

The **NORCHEM AnCAT® Model AL-100S** automatic liquid polymer system is designed to process up to 120 GPH of neat liquid polymer and deliver up to 100 GPM (6000 GPH) of a nominal 0.2 to 2.0% aqueous polymer solution. The AL-100S system is modular in design consisting of a liquid polymer injection module and booster module assembly.

**AnCAT® MODEL AL-100S LIQUID POLYMER SYSTEM SPECIFICATIONS:**

<b>FRAME:</b>	<b>BASE:</b>	<b>42" W x 42" L x 58" H (48" w/OPTIONAL BOLT LUGS)</b>
	<b>CONSTRUCTION:</b>	<b>CARBON STEEL, DRYLAC SERIES 49 POWDER COATING</b>
<b>PANEL:</b>	<b>ENCLOSURE:</b>	<b>NEMA 12</b>
<b>INJECTION MODULE:</b>	<b>PUMP:</b>	<b>ROTARY-GEAR-TYPE, 316 STAINLESS STEEL</b>
	<b>DRIVE:</b>	<b>POSITIVE TORQUE TRANSMISSION, 4:1 GEAR REDUCED</b>
	<b>MOTOR:</b>	<b>1 ½ HP, 1725 RPM, TENV, WASHDOWN DUTY</b>
	<b>CAPACITY:</b>	<b>NEAT POLYMER FLOWRATE: 20 TO 120 GPH (480 TO 2880 GPD)</b>
<b>BOOSTER MODULE:</b>	<b>PUMP:</b>	<b>CENTRIFUGAL-TYPE, CAST IRON MODIFIED FOR POLYMERS</b>
	<b>DRIVE:</b>	<b>CLOSE-COUPLED, DIRECT</b>
	<b>MOTOR:</b>	<b>10 HP, 3450 RPM, TEFC, WASHDOWN DUTY</b>
	<b>DISCHARGE:</b>	<b>5 TO 100 GPM, 15 – 20 PSI BOOST TO INLET WATER PRESSURE</b>
<b>SOLUTION OUTPUT:</b>	<b>PRIMARY FLOW:</b>	<b>5.0 TO 100 GPM (300 TO 6000 GPH)</b>
	<b>SECONDARY FLOW:</b>	<b>NONE,</b>
	<b>TOTAL FLOW:</b>	<b>5.0 TO 100 GPM (300 TO 6000 GPH)</b>
<b>CONCENTRATION:</b>	<b>SOLUTION:</b>	<b>PRIMARY: 0.2 TO 2.0%, VOLUME ON VOLUME</b>
		<b>TOTAL: 0.2 TO 2.0%, VOLUME ON VOLUME</b>
<b>CONTROLS:</b>	<b>CONTROLLER:</b>	<b>MANUAL MECHANICAL, MICROMETER DIAL ADJUSTMENT</b>
	<b>WATER:</b>	<b>LOW WATER FLOW ALARM AND FAILSAFE, MANUAL RESET</b>
	<b>POLYMER:</b>	<b>LOW POLYMER FLOW ALARM AND FAILSAFE, MANUAL RESET</b>
	<b>LIQUID LEVEL:</b>	<b>CONDUCTIVITY-TYPE, 4 STAINLESS STEEL PROBE ASSEMBLY</b>
<b>UTILITIES:</b>	<b>ELECTRICAL:</b>	<b>460 VAC, 3 PHASE, 60 HERTZ, 30 AMP</b>
	<b>WATER:</b>	<b>100 GPM @ 50 PSI, CLEAN SOURCE</b>
	<b>AIR:</b>	<b>&lt;1.0 SCFH @ 50 PSI, CLEAN SOURCE</b>

