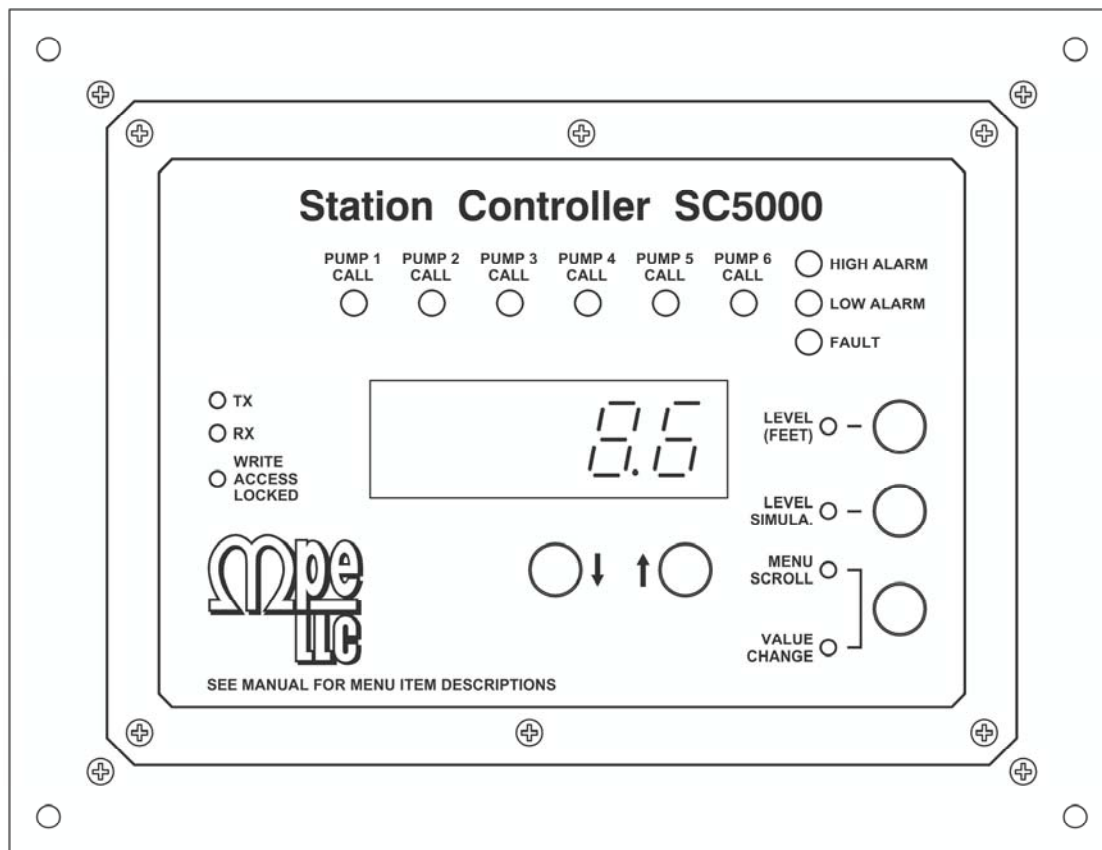


SECTION X SC5000-LED-HMI

Revision Date: 12-12-24
Operating Program Revision: 5



Description

The **SC5000-LED-HMI** is a 5 digit numerical LED HMI that shows the Wet Well Level, the Pump Call to Run status, the High Level and Low Level alarm status, Parameter Security Write Access status, Fault indicator that shows when a Fault Code is present, and TX and RX communication activity status. An operator may also perform Level Simulation and reset of any Fault Codes. All Setup Parameters for LEVEL CONTROL and I/O Setup are made available in its menu for the operator to view or change.

The **SC5000-LED-HMI** is designed and programed for use in the **LEVEL CONTROL** mode and is not suitable for any of the other control modes (the Master Control Mode must be set for **LEVEL CONTROL**, P.091 = 1).

The **SC5000-LED-HMI** should be connected to the Serial Port (COM1) on the SC5000 Controller using a shielded Cat 5 or Cat 6 Ethernet Patch Cable.

For connection diagram see page X-26.

The **SC5000-LED-HMI** is recommended for **LEVEL CONTROL** applications that have little or no control over the enclosure internal temperature, where the **SC5000-LCD-HMI** Touchscreen would overheat and be damaged.

Specifications

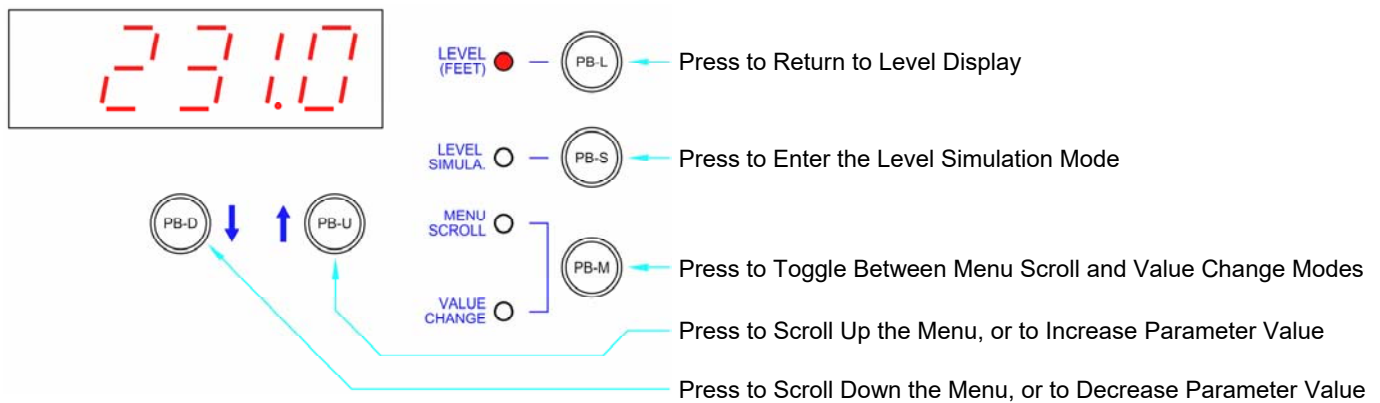
- Input Power: 24VDC $\pm 10\%$, 30mA max
- Agency Approvals: UL 508, CAN/CSA
- Dimensions (Width x Height x Depth): 8.50" x 6.50" x 2.20"
- Ambient Operating Temperature: -20°C to +65°C (-4°F to +149°F)
- Color: White with Blue Graphics
- RS232 Communication Port (COM1): Modbus Master with Modbus RTU Protocol

IND. CONT. EQ.



SC5000-LED-HMI

OPERATOR INTERFACE FUNCTIONS



Note: To Prevent the Accidental Changing of a Parameter Value, there is a 4 second Delay Before a Parameter Value will Change.
(The PB-D or PB-U Push-Button must be Held Down for the Entire 4 second Delay.)

