

AFP-2 AUTOMATIC FUEL PORT 2" (1-TANK SYSTEM)

****CUSTOMER DRAWING****

NOTES

- 1) ALL DIMENSIONS ±.125
- 2) DUE TO SYSTEM COMPLEXITY SOME COMPONENTS MAY NOT BE VISIBLE IN ALL VIEWS
- 3) CONSTRUCTION WELDED 14 GA. H.R.S.
- 4) CABINET COLOR: **WHITE** DOORS COLOR: **BLUE**
- 5) APPROXIMATE WEIGHT: TBDlbs.

BUILT W/ STOCK FAFB-2 (PN. 50002630) & STOCK AFC-1 (PN. 50001628)

STD. FILLING SYSTEM DRAWING
 NON-STD. FILLING SYSTEM DRAWING

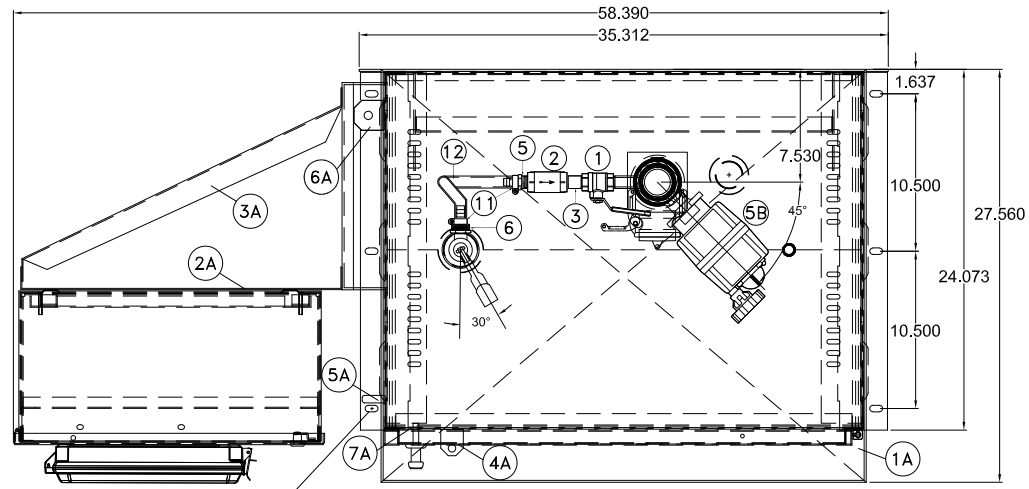
REFERENCE ASSEMBLY (FOR SIMPLEX USE ONLY)

ITEM	DESCRIPTION	PART NUMBER	QTY.
1A	FULL SIZE FILL BASE WELDMENT ASSEMBLY	ACD-00056396D	1
2A	FULL SIZE FILL BASE CONTROLLER SUPPORT PANEL	ACD-00056388B	1
3A	FULL SIZE FILL BASE 24"x20" CONTROLLER BRACE	ACD-00056389A	1

FABRICATED PARTS (Weld-OPERATION 10)			
ITEM	DESCRIPTION	PART NUMBER	QTY.
4A	COMPACT FILL BASE PADLOCK SLOT/TAB, 7GA. H.R.S.		1
5A	COMPACT FILL BASE STAINLESS STEEL GROUND STUD		1
6A	FULL SIZE FILL BASE STAINLESS STEEL GROUND LUG		1
7A	COMPACT FILL BASE DOOR PAWL, 2.375", GALVANIZED		4
8A	FULL SIZE FILL BASE LOUVER COVER		3
9A	FULL SIZE FILL BASE LIFT EYE		2
10A	0.50" NPT. CONDUIT COUPLING, 150#, BLK.		2
11A	0.75" NPT. CONDUIT COUPLING, 150#, BLK.		2

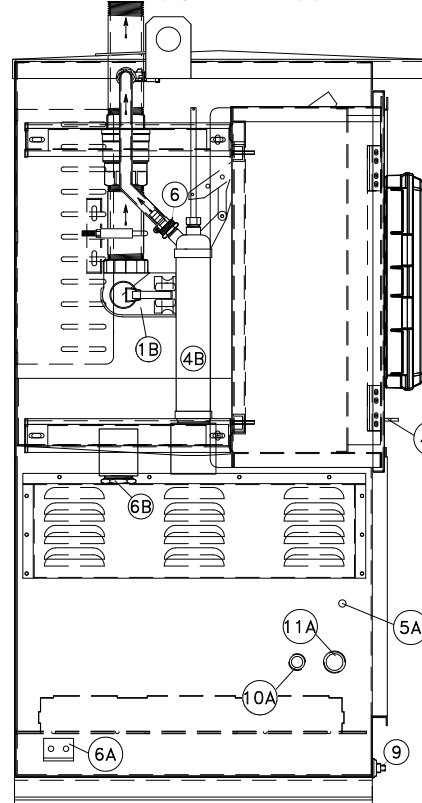
FUEL ASSEMBLY PARTS (FLOOR STOCK)

ITEM	DESCRIPTION	PART NUMBER	QTY.
1	BV1 0.50" NPT. MANUAL BALL VALVE, FULL PORT, BRASS/BRONZE BODY		2
2	CV 0.50" NPT. CHECK VALVE, SPRING TYPE, BRONZE W/ VITON O-RING		1
3	NP2 0.50"x1.50" NPT. NIPPLE, SCH. 40, 304 STAINLESS STEEL, TBE		2
4	NP3 0.75"x3.00" NPT. NIPPLE, SCH. 40, 304 STAINLESS STEEL, TBE		1
5	HB1 HOSE BARB 0.50" ID BARB x 0.50" NPT. MALE THREADS, BRASS		3
6	HB2 HOSE BARB 0.50" ID BARB x GHT FEMALE THREADS, BRASS		1
7	DLN DOOR LATCH, NON-LOCKING T-HANDLE, BLACK W/ GASKET		4
8	DH DOOR HINGE 2-1/4"x19/32" #10 W/ UL GREEN SEALING WASHERS		4
9	SP SUMP PLUG, 0.375" NPT. HEX HEAD, 316 STAINLESS STEEL		1
10	PC PIPE CLAMP U-BOLT, STEEL FOR 2.00" PIPE, 3/8"-16 THREAD		1
11	HC HOSE CLAMP W/ STAINLESS STEEL BAND		4
12	H PCV CLEAR BRAIDED HOSE, 0.50" I.D. x 0.75" O.D.		-
13	T1 0.50" NPT. TEE, 150#, 304 STAINLESS STEEL		1
14	RB1 0.75"x0.50" NPT. REDUCER BELL, 150#, 304 STAINLESS STEEL		1

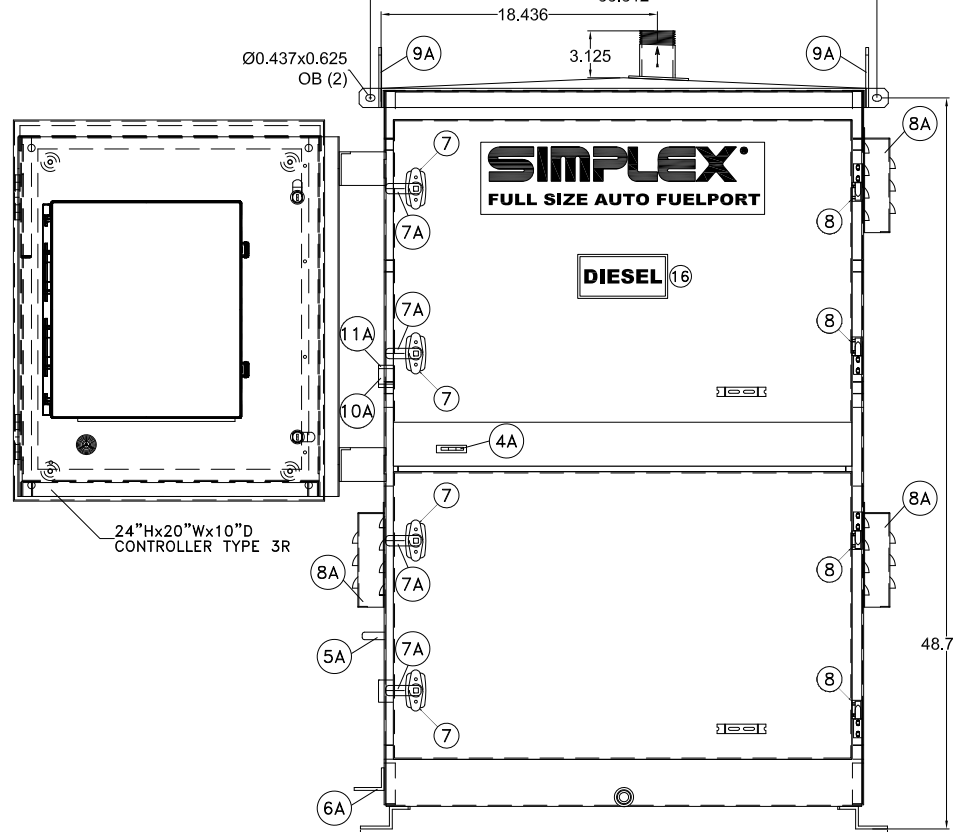


TOP VIEW LESS LOUVER COVERS

OUTLET 2.00" NPT.