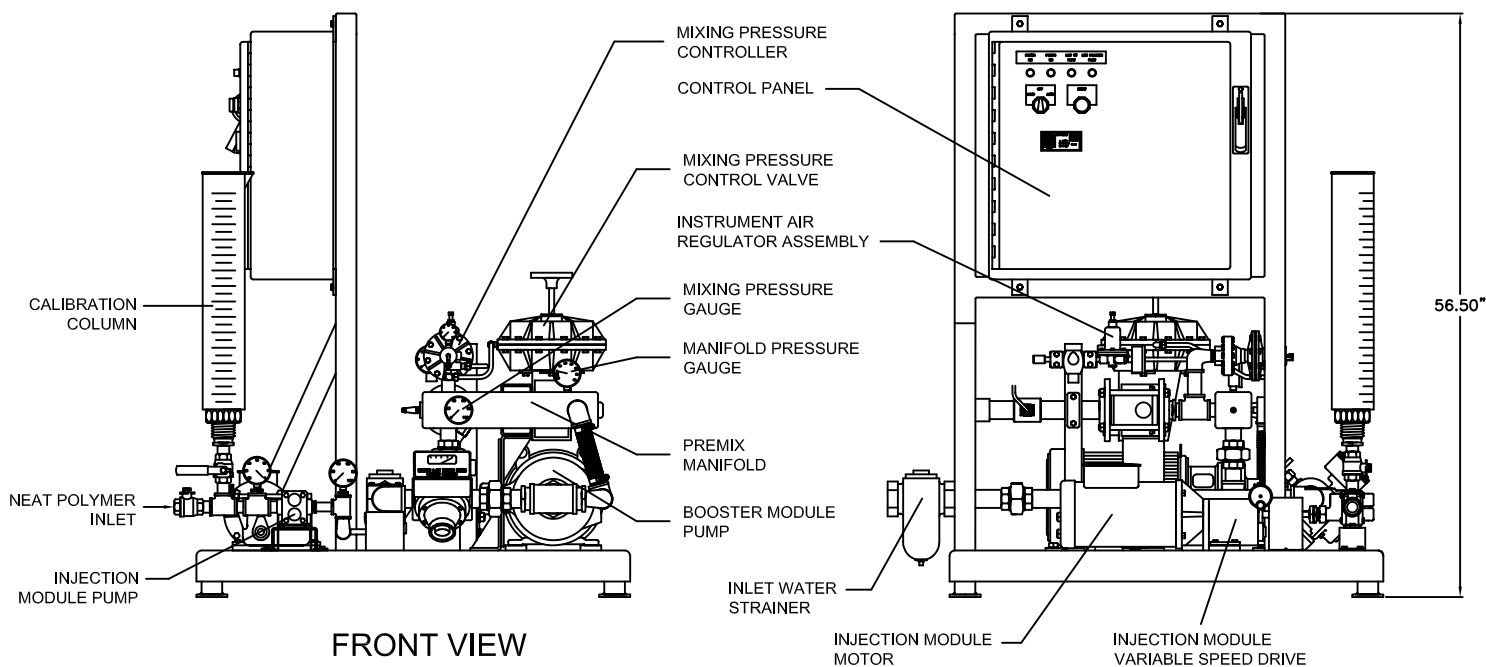
**ENGINEERING SPECIFICATIONS:**

The **AnCAT® Model AL-100S** shall be provided to rapidly dilute, activate and feed emulsion, dispersion, and solution polymers at 100 GPM of polymer solution at concentrations to 2%. The system shall contain a four-step, controlled-energy hydraulic circuit that instantaneously dilutes and blends the polymer to its most effective state for use in the process. The unit shall be designed with full pressure-controlled, inline-inversion capability and shall not be limited by a minimum retention time restriction. The polymer system shall be capable of providing a 15 to 20 PSI pressure boost and shall not rely on available inlet water pressure to discharge the polymer solution product. The system shall be modular in design and shall consist of a polymer injection module, booster module, premix manifold, inlet water solenoid valve, primary inlet water flow meter, primary inlet water flow controller, mixing pressure regulator (adjustable to 70 PSI), hydraulic stabilizer circuit, mixing pressure gauge, manifold pressure gauge, and inlet water throttling valve.

