REVISIONS						
CR	REV.	DESCRIPTION	BY	DATE	APPRVD	DATE
800000018352	0	PRODUCTION RELEASE	BM	19APR17	SR	19APR17
800000026298	1	REVISE TO BE SIMILAR TO X5000 I/O DRAWING	WE	27AUG18	LV	10SEP18
800000039839	2	SHT 1 ADDED INSTRUCTION MANUAL NOTE,ADDED SEE MANUAL TO SENSOR CODE BLOCKS,UPDATE IR400 TO IR400/IR700 ON ALL SHEETS;REVISED ALL JUNCTION BOX P2 OR J1 CONNECTIONS TO JUST J1;ADDED WIRE FUNCTIONS BETWEEN J-BOX AND S5000 ON SHTS 6-8;FIXED WIRING LAYOUTS ONSHT 8	WJE	12MAR20	SR	13MAR20
800000043241	3	ADDED SHEET 2 FOR JB5000 MTG INFO, RENUMBER SHEETS 2-9 TO 3-10,ADDED NOTES STATING JB5000 CANNOT BE USED WITH PASSIVE CAT BEAD, MOS AND IR400/IR700 SENSORS	WJE	9SEP20	FB	16SEP20
800000048530	4	MATRIX SELECTIONS - AGENCY APPROVAL: 1. DELETED "INCLUDES M25 TO NPT ADAPTERS"; ADD '2 = FM', '4 = INMETRO', '5 = MARINE(MED)' , '6 = MARINE (TA)"; CUSTOM FEATURES ADD '02 = HART OFF (FACTORY SETTING, CUSTOMER CAN ENABLE LATER)', '03 = SS TAG / HART OFF (FACTORY SETTING, CUSTOMER CAN ENABLE LATER)', '04 = UI ASSY -1 WITH BLUETOOTH DISABLED', '05 = SS TAG / UI ASSY -1 WITH BLUETOOTH DISABLED"	WJE	23JUN21	JH	24JUN21

S5000 - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

MATERIAL
2 = STAINLESS STEEL IIB+H2 / B, C, D
3 = STAINLESS STEEL IIC / A

RELAY STATE
0 = No Relays
1 = Latch Alarm / Non-Latch Warn De-Energized
2 = Latch Alarm / Non-Latch Warn Energized
3 = Latch Alarm / Latch Warn De-Energized
4 = Latch Alarm / Latch Warn Energized
5 = Non-Latch Alarm / Non-Latch Warn De-Energized
6 = Non-Latch Alarm / Non-Latch Warn Energized
7 = Non-Latch Alarm / Latch Warn De-Energized
8 = Non-Latch Alarm / Latch Warn Energized

OUTPUTS
0 = Bluetooth / Modbus / HART 1.25 mA
1 = Bluetooth / Modbus / HART 3.5 mA
2 = Bluetooth / Modbus / HART 1.25 mA / RELAYS
3 = Bluetooth / Modbus / HART 3.5 mA / RELAYS
4 = No Bluetooth / Modbus / HART 1.25 mA
5 = No Bluetooth / Modbus / HART 3.5 mA
6 = No Bluetooth / Modbus / HART 1.25 mA / RELAYS
7 = No Bluetooth / Modbus / HART 3.5 mA / RELAYS

AGENCY APPROVAL
0 = CSA
1 = ATEX / IECEx
2 = FM
4 = INMETRO
5 = Marine (MED)
6 = Marine (TA)

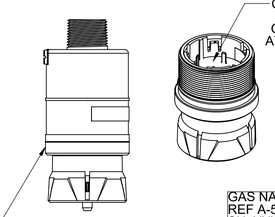
CUSTOM FEATURES
00 = None (std)
01 = SS Tag
02 = HART Off (Factory Setting, customer can enable later)
03 = SS Tag/Hart Off (Factory Setting, customer can enable later)
04 = UI Assy - 1 with Bluetooth Disabled
05 = SS Tag/UI Assy - 1 with Bluetooth Disabled

SENSOR #1(See User Manual for Gas Sensor/Code List)
Dxx = Digital Sensor
Mxx = Passive MOS
Rxx = IR400/IR700
Cxx = Passive Cat Bead

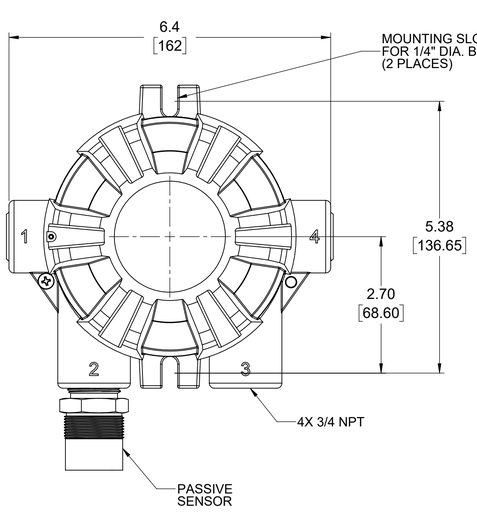
SENSOR #2 (See User Manual for Gas Sensor/Code List)
000 = Defaut (if sensor #1 is Cxx or Mxx)
Dxx = Digital Sensor (only if sensor #1 = Rxx or Dxx)

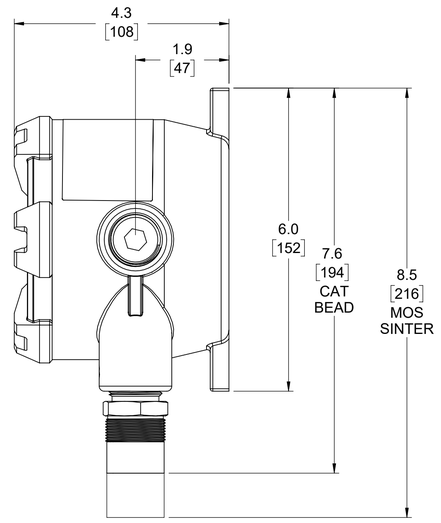
PAINT OPTIONS
0 = None
1 = Gray
2 = Blue
3 = Yellow
4 = White

DIGITAL SENSOR



EXAMPLE SENSOR ATO LABEL





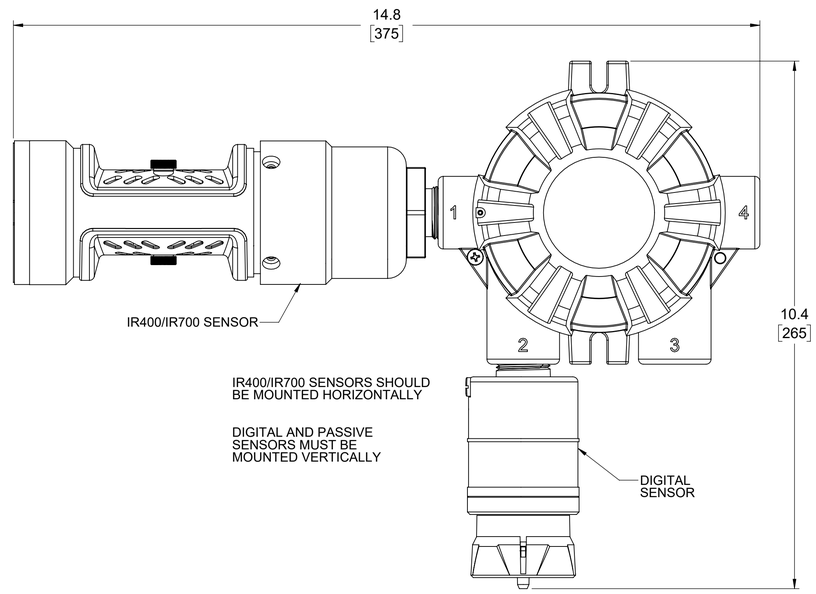


TABLE 1 (ENGLISH)

MAXIMUM WIRE LENGTH TO MAIN TRANSMITTER WITH LOCAL MOUNTED SENSOR(S)							
Sensor Mounting	Local Sensor 1	Local Sensor 2	Max Power (W)	18AWG (Ft)	16AWG (Ft)	14AWG (Ft)	12AWG (Ft)
Locally Mounted	Passive CB	None	6.0	1280	2030	3220	5130
	Passive MOS	None	10.8	710	1130	1790	2850
	Digital CB	None	6.0	1280	2030	3220	5130
	Digital Toxic	None	3.6	2130	3380	5370	8550
	IR400/IR700	None	8.9	860	1370	2180	3470
		Digital CB	11.8	650	1040	1650	2620
		Digital Toxic	9.6	800	1270	2020	3210

TABLE 1 (METRIC)

MAXIMUM WIRE LENGTH TO MAIN TRANSMITTER WITH LOCAL MOUNTED SENSOR(S)							
Sensor Mounting	Local Sensor 1	Local Sensor 2	Max Power (W)	$1mm^2$ (m)	$1.5mm^2$ (m)	$2.5mm^2$ (m)	$4mm^2$ (m)
Locally Mounted	Passive CB	None	6.0	470	710	1180	1890
	Passive MOS	None	10.8	260	390	660	1050
	Digital CB	None	6.0	470	710	1180	1890
	Digital Toxic	None	3.6	790	1180	1970	3150
	IR400/IR700	None	8.9	320	480	800	1280
		Digital CB	11.8	240	360	600	960
		Digital Toxic	9.6	290	440	740	1180

* CONSIDER 1 AMP INRUSH CURRENT WITH A 1 ms DURATION FOR EACH S5000 ON THE POWER SUPPLY

USERS MUST READ AND UNDERSTAND INSTRUCTION MANUAL MANS5000.

