

Wiring and Programming of the TPI (Turbine Pump Interface) with an FEPetro SCIII (3-Phase Smart Controller) Overview

The STP-SCIII 3-Phase Smart Controller can be controlled by the INCON TPI via an RS-485 connection.

The TPI can be used to:

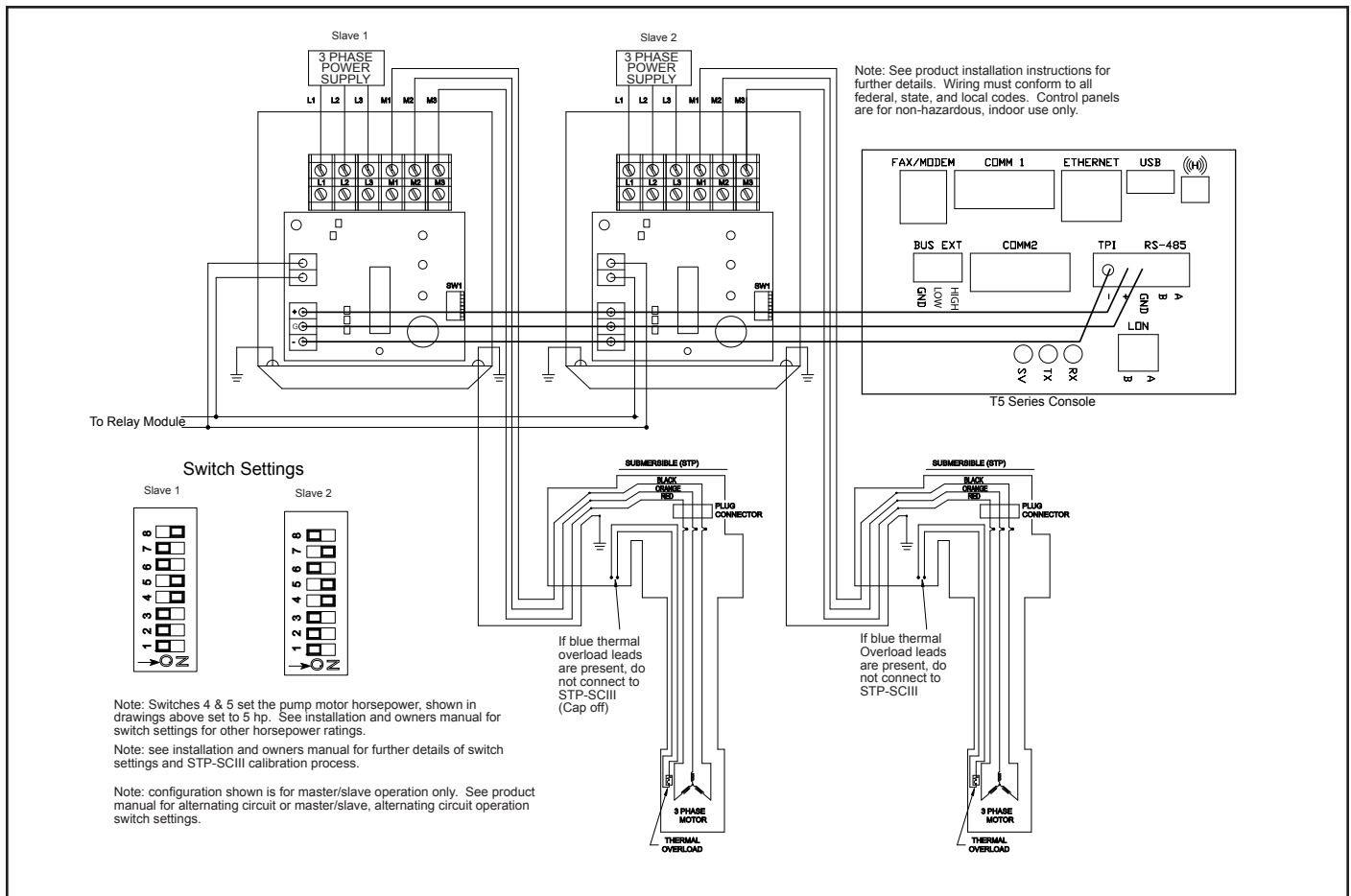
- Mimic a syphon system and manage manifolded pumps thru Leveling Mode
- Manage manifolded pumps thru Priority Mode
- Manage the use of the pumps thru Master/Slave mode
- Manage the use of the pumps when alarms occur

110VAC must be supplied to the hook for the relay to close. The communication signal supplied by the TPI is not enough to engage the relay. Therefore a Relay module is needed to control a separate 110VAC source for the hook signals. The AC Inputs from the dispensers are wired to the DHI board in the tank gauge and then programmed as inputs to both the TPI and to the Normally Open Relay. This will allow both the TPI and the Relay to activate at the same time. The hook signal needs to go to the DHI board in the tank gauge.