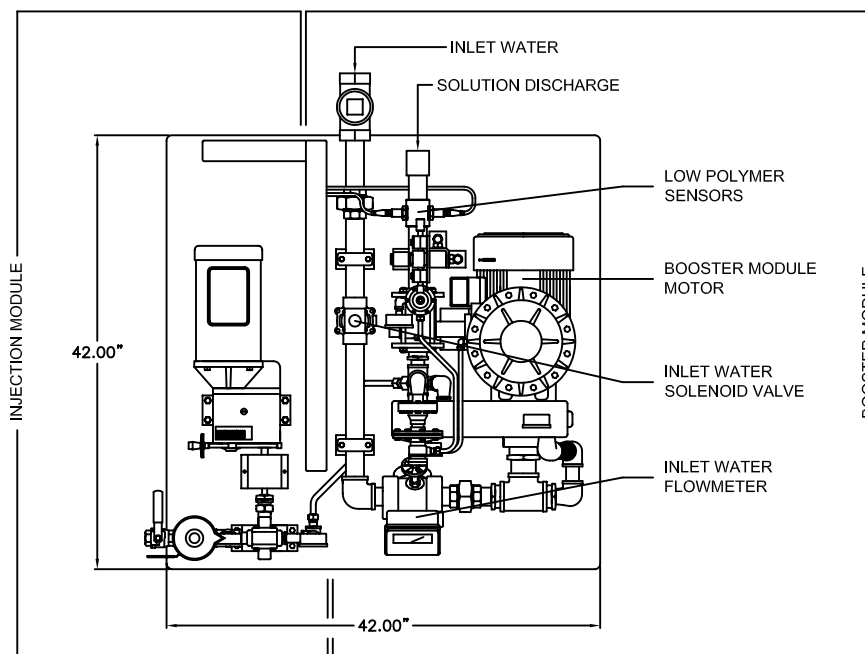
# PLAN & ELEVATION

AL100S\_DIM

# L-SERIES AL-100S



LEFT END VIEW