How to View a Setup Parameter Value

1. Press push-button PB-M until the Menu Scroll Mode indicator comes on.
2. Press push-button PB-D or PB-U as needed to arrive at the Parameter you wish to view.
3. Press push-button PB-M until the Value Change Mode indicator comes on.
4. The current value of the Parameter may then be viewed on the display.

How to Change a Setup Parameter Value

1. Press push-button PB-M until the Menu Scroll Mode indicator comes on.
2. Press push-button PB-D or PB-U as needed to arrive at the Parameter you wish to change.
3. Press push-button PB-M until the Value Change Mode indicator comes on.
4. The current value of the Parameter may then be viewed on the display.
5. Press and hold for 4 seconds, either push-button PB-D or PB-U, to change the Parameter to the desired new value.
6. Press push-button PB-M or PB-L to exit the Value Change Mode.

How to Simulate Levels

1. Press push-button PB-S.
Note: The Simulation starts from the actual level displayed prior to entering the Level Simulation mode.
2. Press push-button PB-D or PB-U as needed to change the simulated level.
3. To end the level simulation press push-button PB-L.
Note: If you do not exit the Level Simulation mode, normal operation will resume automatically 60 seconds after the last time the PB-U, PB-D, or PB-S push-buttons were pressed.

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes	
Parameter	Default Value	Current Value	Register Address		
Level Alarms					
LoAL	2.0 feet		40101	Low Level Alarm	See notes on page 1-7. Range: 0.1 - 231.0 feet
HiAL	10.0 feet		40102	High Level Alarm	See notes on page 1-7. Range: 0.5 - 231.0 feet
Pump On / Off Levels					
1PoFF	3.0 feet		40103	1st Pump Off Level	Range: 0.2 - 231.0 feet
1Pon	6.0 feet		40104	1st Pump On Level	Range: 0.2 - 231.0 feet
2PoFF	3.5 feet		40105	2nd Pump Off Level	Range: 0.2 - 231.0 feet
2Pon	6.5 feet		40106	2nd Pump On Level	Range: 0.2 - 231.0 feet
3PoFF	4.0 feet		40107	3rd Pump Off Level	Range: 0.2 - 231.0 feet
3Pon	7.0 feet		40108	3rd Pump On Level	Range: 0.2 - 231.0 feet
4PoFF	4.5 feet		40109	4th Pump Off Level	Range: 0.2 - 231.0 feet
4Pon	7.5 feet		40110	4th Pump On Level	Range: 0.2 - 231.0 feet
5PoFF	5.0 feet		40111	5th Pump Off Level	Range: 0.2 - 231.0 feet
5Pon	8.0 feet		40112	5th Pump On Level	Range: 0.2 - 231.0 feet
6PoFF	5.5 feet		40113	6th Pump Off Level	Range: 0.2 - 231.0 feet
6Pon	8.5 feet		40114	6th Pump On Level	Range: 0.2 - 231.0 feet
Security Code Entry					
SCE1	-	-	42078	Security Code Entry - SCE3 : SCE2 : SCE1 Range: 1 - 255	
SCE2	-	-	42079	Enter Your Security Code Here to Unlock the Parameters.	
SCE3	-	-	42080	(Parameters must be UNLOCKED to have WRITE ACCESS, which allows their value to be changed.)	
Manually Relock by Entering “1” into Parameter SCE1, or SCE2, or SCE3.					
Fault Code					
FLC	-	-	42499	Fault Code	See Section F for Fault Code Table.
LFC	-	-	42500	Last Fault Code	See Section F for Fault Code Table.
Remote Control Level Input					
rc.02	0	-	42002	Remote Control Level Input	See notes on page 1-13. Range: 0 - 231.0 feet

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
Pump Setup				
P.091	1		40091	Master Control Mode 1 = Level Control Must be set on "1".
P.092	6		40092	Number of Pumps Present 1 = 1 Pump 2 = 2 Pumps 3 = 3 Pumps 4 = 4 Pumps 5 = 5 Pumps 6 = 6 Pumps
P.093	6		40093	Maximum Number of Pumps Allowed to Run at the Same Time 1 = 1 Pump 2 = 2 Pumps 3 = 3 Pumps 4 = 4 Pumps 5 = 5 Pumps 6 = 6 Pumps
P.094	6		40094	Maximum Number of Pumps Allowed to Run While On Generator 1 = 1 Pump 2 = 2 Pumps 3 = 3 Pumps 4 = 4 Pumps 5 = 5 Pumps 6 = 6 Pumps Note: Must Connect Transfer Switch Contact to Discrete Input assigned to Function 18.
Pump Alternation Setup				
P.122	1		40122	Alternation Sequence Mode 1 = Standard Alternation: Group 1: Pumps 1 - 6 See page 1-14. 2 = Pump 1 Always Lead: Group 1: Pump 1 See page 1-14. Group 2: Pumps 2 - 6 3 = Split Alternation - 2&4: Group 1: Pumps 1 - 2 See page 1-15. Group 2: Pumps 3 - 6 4 = Split Alternation - 3&3: Group 1: Pumps 1 - 3 See page 1-15. Group 2: Pumps 4 - 6 5 = Split Alternation - 4&2: Group 1: Pumps 1 - 4 See page 1-16. Group 2: Pumps 5 - 6 Also see: Alternation Sequence Modifier A (Parameter P.124) below.
P.124	0		40124	Alternation Sequence Modifier A 0 = Group 1 Pump(s) Are Allowed To Run With Pumps From Group 2 1 = Group 1 Pump(s) Not Allowed To Run With Pumps From Group 2 (Pump(s) in Group 1 are turned off before starting Pumps in Group 2) Note: This applies when Parameter P.122 = 2, 3, 4, or 5
P.129	0		40129	Forced Lead Pump Position - Group 1 0 = Normal Alternation X = Pump X as Lead Note: This applies to Group 1 when Parameter P.122 = 1, 3, 4, or 5
P.130	0		40130	Forced Lead Pump Position - Group 2 0 = Normal Alternation X = Pump X as Lead Note: This applies to Group 2 when Parameter P.122 = 2, 3, 4, or 5
P.131	0		40131	Time Based Alternation - Group 1 Range: 0 - 65535 minutes 0 = Disabled 60 = 1 hour 480 = 8 hours 1440 = 24 hours See notes on page 1-8.
P.132	0		40132	Time Based Alternation - Group 2 Range: 0 - 65535 minutes 0 = Disabled 60 = 1 hour 480 = 8 hours 1440 = 24 hours See notes on page 1-8.

