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0226
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Visit our website:
zoellerpumps.com

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

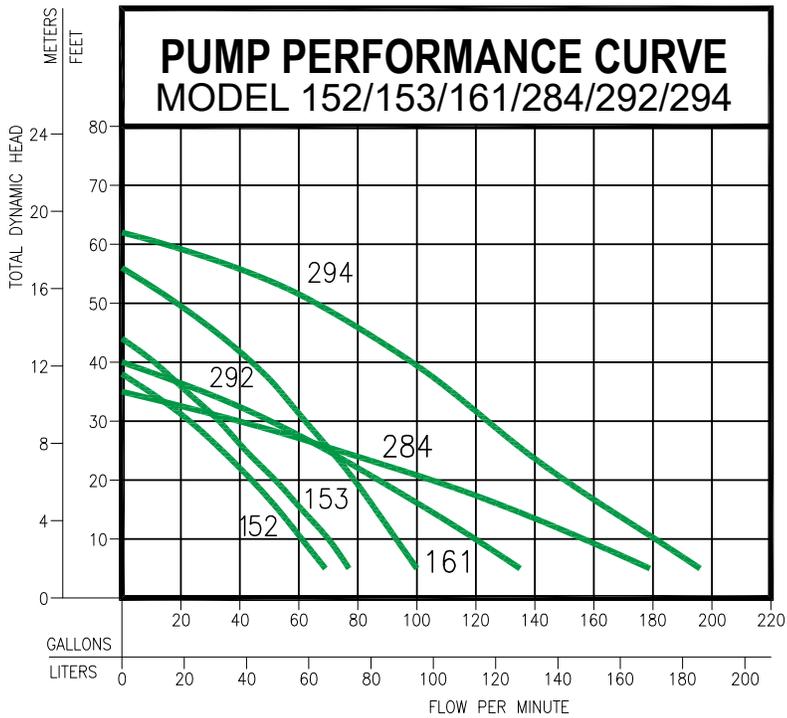
940 OIL GUARD® SUBMITTAL

	PUMP MODEL	152	153	161	284	292	294
MOTOR	Horsepower	4/10	1/2	1/2	1	1/2	1-1/2
	Hertz	60	60	60	60	60	60
	RPM	3450	3450	3450	1750	3450	3450
	Insulation	Class B	Class B	Class B	Class B	Class B	Class F
	Cooling	Oil Filled					
PUMP	Discharge	1-1/2"	1-1/2"	1-1/2"	2"	2"	2"
	Solids Handling	3/4"	3/4"	3/4"	2"	2"	2"
	Cord Length	25'*	25'*	25'*	25'	25'*	25'
	Cord Type	SOW/SOOW					
	Max Operating Temperature	130°F					
MATERIALS	Cap	Cast Iron					
	Motor Housing	Cast Iron					
	Pump Housing	Cast Iron					
	Base	Cast Iron					
	Upper Bearing	Sleeve Bearing		Ball Bearing			
	Lower Bearing	Ball Bearing					
	Mechanical Seal	Carbon and Ceramic					
	Impeller	Cast Iron Vortex					
	Hardware	Stainless Steel					
	Motor Shaft	AISI 1215 Steel		1117 Carbon Steel			
	Gasket	Neoprene					

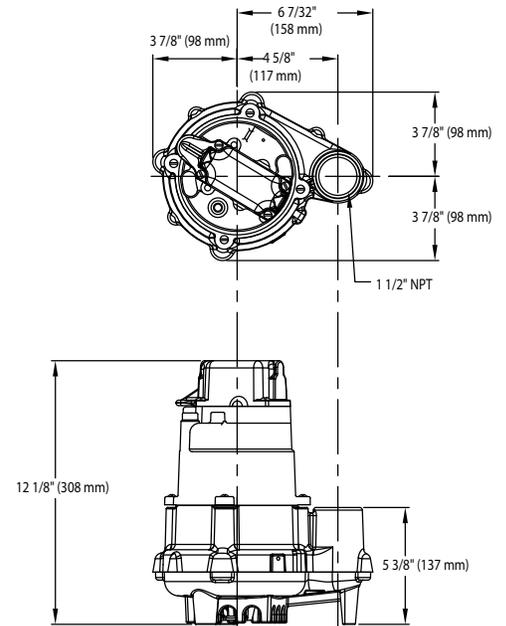
*Optional 6' cord only available for 115V units. Meets ASME 17.1 code.