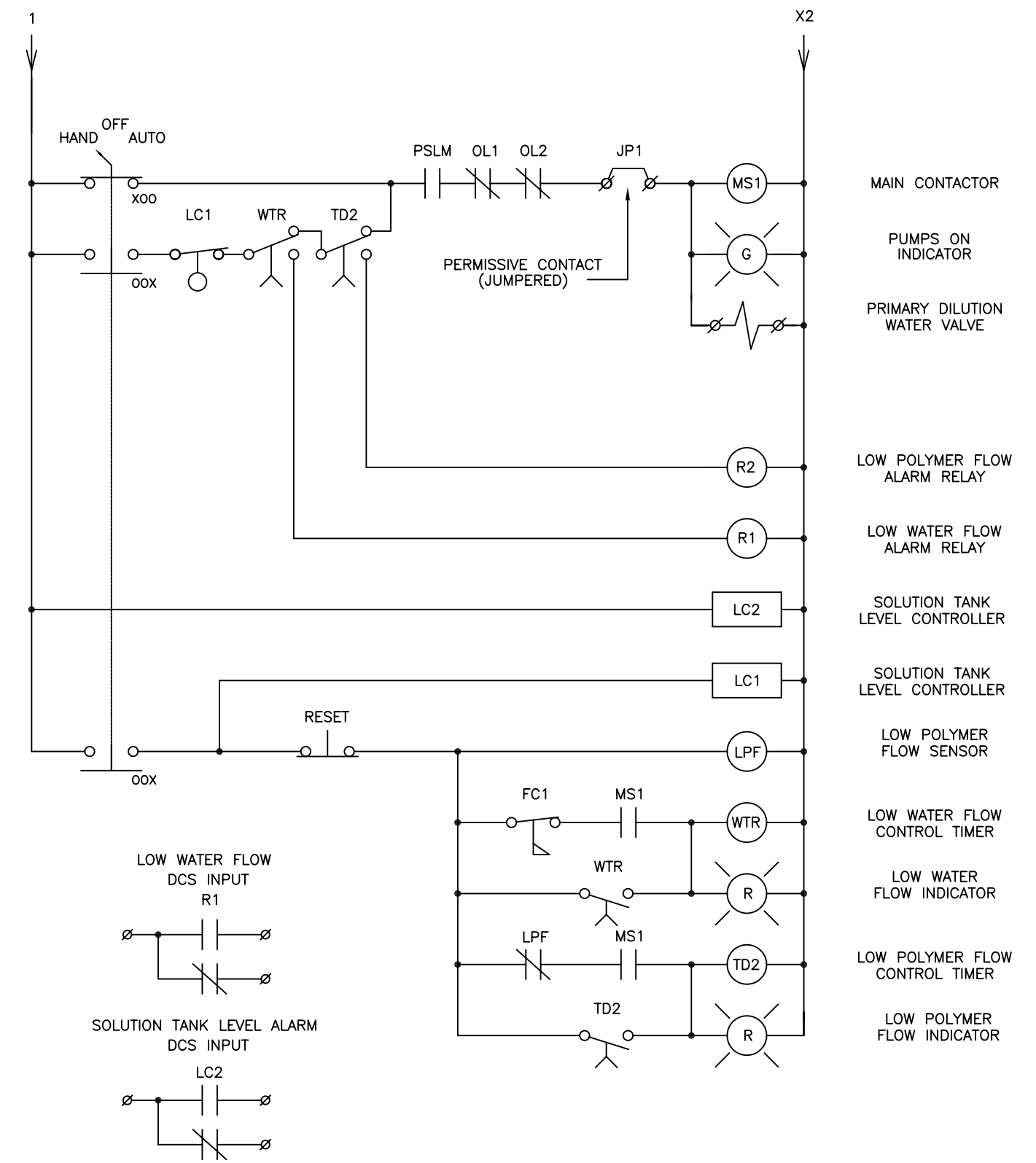
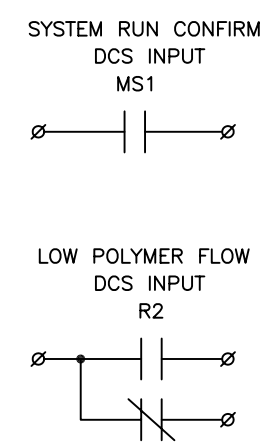
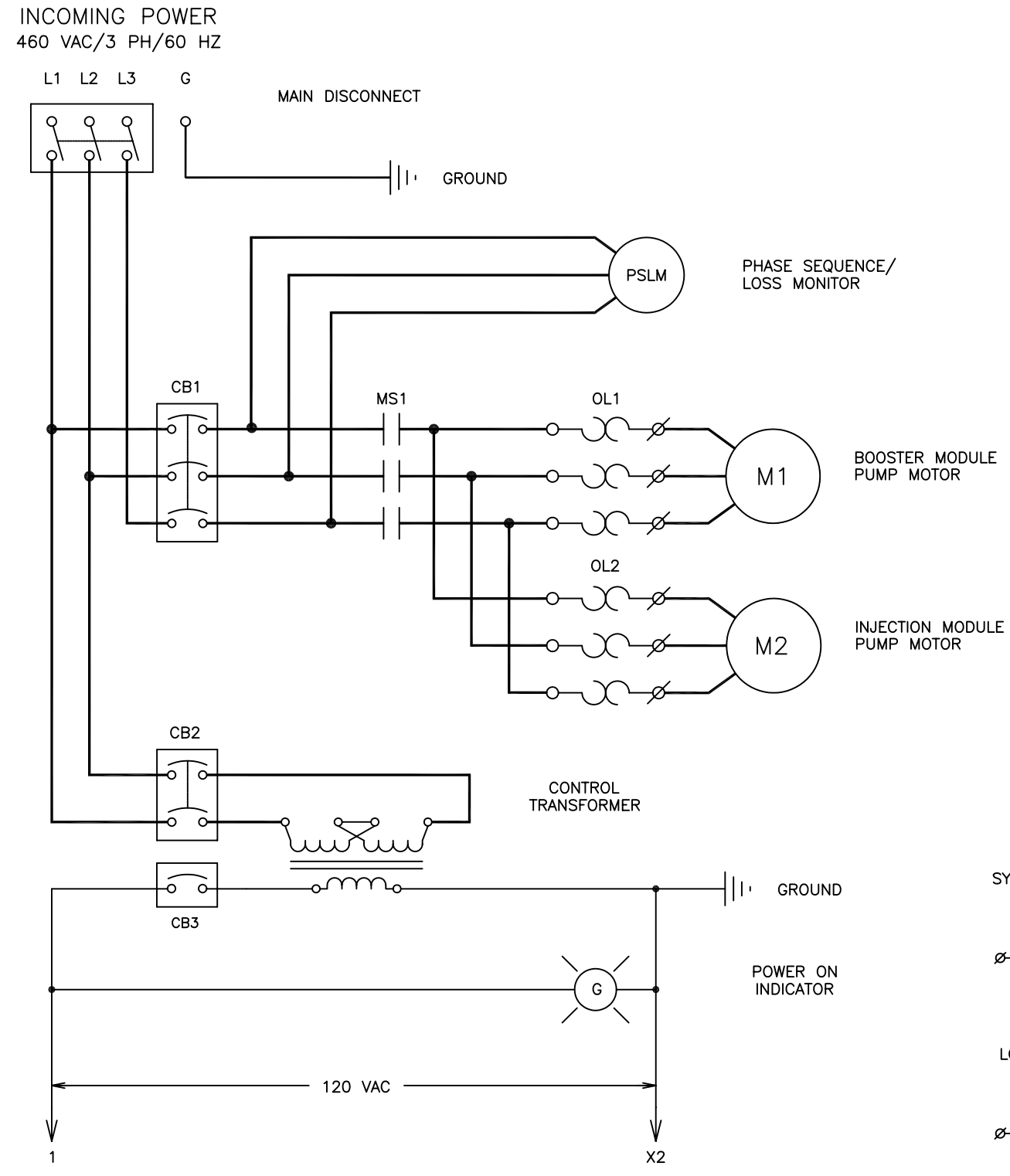
PLAN VIEW