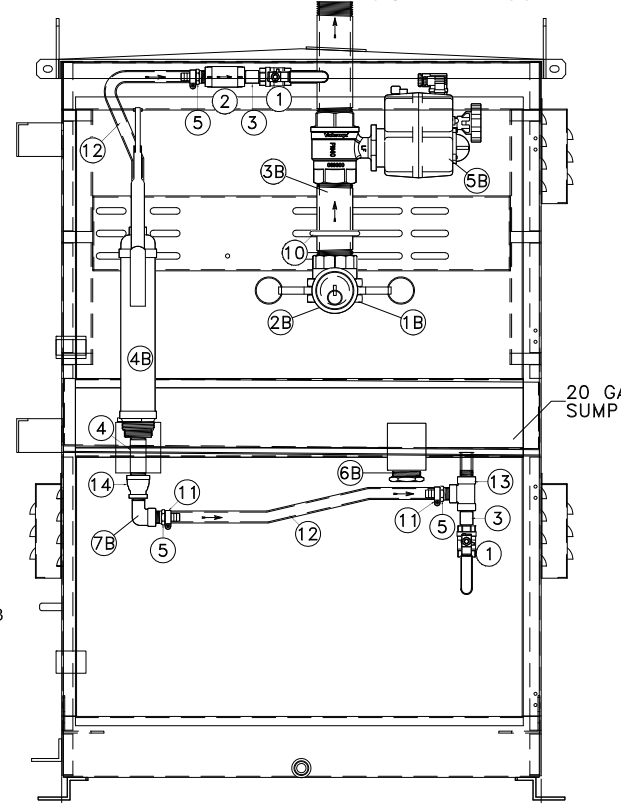


LEFT SIDE VIEW LESS DOORS

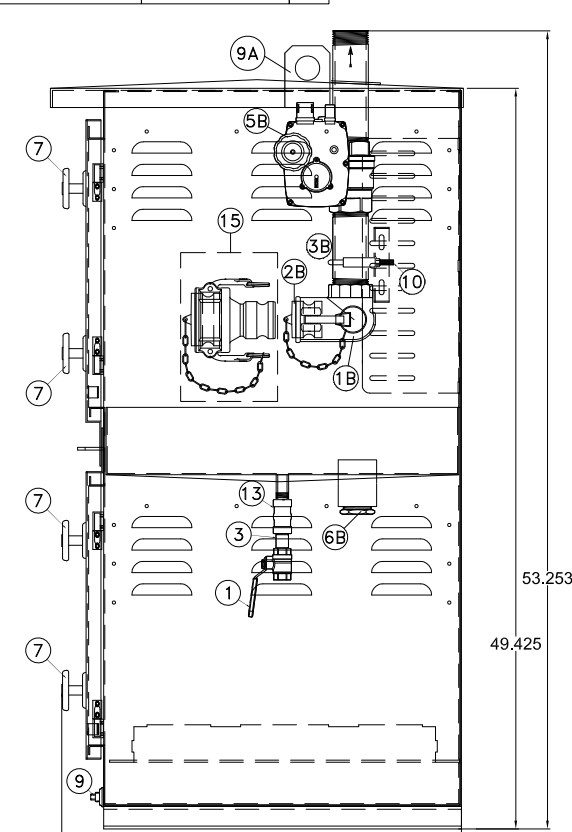


FRONT VIEW

OUTLET 2.00" NPT.



FRONT VIEW LESS DOORS & CONTROLLER



RIGHT SIDE VIEW LESS LOUVER COVERS

FUEL ASSEMBLY PARTS (FS Assy-OPERATION 10)

ITEM	DESCRIPTION	PART NUMBER	QTY.
1B	AC 2.00" ANGLE CHECK ELBOW COUPLER, FEMALE NPT. THREAD x COUPLER, ALUMINUM BODY W/ VITON SEAL, PART G		1
2B	DP1 DUST PLUG ADAPTER FOR 2.00" COUPLER, ALUMINUM, PART W		1
3B	N1 2.00"x6.00" NPT. NIPPLE, SCH. 40, 304 STAINLESS STEEL, TBE		1
4B	MHP MANUAL HAND PUMP, STEEL BODY W/ ALUMINUM HEAD & BASE 1-GAL. PER 9 STROKES DELIVERY RATE		1
5B	MBV 2.00" NPT. MOTORIZED BALL VALVE, BRASS BODY, FULL PORT, 115VAC ACTUATOR W/ POSITION INDICATOR & MANUAL OVERRIDE W/ 16FT ISO PLUG & SUB-MICRO PLUG CABLES		1
6B	P1 1.50" NPT. PLUG, HEX HEAD, 150#, 304 STAINLESS STEEL		1
7B	E1 0.50" NPT. STREET ELBOW, 90 DEGREE, 150#, 304 STAINLESS STEEL		1

AVAILABLE PARTS (REFERENCE SALES ORDER FOR OPTIONS)

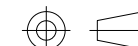
FUEL ASSEMBLY PARTS (FLOOR STOCK)				
ITEM	DESCRIPTION	PART NUMBER	QTY.	OPTION
15	RC 3.00"x2.00" REDUCING COUPLER x ADAPTER, 3.00" PART D COUPLER x 2.00" ADAPTER, ALUMINUM BODY W/ VITON GASKET	60000190	1	FSOP-040
	DP DUST PLUG ADAPTER FOR 3.00" COUPLER, ALUMINUM, PART W	22440904	1	
16	DL DIESEL LABEL, 6"x3"H, GREEN/WHITE	24138005	1	FSOP-041
17	EQ FLORIDA EQ-706 AFC/SPILL CONTAINMENT LABEL, 5.25"Lx2.5"H, WHITE/BLACK	24055214	1	FSOP-044



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THIRD ANGLE PROJECTION



REV	DATE	DESCRIPTION	INT	APPR
A	12/31/2019	ORIGINAL DESIGN		

TOLERANCES
 X.XXX ± 0.005"
 X.XX ± 0.010"
 X.X ± 0.020"
 FRACTIONAL ± 1/32"
 ANGLES ± 1°
 SURFACES 125√

APPROVED BY: AA
 DRAWN BY: AA
 SCALE: 1:12.6199
 SHEET SIZE: ANSI B
 JOB NUMBER: NA

DESCRIPTION
 FULL SIZE AUTO FUEL PORT
 AFP-2 STANDARD
 PICTORIAL

Approved 12/31/2019

DRAWING NUMBER

ACD-00066006

SHEET NUMBER REVISION

1/1

A

AUTOMATIC FILL CONTROLLER (1-TANK) AFC-1 STOCK PN. 50001628

AVAILABLE PARTS (REFERENCE SALES ORDER FOR OPTIONS)

FUEL ASSEMBLY PARTS (FLOOR STOCK)

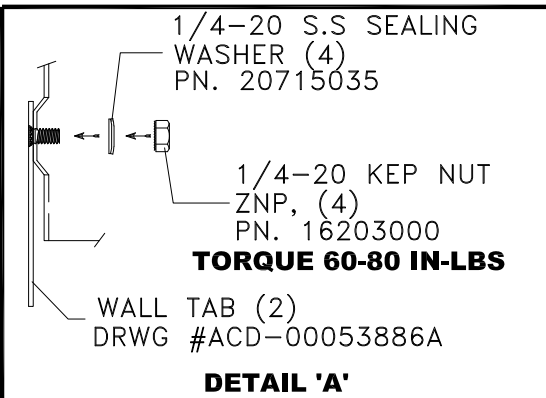
ITEM	DESCRIPTION	PART NUMBER	QTY.	OPTION
12	EQ FLORIDA EQ-706 AFC/SPILL CONTAINMENT LABEL, 5.25"Lx2.5"H, WHITE/BLACK	24055214	1	FSOP-044