UNLESS OTHERWISE SPECIFIED
THIRD ANGLE PROJECTION
DIMENSIONS INCH[mm]

DRAWN	B.MONAHAN	10APR17
CHK'D.	N.CICCONE	19APR17
ENGR.	G.BAI	19APR17

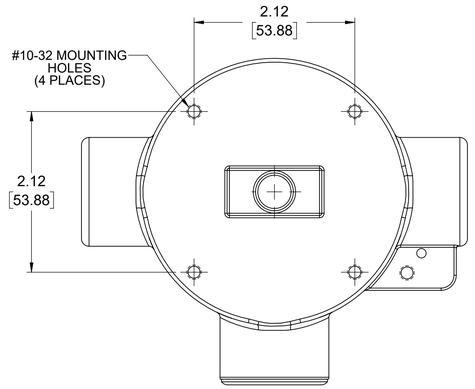
CUSTOMER _____
P.O. NO. _____
GM NO. _____
LOCATION _____
TAG NO. _____
TOTAL NO. OF UNITS _____

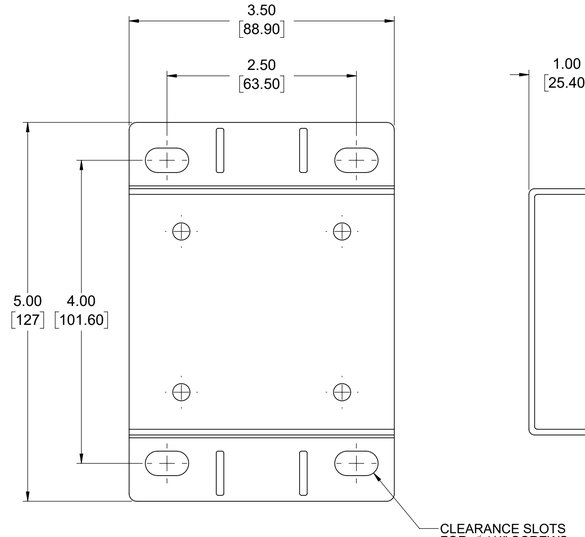
General Monitors by MSA
LAKE FOREST, CA, USA
GALWAY, IRELAND

SIZE: D
TITLE: INSTALLATION OUTLINE, S5000
DRAWING NO.: 324102
LIFECYCLE STATE: Production
REV: 4
SCALE: 1:1
MODEL: S5000
SHEET 1 OF 10

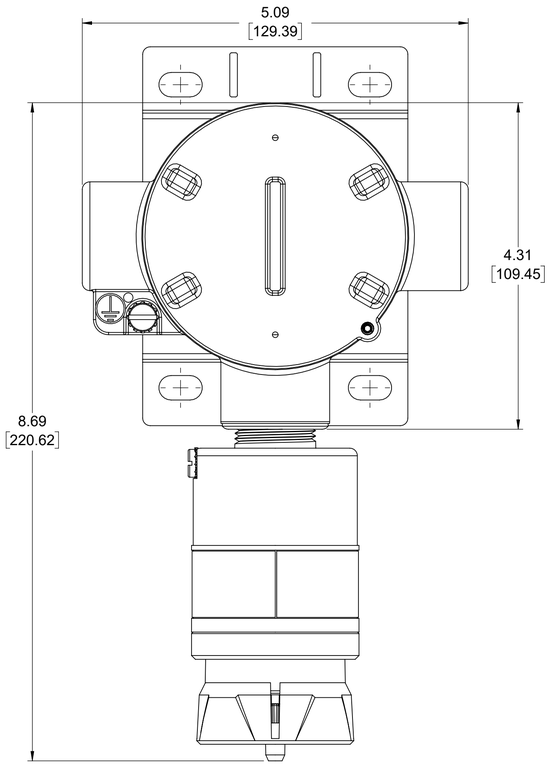
SOLIDWORKS GENERATED
Last Save: Friday, June 25, 2021 10:37:18 AM

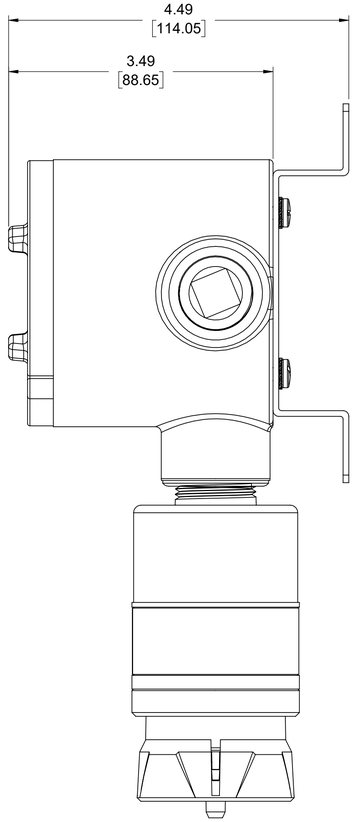
OPTIONAL REMOTE JUNCTION BOX JB5000





JB5000 MOUNTING BRACKET
MSA P/N 10206632





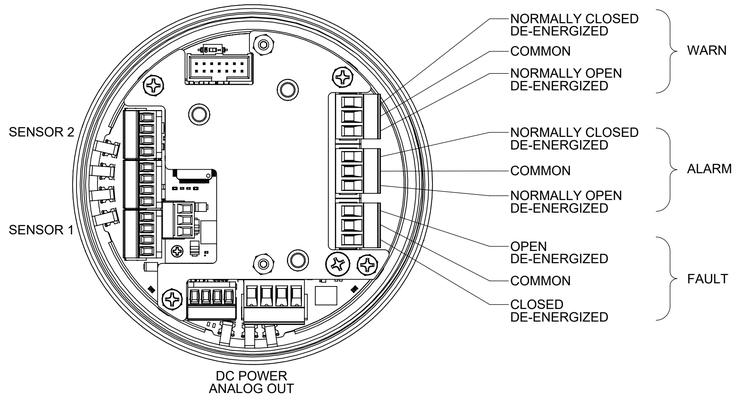
NOTES:
1. JB5000 CAN ONLY BE USED WITH DIGITAL SENSOR, GAS CODE Dxx.
2. JB5000 CANNOT BE USED WITH PASSIVE CAT BEAD SENSOR, GAS CODE Cxx, PASSIVE MOS SENSOR, GAS CODE Mxx OR IR400/IR700 SENSOR, GAS CODE Cxx.
3. REFER TO TABLE 2 FOR MAXIMUM WIRE LENGTH FROM REMOTE SENSOR TO MAIN TRANSMITTER

General Monitors by MSA — LAKE FOREST, CA, USA; GALWAY, IRELAND

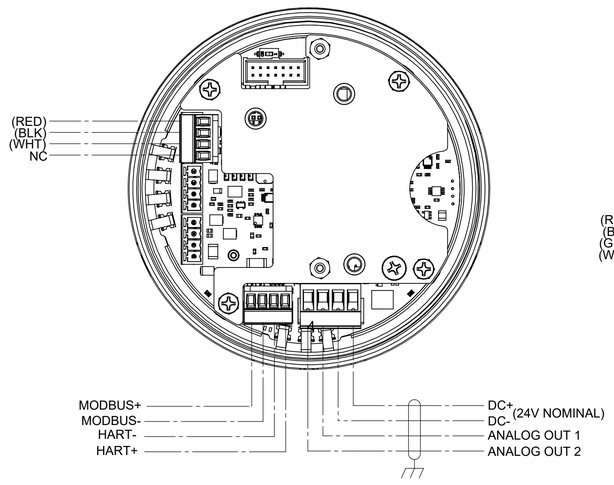
SIZE:	DRAWING NO.:	LIFECYCLE STATE:	REV:
D	324102	Production	4

SCALE: 1:1 | MODEL: | SHEET 2 OF 10

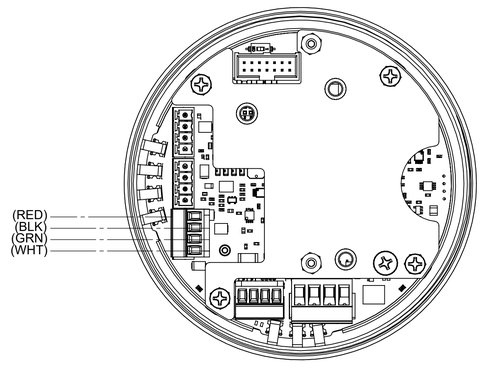
SOLIDWORKS GENERATED
Last Save: Tuesday, March 27, 2007, 8:00



