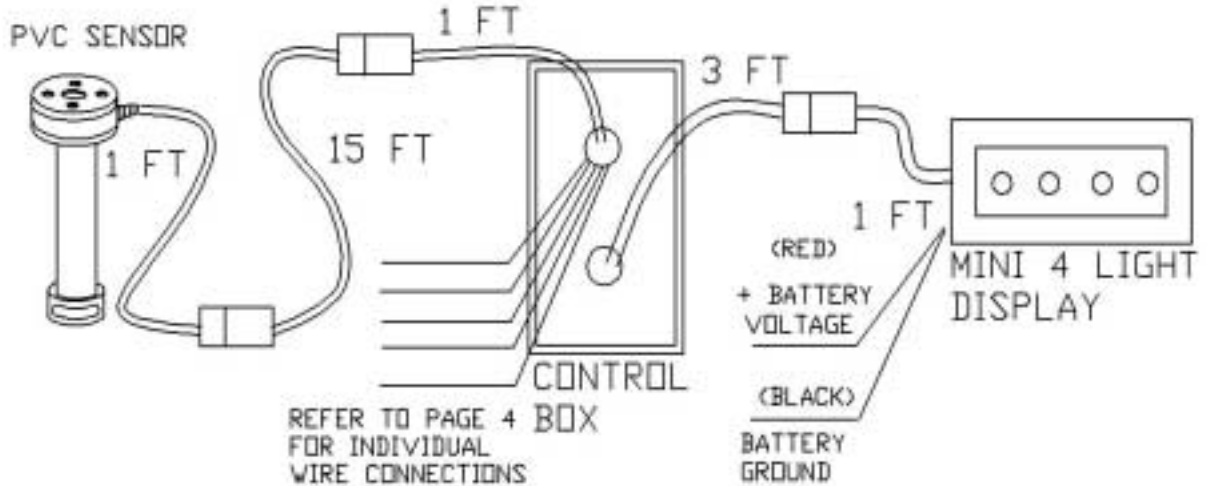
PURPOSE	TYPE	LENGTH	CONNECTORS	PART#
CONTROL	REMOTE TO MASTER	11 ft.	MALE/FEMALE DEUTSCH 5-CONDUCTOR	M1404
CONTROL	EXTENSION	15 ft.	MALE/FEMALE DEUTSCH 3-CONDUCTOR	M1145
CONTROL	ADAPTOR	6"	CANNON TO DEUTSCH (SENSOR TO CONTROL)	M1397
CONTROL	ADAPTOR	6"	CANNON TO DEUTSCH (CONTROL TO DISPLAY)	M1396
CONTROL	"Y" CONNECTOR	6"	MALE/MALE/FEMALE DEUTSCH	M1412



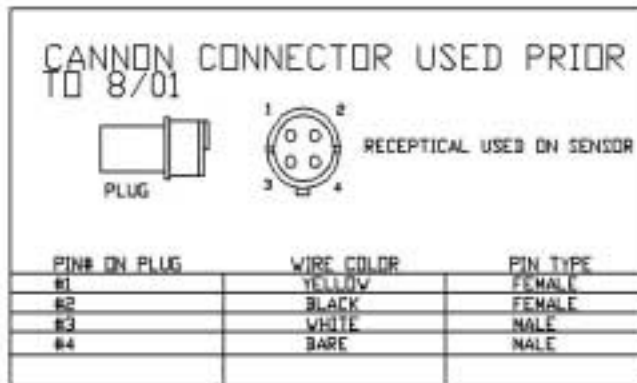
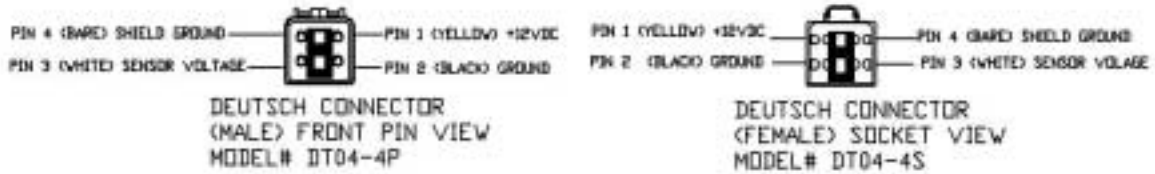
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2000 MINI 4 LIGHT DISPLAY (STAND ALONE)



CONNECTOR SPECIFICATIONS





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**** SERIES 2000 AIR RELIEF FITTING ****