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
Level Input Setup				
P.133	1		40133	Level Input Select 1 = Analog Level Meter - ALM1 - Single Transducer 2 = Analog Level Meter - ALM2 - Single Transducer 3 = Analog Level Meter - ALM1 & ALM2 - Dual Transducers - Manual Switching 4 = Analog Level Meter - ALM1 & ALM2 - Dual Transducers - Automatic Switching 5 = Level Probe Meter - LPM1 - Level Probe 6 = Float Switch Inputs 7 = Remote Control Level Input Selection 1 - Level Input is from ALM1. See Section M. Selection 2 - Level Input is from ALM2. See Section M. Selection 3 - Level Input is Manually switched from ALM1 to ALM2. See Section M. Selection 4 - Level Input is Automatically switched from ALM1 to ALM2. See Section M. Selection 5 - Level Probe with 10 Electrodes Connected to 10 Discrete Inputs. See Section L. Selection 6 - Float Switches as the primary (and only) Level Input. See pages 1-28 and 1-29. Selection 7 - Remote Control Level Input written through SCADA to Parameter rc.02. See page 1-13.
Station Control Setup				
P.137	1		40137	Numerical Display Decimal Point Position 0 = No Decimal Point 1 = XXXX.X 2 = XXX.XX 3 = XX.XXX 4 = X.XXXX
P.138	10 min.		40138	Numerical Display Blanking Delay Range: 10 - 254 minutes Note: To disable the Numerical Display Blanking feature: Set Parameter P.138 = 255.
P.149	1		40149	Pump Up or Down Mode 1 = Pump Down - Empty a Tank 2 = Pump Up - Fill a Tank Note: When parameter P.149 is changed new default level parameter values will be loaded.
P.150	5 sec.		40150	Lag Pump Delay Range: 1 - 100 seconds Note: This is the minimum time period between the calling of pumps to run. It is also used to delay the turning on of the replacement pump when an operating pump is suddenly disabled, or when a time based alternation of the pumps is performed.
P.151	1		40151	Low Level Alarm Disable 0 = Disable Alarm 1 = Enable Alarm See notes on page 1-10.
P.153	10 sec.		40153	Pump Re-enable Delay - Pump Cutoff Low-Low Level Range: 1 - 600 sec. See notes on page 1-10.
P.154	10 sec.		40154	Pump Re-enable Delay - Pump Cutoff High-High Level Range: 1 - 600 sec. See notes on page 1-10.

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
Level Probe Meter LPM1 - Setup				
P.519	1		40519	Level Probe Meter LPM1 - Mode 0 = Level Probe Meter Disabled 1 = Level Probe Meter Enabled
P.520	12 in.		40520	Level Probe Meter Electrode Spacing 5, 6, 8, 10 or 12 inches
See Section L.				
Analog Level Meter ALM1 - Setup				
P.522	23.10 feet		40522	Analog Level Meter ALM1 - Level Input Span Range: 1.00 - 231.00 feet Notes: 1. Parameter P.522 allows the entry of the Transducer's Calibrated Span in feet. 2. A 20mA signal does not need to be applied to the Process Input while Setting the Span. 3. The Decimal Point Position is set by Parameter P.137.
P.523	-		40523	Analog Level Meter ALM1 - Level Input Zero Notes: 1. While viewing Parameter P.523, the UP and Down pushbuttons may be used to make minor adjustments, to the Zero Calibration of Analog Level Meter ALM1. 2. Before attempting to adjust the Level Input Zero, first pull the Submersible Pressure Transducer out of the liquid, or apply a 4.0mA signal to the Level Input, and then Set the Zero. 3. The actual value of Parameter P.523 is not shown here, rather what is shown is the level from Analog Level Meter ALM1 (Parameter Ld.12). 4. The Decimal Point Position is set by Parameter P.137.
P.524	240		40524	Analog Level Meter ALM1 - Signal Conditioning Control Range: 1 - 254 100 = Slow 240 = Normal 250 = Fast Note: This parameter controls the signal conditioning of Analog Level Meter ALM1
See Section M.				
Analog Level Meter ALM2 - Setup				
P.527	23.10 feet		40527	Analog Level Meter ALM2 - Level Input Span Range: 1.00 - 231.00 feet Notes: 1. Parameter P.527 allows the entry of the Transducer's Calibrated Span in feet. 2. A 20mA signal does not need to be applied to the Process Input while Setting the Span. 3. The Decimal Point Position is set by Parameter P.137.
P.528	-		40528	Analog Level Meter ALM2 - Level Input Zero Notes: 1. While viewing Parameter P.528, the UP and Down pushbuttons may be used to make minor adjustments, to the Zero Calibration of Analog Level Meter ALM2. 2. Before attempting to adjust the Level Input Zero, first pull the Submersible Pressure Transducer out of the liquid, or apply a 4.0mA signal to the Level Input, and then Set the Zero. 3. The actual value of Parameter P.528 is not shown here, rather what is shown is the level from Analog Level Meter ALM2 (Parameter Ld.22). 4. The Decimal Point Position is set by Parameter P.137.
P.529	240		40529	Analog Level Meter ALM2 - Signal Conditioning Control Range: 1 - 254 100 = Slow 240 = Normal 250 = Fast Note: This parameter controls the signal conditioning of Analog Level Meter ALM2
See Section M.				

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
VFD Speed Reference Setup				
P.161	50%		40161	VFD - Minimum Speed (Percent of Full Speed) Range: 0% - 95%
P.162	3.5 feet		40162	VFD - Level at Minimum Speed Range: 0.1 - 231.0 feet
P.163	6.0 feet		40163	VFD - Level at 100% Speed Range: 0.1 - 231.0 feet
P.164	0 sec.		40164	Pump Start Speed Boost Time Range: 0 - 60 seconds Note: Set for 0 seconds to Disable Feature.
P.165	100%		40165	VFD - Speed of Pump Under Remote Control Range: 0% - 100%
See notes on page 1-17.				
Flush Cycle Setup				
P.171	0		40171	Flush Cycle Mode 0 = Flush Cycle Disabled 1 = Flush Cycle Enabled
P.172	1440 min		40172	Delay Between Flush Cycles Range: 1 - 65,535 minutes
P.173	9.5 feet		40173	Flush Cycle Start Level Range: 0.2 - 231.0 feet
P.174	2.5 feet		40174	Flush Cycle Stop Level Range: 0.2 - 231.0 feet
See notes on page 1-18.				

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
Flow Calculator Setup				
P.175	0		40175	Flow Calculator Mode 0 = Flow Calculator Disabled - All Flow Data is Reset to Zero 1 = Flow Calculator Enabled - Internal Time Clock 2 = Flow Calculator Enabled - External Time Clock
P.176	79.0 Square Feet		40176	Surface Area of Wet Well Range: 2.0 - 2,000.0 Square Feet
P.177	20 Minutes		40177	Delay Before Forcing On Additional Pump(s) Range: 4 - 60 Minutes
P.178	20 Minutes		40178	Latest Inflow Rate Reset Delay Range: 1 - 100 Minutes
See notes on page 1-19.				