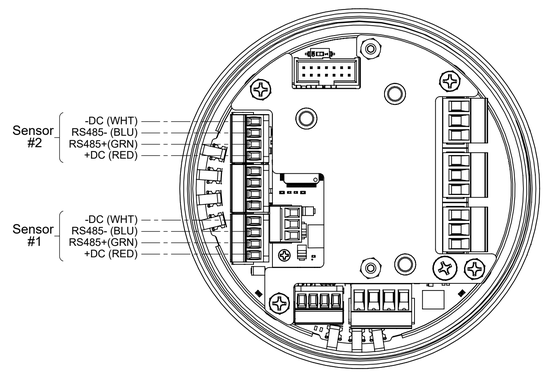
WIRING CONFIGURATION FOR
RELAY CONNECTIONS



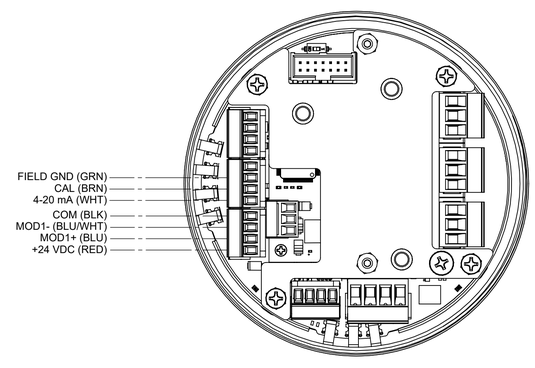
**WIRING CONFIGURATION FOR
CATALYTIC BEAD SENSOR**



**WIRING CONFIGURATION
FOR MOS SENSOR**



**WIRING CONFIGURATION
FOR DIGITAL SENSOR**



**WIRING CONFIGURATION
FOR IR400/IR700 SENSOR**

TABLE 2 (ENGLISH)

MAXIMUM WIRE LENGTH TO MAIN TRANSMITTER WITH 1 REMOTED SENSOR							
Sensor Mounting	Remote Sensor	Local Sensor	Max Power (W)	18AWG (Ft)	16AWG (Ft)	14AWG (Ft)	12AWG (Ft)
Locally Mounted	Passive CB	None	6.2	1240	1970	3140	4990
	Passive MOS	None	11.2	690	1090	1730	2760
	Digital CB	None	6.2	1240	1970	3130	4980
		Digital CB	8.6	890	1420	2260	3590
		Digital Toxic	6.9	1110	1770	2810	4460
		IR400	11.9	640	1020	1620	2580
	Digital Toxic	None	3.6	2130	3380	5370	8550
		Digital Toxic	4.3	1770	2820	4480	7120
		Digital CB	6.7	1140	1810	2880	4580
		IR400	9.6	800	1270	2020	3210
	IR400/IR700	None	9.0	850	1350	2140	3410
		Digital CB	11.9	640	1020	1620	2580
		Digital Toxic	9.7	790	1250	1980	3160

TABLE 2 (METRIC)

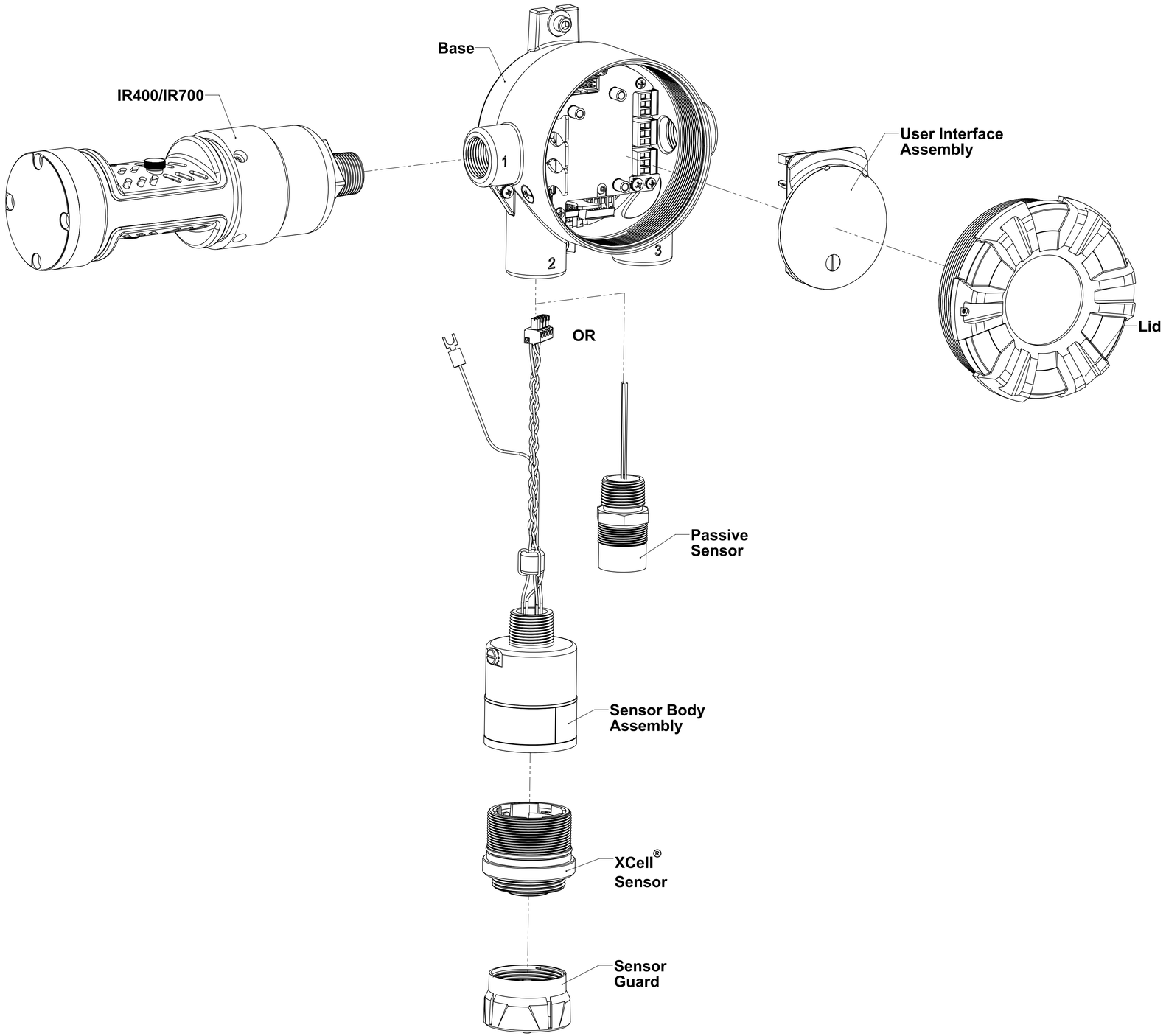
MAXIMUM WIRE LENGTH TO MAIN TRANSMITTER WITH 1 REMOTED SENSOR							
Sensor Mounting	Remote Sensor	Local Sensor	Max Power (W)	1mm² (m)	1.5mm² (m)	2.5mm² (m)	4mm² (m)
Locally Mounted	Passive CB	None	6.2	460	690	1150	1840
	Passive MOS	None	11.2	250	380	630	1010
	Digital CB	None	6.2	460	690	1150	1840
		Digital CB	8.6	330	490	830	1320
		Digital Toxic	6.9	410	620	1030	1640
		IR400	11.9	240	360	590	950
	Digital Toxic	None	3.6	790	1180	1970	3150
		Digital Toxic	4.3	650	980	1640	2620
		Digital CB	6.7	420	630	1050	1690
		IR400	9.6	290	440	740	1180
	IR400/IR700	None	9.0	310	470	780	1260
		Digital CB	11.9	240	360	590	950
		Digital Toxic	9.7	290	440	730	1160

NOTES:
1. JB5000 CANNOT BE USED WITH PASSIVE CAT BEAD SENSOR, GAS CODE Cxx, PASSIVE MOS SENSOR, GAS CODE Mxx OR IR400/IR700 SENSOR, GAS CODE Cxx.

*CONSIDER 1 AMP INRUSH CURRENT WITH A 1mS DURATION FOR EACH S5000 ON THE POWER SUPPLY

General Monitors by MSA
LAKE FOREST, CA, USA
GALWAY, IRELAND

SIZE: D
DRAWING NO.: 324102
LIFECYCLE STATE: Production
REV: 4
SCALE: 1:2
MODEL: S5000
SHEET 3 OF 10
SOLIDWORKS GENERATED
Last Save: Tuesday, March 27, 2007, 8:00



NOTES:
1. JB5000 CANNOT BE USED WITH PASSIVE CAT BEAD SENSOR, GAS CODE Cxx, PASSIVE MOS SENSOR, GAS CODE Mxx OR IR400/IR700 SENSOR, GAS CODE Cxx.

