

NOTES

- 1) ALL DIMENSIONS ARE GIVEN IN INCHES UNLESS OTHERWISE SPECIFIED.
- 2) DESIGN CONDITIONS:
192 GPM @ 100 PSI
MAX TEMP 100°F
FLOODED SUCTION REQUIRED
- 3) BACKWASH FLOWRATE: 150-192 GPM
- 4) APPROXIMATE MASS:
SYSTEM: 983 LBS
OPERATING: 3168 LBS

| # | COMPONENT |
|----|--|
| 1 | NEMA 4X, UL, 460V/3PH/60Hz CONTROL PANEL, FLA=5.90A |
| 2 | MEDIA TANK: 42" 304 SS |
| 3 | PUMP: 5HP 3600RPM, 460/3/60, 192 GPM @ 50' TDH |
| 4 | INLET/OUTLET PRESSURE GAUGES: 2.5" 0-100 PSI, LIQ FILLED |
| 5 | MEDIA: UNIGRAN #50 (X12), UNIGRAN #475 (X14) |
| 6 | UNDERDRAIN/OVERDRAIN: SLOTTED PVC/ SCH 80 PVC |
| 7 | AIR RELIEF VALVE: BARAK 1" NPT |
| 8 | ELECTRIC VALVE ACTUATOR: BRAY S70-1200 |
| 9 | FILTER VALVES: BRAY S-31, BUTTERFLY, EPDM SEATS |
| 10 | BASE: 304 SS C-CHANNEL |
| 11 | FACE PIPE: 3" PVC SCH 80 |

| | | | |
|----------------------------|--|--|--|
| | | 120-J TALBERT ROAD MOORESVILLE, NC 28117 PH: (704) 662-3133 FAX: (704) 662-3155 | |
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| DRAWING DATE: 2/25/2016 | DRAWING TITLE: HMF3-42 SS TANK WITH FACE PIPING AND PUMP | DRAWING NUMBER: 210290-000006 | |
| SCALE: 1:30 | SHEET 1 OF 3 | | |
| DRAWN BY: BJH | CAT NUMBER: 210290-000006 | REV. NO. 0 | |
| CHECKED BY: _____ | GENERAL TOLERANCES (EXCEPT AS NOTED) | ANGULAR ± 1° FRACTIONAL ± 1/8" Dec: 2 PL ± 0.05", 3 PL ± 0.010" | |
| APPROVED BY: _____ | | | |