****CUSTOMER/PRODUCTION DRAWING****

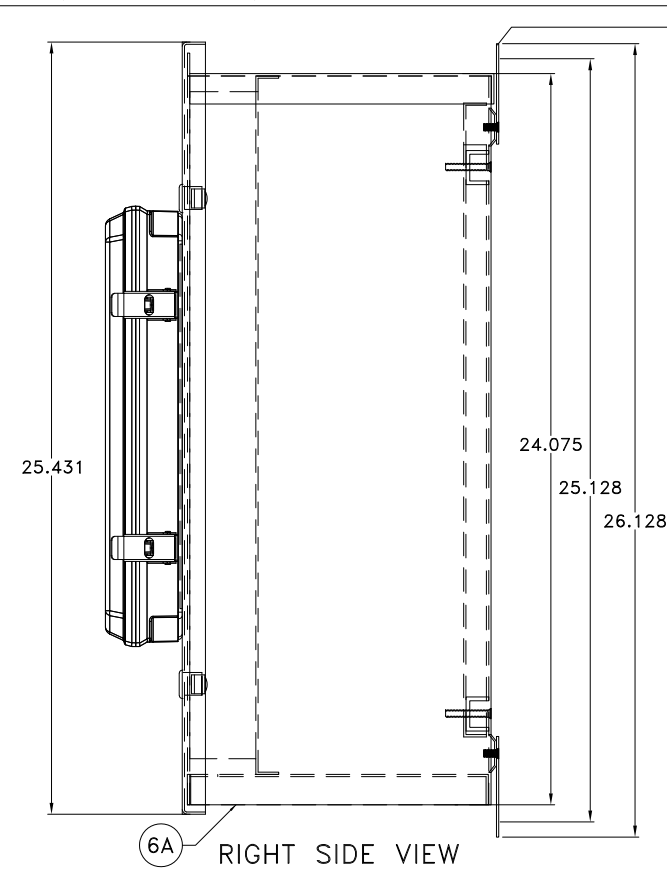
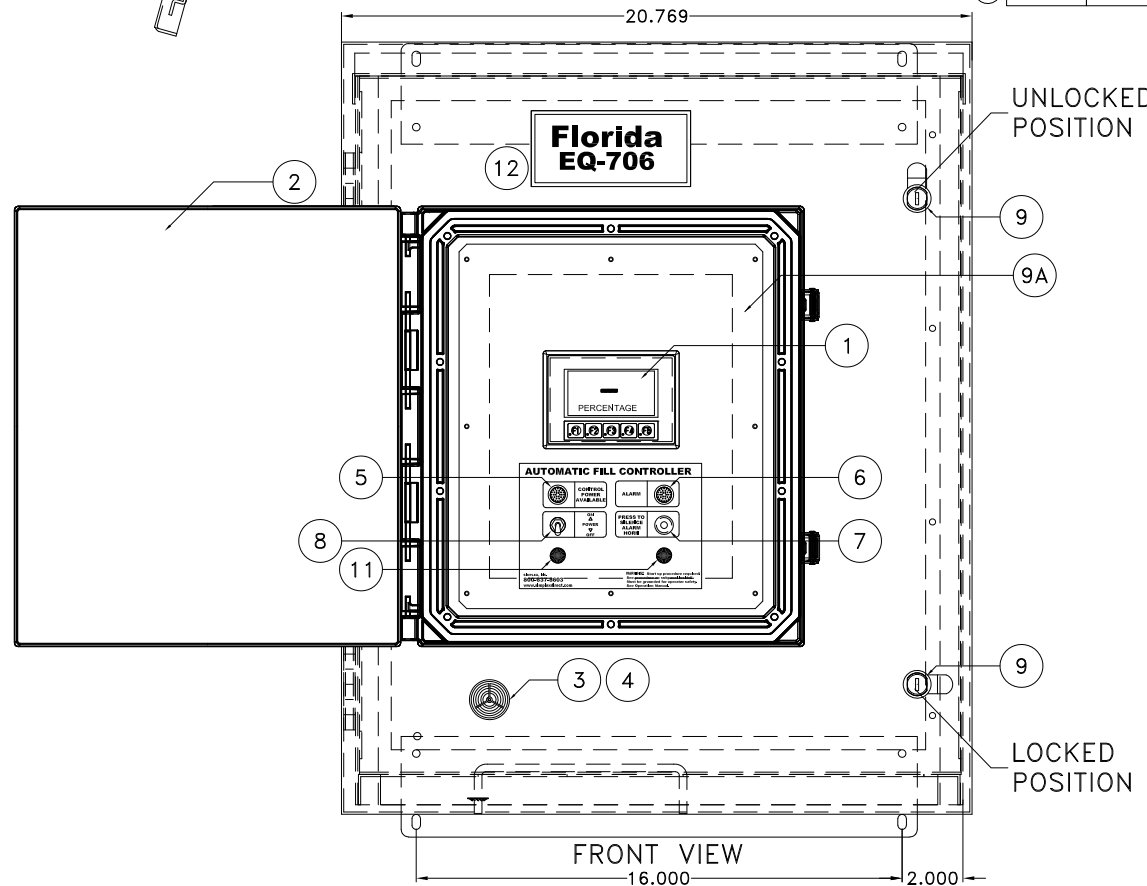
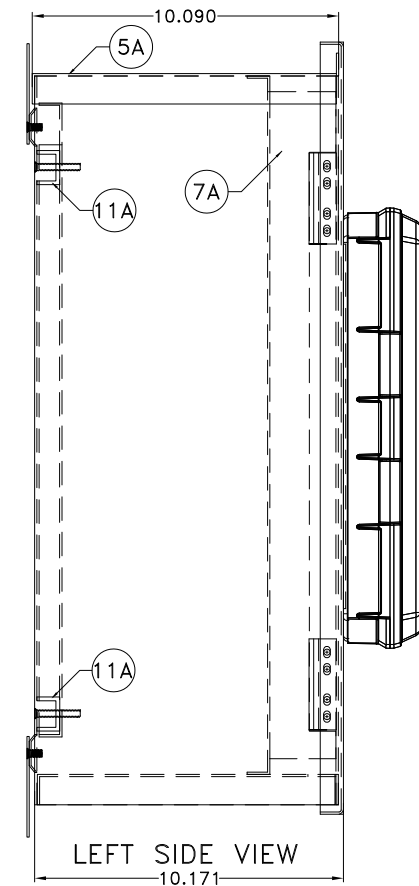
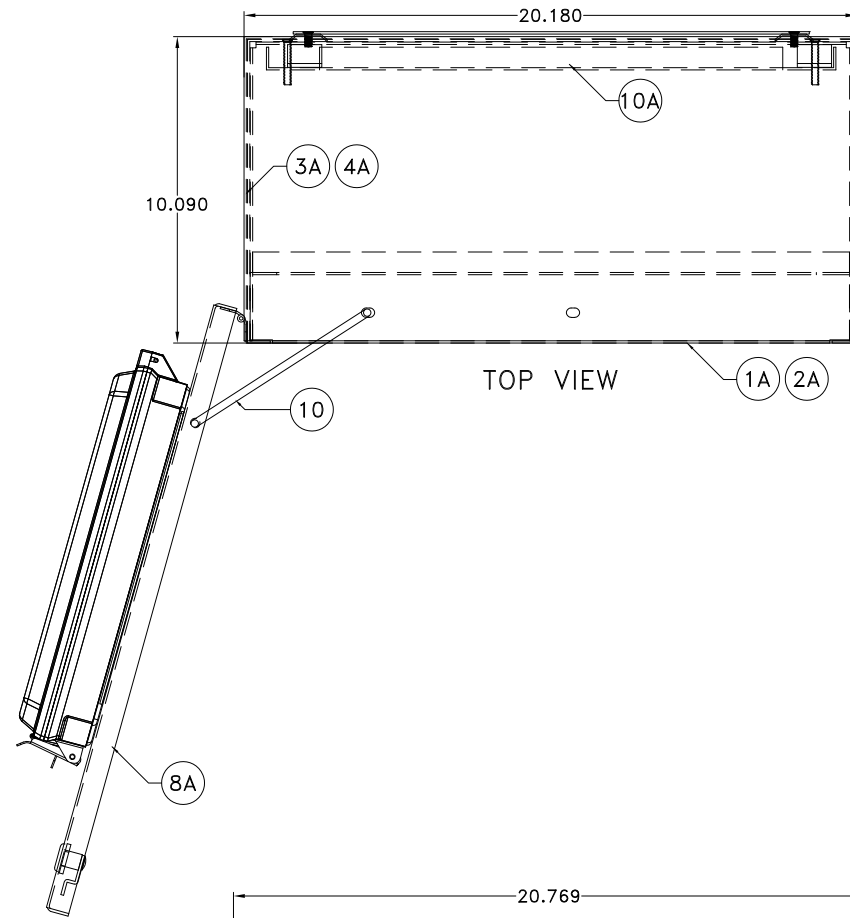
<input checked="" type="checkbox"/>	STD. FILLING SYSTEM DRAWING
<input type="checkbox"/>	NON-STD. FILLING SYSTEM DRAWING

NOTES:

- ENCLOSURE: TYPE 3R, 14 GA. STEEL
- COLOR: CONTROLLER WHITE
DOOR BLUE
- LABELED: UL508A
- APPROXIMATE WEIGHT: 60lbs.



WALL MOUNTING TABS ONLY REQUIRED FOR SHIP LOOSE CONTROLLERS (FLOOR STOCK ITEMS)



REFERENCE ASSEMBLY (SIMPLEX USE ONLY)

ITEM	DESCRIPTION	PART NUMBER	QTY.
1A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER ASSEMBLY	ACD-00055671B	1
2A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER WELDMENT	ACD-00055673B	1
3A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER WRAPPER WELDMENT	ACD-00055674B	1

FABRICATED PARTS (Weld-OPERATION 10)

ITEM	DESCRIPTION	PART NUMBER	QTY.
4A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER WRAPPER	ACD-00055675B	1
5A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER TOP	ACD-00055676A	1
6A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER BOTTOM	ACD-00055677B	1
7A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER INNER DOOR FRAME	ACD-00055678A	1
8A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER TYPE 3R OUTER DOOR	ACD-00055680C	1
9A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER INSERT PANEL FOR 3" HMI	ACD-00053616A	1
10A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER SUBPANEL	ACD-00055679A	1
11A	24"Hx20"Wx10"D AUTOMATIC FILL CONTROLLER SUBPANEL SPACER	ACD-00055682A	4

SUBPANEL PARTS (SubAssy-OPERATION 10)

ITEM	DESCRIPTION	PART NUMBER	QTY.
1	HMI OPERATOR INTERFACE TOUCH SCREEN, 3" COLOR, C-MORE MICRO	24955047	1
2	[HMI] WEATHER PROOF 14"x12" COVER W/ OPAQUE DOOR	13817000	1
3	AH ALARM HORN, PANEL MOUNT, 30-120V	24009100	1
4	[AH] ALARM HORN GASKET	24009101	1

WIRING PARTS (FS SW-OPERATION 20)

ITEM	DESCRIPTION	PART NUMBER	QTY.
5	L1 GREEN LED INDICATOR LAMP, 24VDC, 0.50" DIAMETER	24249761	1
6	L2 RED LED INDICATOR LAMP, 24VDC, 0.50" DIAMETER	24249760	1
7	PB PUSH BUTTOM, METAL, SPDT, MOMENTARY CONTACT, RATED 15A @ 250V	25254000	1
8	S1 2-POSITION SWITCH, METAL, TOGGLE, DPDT, RATED 3A @ 250V	25301000	1

SUBPANEL PARTS (FLOOR STOCK)

ITEM	DESCRIPTION	PART NUMBER	QTY.
9	LC LATCH CAM LOCK, KEYED, WEATHER-RESISTANT W/ S.S. SHUTTER	15453053	2
10	DS DOOR STAY ROD, 0.25" STAINLESS STEEL	17209710	1

WIRING PARTS (FLOOR STOCK)

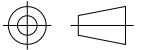
ITEM	DESCRIPTION	PART NUMBER	QTY.
11	HP BLACK HOLE PLUG, 0.50" DIAMETER, NYLON MATERIAL	17107000	2



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THIRD ANGLE PROJECTION



REV	DATE	DESCRIPTION
C	11/21/2019	UPDATED LAYOUT & ADDED FSOP-044
B	05/16/2019	ADDED WALL TABS & RELOCATED AH
A	02/19/2019	ORIGINAL DESIGN