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
Pulse Flow Meter PFM1 - Setup				
P.531	0		40531	Pulse Flow Meter PFM1 - Flow Meter Mode 0 = Flow Meter Disabled 1 = Flow Meter Enabled
P.532	1		40532	Pulse Flow Meter PFM1 - Multiply By Conversion Factor Range: 1 - 1,000 Note: Input Pulse Number will be multiplied by this number.
P.533	1		40533	Pulse Flow Meter PFM1 - Divide By Conversion Factor Range: 1 - 1,000 Note: Input Pulse Number will be divided by this number.
P.534	0.40 minutes		40534	Pulse Flow Meter PFM1 - Input Pulse Sample Window Range: 0.10 - 1.00 min.
The Pulse Input used for PFM1 is fixed as the Pulse Capture Input DPC1.				
See Section J.				
Pulse Flow Meter PFM2 - Setup				
P.536	0		40536	Pulse Flow Meter PFM2 - Flow Meter Mode 0 = Flow Meter Disabled 1 = Flow Meter Enabled
P.537	1		40537	Pulse Flow Meter PFM2 - Multiply By Conversion Factor Range: 1 - 1,000 Note: Input Pulse Number will be multiplied by this number.
P.538	1		40538	Pulse Flow Meter PFM2 - Divide By Conversion Factor Range: 1 - 1,000 Note: Input Pulse Number will be divided by this number.
P.539	0.40 minutes		40539	Pulse Flow Meter PFM2 - Input Pulse Sample Window Range: 0.10 - 1.00 min.
The Pulse Input used for PFM2 is fixed as the Pulse Capture Input DPC2.				
See Section J.				
Pulse Flow Meter PFM3 - Setup				
P.541	0		40541	Pulse Flow Meter PFM3 - Flow Meter Mode 0 = Flow Meter Disabled 1 = Flow Meter Enabled
P.542	1		40542	Pulse Flow Meter PFM3 - Multiply By Conversion Factor Range: 1 - 1,000 Note: Input Pulse Number will be multiplied by this number.
P.543	1		40543	Pulse Flow Meter PFM3 - Divide By Conversion Factor Range: 1 - 1,000 Note: Input Pulse Number will be divided by this number.
P.544	0.40 minutes		40544	Pulse Flow Meter PFM3 - Input Pulse Sample Window Range: 0.10 - 1.00 min.
The Pulse Input used for PFM3 is fixed as the Pulse Capture Input DPC3.				
See Section J.				

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
Analog Flow Meter AFM1 - Setup				
P.551	1		40551	Analog Flow Meter AFM1 - Mode 0 = Flow Meter Disabled 1 = Flow Meter Enabled
P.552	1000		40552	Analog Flow Meter AFM1 - Multiply By Conversion Factor Range: 1 - 65,535 Note: The Analog Flow Rate Input is first conditioned to have a range of 0 - 3,276 and is then multiplied by the value set on this parameter.
P.553	3276		40553	Analog Flow Meter AFM1 - Divide By Conversion Factor Range: 1 - 65,535 Note: After the Analog Flow Rate Input is multiplied by Parameter P.552, it is then divided by the value set on this parameter.
P.554	240		40554	Analog Flow Meter AFM1 - Signal Conditioning Control Range: 1 - 254 100 = Slow 240 = Normal 250 = Fast
See Section K.				
Analog Flow Meter AFM2 - Setup				
P.556	0		40556	Analog Flow Meter AFM2 - Mode 0 = Flow Meter Disabled 1 = Flow Meter Enabled
P.557	1000		40557	Analog Flow Meter AFM2 - Multiply By Conversion Factor Range: 1 - 65,535 Note: The Analog Flow Rate Input is first conditioned to have a range of 0 - 3,276 and is then multiplied by the value set on this parameter.
P.558	3276		40558	Analog Flow Meter AFM2 - Divide By Conversion Factor Range: 1 - 65,535 Note: After the Analog Flow Rate Input is multiplied by Parameter P.557, it is then divided by the value set on this parameter.
P.559	240		40559	Analog Flow Meter AFM2 - Signal Conditioning Control Range: 1 - 254 100 = Slow 240 = Normal 250 = Fast
See Section K.				
Analog Flow Meter AFM3 - Setup				
P.561	0		40561	Analog Flow Meter AFM3 - Mode 0 = Flow Meter Disabled 1 = Flow Meter Enabled
P.562	1000		40562	Analog Flow Meter AFM3 - Multiply By Conversion Factor Range: 1 - 65,535 Note: The Analog Flow Rate Input is first conditioned to have a range of 0 - 3,276 and is then multiplied by the value set on this parameter.
P.563	3276		40563	Analog Flow Meter AFM3 - Divide By Conversion Factor Range: 1 - 65,535 Note: After the Analog Flow Rate Input is multiplied by Parameter P.562, it is then divided by the value set on this parameter.
P.564	240		40564	Analog Flow Meter AFM3 - Signal Conditioning Control Range: 1 - 254 100 = Slow 240 = Normal 250 = Fast
See Section K.				

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
Analog Pressure Meter APM1 - Setup				
P.571	1		40571	Analog Pressure Meter APM1 - Pressure Meter Mode 0 = Pressure Meter Disabled 1 = Pressure Meter Enabled
P.572	100.0 psi		40572	Analog Pressure Meter APM1 - Pressure Input Span Range: 1.0 - 6,000.0 psi Note: This must be set for the Span (in psi) that the Pressure Transducer is calibrated for. This sets the displayed value with a 20mA input from the Pressure Transducer
P.573	240		40573	Analog Pressure Meter APM1 - Signal Conditioning Control Range: 1 - 254 100 = Slow 240 = Normal 250 = Fast Note: This parameter controls the signal conditioning of Analog Pressure Meter APM1
See Section N.				
Analog Pressure Meter APM2 - Setup				
P.575	1		40575	Analog Pressure Meter APM2 - Pressure Meter Mode 0 = Pressure Meter Disabled 1 = Pressure Meter Enabled
P.576	100.0 psi		40576	Analog Pressure Meter APM2 - Pressure Input Span Range: 1.0 - 6,000.0 psi Note: This must be set for the Span (in psi) that the Pressure Transducer is calibrated for. This sets the displayed value with a 20mA input from the Pressure Transducer
P.577	240		40577	Analog Pressure Meter APM2 - Signal Conditioning Control Range: 1 - 254 100 = Slow 240 = Normal 250 = Fast Note: This parameter controls the signal conditioning of Analog Pressure Meter APM2
See Section N.				
Analog Current Meters ACMA, ACMB & APMC - Setup				
P.583	0		40583	Analog Current Meters ACMA, ACMB & APMC - Current Meters Mode 0 = Current Meters Disabled 1 = Current Meters Enabled
P.584	100 Amps		40584	Analog Current Meters ACMA, ACMB & APMC - Current Transducer Span Range: 1 - 65,535 Note: This must be set for the Span or Range (in Amps) that the Current Transducer is calibrated for. This sets the displayed value with a 20mA input from the Current Transducer.
P.585	5		40585	Analog Current Meters ACMA, ACMB & APMC - Signal Conditioning Control 1 = Slow 5 = Normal 10 = Fast Range: 1 - 10 Note: This parameter controls the analog input signal conditioning for the three Current Meters.
See Section O.				