General Monitors by MSA — LAKE FOREST, CA, USA; GALWAY, IRELAND

SIZE: D

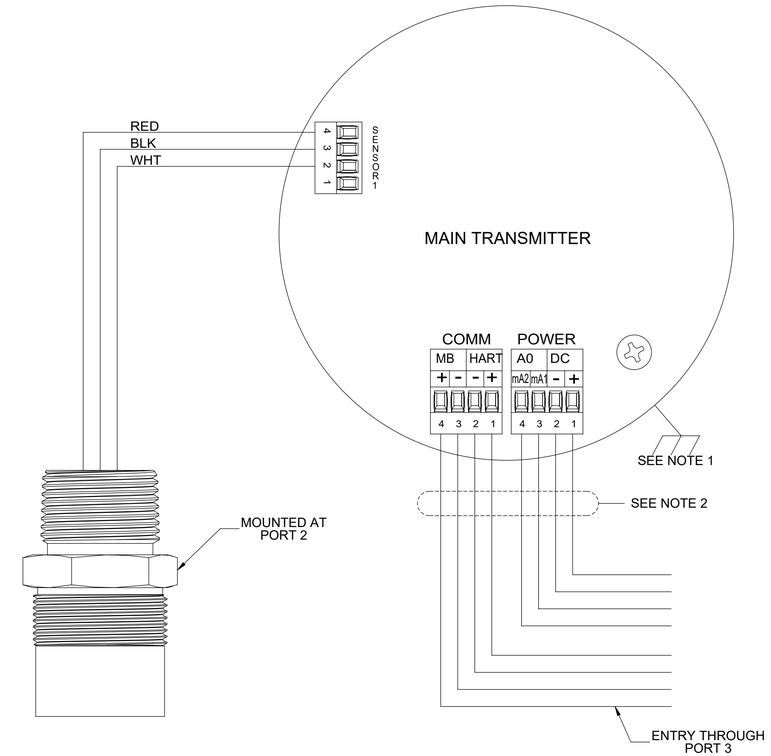
DRAWING NO.:	LIFECYCLE STATE:	REV:
324102	Production	4

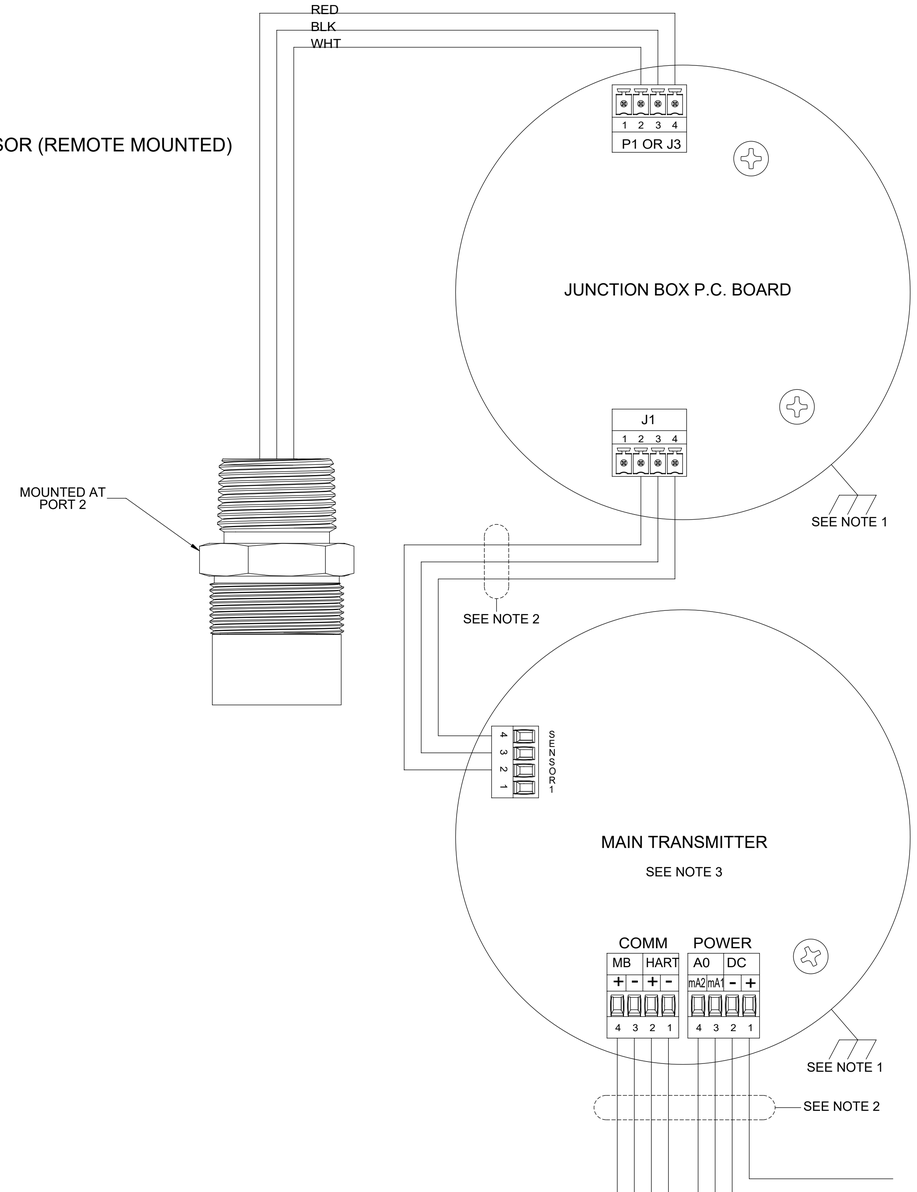
SCALE: 1:1 | MODEL: S5000 | SHEET 4 OF 10

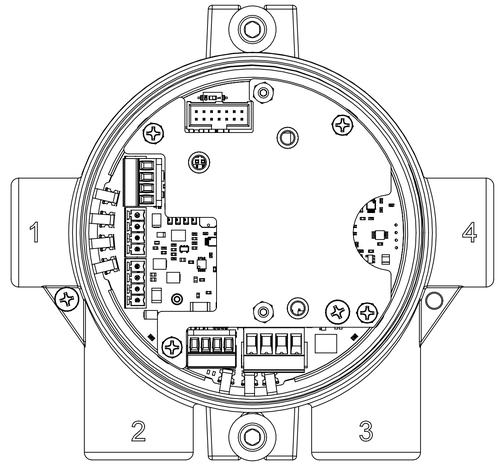
SOLIDWORKS GENERATED
Last Saved: Tuesday, January 29, 2019 11:33:32 AM

GROUNDING CONFIGURATION

CATALYTIC BEAD SENSOR (REMOTE MOUNTED)







CATALYTIC BEAD SENSOR (LOCALLY MOUNTED)

NOTES:
1. ENCLOSURE TO BE MECHANICALLY BOLTED TO STRUCTURAL GROUND.
2. SIGNAL SHIELD TO BE INSULATED AND LEFT FLOATING INSIDE TERMINAL ENCLOSURE - TIE DOWN THE OPPOSITE END TO AN ISOLATED GROUND (AT THE PANEL/CONTROLLER).
3. BOND SIGNAL SHIELD ON INCOMING AND OUTGOING CABLE IN REMOTE SENSOR CONFIGURATION TO PROVIDE CONTINUITY OF SIGNAL SHIELDING TO END DEVICE.
4. SIGNAL SHIELD MUST NOT CONTACT CHASSIS OR ANY OTHER NON-ISOLATED GROUND.
5. JB5000 CANNOT BE USED WITH PASSIVE CAT BEAD SENSOR, GAS CODE Cxx.

General Monitors by MSA — LAKE FOREST, CA, USA; GALWAY, IRELAND

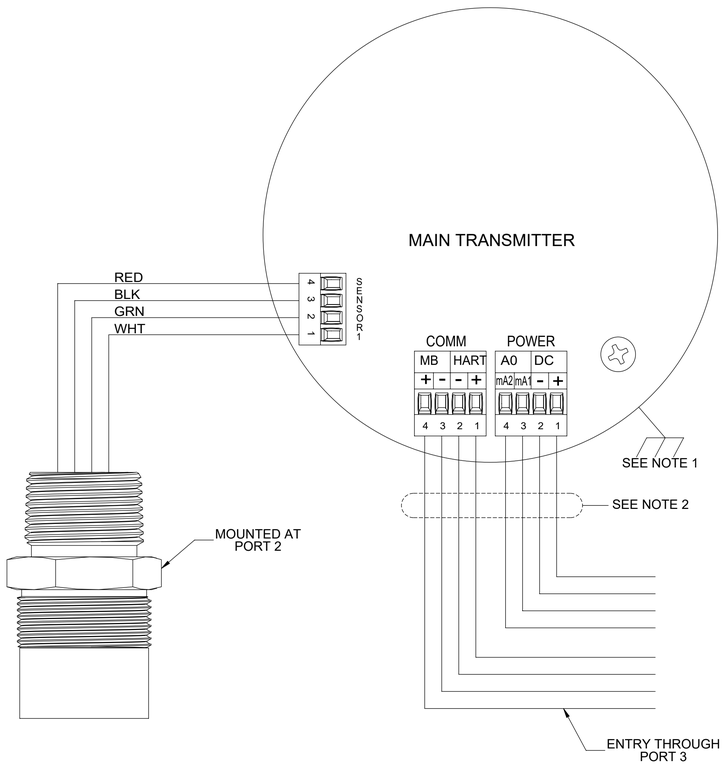
SIZE:	DRAWING NO.:	LIFECYCLE STATE:	REV:
D	324102	Production	4