TOLERANCES
X.XXX ± 0.005"
X.XX ± 0.010"
X.X ± 0.020"
FRACTIONAL ± 1/32"
ANGLES ± 1°
SURFACES 125

APPROVED BY: AA
DRAWN BY: AA
SCALE: 1:6.2271
SHEET SIZE: ANSI B
JOB NUMBER: NA

DESCRIPTION
AUTOMATIC FILL CONTROLLER STOCK 1-TANK (PN. 50001628) CONTROLLER PICTORIAL

Approved 11/21/2019

DRAWING NUMBER
ACD-00053020

SHEET NUMBER: 1/1
REVISION: C

4

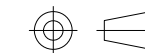
3

2

1

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THIRD ANGLE PROJECTION



REVISIONS & UPDATES

REVISIONS & UPDATES

REVISIONS & UPDATES

TOLERANCES
X.XXX ± 0.005"
X.XX ± 0.010"
X.X ± 0.020"
FRACTIONAL ± 1/32"
ANGLES ± 1°
SURFACES 125

APPROVED BY: AA

DRAWN BY: AA

SCALE: 1:3.3231

SHEET SIZE: ANSI B

JOB NUMBER NA

DESCRIPTION
AUTOMATIC FILL CONTROLLER
STOCK 1-TANK (PN. 50001628)
SUBPANEL LAYOUT

Approved 11/22/2019

DRAWING NUMBER

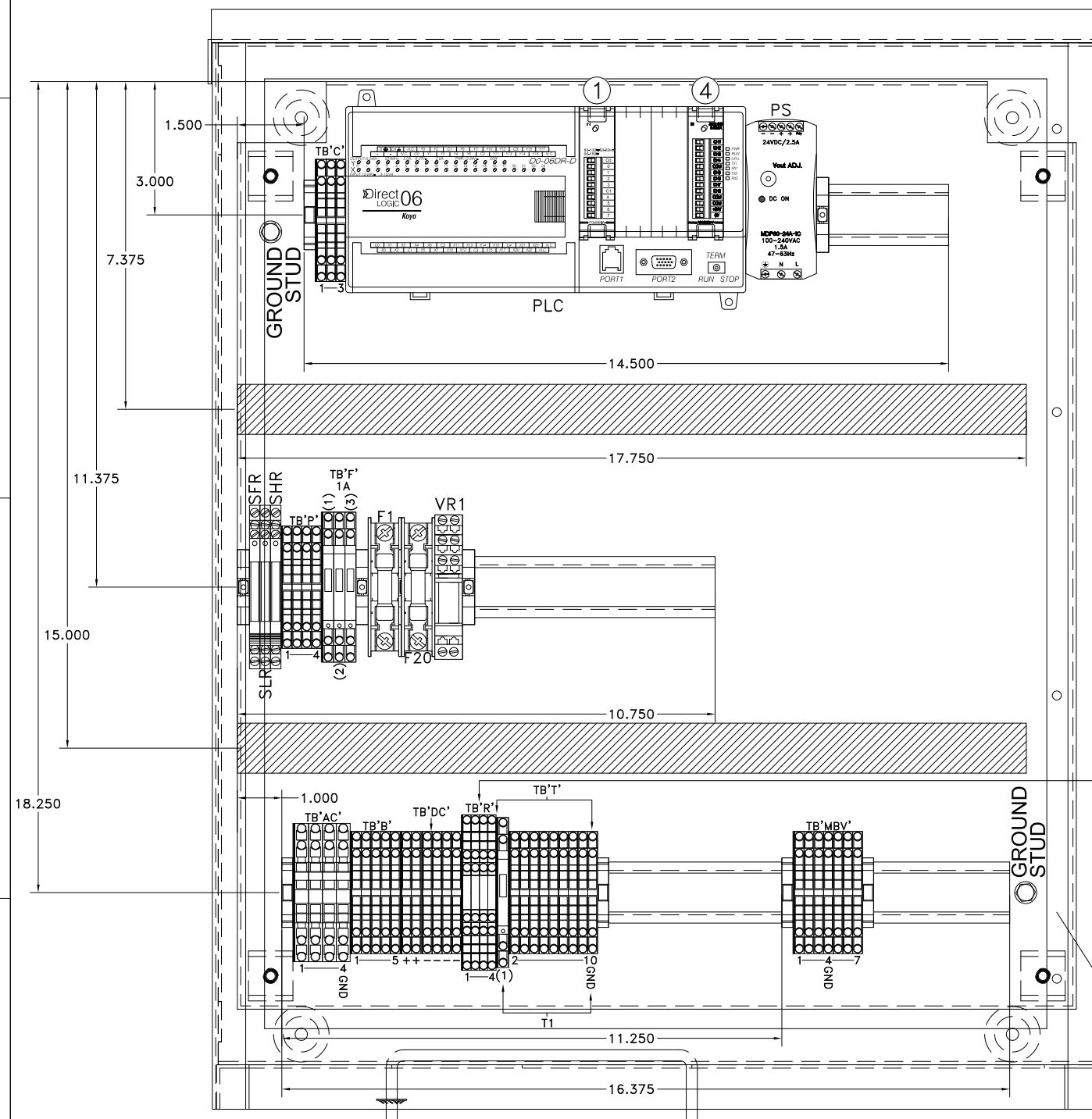
ACD-00053021

SHEET NUMBER REVISION

1/1 B

D

- ① FO-08NA-1
② OPEN
③ OPEN
④ FO-08ADH-1



SUBPANEL PARTS (SubAssy-OPERATION 10)			
ITEM	DESCRIPTION	PART NUMBER	QTY.
PLC	PLC, DL06, 12-24VDC, (1) SERIAL COMM., 20DC INPUTS, 16 RELAY OUTPUTS	24955105	1
PS	POWER SUPPLY, 85-264VAC, 24V, 60W, 50/60HZ. SLIM LINE	25457900A	1
SFR,SLR SHR	RELAY TERMINAL BLOCK STYLE, 1-POLE, 24VDC	24827008	3
[F1,20]	FUSE BLOCK, 1-POLE, 30A, 600VAC, LARGE STYLE	15011100	2
[VR1]	RELAY SOCKET W/ SMALL SWITCHING RELAY, 24VDC, 1-POLE	24827046	1
[PLC]	PLC BACK-UP BATTERY, 3VDC LITHIUM, CR2354	24956000	1

WIRING PARTS (FS SW-OPERATION 20)			
ITEM	DESCRIPTION	PART NUMBER	QTY.
[HMI]	OPERATOR INTERFACE CABLE, PLC PORT-1 TO C-MORE MICRO	24955052	1
[PLC]	PLC COMMUNICATION CABLE, PORT-2 TO RS-485 TERM. 4FT.	24955085	1
[PLC]	PLC INPUT MODULE, 8PT, 115VAC (FO-08NA-1)	24955025	1
[PLC]	PLC INPUT MODULE, (8)-ANALOG INPUTS (FO-08ADH-1)	24955026	1
SFR,SLR SHR	W-2AY SMALL RELAY JUMPER, PUSH-IN TYPE	25678556	1
F1,F20	FUSE, 2.0 AMP, 600VAC, TIME-DELAY, LARGE STYLE	14012000	2

SUBPANEL PARTS (FLOOR STOCK)			
ITEM	DESCRIPTION	PART NUMBER	QTY.
TB-AC	TERMINAL BLOCK, 4-WIRE, 30A, 600V, GRAY	25678558	3
	TERMINAL BLOCK, 4-WIRE, 30A, 600V, GREEN, GROUND	25678559	1
[GND]	TERMINAL BLOCK, 4-WIRE END PLATE, 30A, ORANGE	25678570	1
TB-C,P,B, T,DC,MBV	TERMINAL BLOCK, 4-WIRE, 20A, 600V, GRAY	25678536	32
	TERMINAL BLOCK, 4-WIRE, 20A, 600V, GREEN, GROUND	25678537	2
[GND]	TERMINAL BLOCK, 4-WIRE END PLATE, 20A, ORANGE	25678538	7
TB-F T(1)	TERMINAL BLOCK, 4-WIRE, 20A, 600V, GRAY, FUSE HOLDER STYLE	25678544	4
	FUSE HOLDER STYLE TERMINAL BLOCK END PLATE	25678545	2
TB-R	TERMINAL BLOCK, TRIPLE DECK, 24A, BLUE	25678550	4
	TERMINAL BLOCK, TRIPLE DECK END PLATE, ORANGE	25678551	1

WIRING PARTS (FLOOR STOCK)			
ITEM	DESCRIPTION	PART NUMBER	QTY.
TB-F	FUSE, 1.0 AMP, 250VAC, FAST ACTING, SMALL STYLE	14001001	4
TB-T			

TB-R 1-4 TRIPLE DECK TERMINAL DETAIL:
X.1 IS CLOSEST TO SUBPANEL
X.2 IS MIDDLE DECK
X.3 IS FURTHEST FROM SUBPANEL

SUB

4

3

2

1

D

D

C

C

B

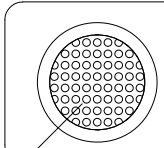
B

A

A

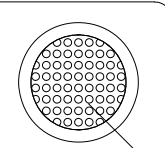
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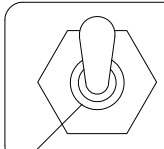
AUTOMATIC FILL CONTROLLER



**CONTROL
POWER
AVAILABLE**

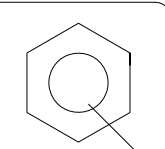
ALARM






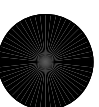
**ON
POWER
OFF**

**PRESS TO
SILENCE
ALARM
HORN**





S1



PB

WARNING: INITIAL SET-UP PROCEDURE REQUIRED.
REFERENCE MANUAL FOR OPERATING INSTRUCTIONS.
UNIT MUST BE GROUNDED FOR OPERATOR SAFETY.