SC5000-LED-HMI MENU

User / Operator Info.			SCADA		Description of Parameters and SCADA Notes	
Parameter	Default Value	Current Value	Register Address			
Discrete Input Setup						
Discrete Input Function				Discrete Input	Function of Input:	Connect To:
F.101	1		40601	Discrete Input - D1	0 = Collect Discrete Data for SCADA	Telemetry Contact
F.102	2		40602	Discrete Input - D2	1 = Level Probe Electrode 1	Level Probe
F.103	3		40603	Discrete Input - D3	2 = Level Probe Electrode 2	Level Probe
F.104	4		40604	Discrete Input - D4	3 = Level Probe Electrode 3	Level Probe
F.105	5		40605	Discrete Input - D5	4 = Level Probe Electrode 4	Level Probe
F.106	6		40606	Discrete Input - D6	5 = Level Probe Electrode 5	Level Probe
F.107	7		40607	Discrete Input - D7	6 = Level Probe Electrode 6	Level Probe
F.108	8		40608	Discrete Input - D8	7 = Level Probe Electrode 7	Level Probe
F.109	9		40609	Discrete Input - D9	8 = Level Probe Electrode 8	Level Probe
F.110	10		40610	Discrete Input - D10	9 = Level Probe Electrode 9	Level Probe
F.111	11		40611	Discrete Input - D11	10 = Level Probe Electrode 10	Level Probe
F.112	12		40612	Discrete Input - D12	11 = Pump 1 Disable	HOA and Fault Logic
F.113	13		40613	Discrete Input - D13	12 = Pump 2 Disable	HOA and Fault Logic
F.114	14		40614	Discrete Input - D14	13 = Pump 3 Disable	HOA and Fault Logic
F.115	15		40615	Discrete Input - D15	14 = Pump 4 Disable	HOA and Fault Logic
F.116	16		40616	Discrete Input - D16	15 = Pump 5 Disable	HOA and Fault Logic
F.117	17		40617	Discrete Input - D17	16 = Pump 6 Disable	HOA and Fault Logic
F.118	18		40618	Discrete Input - D18	17 = All Pump Disable	Phase Monitor
F.119	19		40619	Discrete Input - D19	18 = On Generator	Automatic Transfer Switch
F.120	20		40620	Discrete Input - D20	19 = Switch Between ALM1 & ALM2 for Level Input	Select Switch
F.121	61		40621	Discrete Input - D21	20 = Start Flush Cycle	External Time Clock
F.122	62		40622	Discrete Input - D22	21 = External Alternation - Group 1	External Time Clock
F.123	63		40623	Discrete Input - D23	22 = External Alternation - Group 2	External Time Clock
F.124	64		40624	Discrete Input - D24	31 = Sequence Input 1	Lead Select Switch - 1 as Lead
F.125	65		40625	Discrete Input - D25	32 = Sequence Input 2	Lead Select Switch - 2 as Lead
F.126	66		40626	Discrete Input - D26	33 = Sequence Input 3	Lead Select Switch - 3 as Lead
F.127	67		40627	Discrete Input - D27	34 = Sequence Input 4	Lead Select Switch - 4 as Lead
F.128	68		40628	Discrete Input - D28	35 = Sequence Input 5	Lead Select Switch - 5 as Lead
F.129	69		40629	Discrete Input - D29	36 = Sequence Input 6	Lead Select Switch - 6 as Lead
F.130	70		40630	Discrete Input - D30	41 = Call Pump 1 Last	Logic Contact
					42 = Call Pump 2 Last	Logic Contact
					43 = Call Pump 3 Last	Logic Contact
					44 = Call Pump 4 Last	Logic Contact
					45 = Call Pump 5 Last	Logic Contact
					46 = Call Pump 6 Last	Logic Contact
					47 = Flow Calculator - Start New Day	External Time Clock
					Pump Cutoff & Alarm	
					59 = Pump Cutoff - Low-Low Level (Pump Down Mode)....	Float Switch
					60 = Pump Cutoff - High-High Level (Pump Up Mode)	Float Switch
					Alarm Only	
					61 = Low Level Alarm Only	Float Switch
					62 = High Level Alarm Only	Float Switch
					Pump Control & Alarm	
					63 = Float Control - Off Level	Float Switch
					64 = Float Control - 1ST On Level	Float Switch
					65 = Float Control - 2ND On Level	Float Switch
					66 = Float Control - 3RD On Level	Float Switch
					67 = Float Control - 4TH On Level	Float Switch
					68 = Float Control - 5TH On Level	Float Switch
					69 = Float Control - 6TH On Level	Float Switch
					70 = Float Control - High Level (Pump Down Mode).....	Float Switch
					Notes:	
					1. Any Discrete Input may be set for Function "0" when the input is used only to collect data for SCADA and no other Function is desired.	
					2. The status of the Discrete Inputs may be read as a "0" or "1" from Modbus Coils 1 - 30 (Register 40001 Bits 0 - 15 and Register 40002 Bits 0 - 13). See page A-10.	
					3. For a description of the Functions see pages A-2 - A-6.	
					4. Pump 1(2,3,4,5,6) Disable logic may be inverted using Parameter F.145. See page A-8.	

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Address	
Discrete Input Setup				
F.141	100		40641	Discrete Input Sensitivity - D1 - D10 100 = Standard Sensitivity 150 = Extra Sensitive Range: 90 - 210
F.142	100		40642	Discrete Input Sensitivity - D11 - D20 100 = Standard Sensitivity 150 = Extra Sensitive Range: 90 - 210
F.143	100		40643	Discrete Input Sensitivity - D21 - D30 100 = Standard Sensitivity 150 = Extra Sensitive Range: 90 - 210
F.145	0		40645	Discrete Input Pump Disable Mode 0 = Disable Pump with Closed Discrete Input 1 = Disable Pump with Open Discrete Input Note: This parameter only applies to Discrete Inputs that are assigned to be Pump Disable Inputs (Function 11 - 16).
See Section A.				
Relay Output Setup				
Relay Output Function				Relay Output
F.201	1		40651	Relay Output - ROX1
F.202	2		40652	Relay Output - ROX2
F.203	3		40653	Relay Output - ROX3
F.204	4		40654	Relay Output - ROX4
F.205	5		40655	Relay Output - ROX5
F.206	6		40656	Relay Output - ROX6
F.207	7		40657	Relay Output - ROX7
F.208	8		40658	Relay Output - ROX8
F.209	0		40659	Relay Output - ROX9
F.210	0		40660	Relay Output - ROX10
F.211	0		40661	Relay Output - ROX11
F.212	0		40662	Relay Output - ROX12
See Section B.				

Function of Relay Output:

0 = Remote Control
1 = Pump 1 Control
2 = Pump 2 Control
3 = Pump 3 Control
4 = Pump 4 Control
5 = Pump 5 Control
6 = Pump 6 Control
7 = Low Level Alarm
8 = High Level Alarm

Notes:

- Output Relays set for Function 0 may be Remotely Controlled by writing to Modbus Coils 65 - 76 (Register 40005 Bits 0 - 11).
- Output Relay's status may be viewed from Parameters ro.01 - ro.12.