» MODEL COMPARISON

MODEL	115V/1Ph	200V/1Ph	230V/1Ph	200V/3Ph	230V/3Ph	460V/3Ph
	FLA	FLA	FLA	FLA	FLA	FLA
152	8.5	N/A	4.3	N/A	N/A	N/A
153	10.5	N/A	5.3	N/A	N/A	N/A
161	15.0	8.8	7.5	6.4	5.2	2.9
284	N/A	9.3	8.9	5.5	5.0	2.6
292	15.0	8.8	7.5	6.4	5.2	2.9
294	N/A	17.8	13.7	10.8	9.5	4.8



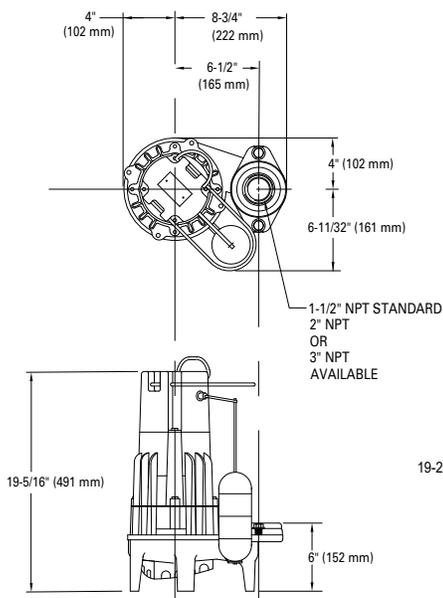
PUMP MODEL 152/153



SK2064

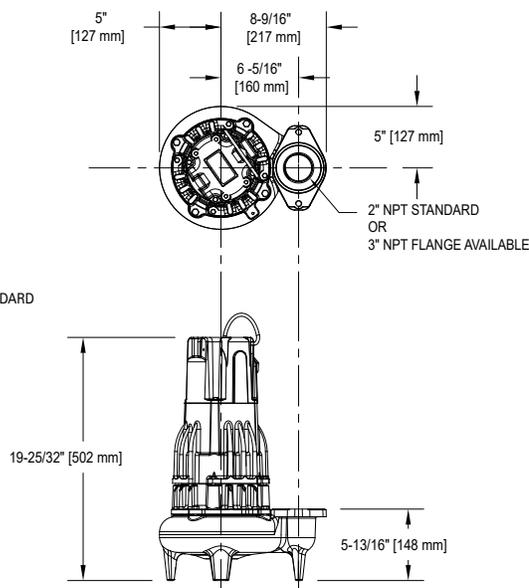
159788

PUMP MODEL 161



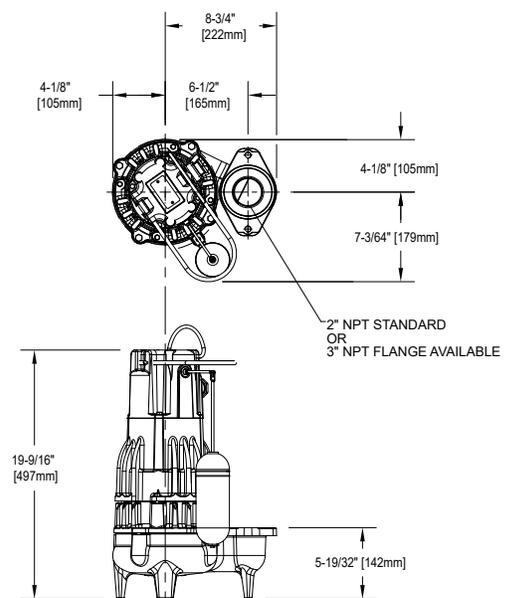
SK374

PUMP MODEL 284



SK1023

PUMP MODEL 292/294



SK863

» OIL GUARD® PLUG-AND-PLAY SYSTEM

The Oil Guard® Plug-and-Play System, when combined with a manual sump pump, will automatically pump water without the risk of pumping oil into the environment. The system will alert in the event of a high oil or high water condition. Installation of the 940 system allows you to comply with Elevator Code ASME A17.1 and state/federal regulations while reducing the risk of adverse publicity, fines, and expensive cleanup costs.