SCALE: 1:1 | MODEL: S5000 | SHEET 5 OF 10

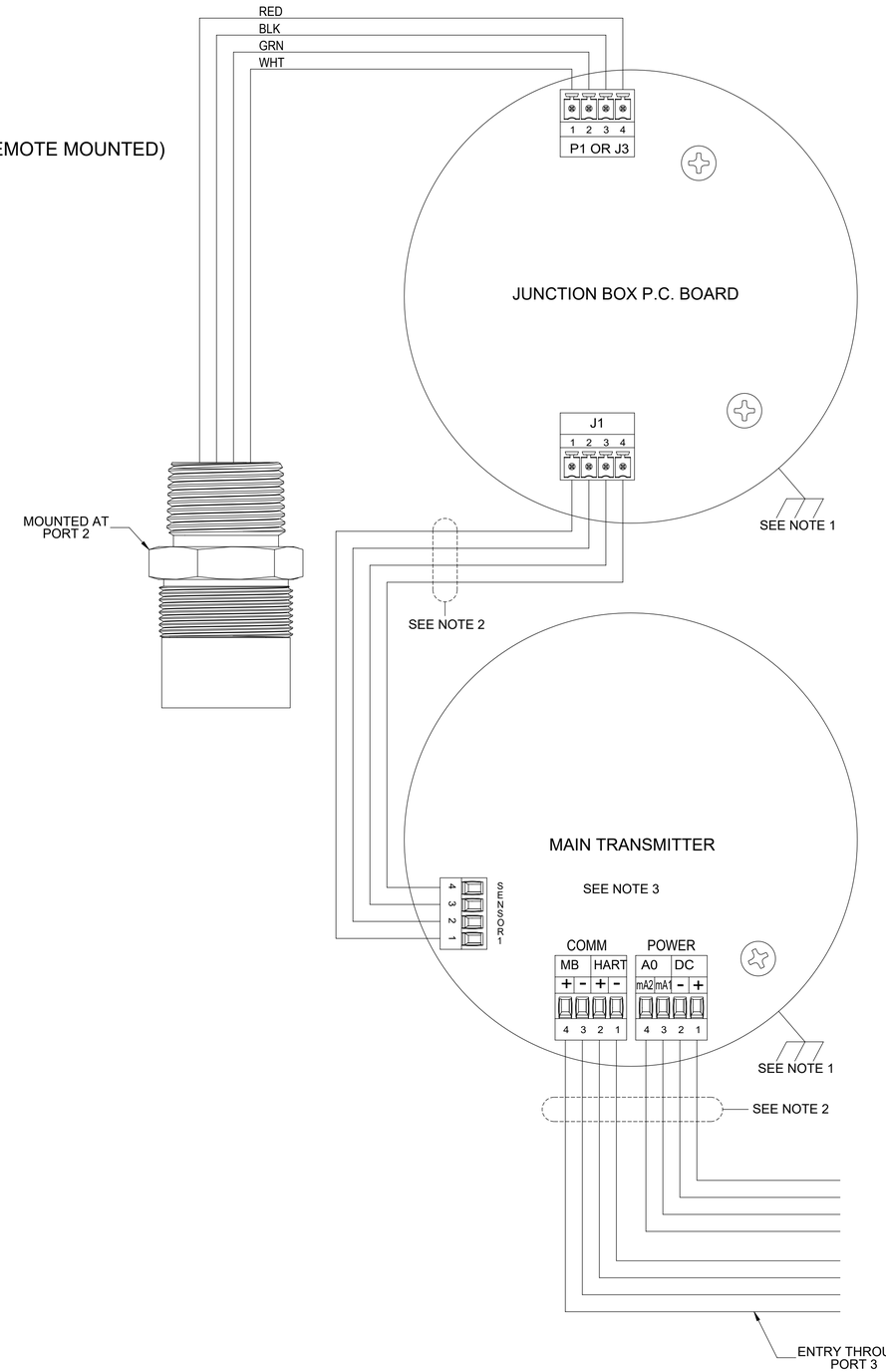
SOLIDWORKS GENERATED
Last Saved: Tuesday, March 27, 2007, 8:00

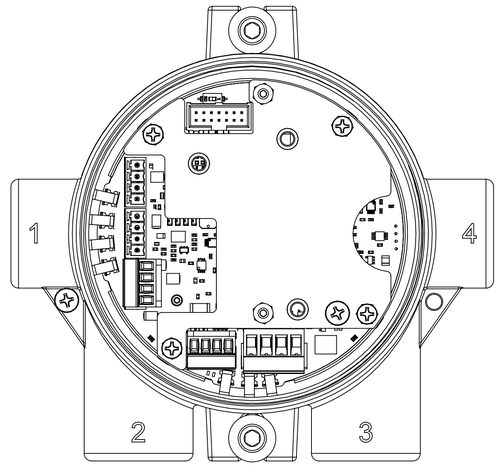
GROUNDING CONFIGURATION

MOS SENSOR (REMOTE MOUNTED)



MOS SENSOR (LOCALLY MOUNTED)





NOTES:
1. ENCLOSURE TO BE MECHANICALLY BOLTED TO STRUCTURAL GROUND.
2. SIGNAL SHIELD TO BE INSULATED AND LEFT FLOATING INSIDE TERMINAL ENCLOSURE - TIE DOWN THE OPPOSITE END TO AN ISOLATED GROUND (AT THE PANEL/CONTROLLER).
3. BOND SIGNAL SHIELD ON INCOMING AND OUTGOING CABLE IN REMOTE SENSOR CONFIGURATION TO PROVIDE CONTINUITY OF SIGNAL SHIELDING TO END DEVICE.
4. SIGNAL SHIELD MUST NOT CONTACT CHASSIS OR ANY OTHER NON-ISOLATED GROUND.
5. JB5000 CANNOT BE USED WITH PASSIVE MOS SENSOR, GAS CODE Mxx.

General Monitors by MSA — LAKE FOREST, CA, USA; GALWAY, IRELAND

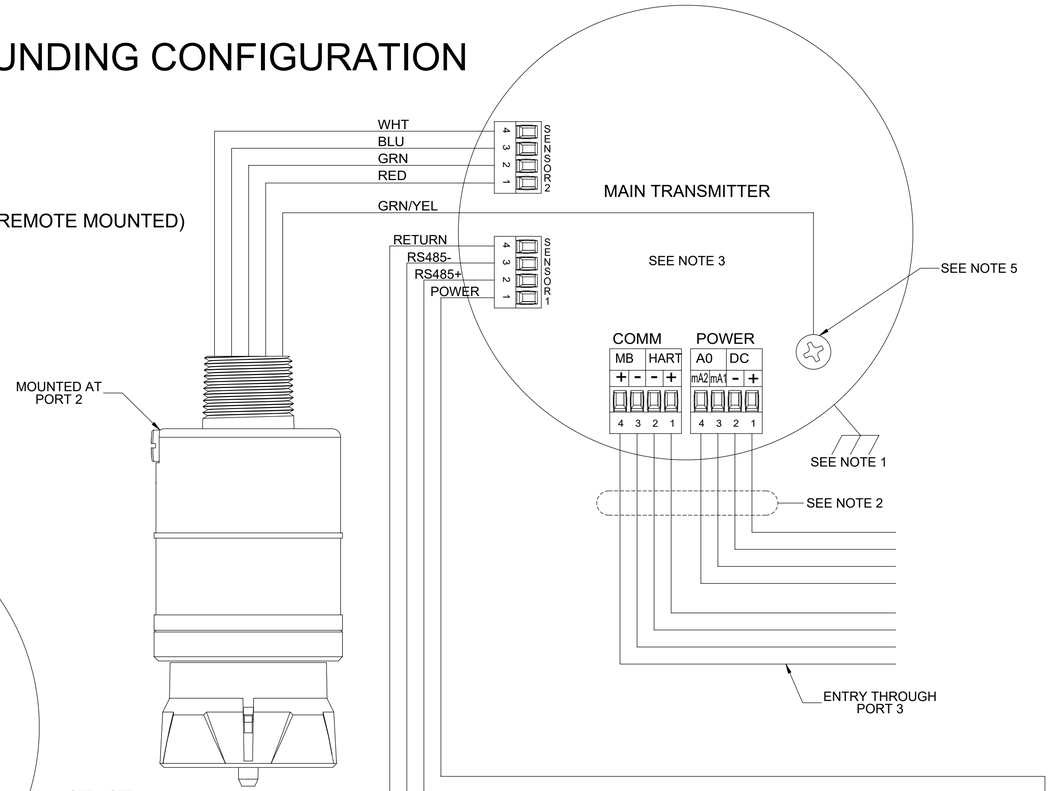
SIZE:	DRAWING NO.:	LIFECYCLE STATE:	REV:
D	324102	Production	4