SIMPLEX, INC.
800-637-8603
www.simplexdirect.com

L1
GREEN LIGHT

L2
RED LIGHT

S1

PB

CONTROLLER NAMEPLATE

**SHORT CIRCUIT
CURRENT RATING: 5 kA
RMS SYMMETRICAL, 600V MAX.
ENCLOSURE: TYPE 3R
LARGEST MOTOR FLA: N/A
CONTROL POWER CIRCUIT:
VOLTAGE: 115VAC, 1-PH, 60 Hz
FULL LOAD AMPS: 2.5A**

STOCK AFC-1 MAN'F BY NAMEPLATE

SIMPLEX®

**FUSE REPLACEMENT
CHART**

**F1: 2AMP, 600VAC, TD
F20: 2AMP, 600VAC, TD**

FUSES IN TERMINAL BLOCKS
TB'F'-1: 1AMP, 250VAC
TB'F'-2: 1AMP, 250VAC
TB'F'-3: 1AMP, 250VAC
TB'T'-1: 1AMP, 250VAC

**FOR FIELD WIRING USE
COPPER WIRE 60 DEGREE
CENTIGRADE OR BETTER**

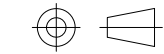
STOCK AFC-1 FUSE CHART NAMEPLATE

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THIRD ANGLE PROJECTION



REV. NO.		DATE	DESCRIPTION
AA	AA		
AA	AA		
REVISIONS & UPDATES			
ADDED MAN'F BY NAMEPLATE			
ORIGINAL DESIGN			
11/22/2019			
02/19/2019			
B	A		

TOLERANCES
 X.XXX ± 0.005"
 X.XX ± 0.010"
 X.X ± 0.020"
 FRACTIONAL ± 1/32"
 ANGLES ± 1°
 SURFACES 125

APPROVED BY: AA
 DRAWN BY: AA
 SCALE: 1:0.9934
 SHEET SIZE: ANSI B
 JOB NUMBER: NA

DESCRIPTION
 AUTOMATIC FILL CONTROLLER
 STOCK 1-TANK (PN. 50001628)
 NAMEPLATE DETAIL

Approved 11/22/2019

DRAWING NUMBER
ACD-00053022

SHEET NUMBER	REVISION
1/1	B

4

3

2

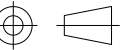
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THIRD ANGLE PROJECTION



REV	DATE	DESCRIPTION	INT	APPR
A				
02/19/2019		ORIGINAL DESIGN		
		REVISIONS & UPDATES		

TOLERANCES
X.XXX ± 0.005"
X.XX ± 0.010"
X.X ± 0.020"
FRACTIONAL ± 1/32"
ANGLES ± 1°
SURFACES 125

APPROVED BY: AA
DRAWN BY: AA
SCALE: 1:1.309
SHEET SIZE: ANSI B
JOB NUMBER: NA

DESCRIPTION
AUTOMATIC FILL CONTROLLER
STOCK 1-TANK (PN. 50001628)
WIRING DIAGRAM 1

Approved 02/19/2019

DRAWING NUMBER
ACD-00053023

SHEET NUMBER: 1/1
REVISION: A

CIRCUIT BREAKER
15 AMP. MAX.
(BY OTHERS)

CONTROL
POWER INPUT
115VAC, 1Ø, 60HZ

#14 AWG OR LARGER DEPENDING
ON LENGTH OF RUN
USE COPPER CONDUCTORS ONLY
60°C OR HIGHER

SEE NOTE #1

TB'AC'

1

2

3

4

GND

B1

B2

BLACK
16 GA.

WHITE
16 GA.

GREEN
14 GA.

GROUND STUD
ON SUBPANEL

TB'B'

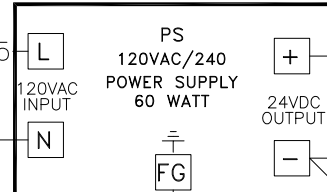
4

5

2AMP
F1
TD

BLACK-B4

BLACK-B5



RED-B6

BLACK/
YELLOW
STRIPE

B7

GREEN

GREEN

GROUND STUD
ON SUBPANEL

B10

TB'DC'

+

+

-

-

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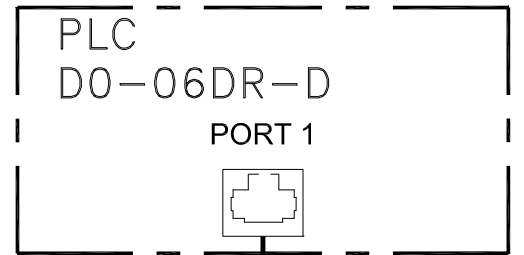
-

-

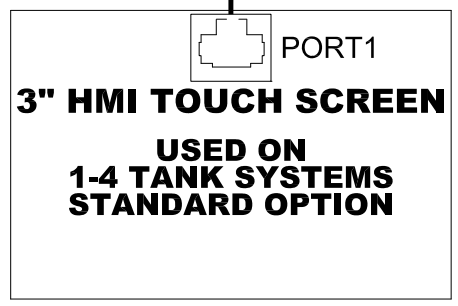
-

STOCK UNIT WIRING DIAGRAM CONFIGURATION

- NOTES:
- UNIT MUST BE GROUNDED FOR OPERATORS SAFETY.
 - DASHED LINES ----- INDICATE WIRING NOT SUPPLIED BY SIMPLEX.
 - SOLID LINES ----- INDICATE WIRING BY SIMPLEX.
 - COMPONENTS MOUNTED ON PRINTED CIRCUIT BOARDS ARE ENCLOSED BY PHANTOM LINES - - - - -
 - ALL WIRES ARE #18 AWG, 105°C UNLESS OTHERWISE NOTED.
 - LABELED: UL508A
 - B10 IS LAST WIRE NUMBER USED ON THIS DIAGRAM.



CABLE-1
DV-1000CBL
(24955052)



**3" HMI TOUCH SCREEN
USED ON
1-4 TANK SYSTEMS
STANDARD OPTION**

- NOTES:
1. UNIT MUST BE GROUNDED FOR OPERATORS SAFETY.
 2. DASHED LINES ----- INDICATE WIRING NOT SUPPLIED BY SIMPLEX.
 3. SOLID LINES _____ INDICATE WIRING BY SIMPLEX.
 4. COMPONENTS MOUNTED ON PRINTED CIRCUIT BOARDS ARE ENCLOSED BY PHANTOM LINES ----- .
 5. ALL WIRES ARE #18 AWG, 105°C UNLESS OTHERWISE NOTED.
 6. LABELED: UL508A
 7. B145 IS LAST WIRE NUMBER USED ON THIS DIAGRAM.