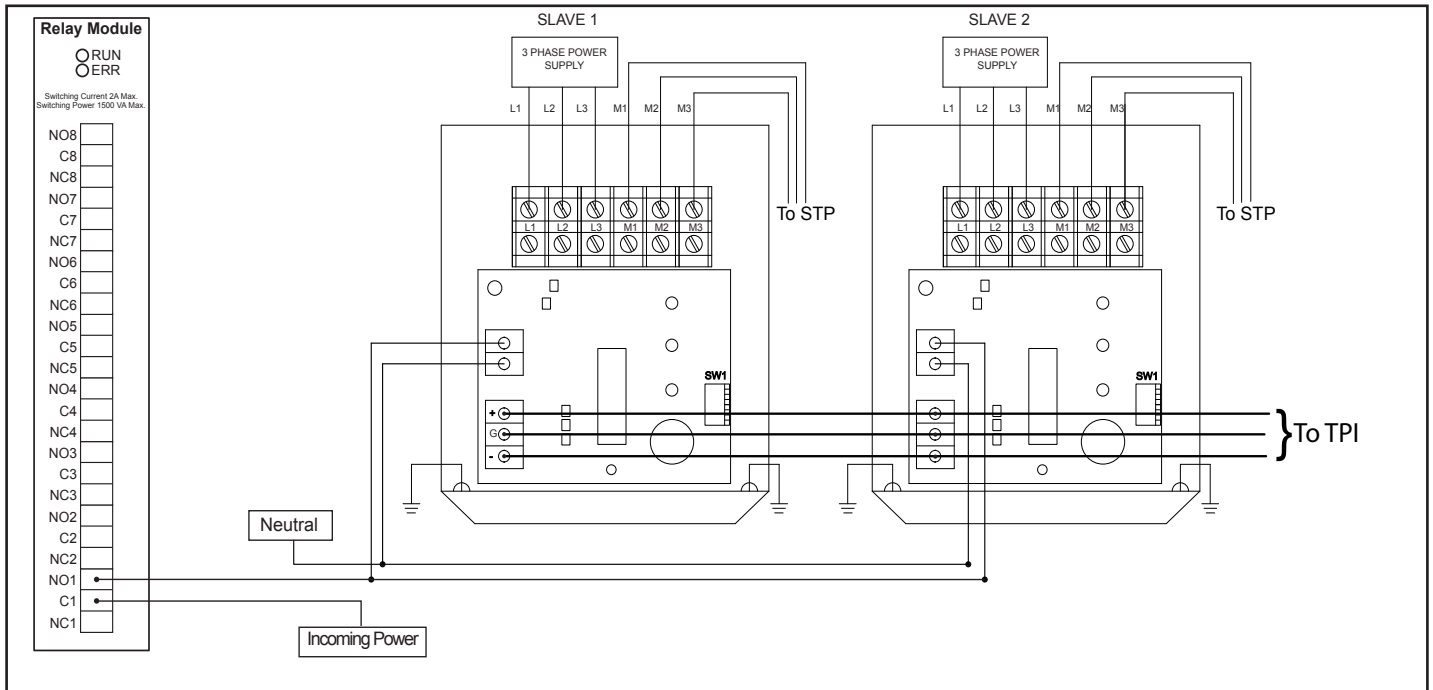
The STP-SCIII switches should be set as Slave (Dip Switch 1 off). The T5 programming should be set as Master/Slave. Doing so will prevent the motor from running continuously when communication is lost to the TPI.

The relay is wired as Normally Open and programmed as inverted. The STP will turn off if the gauge loses power.