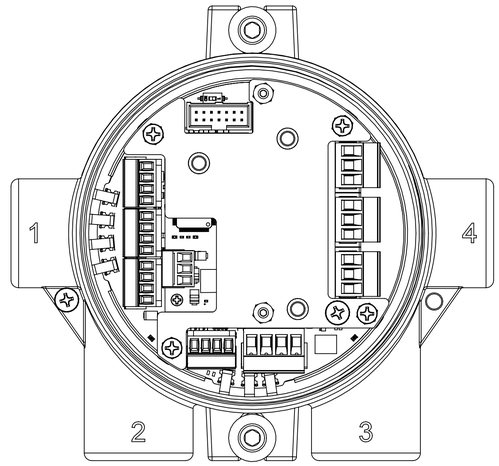
SCALE: 1:1 | MODEL: S5000 | SHEET 6 OF 10

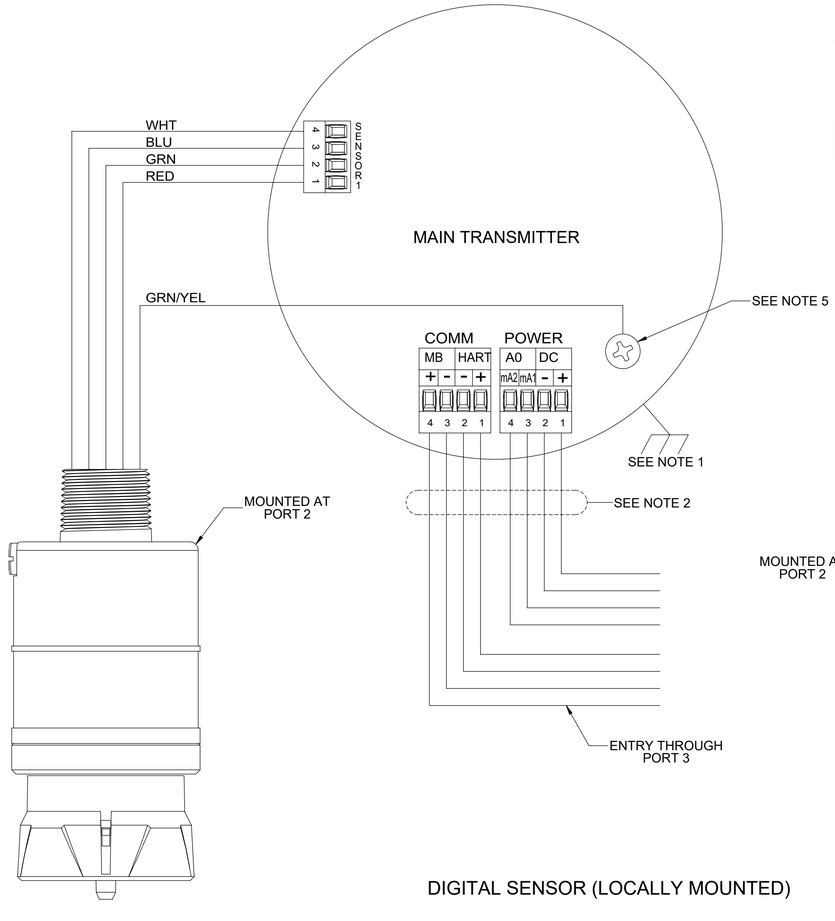
SOLIDWORKS GENERATED
Last Save: Tuesday, March 27, 2007, 8:05

GROUNDING CONFIGURATION

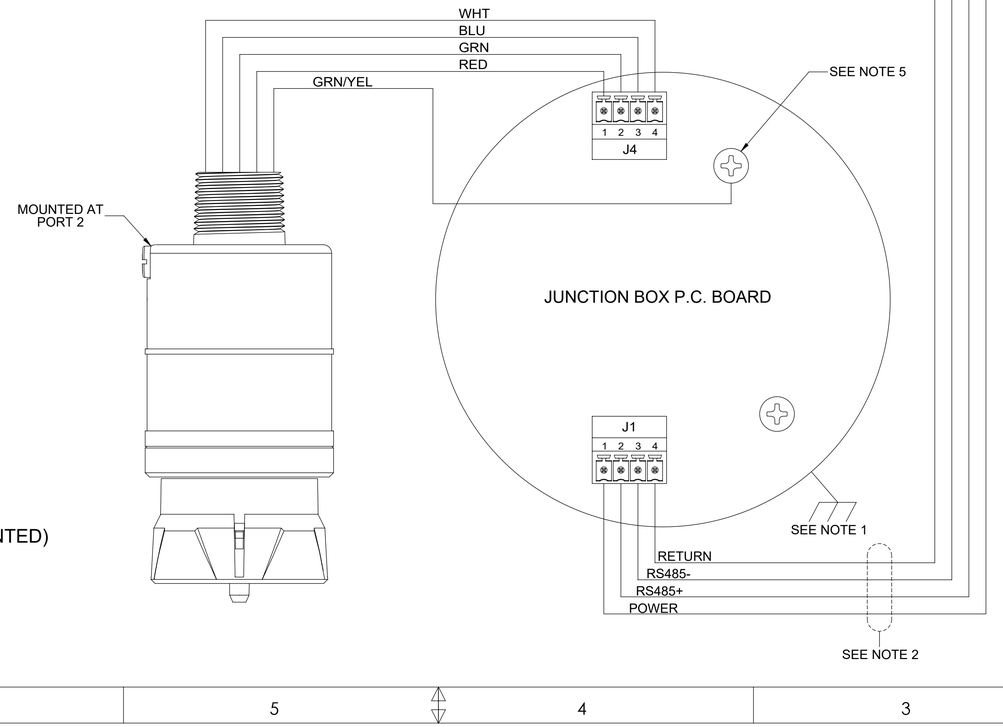
DIGITAL SENSOR (LOCALLY & REMOTE MOUNTED)







DIGITAL SENSOR (LOCALLY MOUNTED)



NOTES:
1. ENCLOSURE TO BE MECHANICALLY BOLTED TO STRUCTURAL GROUND.
2. SIGNAL SHIELD TO BE INSULATED AND LEFT FLOATING INSIDE TERMINAL ENCLOSURE - TIE DOWN THE OPPOSITE END TO AN ISOLATED GROUND (AT THE PANEL/CONTROLLER).
3. BOND SIGNAL SHIELD ON INCOMING AND OUTGOING CABLE IN REMOTE SENSOR CONFIGURATION TO PROVIDE CONTINUITY OF SIGNAL SHIELDING TO END DEVICE.
4. SIGNAL SHIELD MUST NOT CONTACT CHASSIS OR ANY OTHER NON-ISOLATED GROUND.
5. GREEN/YELLOW SENSOR WIRE TO BE BONDED TO ENCLOSURE CASE SCREW.