FEATURES

- Plug-and-play for easy installation, 120VAC
- Includes Oil Guard® Pump Switch with 25' cord and piggyback plug
- Includes Oil Guard® high liquid alarm (OSA-05) with 10' power cord and Liquid Smart® Alarm Sensor with 20' cord
- Pump control and alarm components differentiate between oil and water
- Alarm visible indicators: Red beacon alarm light, yellow light for oil, white light for water, alarm test and silence buttons
- Alarm horn sounds at 85 decibels at 10'
- Remote monitoring dry contacts: Oil, Water, and High Liquid Alarm
- UL listed for the United States and Canada

APPLICATIONS:

- Elevator sumps
- Electric utilities (Substations, power plants, underground vaults, and transformer barriers)
- Manufacturing facilities
- Any application where there is a need to remove water while containing oil

TECHNICAL SPECIFICATIONS

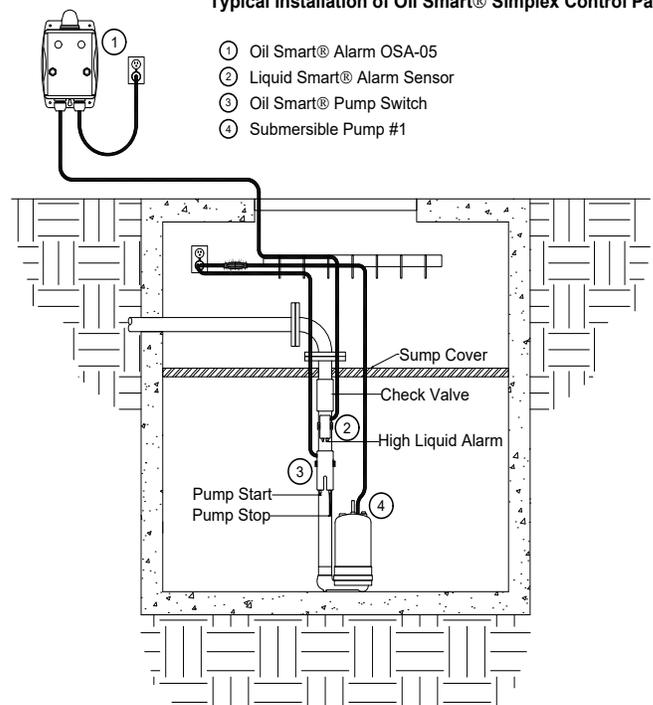
- Panel enclosure: NEMA type 1 enclosure
- Liquid Smart® enclosure: IP68/NEMA type 6P high impact injected plastic
- Liquid Smart® technology: Combination capacitive/optic, solid-state low amp circuit
- Oil Guard® control enclosure: IP68/NEMA type 6P high impact injected plastic
- Oil Guard® control technology: Capacitive type sensitive to variations in dielectric constant of water and/or hydrocarbons

SIMPLEX SINGLE PHASE: 120VAC

MODEL	PUMP FULL LOAD AMP RATING
10-5807	0-16.0 FLA



Typical Installation of Oil Smart® Simplex Control Panel



» OIL SMART® PUMP SWITCH

The Oil Smart® Pump Switch, when combined with a non-auto sump pump, will allow water to be pumped without the risk of pumping oil. This product is ideal for elevator sumps, transformer containment areas, and city underground vaults. Since 1995, the Oil Smart® Pump Switch has been the reliable choice for safely pumping water.