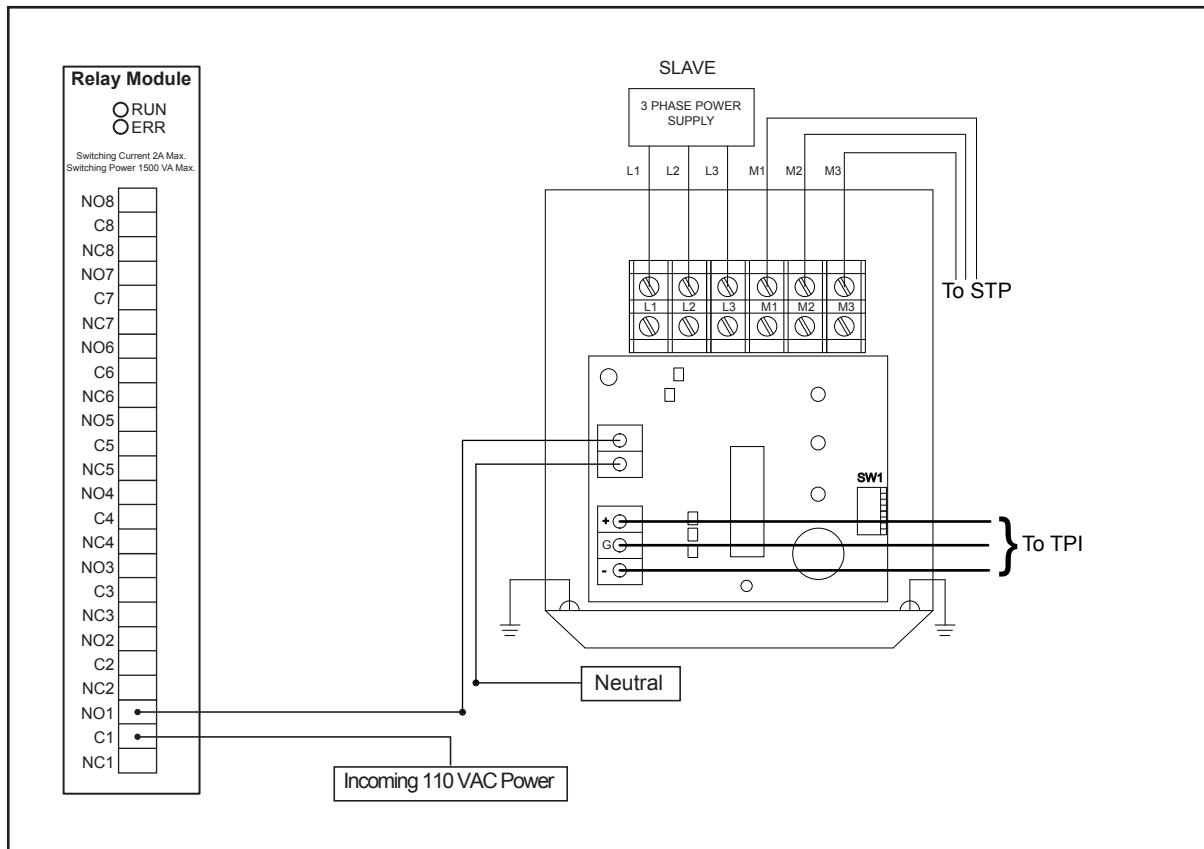
Wiring Diagrams



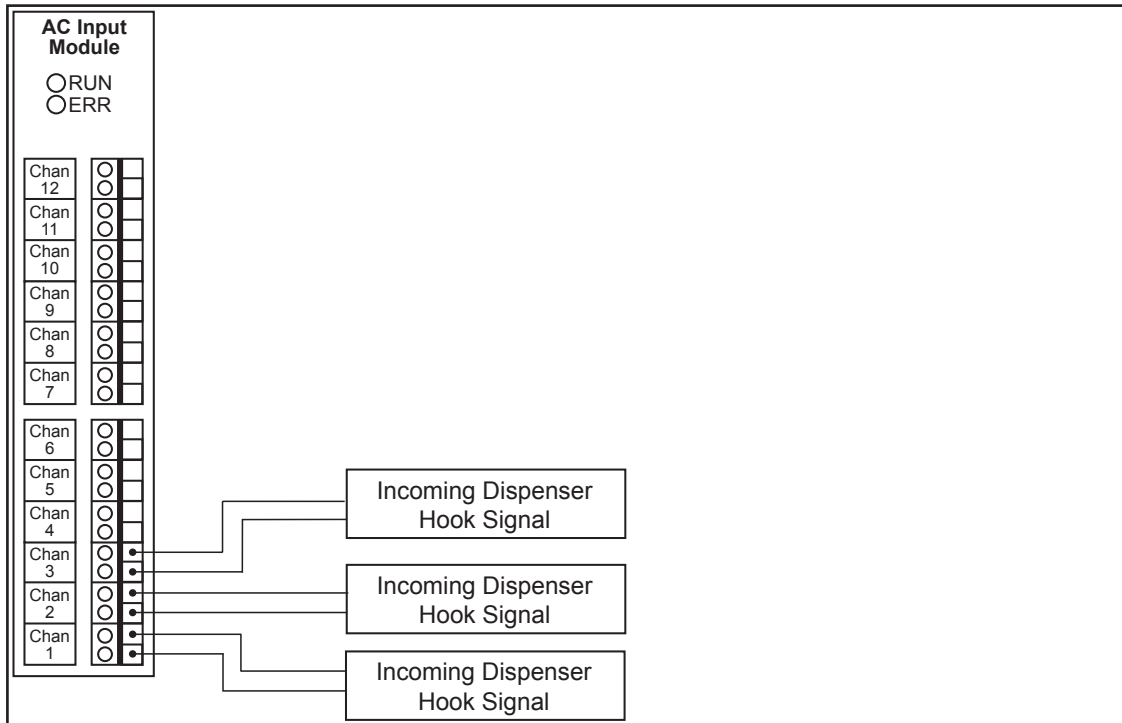
TPI Wiring



Relay Module Wiring: Leveling/Priority



Relay Module Wiring: Standalone



AC Input Wiring

Power Supply			
RS-485 AB (POS)	Enable Interface	No	
RS-485	Enable Interface	Yes	
TS-TPI	Enable Interface	Yes	
Controllers	Number of Controllers	4	
Controller 1	Name	Unleaded North Pump TPI	Type a descriptive name for the channel
	Enabled	Yes	All tanks of similar products should be in the same group
	Type	3 Phase Smart 208/380V	
	Address	1	
	Group	1	The tank number this pump is listed in under Fuel Management System
	Tank	1	
	Height	5.00 in	Motor height above the tank bottom
	Number of inputs	2	Number of inputs that will be able to turn on the pump
Input 1	Type	AC Input Module	
	Channel	DISP 1/2 87 Hook Input	
Input 2	Type	AC Input Module	
	Channel	DISP 3/4 87 Hook Input	
Controller 2	Name	Unleaded South Pump TPI	
	Enabled	Yes	
	Type	3 Phase Smart 208/380V	
	Address	2	
	Group	1	
	Tank	2	
	Height	5.00 in	
	Number of inputs	2	
Input 1	Type	AC Input Module	
	Channel	DISP 1/2 87 Hook Input	
Input 2	Type	AC Input Module	
	Channel	DISP 3/4 87 Hook Input	
Controller 3	Name	Midgrade Pump TPI	
	Enabled	Yes	
	Type	3 Phase Smart 208/380V	
	Address	3	
	Group	0	Set to 0 when there are no other tanks with the same product
	Tank	3	
	Height	5.00 in	
	Number of inputs	2	
Input 1	Type	AC Input Module	
	Channel	DISP 1/2 89 Hook Input	
Input 2	Type	AC Input Module	
	Channel	DISP 3/4 89 Hook Input	
Controller 4	Name	Premium Pump TPI	
	Enabled	Yes	