General Monitors by MSA — LAKE FOREST, CA, USA; GALWAY, IRELAND

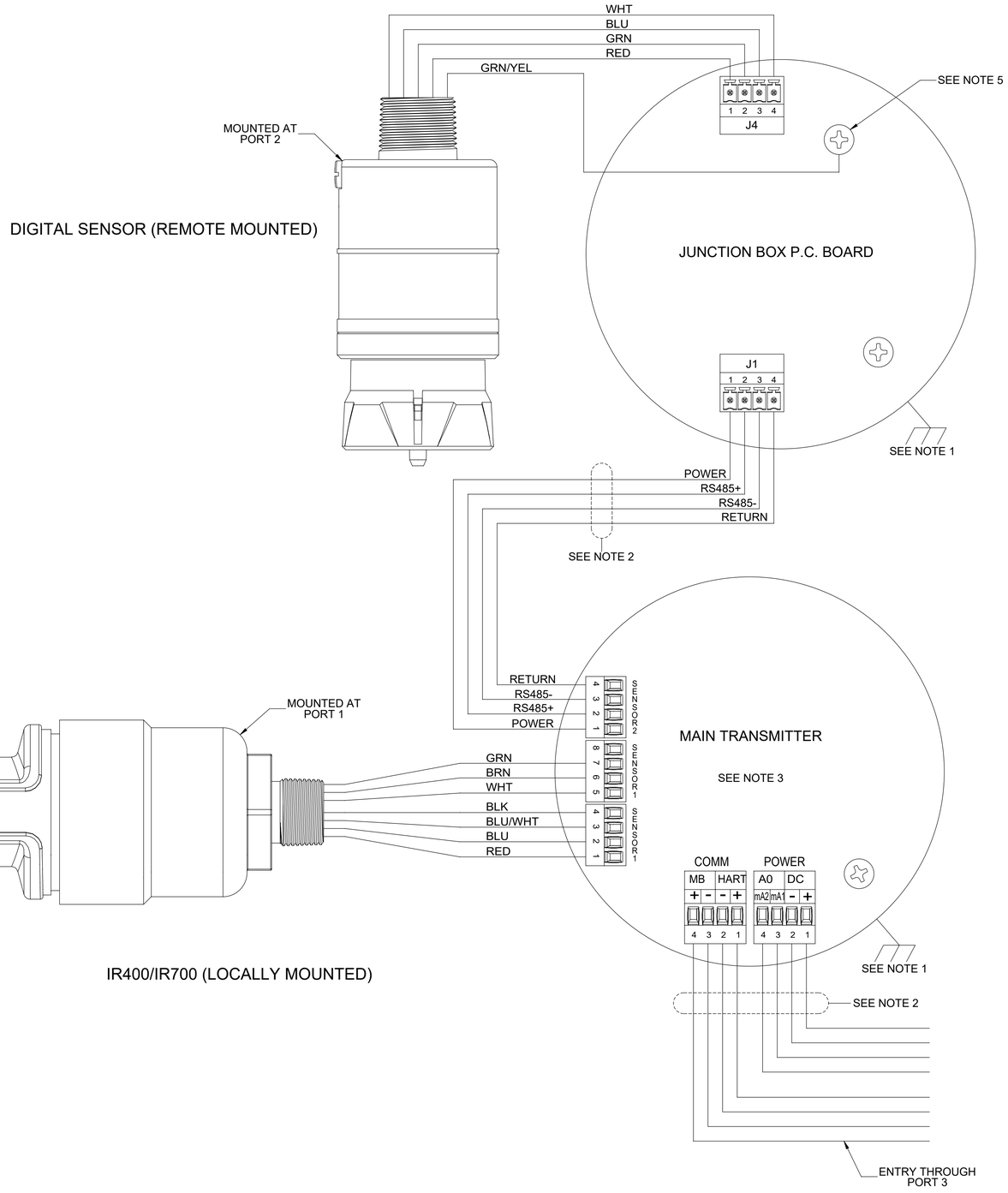
SIZE: D

DRAWING NO.:	LIFECYCLE STATE:	REV:
324102	Production	4

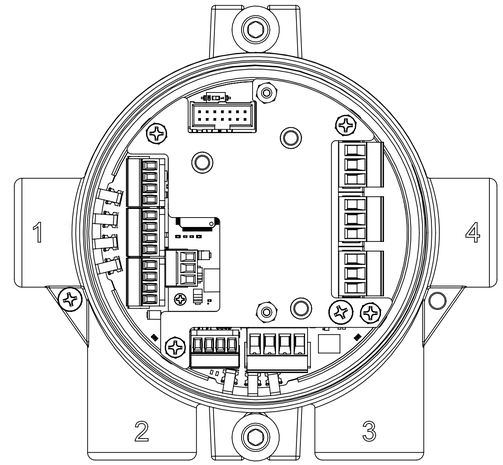
SCALE: 1:1 | MODEL: S5000 | SHEET 7 OF 10

SOLIDWORKS GENERATED
Last Save: Tuesday, March 27, 2007, 8:00

GROUNDING CONFIGURATION



IR400/IR700 (LOCALLY MOUNTED)



NOTES:
1. ENCLOSURE TO BE MECHANICALLY BOLTED TO STRUCTURAL GROUND.
2. SIGNAL SHIELD TO BE INSULATED AND LEFT FLOATING INSIDE TERMINAL ENCLOSURE - TIE DOWN THE OPPOSITE END TO AN ISOLATED GROUND (AT THE PANEL/CONTROLLER).
3. BOND SIGNAL SHIELD ON INCOMING AND OUTGOING CABLE IN REMOTE SENSOR CONFIGURATION TO PROVIDE CONTINUITY OF SIGNAL SHIELDING TO END DEVICE.
4. SIGNAL SHIELD MUST NOT CONTACT CHASSIS OR ANY OTHER NON-ISOLATED GROUND.
5. GREEN/YELLOW SENSOR WIRE TO BE BONDED TO ENCLOSURE CASE SCREW.

General Monitors by MSA — LAKE FOREST, CA, USA; GALWAY, IRELAND

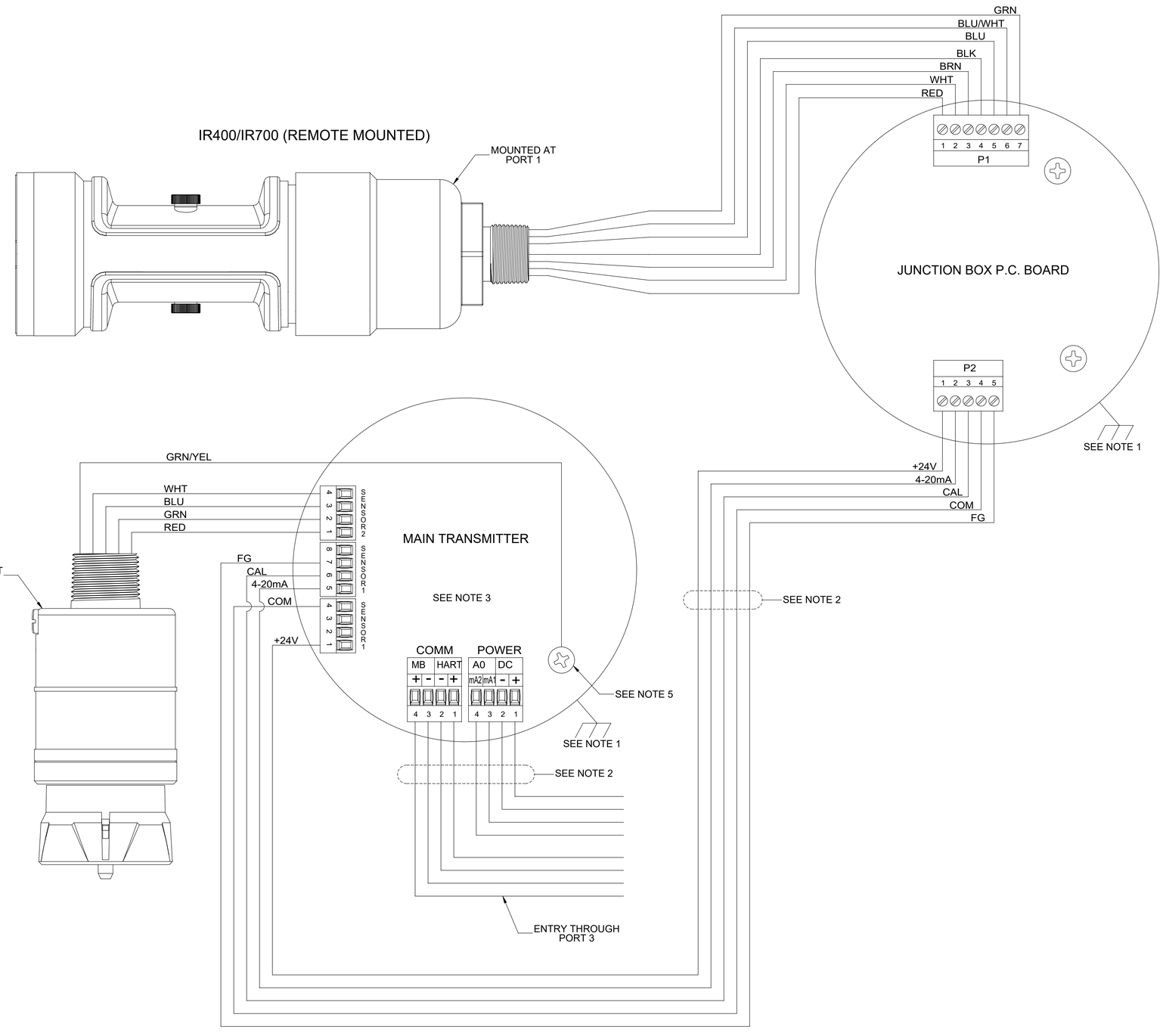
SIZE: D

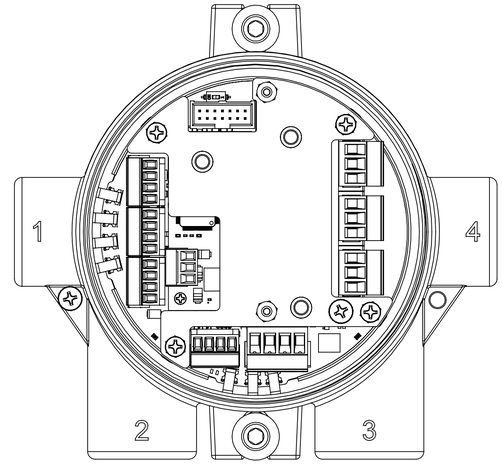
DRAWING NO.:	LIFECYCLE STATE:	REV:
324102	Production	4

SCALE: 1:1 | MODEL: S5000 | SHEET 8 OF 10

SOLIDWORKS GENERATED
Last Saved: Tuesday, March 27, 2007, 8:03

GROUNDING CONFIGURATION





NOTES:
1. ENCLOSURE TO BE MECHANICALLY BOLTED TO STRUCTURAL GROUND.
2. SIGNAL SHIELD TO BE INSULATED AND LEFT FLOATING INSIDE TERMINAL ENCLOSURE - TIE DOWN THE OPPOSITE END TO AN ISOLATED GROUND (AT THE PANEL/CONTROLLER).
3. BOND SIGNAL SHIELD ON INCOMING AND OUTGOING CABLE IN REMOTE SENSOR CONFIGURATION TO PROVIDE CONTINUITY OF SIGNAL SHIELDING TO END DEVICE.
4. SIGNAL SHIELD MUST NOT CONTACT CHASSIS OR ANY OTHER NON-ISOLATED GROUND.
5. GREEN/YELLOW SENSOR WIRE TO BE BONDED TO ENCLOSURE CASE SCREW.
6. JB5000 CANNOT BE USED WITH IR400/IR700 SENSOR, GAS CODE Cxx.