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
Analog Input Setup				
Analog Input Function				Analog Input
F.299	1		40669	Analog Input - AIX1
F.300	2		40670	Analog Input - AIX2
F.301	0		40671	Analog Input - A1
F.302	0		40672	Analog Input - A2
F.303	0		40673	Analog Input - A3
F.304	0		40674	Analog Input - A4
F.305	0		40675	Analog Input - A5
F.306	0		40676	Analog Input - A6
F.307	0		40677	Analog Input - A7
F.308	0		40678	Analog Input - A8
Function of Input: 0 = Collect Analog Data for SCADA 1 = Analog Level Meter ALM1 2 = Analog Level Meter ALM2 3 = Analog Flow Meter AFM1 4 = Analog Flow Meter AFM2 5 = Analog Flow Meter AFM3 6 = Analog Pressure Meter APM1 7 = Analog Pressure Meter APM2 8 = Analog Current Meter (Phase A) ACMA 9 = Analog Current Meter (Phase B) ACMB 10 = Analog Current Meter (Phase C) ACMC Notes: 1. Any or all of the Analog Inputs may be assigned Function "0", when the intended use is to only collect analog data for SCADA and no other Function is desired. 2. In addition to collecting data for SCAD, Functions 1 - 10 also send the analog data to one of the Analog Meters on the Controller.				
See Section C.				

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes	
Parameter	Default Value	Current Value	Register Address		
Analog Output Setup					
Analog Output Function				Analog Output	Function of Analog Output: 0 = No Function 1 = Pump 1 Speed Reference 2 = Pump 2 Speed Reference 3 = Pump 3 Speed Reference 4 = Pump 4 Speed Reference 5 = Pump 5 Speed Reference 6 = Pump 6 Speed Reference 7 = Pump X Speed Reference 8 = Local Analog Level Display Notes: 1. The “No Function” (Function 0) turns off the Analog Output. 2. The “Pump 1 - 6 Speed Reference” (Functions 1 - 6) are active only when the respective pump is called to run. 3. The “Pump X Speed Reference” (Function 7) is always active. 4. The “Local Analog Level Display” (Function 8) is a copy of the “Level Input Data” (Parameter Ld.01, see page 1-9) that may be sent to a Local Analog Level Display or Telemetry Device. The “Local Analog Level Display - Span” (Parameter F.407) must be set so that it matches the Span set on the external Local Analog Level Display or Telemetry Device. See below.
F.400	8		40690	Analog Output - AOX1	
F.401	1		40691	Analog Output - AO1	
F.402	2		40692	Analog Output - AO2	
F.403	3		40693	Analog Output - AO3	
F.404	4		40694	Analog Output - AO4	
F.405	5		40695	Analog Output - AO5	
F.406	6		40696	Analog Output - AO6	
F.407	23.1 feet		40697	Local Analog Level Display - Span Note: One of the Controller’s Analog Outputs may be assigned to perform the Function of “Local Analog Level Display” (Function 8) which sends the Level Input Data from Parameter Ld.01 to an external 4-20mA device (Local Analog Level Display or Telemetry Device). Parameter F.407 is used to scale the 4-20mA output signal so that the Local Analog Level Display will correctly display the level in feet and 1/10 of feet. The Span of the Analog Output assigned to perform Function 8 must match the Span of the external Local Analog Level Display or Telemetry Device. To make them match set Parameter F.407 so that it matches the Span set on the external Local Analog Level Display or Telemetry Device.	Range: 0.2 - 231.0 feet
See Section D.					

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
Remote Control Setup				
E.011	60 sec.		40181	Remote Control Command Canceling Delay - Ethernet Port - ENET1 Delay Range: 1 - 65535 seconds Set to "0" to disable the Remote Control Command Canceling feature.
E.012	60 sec.		40182	Remote Control Command Canceling Delay - Ethernet Port - ENET2 Delay Range: 1 - 65535 seconds Set to "0" to disable the Remote Control Command Canceling feature.
E.013	60 sec.		40183	Remote Control Command Canceling Delay - RS232 Port - COM1 Delay Range: 1 - 65535 seconds Set to "0" to disable the Remote Control Command Canceling feature.
E.015	0.0 feet		40185	Default Remote Level Range: 0.0 - 231.0 feet
See Section E.				

User / Operator Info.		Scada	Parameter Definitions
Parameter	Default Value	Register Address	
Ethernet Port ENET1 Setup			
E.101	2	40200	Protocol 2 = Modbus TCP
E.114 - E.111	192 . 168 . 80 . 12 (E.114 . E.113 . E.112 . E.111)	40204-40201	IP Address Range: 0 -255
E.144 - E.141	255 . 255 . 255 . 0 (E.144 . E.143 . E.142 . E.141)	40226-40223	Subnet Mask Range: 0 -255
E.154 - E.151	192 . 168 . 80 . 1 (E.154 . E.153 . E.152 . E.151)	40230-40227	Default Gateway Range: 0 -255
E.161	502	40232	Port Number Range: 1 -65,535
E.176 - E.171	0 : 80 : 194 : 219 : XXX : XXX (E.176 : E.175 : E.174 : E.173 : E.172 : E.171)	40222-40217	MAC Address
See Section E.			

Note:

The Ethernet Port reads the setup values upon power up; any changes to the above settings require that the power to be cycled before the new values are used.

SC5000-LED-HMI MENU

User / Operator Info.		Scada	Parameter Definitions
Parameter	Default Value	Register Address	
Ethernet Port ENET2 Setup			
E.201	2	40250	Protocol 2 = Modbus TCP
E.214 - E.211	192 . 168 . 80 . 12 (E.214 . E.213 . E.212 . E.211)	40254-40251	IP Address Range: 0 - 255
E.244 - E.241	255 . 255 . 255 . 0 (E.244 . E.243 . E.242 . E.241)	40276-40273	Subnet Mask Range: 0 - 255
E.254 - E.251	192 . 168 . 80 . 1 (E.254 . E.253 . E.252 . E.251)	40280-40277	Default Gateway Range: 0 - 255
E.261	502	40282	Port Number Range: 1 - 65,535
E.276 - E.271	0 : 80 : 194 : 219 : XXX : XXX (E.276 : E.275 : E.274 : E.273 : E.272 : E.271)	40272-40267	MAC Address
See Section E.			

Note:

The Ethernet Port reads the setup values upon power up; any changes to the above settings require that the power to be cycled before the new values are used.

RS232 PORT - COM1 - For Connection to the SC5000-LED-HMI

Description

The RS232 Port COM1 has the following features:

- Protocol Supported: Modbus RTU
- Connector: RJ45 for use with a Shielded CAT5 Patch Cable.
- Setup Parameters: SC5000 Controller Factory set to match the SC5000-LED-HMI.

Settings:

Baud Rate: 9600 bps
Parity Mode: No Parity
Stop Bits: 1

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes
Parameter	Default Value	Current Value	Register Address	
RS232 Port COM1 Slave Address Setup				
E.347	1		40347	Slave Address - COM1 Range: 1 - 247 Note: COM1 will always respond to what is set on Parameter E.347. COM1 will also always respond to Modbus request using the Slave Address "1". (The SC5000-LED-HMI uses Slave Address "1" to communicate with the SC5000.)