	Type	3 Phase Smart 208/380V	

Controllers: Setup

Controllers	A	Number of Controllers	4	
Controller 1		Name	Unleaded North Pump TPI	
		Enabled	Yes	
		Type	3 Phase Smart 208/380V	
		Address	1	
		Group	1	
		Tank	1	
		Height	5.00 in	
		Number of inputs	2	
Input 1	»	...	...
Input 2	»	...	...
Controller 2		Name	Unleaded South Pump TPI	
		Enabled	Yes	
		Type	3 Phase Smart 208/380V	
		Address	2	
		Group	1	
		Tank	2	
		Height	5.00 in	
		Number of inputs	2	
Input 1		Type	AC Input Module	
		Channel	DISP 1/2 87 Hook Input	
Input 2		Type	AC Input Module	
		Channel	DISP 3/4 87 Hook Input	
Controller 3	»	...	...
Controller 4	»	...	...
Groups		Number of groups	1	Name the group
Group 1		Name	Unleaded	Choose between Leveling and Priority
		Mode	Leveling	
		Master/Slave	Yes	Choose if this group uses Master/Slave configuration
		Fault Shutdown	No	Choose if both pumps are to shut down on a fault

Groups: Setup

Relay Modules		Q		
Module 1	10 Amp Channels	No		
		3		
	Channel 1	Name	Unleaded STP Relay	Name the channel with a descriptive name and label it as a relay
		Enabled	Yes	
		Type	Submersible Pump	Choose submersible pump
		Polarity	Invert	
		Logic	OR Logic	
		Physically Wired As	Normally Open	
		Number of inputs	0	Inputs should be set to 0
	Channel 2	Name	Midgrade STP Relay	
		Enabled	Yes	
		Type	Submersible Pump	
		Polarity	Invert	
Logic		OR Logic		
Physically Wired As		Normally Open		
Channel 3	Name	Premium STP Relay		
	Enabled	Yes		
	Type	Submersible Pump		
	Polarity	Invert		
	Logic	OR Logic		
	Physically Wired As	Normally Open		
Remote Module 2	»	...	...

Relay: Setup