FEATURES

- Directly controls sump pumps 0 to 1 hp or 16 FLA (piggyback): quick installation
- Available in 120 VAC, 230 VAC 50/60 Hz., or 12/24 VDC
- No expensive electrical panel required
- Sensors differentiate between oil and water
- Differential between on and off is 6" (Pumping Range)
- Available as hardwire or piggyback plug configuration
- Helps satisfy elevator code ASME A17.1 and the EPA's Spill Prevention, Control, and Countermeasure Plan

APPLICATIONS

- Elevator sumps
- Transformer containment areas
- Underground utility vaults
- Any application where there is a need to remove water while containing oil

TECHNICAL SPECIFICATIONS

- Plastic: High Impact Injected Plastic
- IP68, NEMA 6P
- Sensors: Type 304 Stainless Steel
- Standard Temperature Operating Range: -33°F (-36°C) to 170°F (77°C)
- Operating Temperature: Designed to operate up to 30 psig at 70°F (21°C)
- Standby Current: .004 Amps
- Technology: Capacitive type sensitive to variations in dielectric constant of water and/or hydrocarbons
- Control Circuit: Solid State

MODEL	VOLTAGE	PUMP FULL LOAD AMP RATING
10-5805	120VAC	0-16.0 FLA



» OIL SMART® SIMPLEX CONTROL PANEL (SINGLE PHASE)

The Oil Smart® simplex control panel (10-5808 and 10-5830), when combined with a manual sump pump, will automatically pump water without the risk of pumping oil into the environment. The system will alert in the event of a high oil or high water condition. This panel allows you to comply with Elevator Code ASME A17.1 and state/federal regulations while reducing the risk of adverse publicity, fines, and expensive cleanup costs.

FEATURES

- Includes Oil Smart® Pump Switch and Liquid Smart® Alarm Sensor with 25' Cords
- Heavy duty polycarbonate indoor/outdoor NEMA 4X rated enclosure with stainless steel lockable latch
- Pump control and alarm components differentiate between oil and water
- Pump control visible indicators: Pump hand-off-auto (H.O.A.) switch, green Pump Run light, and green Power On light
- Alarm visible indicators: Red beacon alarm light, yellow light for oil, white light for water, alarm test and silence buttons
- Alarm horn sounds at 85 decibels at 10'
- Remote monitoring dry contacts: Oil, Water, and High Liquid
- Panel and controls: UL listed for the United States and Canada

APPLICATIONS

- Elevator sumps
- Electric utilities (Substations, power plants, underground vaults, and transformer barriers)
- Manufacturing facilities
- Any application where there is a need to remove water while containing oil