| NO. | REVISION NOTES | DATE | BY |
|-----|----------------|------|----|
| | | | |

460V/3 ϕ /60 Hz

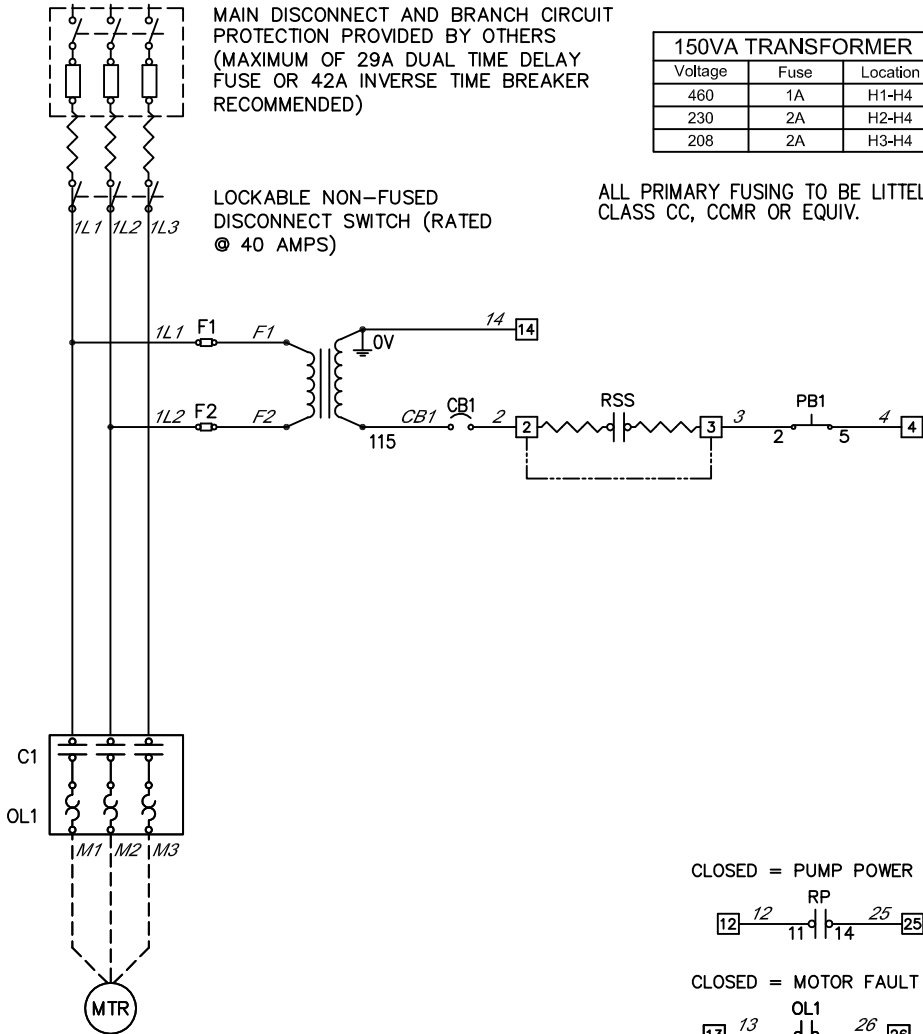
L1 L2 L3

MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION PROVIDED BY OTHERS (MAXIMUM OF 29A DUAL TIME DELAY FUSE OR 42A INVERSE TIME BREAKER RECOMMENDED)

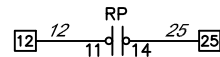
| 150VA TRANSFORMER | | |
|-------------------|------|----------|
| Voltage | Fuse | Location |
| 460 | 1A | H1-H4 |
| 230 | 2A | H2-H4 |
| 208 | 2A | H3-H4 |

LOCKABLE NON-FUSED DISCONNECT SWITCH (RATED @ 40 AMPS)

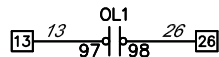
ALL PRIMARY FUSING TO BE LITTELFUSE CLASS CC, CCMR OR EQUIV.