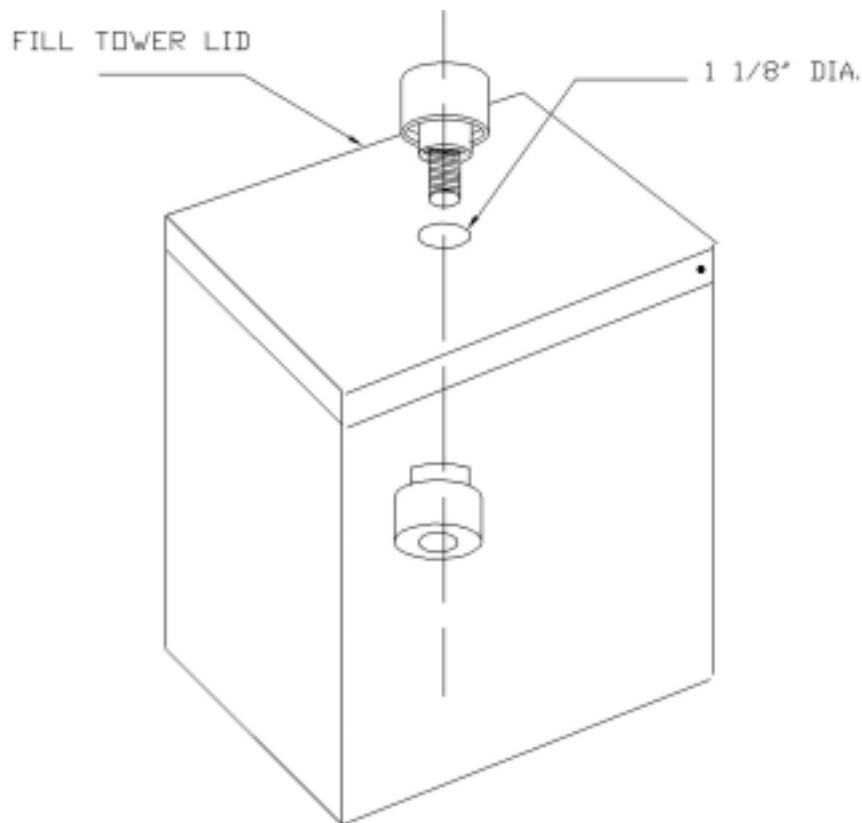
INSTALLATION INSTRUCTIONS

ENSURE THAT THE AIR RELIEF VALVE WILL SIT ABOVE THE FLUID LEVEL. DRILL A 1 1/8" HOLE IN THE FILL TOWER LID.

UNSCREW THE SUPPLIED RELIEF FITTING. INSERT ONE HALF OF THE FITTING INTO THE HOLE AND SCREW THE REMAINING HALF ONTO THE FIRST HALF HAND TIGHT.

THE MC AIR RELIEF FITTING WAS SPECIALLY DESIGNED TO MAINTAIN THE APPROPRIATE PRESSURE IN THE TANK.

TANKS PREVIOUSLY EQUIPPED WITH A VENT OTHER THAN MC PRODUCTS AIR RELIEF FITTING ARE STILL REQUIRED TO INSTALL THE MC AIR RELIEF FITTING WITH A MC SERIES 2000 PVC FACTORY VENTED SENSOR.





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****SERIES 2000 CALIBRATION INSTRUCTIONS****

REGULAR SHAPED TANKS

DIVIDE THE TANK DEPTH BY 4, USING THIS MEASUREMENTS, MARK THE PVC SENSOR STARTING FROM THE UNDERSIDE OF THE FLANGE GASKET. TO USE THESE MARKS DURING THE CALIBRATION PROCEDURE, YOU HAVE TO ALLOW FOR THE TANK TOP THICKNESS. THEN ADJUST (SUBTRACT) THE SET POINT MARKS BY THE TANK TOP THICKNESS; THIS WILL LET YOU TO SEE THE MARKS AS YOU MOVE THE SENSOR OUT OF THE TANK WHILE ADJUSTING THE POTS FOR EACH LEVEL.

IRREGULAR SHAPED TANKS

IRREGULAR SHAPED TANK SET POINTS CAN BE OBTAINED BY CALLING MC PRODUCTS TECH SUPPORT 1-800-843-6465. AFTER OBTAINING THE SET POINTS FROM MC PRODUCTS, FOLLOW THE SAME PROCEDURE USED FOR THE REGULAR SHAPED TANK.

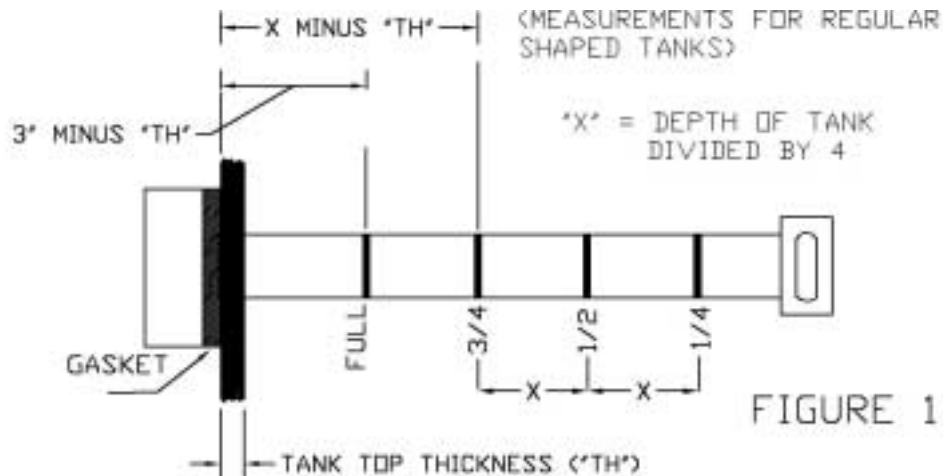
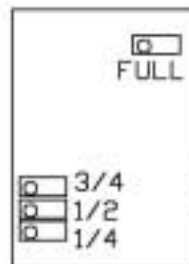


FIGURE 1



TURN THE FULL POT CLOCKWISE TO TURN ON THE LIGHT.