SC5000-LED-HMI MENU

User / Operator Info.			SCADA	Description of Parameters and SCADA Notes	
Parameter	Default Value	Current Value	Register Address		
Parameter Security Setup					
cSCE1	-	-	-	Security Code Entry - cSCE3 : cSCE2 : cSCE1 Range: 1 - 255	
cSCE2	-	-	-	Enter Your Security Code Here to Unlock the following Parameter Security Setup Parameters:	
cSCE3	-	-	-	S.001, S.002, S.003, S004, SCS1, SCS2 & SCS3	
S.001	0		-	ENET1	Parameter Write Access Mode 0 = Always Unlocked 1 = Requires Security Code Entry 2 = Always Locked (This mode is only available for ENET1.)
S.002	0		-	ENET2	
S.003	0		-	COM1	
S.004	60 min.		-	Parameter Write Access Relock Delay Range: 10 - 480 minutes	
SCS1	11	-	-	Security Code Setup - SCS3 : SCS2 : SCS1 Range: 2 - 255	
SCS2	12	-	-	Establishes the Numerical Values that will be Accepted as the Security Code.	
SCS3	13	-	-		
See Section G.					
Backup or Restore Setup Parameters using USB FLASH DRIVE					
uSEC1	-	-	-	Security Code Entry - uSCS3 : uSCS2 : uSCS1 Range: 1 - 255	
uSEC2	-	-	-	Enter Your Security Code Here to Unlock the Backup and Restore of Set-up Parameters using a USB FLASH DRIVE.	
uSEC3	-	-	-		
PbAuP	-	-	-	Parameter Backup Step	
Prtor	-	-	-	Parameter Restore Step	
See Section H for Backup and Restore Procedures.					
Restore Setup Parameters to Factory Defaults					
rSEC1	-	-	-	Security Code Entry - rSCS3 : rSCS2 : rSCS1 Range: 1 - 255	
rSEC2	-	-	-	Enter Your Security Code Here to Unlock the Restore of Setup Parameters to Factory Defaults.	
rSEC3	-	-	-		
Fdtor	-	-	-	Parameter Restore Percent of Completion	
See Section I for Restore Procedure.					

SC5000-LED-HMI MENU

User / Operator Info.	SCADA	Description of Parameters and SCADA Notes	
Parameter	Coil Address		
Discrete Input Discrete Status			
n.01	Coil 1	Discrete Input - D1	Each Discrete Input sends out its own 60 Hz square wave Test Signals to determine the status of the Discrete Input. The Controller compares each of the Test Signal analog values with the Discrete Input Sensitivity set on Parameters F.141 - F.143. The Discrete Input is considered to be: 0 = Input Open - When the Test Signal is above the Sensitivity setting. 1 = Input Closed - When the Test Signal is below the Sensitivity setting.
n.02	Coil 2	Discrete Input - D2	
n.03	Coil 3	Discrete Input - D3	
n.04	Coil 4	Discrete Input - D4	
n.05	Coil 5	Discrete Input - D5	
n.06	Coil 6	Discrete Input - D6	
n.07	Coil 7	Discrete Input - D7	
n.08	Coil 8	Discrete Input - D8	
n.09	Coil 9	Discrete Input - D9	
n.10	Coil 10	Discrete Input - D10	
n.11	Coil 11	Discrete Input - D11	
n.12	Coil 12	Discrete Input - D12	
n.13	Coil 13	Discrete Input - D13	
n.14	Coil 14	Discrete Input - D14	
n.15	Coil 15	Discrete Input - D15	
n.16	Coil 16	Discrete Input - D16	
n.17	Coil 17	Discrete Input - D17	
n.18	Coil 18	Discrete Input - D18	
n.19	Coil 19	Discrete Input - D19	
n.20	Coil 20	Discrete Input - D20	
n.21	Coil 21	Discrete Input - D21	
n.22	Coil 22	Discrete Input - D22	
n.23	Coil 23	Discrete Input - D23	
n.24	Coil 24	Discrete Input - D24	
n.25	Coil 25	Discrete Input - D25	
n.26	Coil 26	Discrete Input - D26	
n.27	Coil 27	Discrete Input - D27	
n.28	Coil 28	Discrete Input - D28	
n.29	Coil 29	Discrete Input - D29	
n.30	Coil 30	Discrete Input - D30	
See Section A.			

SC5000-LED-HMI MENU

User / Operator Info.	SCADA	Description of Parameters and SCADA Notes	
Parameter	Coil Address		
Relay Output Status			
ro.01	Coil 49	Relay Output - ROX1	Relay Status: 0 = Relay Not Energized 1 = Relay Is Energized
ro.02	Coil 50	Relay Output - ROX2	
ro.03	Coil 51	Relay Output - ROX3	
ro.04	Coil 52	Relay Output - ROX4	
ro.05	Coil 53	Relay Output - ROX5	
ro.06	Coil 54	Relay Output - ROX6	
ro.07	Coil 55	Relay Output - ROX7	
ro.08	Coil 56	Relay Output - ROX8	
ro.09	Coil 57	Relay Output - ROX9	
ro.10	Coil 58	Relay Output - ROX10	
ro.11	Coil 59	Relay Output - ROX11	
ro.12	Coil 60	Relay Output - ROX12	
See Section B.			