CLOSED = PUMP POWER ON



CLOSED = MOTOR FAULT



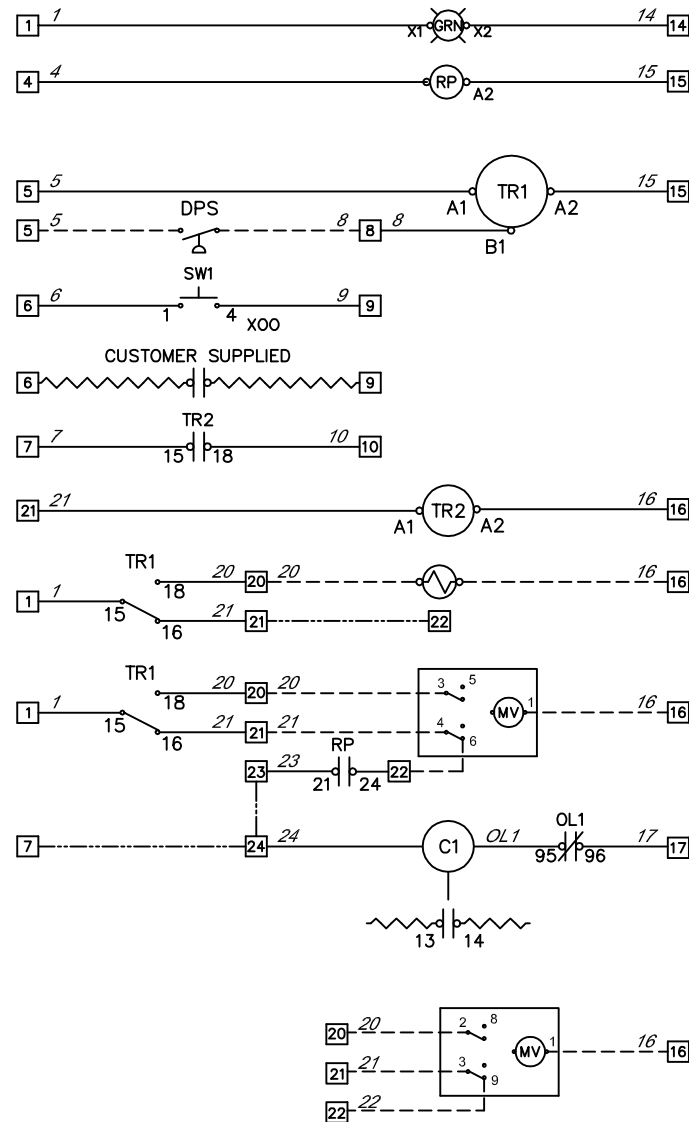
MAX. VOLTAGE: 600V
MAX. AMPERES: 16A

| | | |
|-------|--------------|---------------------------------|
| POWER | POWER | 460V/3~/60HZ |
| | TOTAL FLA | 16.33 AMPS |
| | SCCR | 5 KA RMS SYMMETRICAL, 600V MAX. |
| | LARGEST MTR. | 15 HP |

| | | |
|-----------|-----------|-------------------|
| ENCLOSURE | STANDARD | UL 508A |
| | SIZE | 12"L x 10"W x 6"D |
| | UL RATING | TYPE 4X |
| | MATERIAL | POLYCARBONATE |

- GROUND PER 2011 NATIONAL ELECTRICAL CODE ARTICLE 250.
- PANEL WIRING:
SHOP/FIELD WIRING: _____
CUSTOMER'S WIRING: ~~~~~
FACTORY INSTALLED JUMPER: - - - - -
- USE COPPER WIRE RATED 60°C MINIMUM UNLESS OTHERWISE SPECIFIED.
- DISCONNECT SWITCH TORQUE REQUIREMENTS: 35 LB IN. CONTACTOR/OVERLOAD TORQUE REQUIREMENTS: 7-10 LB IN.
- SIZE THE MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION PER 2011 NATIONAL ELECTRIC CODE ARTICLE 430.

- CONDUIT HUBS AND FITTINGS MUST HAVE THE SAME UL ENVIRONMENTAL RATING AS THE CONTROL PANEL ENCLOSURE.
- WIRE COLORS ARE AS FOLLOWS—LINE=BLACK, AC=RED, NEUTRAL=WHITE, DC+=BLUE, DC-=WHITE/BLUE, GROUND=GREEN/YELLOW, EXTERNAL SOURCE=YELLOW.
- SET MOTOR OVERLOADS ACCORDING FLA ON MOTOR DATA PLATE
- ALL MOTOR WIRING TO BE AT LEAST CU, 75° RATED.
- TB1= [5] TBA= (1) TBB= (1)



POWER ON LIGHT

PUMP POWER ON

FLUSH DURATION (2 MIN)
DIFFERENTIAL PRESSURE

LOCAL FLUSH START

REMOTE FLUSH START

CYCLE TIMER

CYCLE TIMER
(0.05S-60HRS)

FLUSH VALVE OPTIONS
(SHOP TO ADD JUMPER FROM TB21 TO TB22 IF SOLENOID FLUSH VALVE IS USED)

SYSTEM PUMP (REMOVE JUMPER FROM TB7 TO TB24 FOR EXTERNAL SOURCE FLUSH; REMOVE MECHANICAL JUMPER FROM TB23 TO TB24 FOR SYSTEM FLUSH)