TURN THE 3/4, 1/2, & 1/4 POTS COUNTER-CLOCKWISE TO TURN ON THE LIGHT

INSIDE THE DISPLAY



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CALIBRATION INSTRUCTION CONT.

IMPORTANT!!

MAKE SURE THE TANK IS FULL AND POWER IS ON. MAKE SURE THE SENSOR END CAP SITS AT LEAST 1 1/2" TO 2" OFF THE BOTTOM OF THE TANK.

THE 3/4, 1/2, AND 1/4 POINTS CAN BE ADJUSTED ONLY AFTER THE FULL POINT HAS BEEN SET.

TURN THE POTENTIOMETER SLOWLY WHEN CALIBRATING SO AS NOT TO OVER SHOOT THE SET POINT.

THERE WILL BE A GAP BETWEEN THE LIGHT COMING ON AND GOING OFF WHEN MOVING THE SENSOR UP AND DOWN IN THE LIQUID.

INSERT THE SENSOR INTO THE TANK AND PLUG IT INTO THE CONTROL CABLE. **TO LOCATE CALIBRATION POTENTIOMETERS, REMOVE THE WHITE PLASTIC ARROW CLIPS LOCATED ON THE SIDES OF THE DISPLAY, LOOSEN THE STAIN RELIEF AND CAREFULLY REMOVE THE BACK OF THE DISPLAY. (SEE FIG. 1 ON PAGE 14.)** RAISE THE SENSOR SO THAT THE FULL MARK IS JUST AT THE OUTSIDE EDGE OF THE TANK. ASK ANOTHER PERSON TO OBSERVE THE MONITOR LAMPS. **IF THE FULL LAMP (BLUE) IS ON**, TURN THE FULL POTENTIOMETER COUNTER-CLOCKWISE UNTIL THE FULL LAMP JUST GOES OFF. THEN, TURN THE POTENTIOMETER UNTIL THE FULL LAMP JUST GOES BACK ON. **IF THE FULL LAMP IS OFF**, TURN THE FULL POTENTIOMETER CLOCKWISE UNTIL THE FULL LAMP JUST GOES ON. THE FULL LEVEL IS NOW CALIBRATED.

RAISE THE SENSOR SO THAT THE 3/4 LEVEL MARK IS JUST AT THE OUTSIDE EDGE OF THE TANK. **IF THE 3/4 LEVEL LAMP (GREEN) IS ON**, TURN THE 3/4 LEVEL POTENTIOMETER CLOCKWISE UNTIL THE 3/4 LEVEL LAMP JUST GOES OFF. THEN, TURN THE POTENTIOMETER COUNTER-CLOCKWISE UNTIL THE 3/4 LEVEL LAMP JUST GOES BACK ON. **IF THE 3/4 LAMP IS OFF**, TURN THE 3/4 POTENTIOMETER COUNTER-CLOCKWISE UNTIL THE 3/4 LAMP JUST GOES ON. THE 3/4 LEVEL IS NOW CALIBRATED.

RAISE THE SENSOR SO THAT THE 1/2 LEVEL MARK IS JUST AT THE OUTSIDE EDGE OF THE TANK. **IF THE 1/2 LEVEL LAMP (AMBER) IS ON**, TURN THE 1/2 LEVEL POTENTIOMETER CLOCKWISE UNTIL THE 1/2 LAMP JUST GOES OFF. TURN THE POTENTIOMETER COUNTER-CLOCKWISE UNTIL THE 1/2 LAMP JUST GOES BACK ON. **IF THE 1/2 LAMP IS OFF**, TURN THE 1/2 POTENTIOMETER COUNTER-CLOCKWISE UNTIL THE 1/2 LEVEL LAMP JUST GOES ON. THE 1/2 LEVEL LAMP IS NOW CALIBRATED.

RAISE THE SENSOR SO THE 1/4 LEVEL MARK IS JUST AT THE OUTSIDE EDGE OF THE TANK. **IF THE 1/4 LEVEL LAMP (RED) IS ON**, TURN THE 1/4 LEVEL POTENTIOMETER CLOCKWISE UNTIL THE 1/4 LAMP JUST GOES OFF. THEN, TURN THE POTENTIOMETER COUNTER-CLOCKWISE UNTIL THE 1/4 LAMP JUST GOES BACK ON. **IF THE 1/4 LAMP IS OFF**, TURN THE 1/4 POTENTIOMETER COUNTER-CLOCKWISE UNTIL THE 1/4 LEVEL LAMP JUST GOES ON. THE 1/4 LEVEL LAMP IS NOW CALIBRATED. THE TOTAL CALIBRATION IS ALSO NOW COMPLETE.