## **Field Wiring**

'AS' Cooling Towers

CONTROLLER: SAT

SAT-CP-OR-F-RM E4- Hardwired

<b>Conductivity Sensors:</b>	Cable to:	Located:
Tower Conductivity	A+ & A-, E+ & E-	Door mounted circuit board
		Blue cable sleeve sensors

Cabling Notes: Extend conductivity sensor cables with 4 x AWG22 cable, shielded or unshielded & color coded black, white, red and green.

pH & ORP Sensors:	Cable to:	Located:
Tower pH	C+ & C-	Door mounted circuit board
	Coax. Shield to C-	Green ground wire to backplate
ORP controller	Sensor + & - Coax. Shield to '-'	Module located in back of enclosure – labeled by function See manual appendix D3.

Cabling Notes: Do not parallel pH cables & AC power cables.

If sensor cables are shortened, strip center conductor 'black' insulation from inner 'clear' insulation before terminating. Do not extend pH sensor cables.

Any mix of three contact head, turbine & paddlewheel sensors may be connected to the controller.

Water meters:	Cable to:	Located:
Tower Make-up	'O' input	Door mounted circuit board
Tower Bleed	'P' input	Door mounted circuit board

Cabling Notes: Contact head meters wire to **O+** & **O-** through **Q+** & **Q-**. See manual Sections 3.3.5 & 4.3 for turbine & paddlewheel cabling.

Flowswitch:	Cable to:	Located:
Tower Recirculating	'U' input	Door mounted circuit board

Cabling Notes: Connect to U+ & U-. Dry contacts may be substituted for a flowswitch. Contacts must be closed to operate pumps and solenoids.

Pumps & Bleed Solenoid:	Cable to:	Located:
Inhibitor Pump	Line to L1 Neutral to N1	Door mounted circuit board
Bleed Solenoid	Line to NO2 Neutral to N2	Door mounted circuit board
Acid Pump	Line to NO3 Neutral to N3	Door mounted circuit board
Oxidant Pump	Line to NO4 Neutral to N4	Door mounted circuit board

Cabling Notes: Pumps & bleed solenoids are hard-wired using AWG18-16 multiple stranded wire.

Do not wire AWG14, seven strand wire directly to the door mounted terminal blocks.

Refer to Manual Section 3.3.8 for wiring detail.

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