OPTIONAL BRAY ACTUATOR

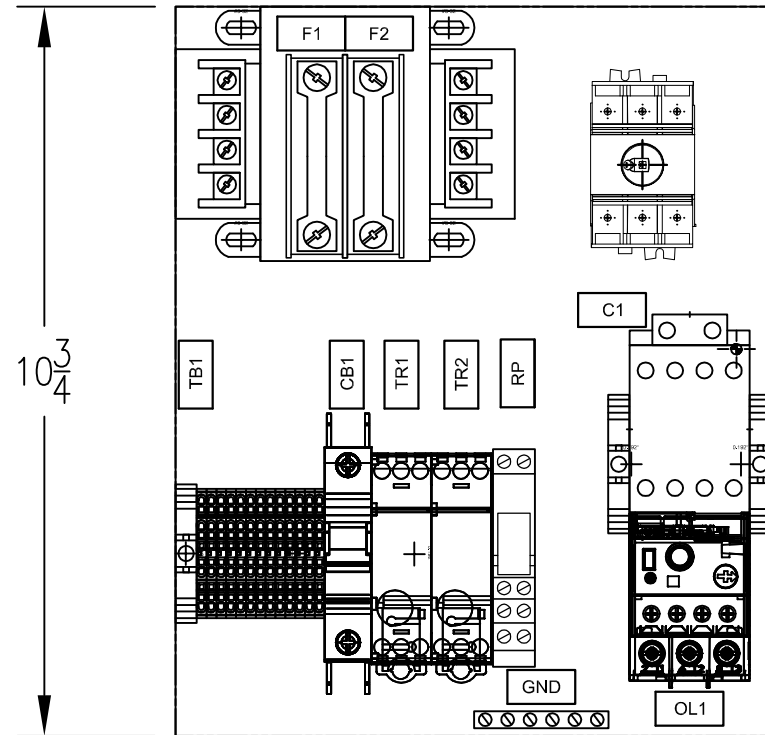
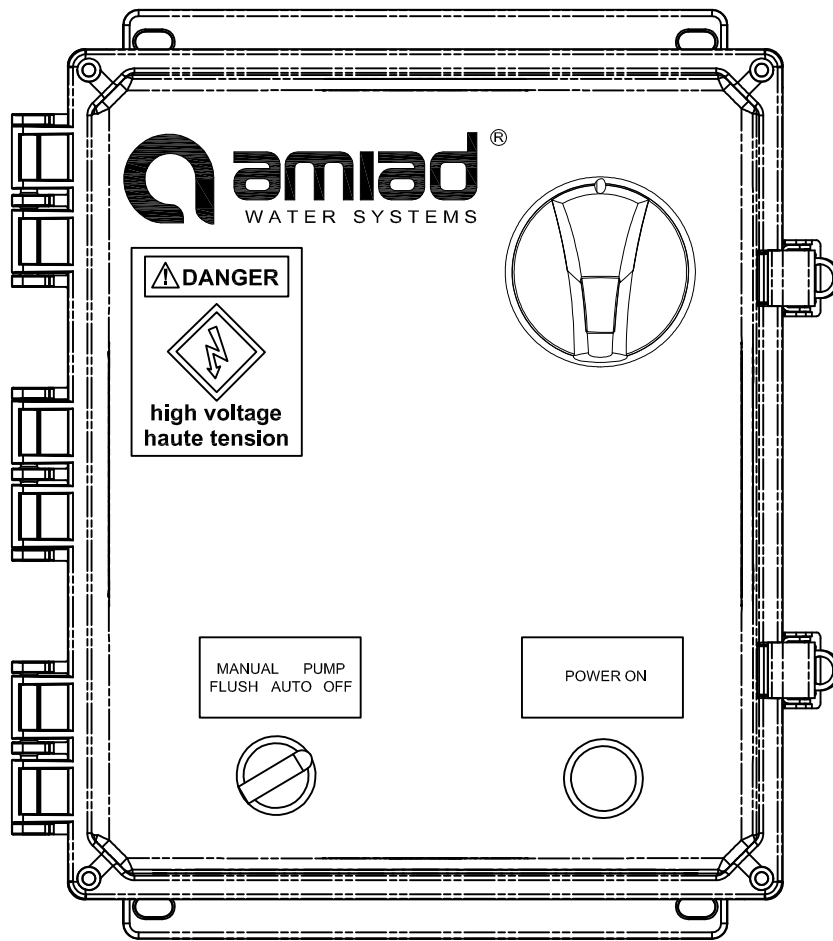