SIMPLEX SINGLE PHASE: 120/208/240VAC

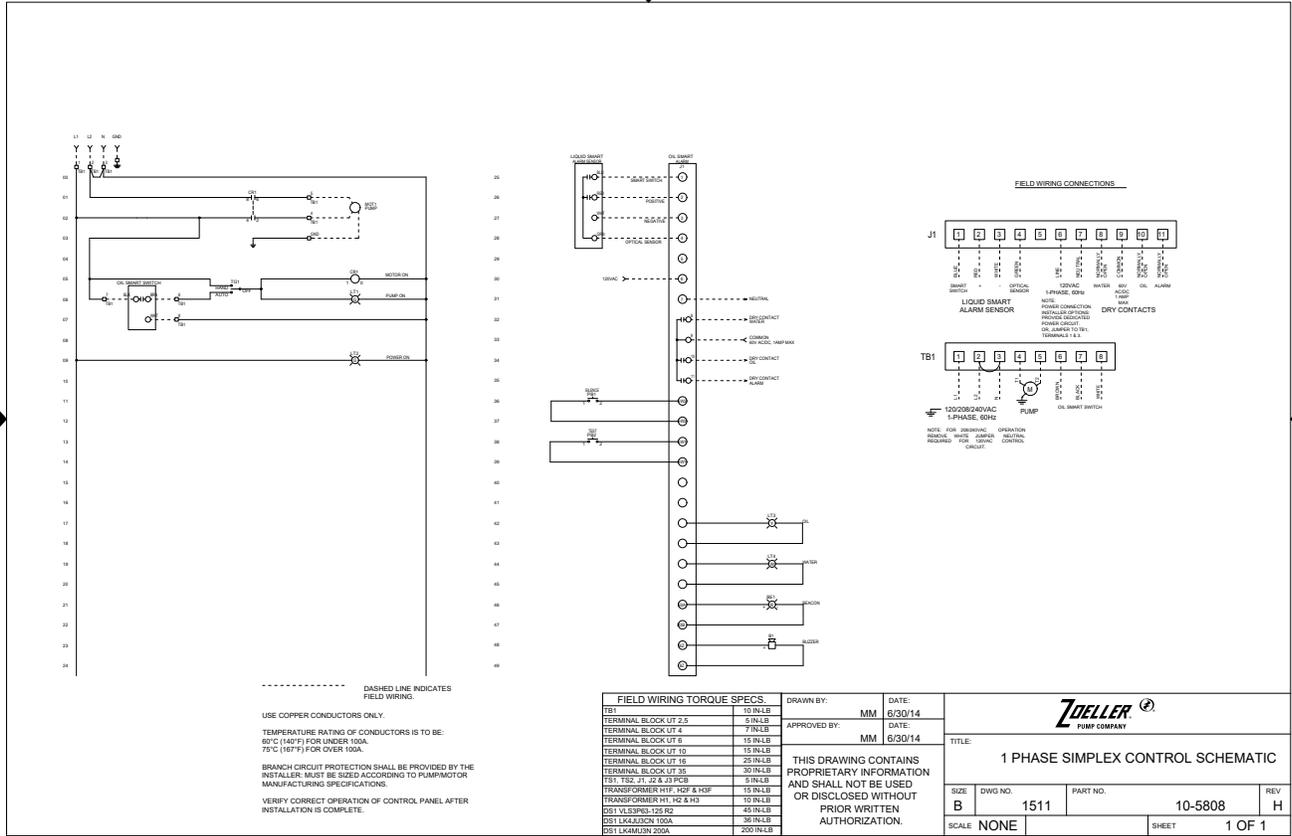
MODEL	PUMP FULL LOAD AMP RATING
10-5808	0-16.0 FLA
10-5830	15.0 - 22.0 FLA



10-5808 PANEL SCHEMATIC

FNAME: OSSIM-30

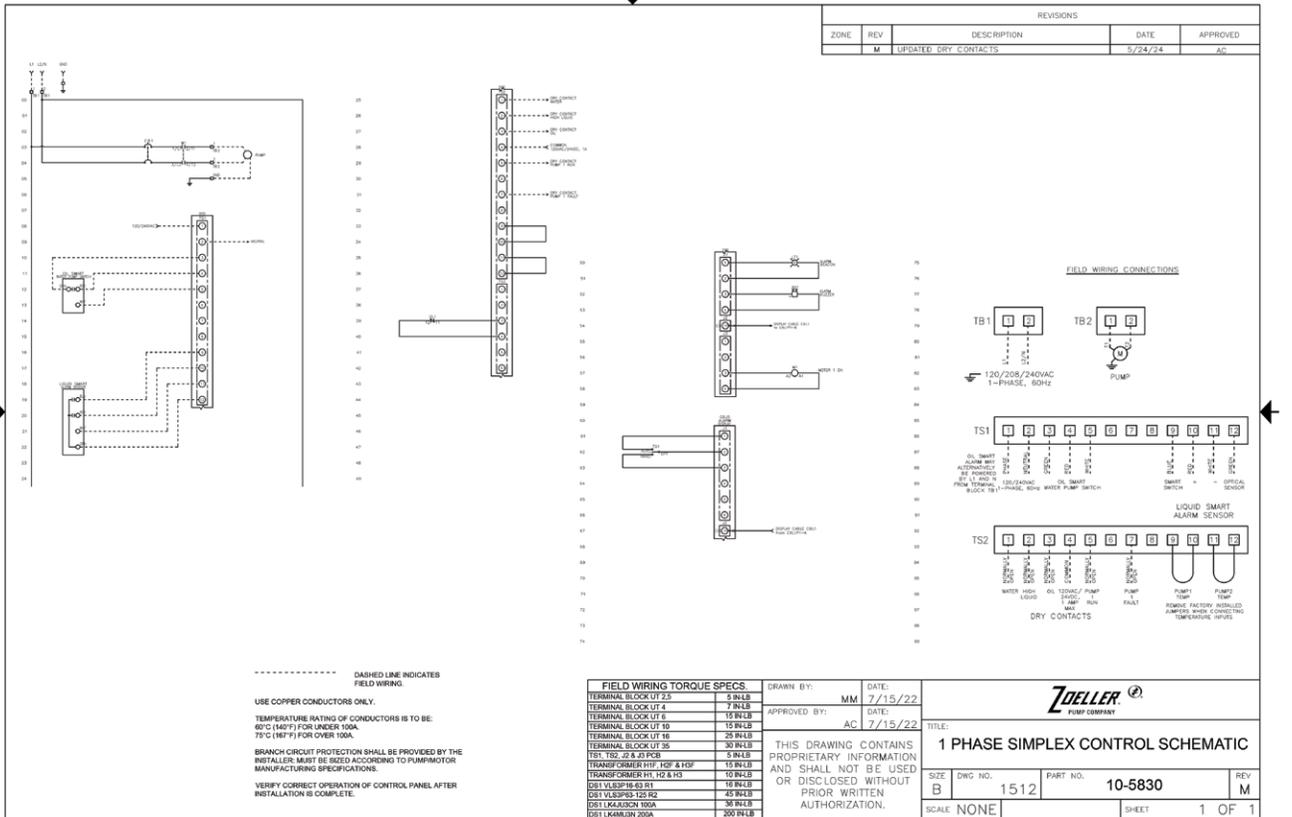
REVDATE: 0125



10-5830 PANEL SCHEMATIC

FNAME: OSSIM-TP-(1001-1004)

REVDATE: 0524



» OIL SMART® SIMPLEX CONTROL PANEL (THREE PHASE)

The Oil Smart® simplex control panels will control a 120/208/240V single phase or a 208/240/480V three phase pump in elevator sumps, transformer containment areas, and any application where there is a need to remove water while containing oil. This simplex control panel comes standard with a clear front NEMA 4X rated enclosure, Oil Smart® components, an IEC rated contactor, and a motor protective switch. They are also compliant with Elevator Code ASME A17.1 and state/federal regulations. All panels are UL listed for the United States and Canada and come with a five-year warranty.

FEATURES

- Panel enclosure: Heavy duty polycarbonate indoor/outdoor NEMA 4X rated with lockable latches
- Pump control visible indicators: Pump hand-off-auto (H.O.A.) switch, green Pump Run light, red Pump Fault light, and green Power On light
- Alarm visible indicators: Red beacon alarm light, yellow light for oil, white light for water, alarm test and silence buttons
- Alarm horn sounds at 85 decibels at 10'
- Remote monitoring dry contacts: Oil, Water, High Liquid, Pump Run, and Pump Fault
- Upgraded pump protection: Motor protective switch (branch circuit protection, adjustable overload and disconnect) and a thermal cutout with indicator
- Panel and controls: UL listed for the United States and Canada