# NORCHEM INC.

# ELECTRICAL SCHEMATIC

# L-SERIES AL-100S

AL100S\_ELE



# AnCAT L-SERIES AL-60S & AL-100S

LEGEND

DEVICES

HV-1	POLYMER SUPPLY SHUTOFF HAND VALVE
HV-2	CALIBRATION ASSEMBLY ISOLATION HAND VALVE
CAL-1	CALIBRATION CYLINDER
PI-101	NEAT POLYMER POLYMER SUCTION GAUGE
PI-102	NEAT POLYMER PUMP DISCHARGE GAUGE
PI-103	MIXING PRESSURE GAUGE
PI-104	MANIFOLD PRESSURE GAUGE
PI-105	INSTRUMENT AIR PRESSURE GAUGE
M-101	BOOSTER PUMP MOTOR
M-102	POLYMER INJECTION PUMP MOTOR
SOV-101	DILUTION WATER INLET SOLENOID VALVE
SOV-102	INSTRUMENT AIR SOLENOID VALVE
CV-101	MIXING PRESSURE CONTROL VALVE
CV-102	INSTRUMENT AIR PRESSURE CONTROL REGULATOR
FEI-101	DILUTION WATER INDICATING FLOW METER w/VALVE

CONTROLS

SS-101	SELECTOR SWITCH "HAND-OFF-AUTO"
PB-101	PUSH BUTTON "RESET"
LC-101	PRIMARY LEVEL CONTROLLER
LC-102	SECONDARY LEVEL CONTROLLER
LPF-101	LOW POLYMER FLOW CONTROLLER
PC-101	MIXING PRESSURE AUTOMATIC CONTROLLER

INDICATORS

PWR-101	"POWER ON" INDICATOR
PMP-101	"PUMPS ON" INDICATOR
LWA-101	"LOW WATER FLOW" INDICATOR
LPA-101	"LOW POLYMER FLOW" INDICATOR

OUTPUTS

R101	COMMON FAULT
R102	COMMON ALARM
R103	SYSTEM POWER FAULT
R104	TANK LEVEL ALARM