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| NO. | DATE | NOTES | BY | CHKD BY | APP. BY |
|-------------------|------------|--------------------------------------|-----|---------|---------|
| 5 | 10/10/2017 | REMOVE COUNTER | RAM | | |
| 4 | 08/31/2016 | ADD COUNTER, FIX PUMP "SOURCE" POWER | RAM | | |
| 3 | 02/04/2016 | ADD OPTIONAL BRAY ACTUATOR | RAM | | |
| 2 | 07/09/2014 | MOTOR CONTROL | CEH | | |
| 1 | 06/03/2014 | WIRE LABELS | JTE | | |
| GENERAL REVISIONS | | | | | |

| | | | |
|---|-------------|--|------------|
| DRAWING DATE: 05/09/2014 | | DRAWING TITLE: 1F 460V/3~ UNI/SOL PEP 3.2-16A WIRING DIAGRAM | |
| SCALE: 1" = 1" | SHT. 1 of 2 | DRAWING NUMBER: 720102-002083-ELC | REV. NO. 5 |
| DRAWN BY: JTE | | CATALOG NUMBER: 720102-002083 | |
| GENERAL TOLERANCES (EXCEPT AS NOTED) | | ANGULAR ±1° FRACTIONAL ± 1/8" DEC: 2PL±0.05", 3PL±0.010" | |



UPPER LEVEL

LOWER LEVEL

| | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 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 |

NOTE

- ALL HARDWARE WILL INCLUDE ONE MECHANICAL LOCK AND A FLAT WASHER.
- THE ONLY EXCEPTION IS IF THE MECHANICAL SCREW IS A SELF-THREADING SCREW.
- IF BOLT/SCREW NEEDS TO GO THROUGH A THROUGH-HOLE, THE BOLT/SCREW WILL NEED A FLAT WASHER ON BOTH SIDES OF THE MATERIAL AND MECHANICAL LOCK BEFORE THE NUT.
- ALL HARDWARE HAS TO THREAD AT LEAST TWO COMPLETE TURNS THROUGH THE NUT/THREADED HOLE
- IF VISIBLE, NO HARDWARE WILL EXTEND PAST THREE THREADS OUT OF THE NUT/THREADED HOLE.
- BACKPLANE AND DEAD FRONT IF REQUIRED ARE TO BE GROUNDED ACCORDING NEC 70E.
- UNLESS OTHERWISE NOTED, ALL CONTACTORS WILL BE AB 100-C, OVERLOADS AB 193 E-1, CONTROL RELAYS AB 700-HLT, AND CIRCUIT BREAKERS AB 1489.

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|-----------------------------|--|--|
| DRAWING DATE: 05/09/2014 | DRAWING TITLE: 1F 460V/3~ UNI/SOL PEP 3.2-16A WIRING DIAGRAM | |
| SCALE: 1" = 3" | DRAWING NUMBER: 720102-002083-ELC | REV. NO. 5 |
| SHT. 2 of 2 | CATALOG NUMBER: 720102-002083 | |
| DRAWN BY: JTE | GENERAL TOLERANCES (EXCEPT AS NOTED) | ANGULAR ±1° FRACTIONAL ± 1/8" DEC: 2PL±0.05", 3PL±0.010" |
| NO. DATE | NOTES | BY |
| GENERAL REVISIONS | | |
| APP. BY: --- | CHKD BY: --- | |