APPLICATIONS

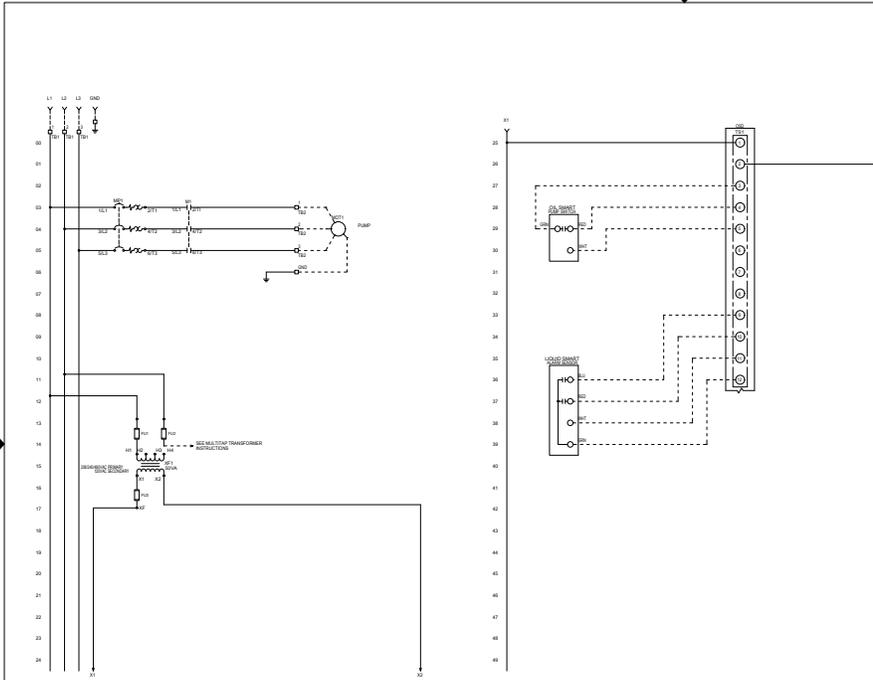
- Elevator sumps
- Electric utilities (substations, power plants, underground vaults, and transformer barriers)
- Manufacturing facilities
- Any application where there is a need to remove water while containing oil

SIMPLEX THREE PHASE: 208/240/480VAC

MODELS	PUMP FLA
10-5809	2.5-4.0 FLA
10-5810	4.0-6.3 FLA
10-5811	6.0-10.0 FLA
10-5812	9.0-14.0 FLA

FNAME: OSSIM-TP-(3001-3009)

REVDATE: 0524



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	N	UPDATED DRY CONTACTS	5/24/24	AC

MULTI-TAP TRANSFORMER:
 CONNECT FACTORY TAGGED WIRES TO APPROPRIATE TRANSFORMER VOLTAGE TAP. SEE BELOW FOR CONNECTIONS:
 FOR 208V OPERATION, CONNECT TO FUSE INPUT HF & TO TRANSFORMER TAP H2.
 FOR 240V OPERATION, CONNECT TO FUSE INPUT HF & TO TRANSFORMER TAP H3.
 FOR 480V OPERATION, CONNECT TO FUSE INPUT HF & TO TRANSFORMER TAP H4.

DASHED LINE INDICATES FIELD WIRING.
 USE COPPER CONDUCTORS ONLY.
 TEMPERATURE RATING OF CONDUCTORS IS TO BE: 60°C (140°F) FOR UNDER 100A, 75°C (167°F) FOR OVER 100A.
 BRANCH CIRCUIT PROTECTION SHALL BE PROVIDED BY THE INSTALLER. MUST BE SIZED ACCORDING TO PUMPMOTOR MANUFACTURING SPECIFICATIONS.
 VERIFY CORRECT OPERATION OF CONTROL PANEL AFTER INSTALLATION IS COMPLETE.

FIELD WIRING TORQUE SPECS.	
TERMINAL BLOCK UT 2.5	5 IN-LB
TERMINAL BLOCK UT 4	7 IN-LB
TERMINAL BLOCK UT 6	15 IN-LB
TERMINAL BLOCK UT 10	15 IN-LB
TERMINAL BLOCK UT 16	25 IN-LB
TERMINAL BLOCK UT 35	30 IN-LB
TS1, TS2, J2 & J3 PCB	5 IN-LB
TRANSFORMER HF, H2F & H3F	15 IN-LB
TRANSFORMER H1, H2 & H3	10 IN-LB
DS1 VLS3P163 R1	10 IN-LB
DS1 VLS3P63 125 R2	45 IN-LB
DS1 LK42UCN 100A	30 IN-LB
DS1 LK4MUN 200A	200 IN-LB