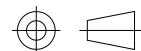


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THIRD ANGLE PROJECTION



REV	DATE	DESCRIPTION	INT	APPR
A	02/19/2019	ORIGINAL DESIGN		

TOLERANCES
X.XXX ± 0.005"
X.XX ± 0.010"
X.X ± 0.020"
FRACTIONAL ± 1/32"
ANGLES ± 1°
SURFACES 125

APPROVED BY: AA
DRAWN BY: AA
SCALE: 1:2.2305
SHEET SIZE: ANSI B
JOB NUMBER: NA

DESCRIPTION
AUTOMATIC FILL CONTROLLER
STOCK 1-TANK (PN. 50001628)
WIRING DIAGRAM 2

Approved 02/19/2019

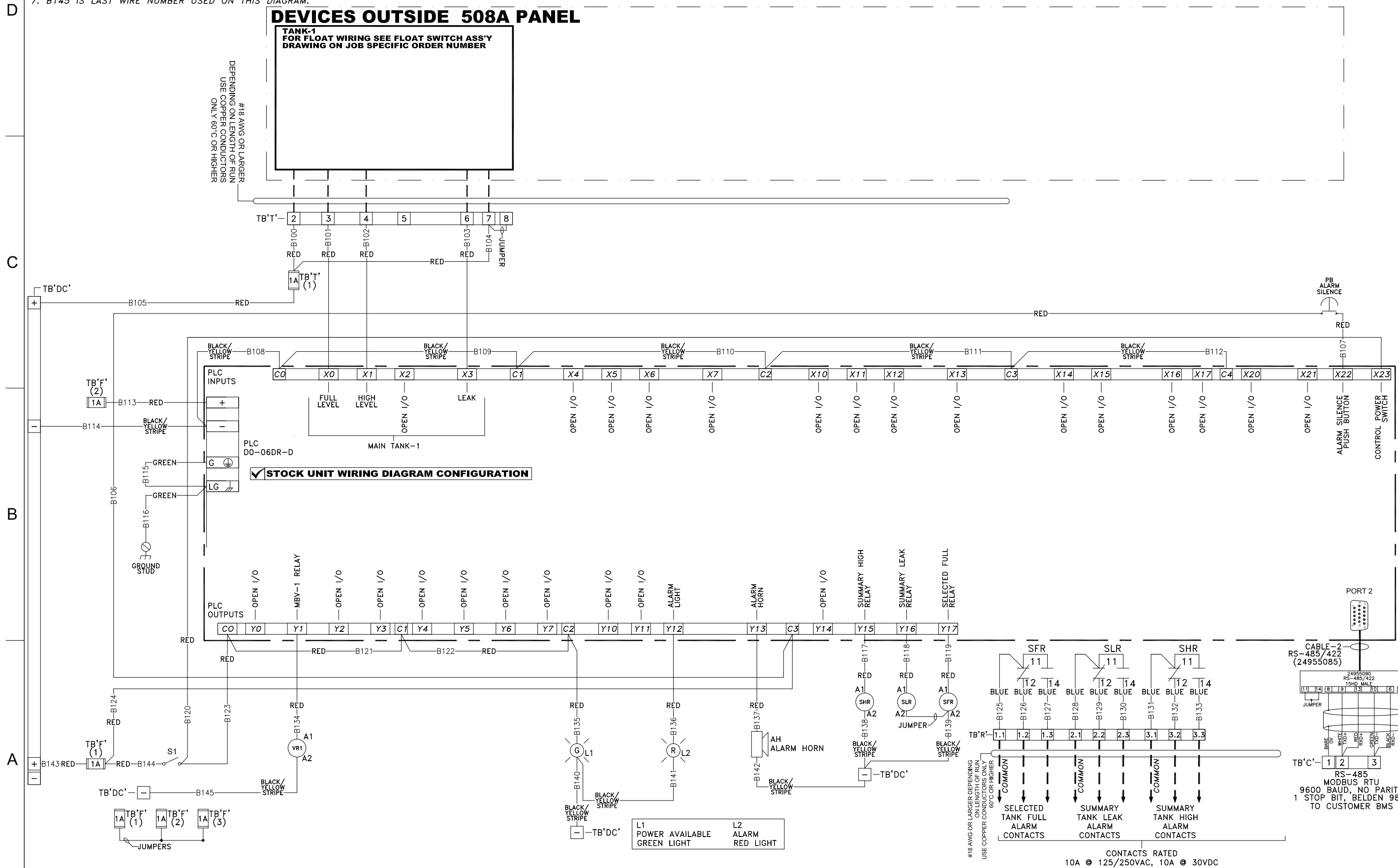
DRAWING NUMBER
ACD-00053024

SHEET NUMBER: 1/1
REVISION: A

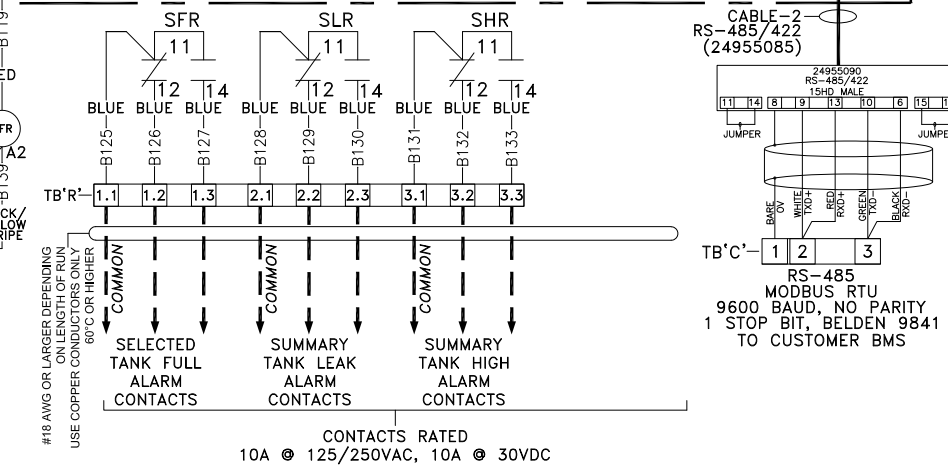
DEVICES OUTSIDE 508A PANEL

**TANK-1
FOR FLOAT WIRING SEE FLOAT SWITCH ASS'Y
DRAWING ON JOB SPECIFIC ORDER NUMBER**

#8 AWG OR LARGER
DEPENDING ON LENGTH OF RUN
USE COPPER CONDUCTORS
ONLY 60°C OR HIGHER



PLC DO-06DR-D
MAIN TANK-1
STOCK UNIT WIRING DIAGRAM CONFIGURATION



L1 POWER AVAILABLE GREEN LIGHT
L2 ALARM RED LIGHT

#18 AWG OR LARGER REFERING TO LENGTH OF RUN USE COPPER CONDUCTORS ONLY 60°C OR HIGHER
CONTACTS RATED
10A @ 125/250VAC, 10A @ 30VDC

NOTES:

- 1. UNIT MUST BE GROUNDED FOR OPERATORS SAFETY.
- 2. DASHED LINES -----INDICATE WIRING NOT SUPPLIED BY SIMPLEX.
- 3. SOLID LINES -----INDICATE WIRING BY SIMPLEX.
- 4. COMPONENTS MOUNTED ON PRINTED CIRCUIT BOARDS
- ARE ENCLOSED BY PHANTOM LINES - - - - - .
- 5. ALL WIRES ARE #18 AWG, 105°C UNLESS OTHERWISE NOTED.
- 6. LABELED: UL508A
- 7. B203 IS LAST WIRE NUMBER USED ON THIS DIAGRAM.

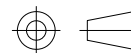


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THIRD ANGLE PROJECTION



REV		DATE	DESCRIPTION	INT	APPR
A		02/19/2019	ORIGINAL DESIGN		
REVISIONS & UPDATES					
AA					
AA					

TOLERANCES
X.XXX ± 0.005"
X.XX ± 0.010"
X.X ± 0.020"
FRACTIONAL ± 1/32"
ANGLES ± 1°
SURFACES 125

APPROVED BY: AA

DRAWN BY: AA

SCALE: 1:1.8634

SHEET SIZE: ANSI B

JOB NUMBER NA

DESCRIPTION
AUTOMATIC FILL CONTROLLER
STOCK 1-TANK (PN. 50001628)
WIRING DIAGRAM 3

Approved 02/19/2019

DRAWING NUMBER

ACD-00053025

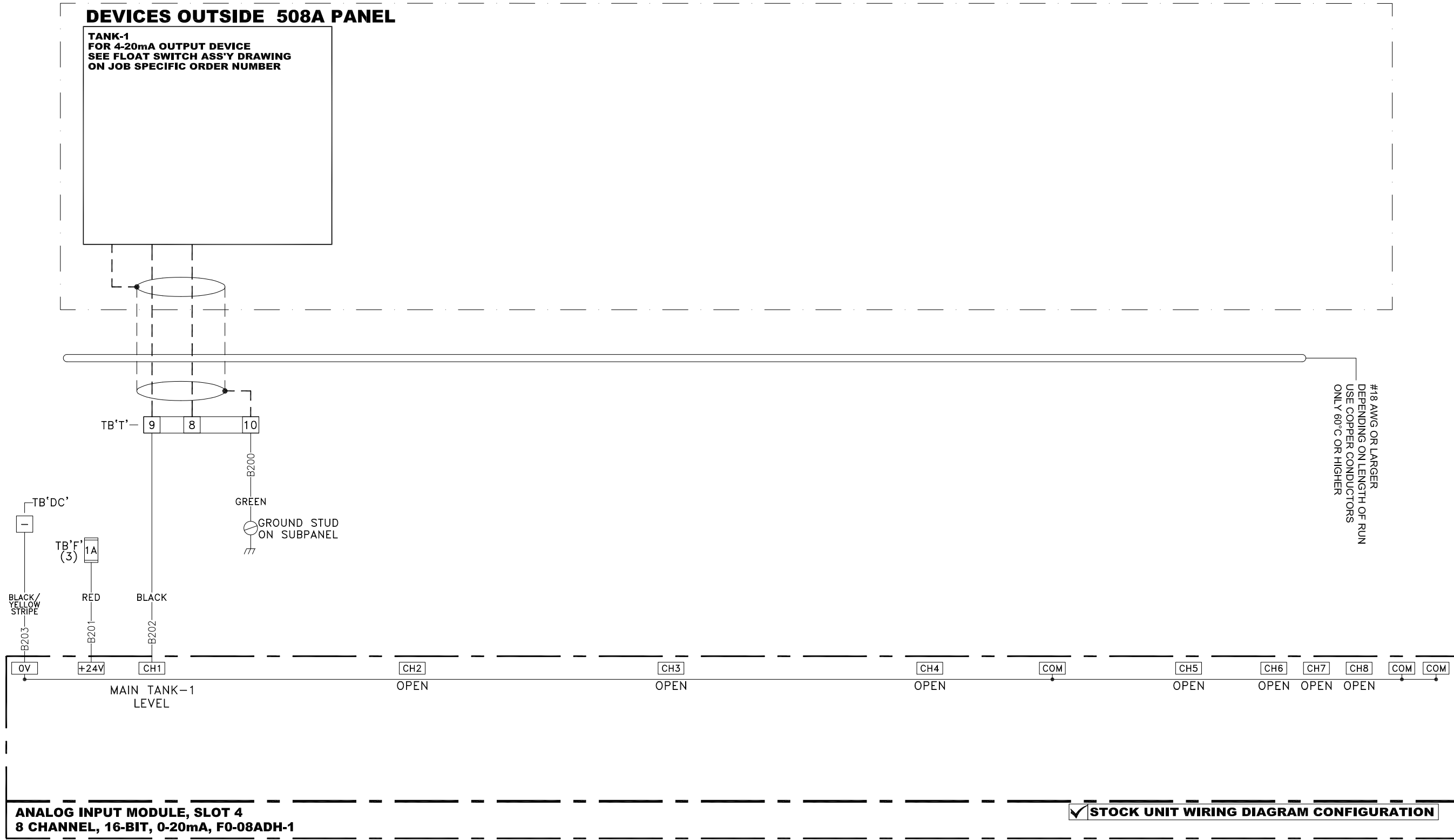
SHEET NUMBER REVISION

1/1

A

DEVICES OUTSIDE 508A PANEL

TANK-1
FOR 4-20mA OUTPUT DEVICE
SEE FLOAT SWITCH ASS'Y DRAWING
ON JOB SPECIFIC ORDER NUMBER



- NOTES:
1. UNIT MUST BE GROUNDED FOR OPERATORS SAFETY.
 2. DASHED LINES ----- INDICATE WIRING NOT SUPPLIED BY SIMPLEX.
 3. SOLID LINES _____ INDICATE WIRING BY SIMPLEX.
 4. COMPONENTS MOUNTED ON PRINTED CIRCUIT BOARDS ARE ENCLOSED BY PHANTOM LINES - - - - - .
 5. ALL WIRES ARE #18 AWG, 105°C UNLESS OTHERWISE NOTED.
 6. LABELED: UL508A
 7. B260 IS LAST WIRE NUMBER USED ON THIS DIAGRAM.