General Monitors by MSA
LAKE FOREST, CA, USA
GALWAY, IRELAND

SIZE:	DRAWING NO.:	LIFECYCLE STATE:	REV:
D	324102	Production	4

SCALE: 1:1 | MODEL: S5000 | SHEET 9 OF 10

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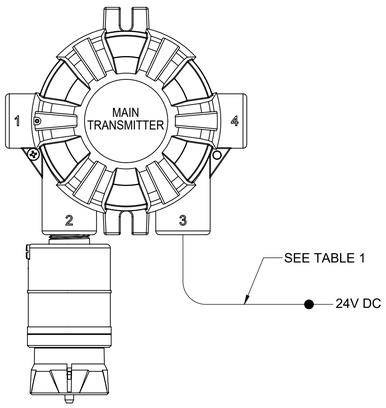

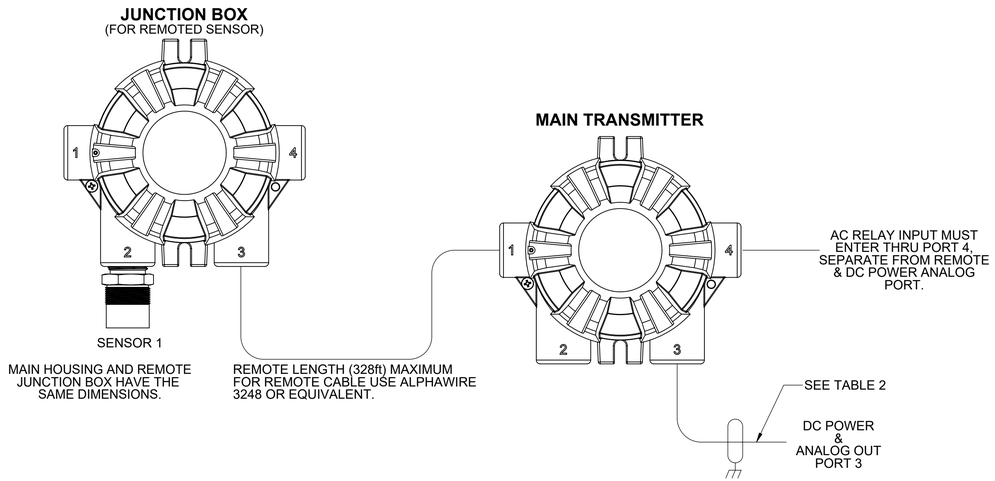

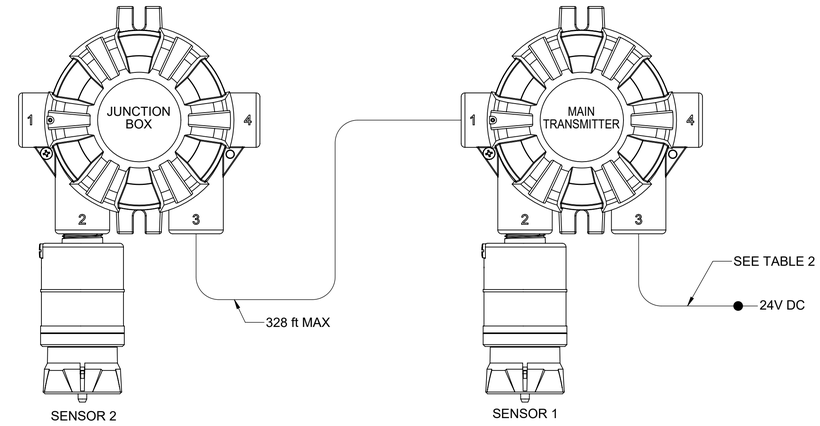

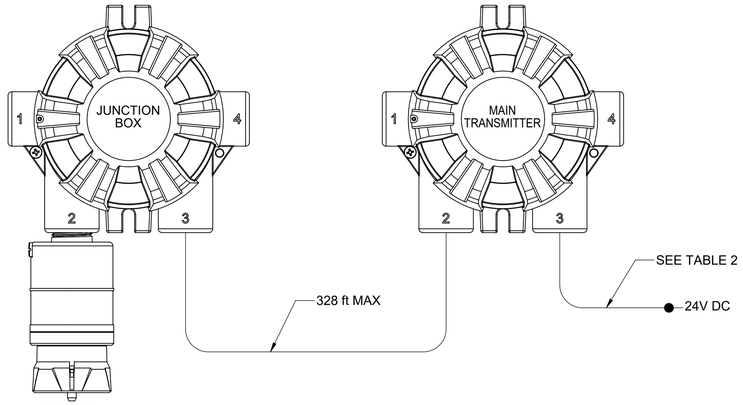

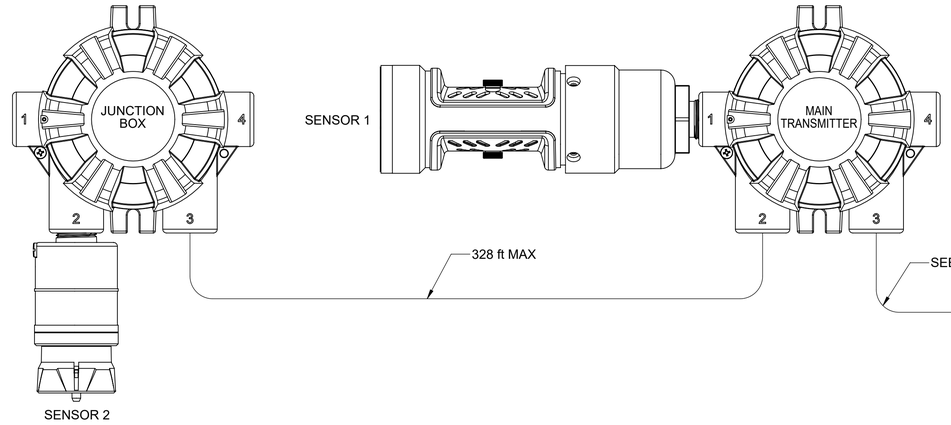

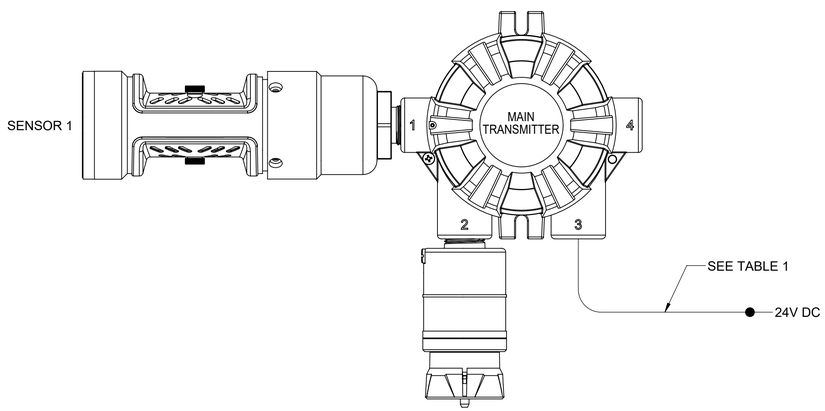

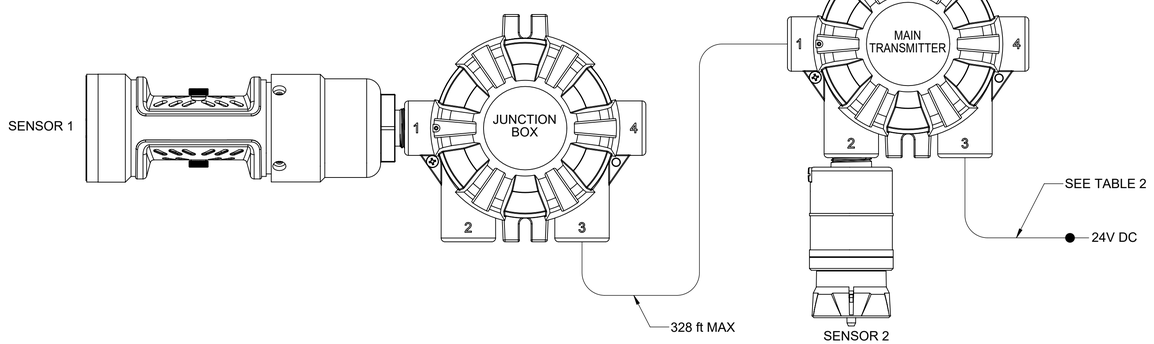

NOTES:
1. JB5000 CAN ONLY BE USED WITH DIGITAL SENSOR, GAS CODE Dxx.
2. JB5000 CANNOT BE USED WITH PASSIVE CAT BEAD SENSOR, GAS CODE Cxx, PASSIVE MOS SENSOR, GAS CODE Mxx OR IR400/IR700 SENSOR, GAS CODE Cxx.

General Monitors by MSA
LAKE FOREST, CA, USA
GALWAY, IRELAND

SIZE: D

DRAWING NO.:	LIFECYCLE STATE:	REV:
324102	Production	4

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