DRAWN BY: MM DATE: 7/20/14
 APPROVED BY: KM DATE: 7/20/14

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ZOELLER
PUMP COMPANY

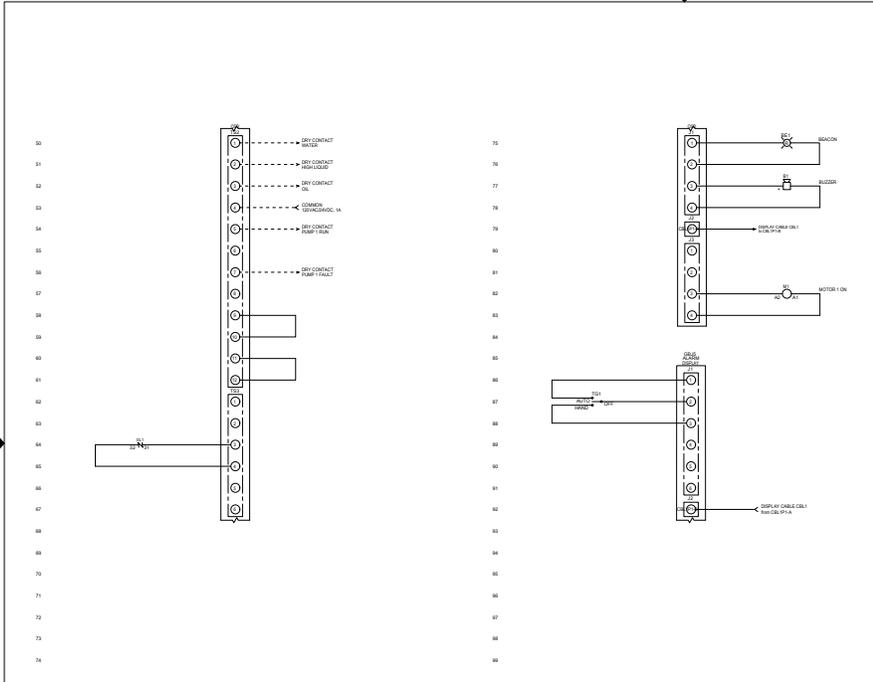
TITLE: **3 PHASE SIMPLEX CONTROL SCHEMATIC**

SIZE	DWG NO.	PART NO.	REV
B	1513	10-5809, 10-5810, 10-5811, 10-5812	N

SCALE: NONE SHEET: 1 OF 2

FNAME: OSSIM-TP-(3001-3009)

REVDATE: 0524



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	N	UPDATED DRY CONTACTS	5/24/24	AC

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 FOR 480V OPERATION, CONNECT TO FUSE INPUT HF & TO TRANSFORMER TAP H4.

DASHED LINE INDICATES FIELD WIRING.
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FIELD WIRING TORQUE SPECS.	
TERMINAL BLOCK UT 2.5	5 IN-LB
TERMINAL BLOCK UT 4	7 IN-LB
TERMINAL BLOCK UT 6	15 IN-LB
TERMINAL BLOCK UT 10	15 IN-LB
TERMINAL BLOCK UT 16	25 IN-LB
TERMINAL BLOCK UT 35	30 IN-LB
TS1, TS2, J2 & J3 PCB	5 IN-LB
TRANSFORMER HF, H2F & H3F	15 IN-LB
TRANSFORMER H1, H2 & H3	10 IN-LB
DS1 VLS3P163 R1	10 IN-LB
DS1 VLS3P63 125 R2	45 IN-LB
DS1 LK42UCN 100A	30 IN-LB
DS1 LK4MUN 200A	200 IN-LB

DRAWN BY: MM DATE: 7/20/14
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ZOELLER
PUMP COMPANY

TITLE: **3 PHASE SIMPLEX CONTROL SCHEMATIC**

SIZE	DWG NO.	PART NO.	REV
B	1513	10-5809, 10-5810, 10-5811, 10-5812	N

SCALE: NONE SHEET: 2 OF 2