OMITT WIRE CHART
WITH CUSTOMER SUPPLIED
MOTORIZED BALL VALVE

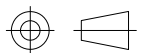
MBV CORD SET WIRE CHART		
PIN #1	FUNCTION	COLOR
1	COMMON	BROWN
2	CLOSE/CLOSED	GREY OR BLUE
3	OPEN/OPENED	BLACK
E	GROUND	GREEN/YELLOW OR GREEN



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THIRD ANGLE PROJECTION



REV. DATE		DESCRIPTION	INT.	APPR.
B	11/22/2019	ADDED NOTE FOR CUSTOMER SUPPLIED MBV'S ORIGINAL DESIGN		
A	02/19/2019			

TOLERANCES
X.XXX ± 0.005"
X.XX ± 0.010"
X.X ± 0.020"
FRACTIONAL ± 1/32"
ANGLES ± 1°
SURFACES 125

APPROVED BY: AA
DRAWN BY: AA
SCALE: 1:1.6859
SHEET SIZE: ANSI B
JOB NUMBER: NA

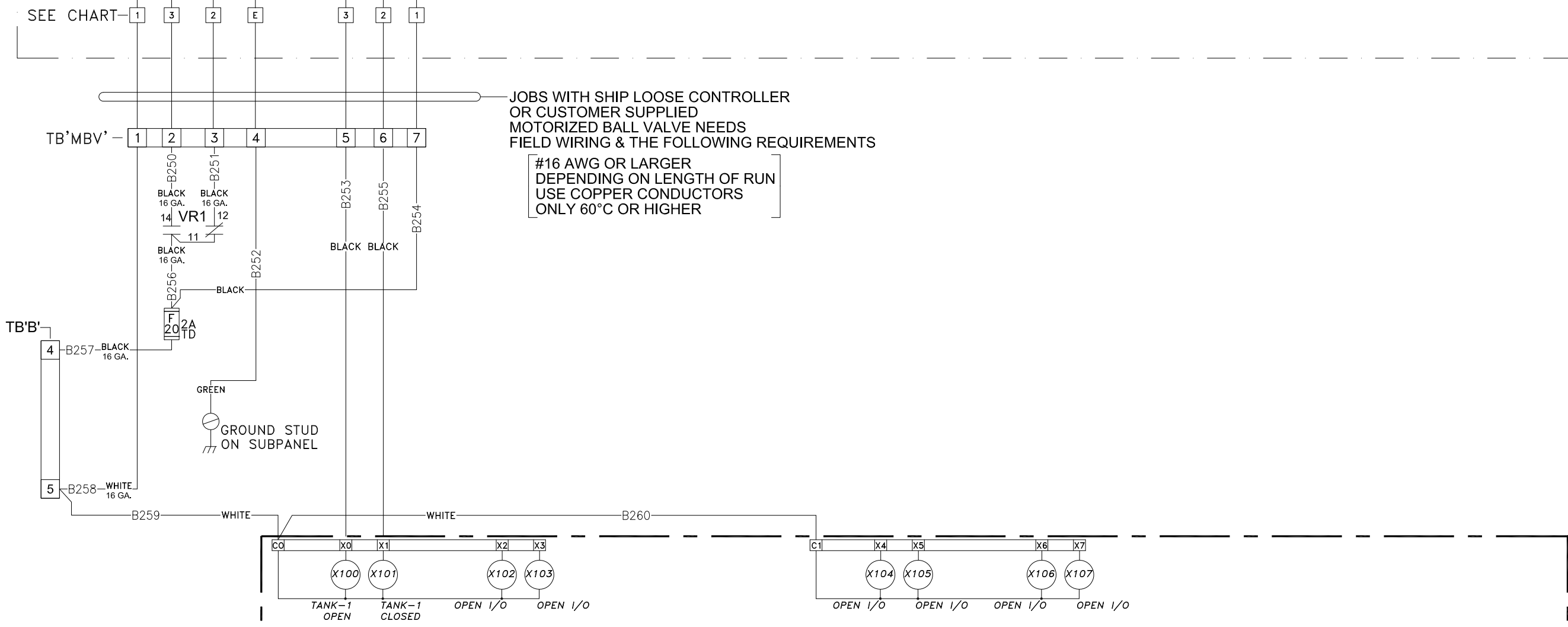
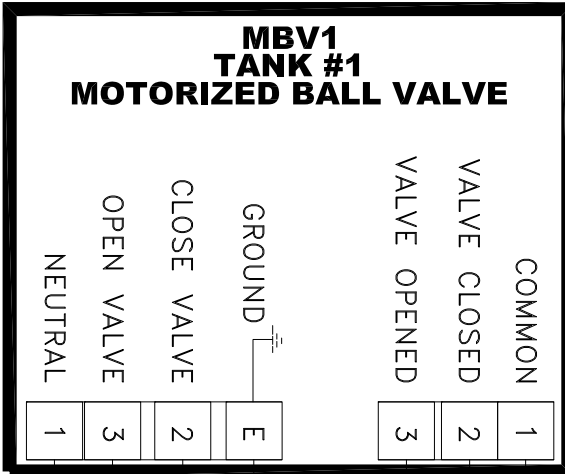
DESCRIPTION
AUTOMATIC FILL CONTROLLER
STOCK 1-TANK (PN. 50001628)
WIRING DIAGRAM 4

Approved 11/22/2019

DRAWING NUMBER
ACD-00053026

SHEET NUMBER: 1/1
REVISION: B

DEVICES OUTSIDE 508A PANEL



JOBS WITH SHIP LOOSE CONTROLLER OR CUSTOMER SUPPLIED MOTORIZED BALL VALVE NEEDS FIELD WIRING & THE FOLLOWING REQUIREMENTS
#16 AWG OR LARGER DEPENDING ON LENGTH OF RUN USE COPPER CONDUCTORS ONLY 60°C OR HIGHER

AC INPUT MODULE, SLOT 1
8 POINT, 120VAC, F0-08NA-1

STOCK UNIT WIRING DIAGRAM CONFIGURATION

SEQUENCE OF OPERATION

GENERAL: THE AUTO FILL CONTROLLER (AFC) CONTROLS THE TRANSFER FROM A DELIVERY TRUCK TO THE MAIN STORAGE TANK(S).

D OPERATION: TO BEGIN, THE "POWER" TOGGLE SWITCH MUST BE IN THE "ON" POSITION. SELECT THE APPROPRIATE TANK FROM THE HMI. THE SELECTED TANK'S DETAIL SCREEN WILL APPEAR, PROVIDING THE FOLLOWING CURRENT TANK STATUS AND FILL CONTROLS.

1. CURRENTLY SELECTED TANK'S STATUS
2. "FILL START" HMI SOFT-KEY
3. "FILL STOP" HMI SOFT KEY
4. TANK'S VALVE STATUS
5. CURRENTLY SELECTED TANK'S LEVEL IN PERCENT AND GALLONS/LITERS

C THE FILLING PROCESS CAN BE STOPPED AT ANY TIME BY PRESSING THE "FILL STOP" OPTION ON THE DISPLAY. AS THE TANK FILLS, THE TANK LEVEL IS CONTINUOUSLY UPDATED AND DISPLAYED ON THE HMI. ONCE THE TANK REACHES THE "FULL" LEVEL (TYP. 90%), THE ALARM WILL SOUND TO ALERT THE DRIVER AND THE TANK VALVE WILL CLOSE. IF THE DELIVERY HOSE NEEDS TO BE DRAINED THE FILL PROCESS MAY BE STARTED AGAIN FOR 30 SECOND INCREMENTS BY PRESSING THE "OVERRIDE"⁽⁴⁾ OPTION. IF THE TANK REACHES THE "HIGH" LEVEL (TYP. 95%) THE ALARM WILL SOUND, THE FILL VALVE WILL BE CLOSED, AND ALL FILLING OPERATIONS FOR THE SELECTED TANK WILL BE PROHIBITED. ANOTHER TANK MAY BE SELECTED FOR FILL, IF APPLICABLE.

REPEAT THE PROCESS FOR ALL TANKS IN THE SYSTEM UNTIL FILLING IS COMPLETED.⁽¹⁾

ONCE FILLING IS COMPLETE, CLOSE ANY MANUAL VALVES, REMOVE TRUCK HOSE, AND REPLACE THE FILL CAP. REMOVE THE GROUNDING CABLE AND TURN THE "POWER" TOGGLE SWITCH BACK TO THE "OFF" POSITION

B FULL LEVEL INDICATION: IF THE LEVEL IN THE SELECTED TANK REACHES THE FULL LEVEL (TYP. 90%) AN AUDIBLE AND VISUAL ALARM IS ACTIVATED AND THE AFC WILL CLOSE THE FILL VALVE. THE FILL VALVE MAY BE OPENED AGAIN BY PRESSING THE "OVERRIDE"⁽⁴⁾ OPTION ON THE HMI. THE FILL VALVE WILL OPEN FOR 30 SECOND INTERVALS TO ALLOW DRAINING OF TRUCKER HOSE. THE "OVERRIDE"⁽⁴⁾ OPTION WILL BE AVAILABLE UNTIL THE SELECTED TANK REACHES HIGH LEVEL (TYP. 95%).

HIGH LEVEL INDICATION: IF THE LEVEL IN THE SELECTED TANK REACHES THE HIGH LEVEL (TYP. 95%) AN AUDIBLE AND VISUAL ALARM IS ACTIVATED AND THE AFC WILL CLOSE THE FILL VALVE. THE FILL VALVE CANNOT BE REOPENED UNTIL THE LEVEL IN THE TANK IS BROUGHT BELOW THE HIGH LEVEL (TYP. 95%).

CRITICAL HIGH LEVEL INDICATION:⁽¹⁾ IF THE LEVEL IN ANY TANK REACHES THE CRITICAL HIGH LEVEL (TYP. 98%) THE AFC WILL CLOSE ALL FILL VALVES. THE FILL VALVES WILL REMAIN LOCKED OUT FROM USE UNTIL THE LEVEL IN ALL TANKS IS BROUGHT BELOW THE CRITICAL HIGH LEVEL. THIS PREVENTS AN OVERFLOW IN A NON-SELECTED TANK CAUSED BY A LEAKING OR MISALIGNED VALVE.

- A** NOTES:
- 1 MULTI-TANK SYSTEMS ONLY
 - 2 OPTIONAL ADD-ON FEATURE
 - 3 TYPICAL OF ALL TANKS
 - 4 OPTION IS LABELED "HOSE DRAIN" WITH 7.00" HMI UPGRADE

MAIN TANK LOW LEVEL INDICATION:⁽²⁾ IF THE LEVEL IN THE SELECTED TANK REACHES THE LOW LEVEL (TYP. 10%) AN AUDIBLE AND VISUAL ALARM IS ACTIVATED ON THE HMI.

TANK LEAK INDICATION: IF A LEAK IS DETECTED IN THE SELECTED TANK AN AUDIBLE AND VISUAL ALARM IS ACTIVATED AND THE AFC WILL CLOSE THE SELECTED TANK'S FILL VALVE. THE AFC WILL NOT OPEN THE SELECTED TANK'S FILL VALVE UNTIL THE LEAK HAS BEEN CORRECTED AND ANY SPILLAGE HAS BEEN REMOVED FROM THE TANK'S SECONDARY LEAK BASIN.

SUMP LEAK INDICATION:⁽²⁾ IF A LEAK IS DETECTED IN THE SUMP AN AUDIBLE AND VISUAL ALARM IS ACTIVATED AND THE AFC WILL CLOSE ALL TANK FILL VALVE(S). THE AFC WILL NOT OPEN THE SELECTED TANK'S FILL VALVE UNTIL THE LEAK HAS BEEN CORRECTED AND ANY SPILLAGE HAS BEEN REMOVED FROM SUMP AREA.

REMOTE ANNUNCIATION: MODBUS(STANDARD) OR BACNET⁽²⁾ COMMUNICATION WITH THE BUILDING MANAGEMENT SYSTEM ALLOWS REMOTE ANNUNCIATION FOR ALL STATUS AND ALARM CONDITIONS. (REFER TO DRAWING PACKET FOR PROTOCOL SPECIFICS)

NORMAL CONDITIONS: THE FOLLOWING NORMAL OPERATING CONDITIONS ARE PROVIDED:

1. CONTROL POWER AVAILABLE
2. MAIN TANK LEVEL IN PERCENT/GALLONS OR LITERS⁽³⁾
3. MAIN TANK FILL VALVE OPEN⁽³⁾
4. MAIN TANK FULL LEVEL⁽³⁾

STANDBY CONDITIONS: THE FOLLOWING STANDBY OPERATING CONDITIONS ARE PROVIDED:

1. MAIN TANK FILL VALVE CLOSED⁽³⁾

ALARM CONDITIONS: ALARM CONDITIONS ARE INDICATED BY AUDIBLE AND VISUAL ALARMS ON THE AUTOMATIC FILL CONTROLLER HMI. THE VISUAL ALARM REMAINS ILLUMINATED UNTIL THE ALARM CONDITION CLEARS AND THE PANEL RESET BUTTON IS ACTIVATED. THE AUDIBLE ALARM REMAINS ON UNTIL MANUALLY RESET. THE FOLLOWING ALARMS ARE PROVIDED:

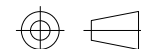
1. MAIN TANK FILL VALVE ERROR⁽³⁾
2. MAIN TANK HIGH LEVEL⁽³⁾
3. MAIN TANK CRITICAL HIGH LEVEL⁽¹⁾
4. MAIN TANK LEAK⁽³⁾
5. MAIN TANK LOW LEVEL⁽²⁾



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THIRD ANGLE PROJECTION



RG	RG	RG	RG	RG	RG	INT	APPR

REVISIONS & UPDATES	DATE	DESCRIPTION

REV	DATE	DESCRIPTION
C	07/23/2019	
B	05/13/2019	
A	04/13/2019	

TOLERANCES
 X.XXX ± 0.005"
 X.XX ± 0.010"
 X.X ± 0.020"
 FRACTIONAL ± 1/32"
 ANGLES ± 1°
 SURFACES 125 ✓

APPROVED BY: RG

DRAWN BY: RG

SCALE: 1:0.9884

SHEET SIZE: ANSI B

JOB NUMBER: NA

DESCRIPTION
AUTO FILL CONTROLLER
SEQUENCE OF OPERATIONS
AFP

Approved 07/23/2019

DRAWING NUMBER

ACD-00055712

SHEET NUMBER REVISION

1/1 C

4

3

2

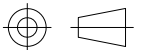
1

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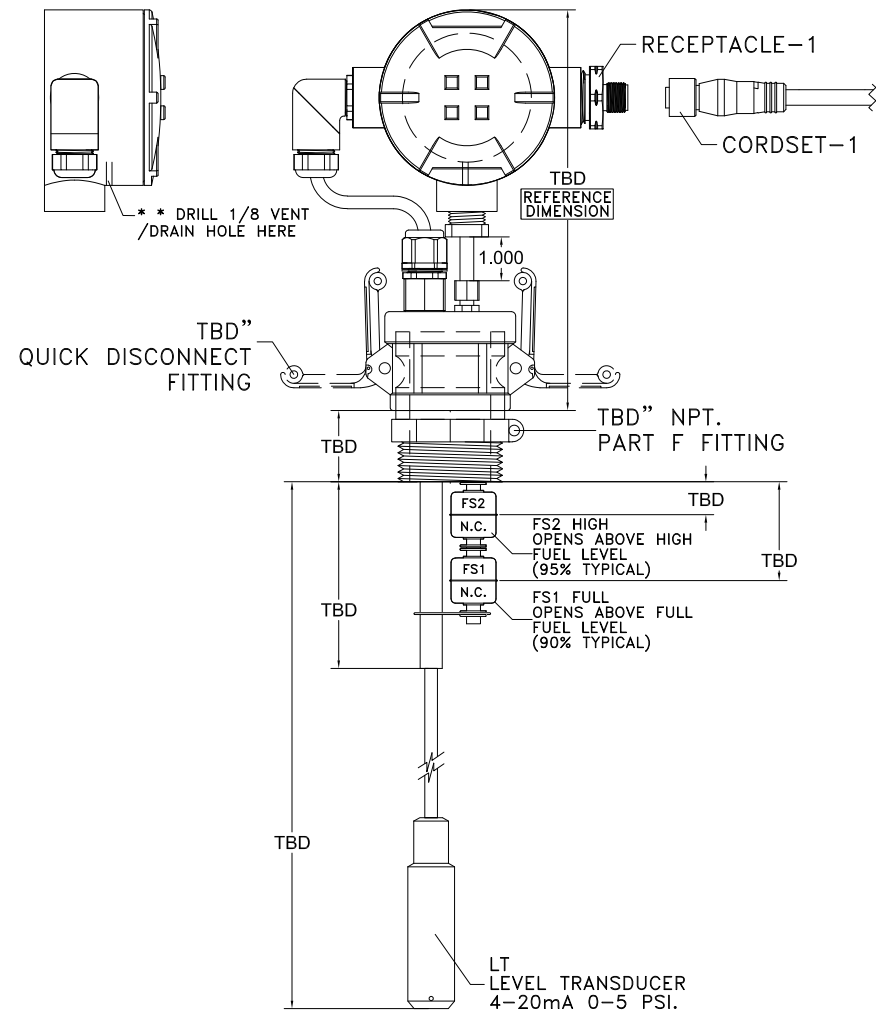
TANK STYLE:TBD
TANK INSIDE DIMENSION:TBD
GALLON CAPACITY:TBD
DEAD AREA:TBD

SAMPLE DRAWING ONLY

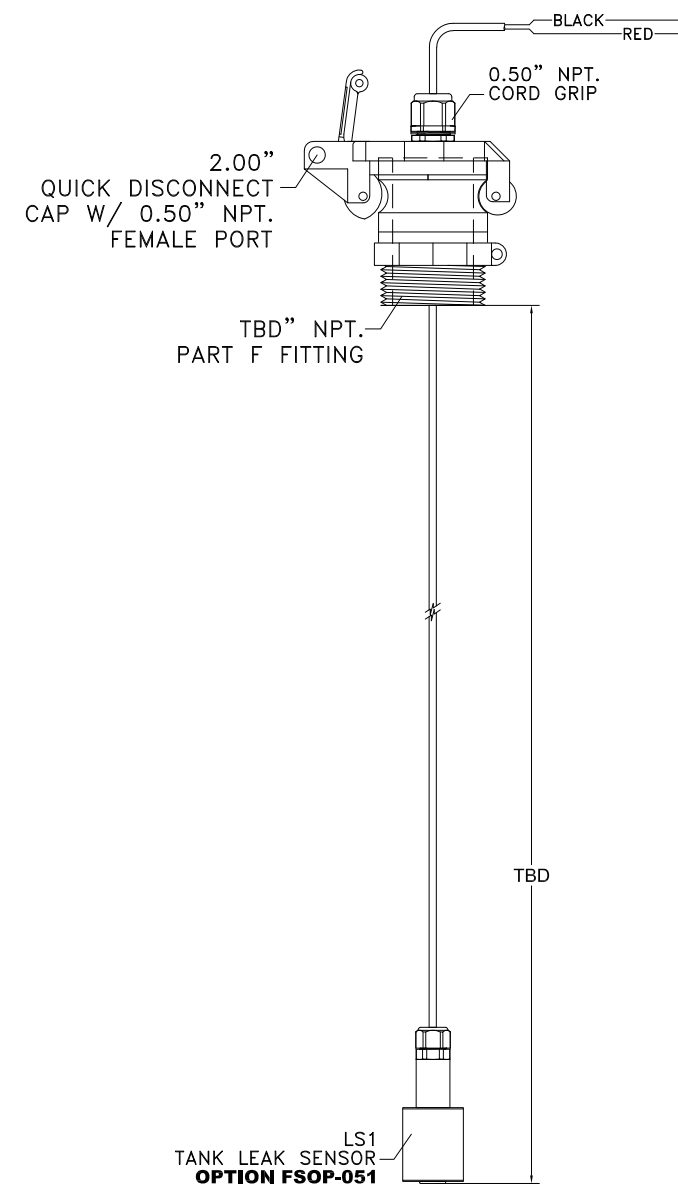
NO TANK DATA SUBMITTED – DESIGN
WILL CHANGE BASED ON TANK DESIGN
AND PORT AVAILABILITY

BASE TANKS UNDER 30" WILL REQUIRE
(2) 2" PORTS OR (1) 4" PORT IN
PRIMARY TANK FOR FSOP-061

SINGLE TANK UNIT



TANK LEAK SENSOR



REV	DATE	DESCRIPTION	INT	APPR
A				
REVISIONS & UPDATES				
ORIGINAL DESIGN				
	08/23/2019			
AA				
AA				

TOLERANCES
X.XXX ± 0.005"
X.XX ± 0.010"
X.X ± 0.020"
FRACTIONAL ± 1/32"
ANGLES ± 1°
SURFACES 125

APPROVED BY: AA
DRAWN BY: AA
SCALE: 1:4.3072
SHEET SIZE: ANSI B
JOB NUMBER: NA

DESCRIPTION
COMPACT AUTO FUEL PORT
CAFP/AFP 1-TANK STANDARD
FLOAT ASSEMBLY

DRAWING NUMBER
ACD-00061673

SHEET NUMBER: 1/1
REVISION: A

4

3

2

1