SC5000-LED-HMI MENU

User / Operator Info.	SCADA	Description of Parameters and SCADA Notes													
Parameter	Register Address														
Discrete Input Analog Test Signal Status															
A.101	41801	Discrete Input - D1	Notes: 1. Each of the Discrete Inputs send out a low voltage (+/- 6 V), low current (0.6 mA), AC (60Hz) square wave as a Test Signal to determine the status of the input, either Open or Closed. The Status of the Test Signals for each of the Discrete Input (as an analog value) may be viewed from Parameters A.101 - A.130. 2. The Controller compares each of the Test Signal analog values with the Discrete Input Sensitivity set on Parameters F.141 - F.143. Each Discrete I/O Board, having 10 Discrete Inputs each, has its own Discrete Input Sensitivity setting (Parameters F.141 - F.143). See page X-13. The Discrete Input is considered to be: Open - When the Test Signal is above the Sensitivity setting. Closed - When the Test Signal is below the Sensitivity setting. 3. Each Discrete I/O Board generates its own 60Hz square wave Clock Signal that is used to generate the Discrete Input Test Signals for its 10 inputs. The analog values of these Clocks are available to be viewed from Parameters A.141 - A.143. See below. 4. The status of all the Discrete Inputs as a discrete value may also be read from Modbus Coils 1 - 30 (Register 40001 Bits 0 - 16, & Register 40002 Bits 0 - 13). See page A-10.												
A.102	41802	Discrete Input - D2													
A.103	41803	Discrete Input - D3													
A.104	41804	Discrete Input - D4													
A.105	41805	Discrete Input - D5													
A.106	41806	Discrete Input - D6													
A.107	41807	Discrete Input - D7													
A.108	41808	Discrete Input - D8													
A.109	41809	Discrete Input - D9													
A.110	41810	Discrete Input - D10													
A.111	41811	Discrete Input - D11													
A.112	41812	Discrete Input - D12													
A.113	41813	Discrete Input - D13													
A.114	41814	Discrete Input - D14													
A.115	41815	Discrete Input - D15													
A.116	41816	Discrete Input - D16													
A.117	41817	Discrete Input - D17													
A.118	41818	Discrete Input - D18													
A.119	41819	Discrete Input - D19													
A.120	41820	Discrete Input - D20													
A.121	41821	Discrete Input - D21													
A.122	41822	Discrete Input - D22													
A.123	41823	Discrete Input - D23													
A.124	41824	Discrete Input - D24													
A.125	41825	Discrete Input - D25													
A.126	41826	Discrete Input - D26													
A.127	41827	Discrete Input - D27													
A.128	41828	Discrete Input - D28													
A.129	41829	Discrete Input - D29													
A.130	41830	Discrete Input - D30													
		<table><tr><th>Parameter</th><th>Register Address</th><th>Data Description</th></tr><tr><td>A.141</td><td>41841</td><td>Clock Signal for Discrete Inputs: D1 - D10</td></tr><tr><td>A.142</td><td>41842</td><td>Clock Signal for Discrete Inputs: D11 - D20</td></tr><tr><td>A.143</td><td>41843</td><td>Clock Signal for Discrete Inputs: D21 - D30</td></tr></table>	Parameter	Register Address	Data Description	A.141	41841	Clock Signal for Discrete Inputs: D1 - D10	A.142	41842	Clock Signal for Discrete Inputs: D11 - D20	A.143	41843	Clock Signal for Discrete Inputs: D21 - D30	
Parameter	Register Address	Data Description													
A.141	41841	Clock Signal for Discrete Inputs: D1 - D10													
A.142	41842	Clock Signal for Discrete Inputs: D11 - D20													
A.143	41843	Clock Signal for Discrete Inputs: D21 - D30													
See Section A.															

SC5000-LED-HMI MENU

User / Operator Info.	SCADA	Description of Parameters and SCADA Notes	
Parameter	Register Address		
Analog Input Status			
A.299	41849	Analog Input - AIX1	Note: Parameters A.299 - A.308 are 12-bit Analog to Digital Converter input values that are conditioned and factory calibrated to the following values: 819 @ 4.0 mA 4095 @ 20 mA
A.300	41850	Analog Input - AIX2	
A.301	41851	Analog Input - A1	
A.302	41852	Analog Input - A2	
A.303	41853	Analog Input - A3	
A.304	41854	Analog Input - A4	
A.305	41855	Analog Input - A5	
A.306	41856	Analog Input - A6	
A.307	41857	Analog Input - A7	
A.308	41858	Analog Input - A8	
See Section C.			
Analog Output Status			
A.400	41870	Analog Output - AOX1	Note: Parameters A.400 - A.406 are 12-bit Digital to Analog Converter output control values that are factory calibrated to the following: 819 @ 4.0 mA 4095 @ 20 mA
A.401	41871	Analog Output - AO1	
A.402	41872	Analog Output - AO2	
A.403	41873	Analog Output - AO3	
A.404	41874	Analog Output - AO4	
A.405	41875	Analog Output - AO5	
A.406	41876	Analog Output - AO6	
See Section D.			

SC5000-LED-HMI MENU

User / Operator Info.	SCADA	Data Description
Parameter	Register Address	
Controller Data		
Controller Data		
d.101	42501	Main Control Board - Operating Program Revision Number
d.102	42502	Analog Output Board - Operating Program Revision Number
d.103	42503	Analog Output Board - Polling Counter
d.104	42504	Analog Input Board - Operating Program Revision Number
d.105	42505	Analog Input Board - Polling Counter
d.108	42508	Discrete I/O Board 1 - Operating Program Revision Number
d.109	42509	Discrete I/O Board 1 - Polling Counter
d.110	42510	Discrete I/O Board 2 - Operating Program Revision Number
d.111	42511	Discrete I/O Board 2 - Polling Counter
d.112	42512	Discrete I/O Board 3 - Operating Program Revision Number
d.113	42513	Discrete I/O Board 3 - Polling Counter
d.116	42516	Ethernet Port Board - ENET1 - Operating Program Revision Number
d.117	42517	Ethernet Port Board - ENET1 - Polling Counter
d.118	42518	Ethernet Port Board - ENET2 - Operating Program Revision Number
d.119	42519	Ethernet Port Board - ENET2 - Polling Counter
d.121	42521	RS232 Port - COM1 - Polling Counter
d.122	42522	USB Host Board - Operating Program Revision Number
d.123	42523	USB Host Board - Polling Counter
d.124	42524	Main Control Board - Startup Status (% Completion)
d.125	42525	Voltage of +24 Volt Power Supply (Volts)
d.126	42526	SC5000-LED-HMI - Operating Program Revision Number

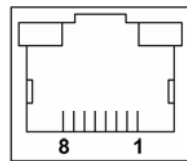
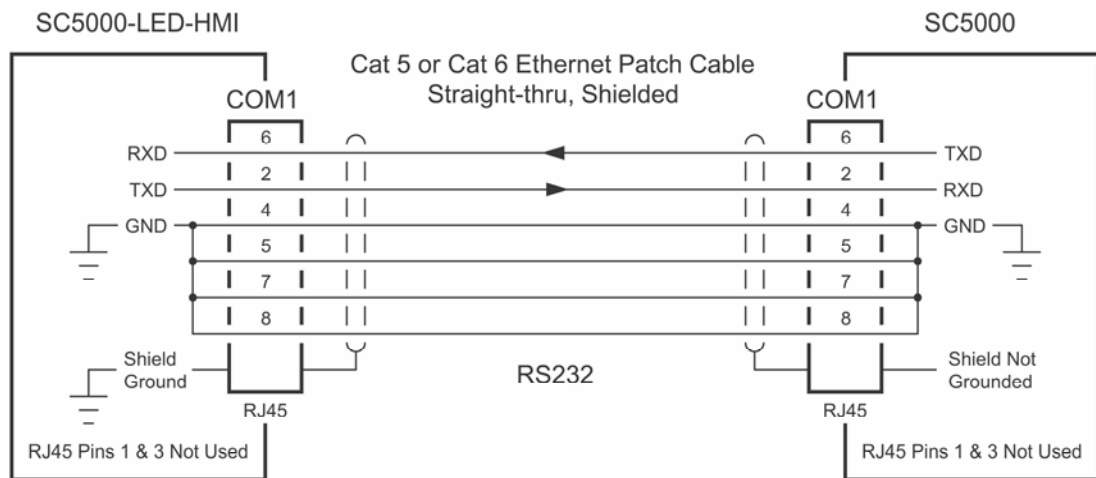
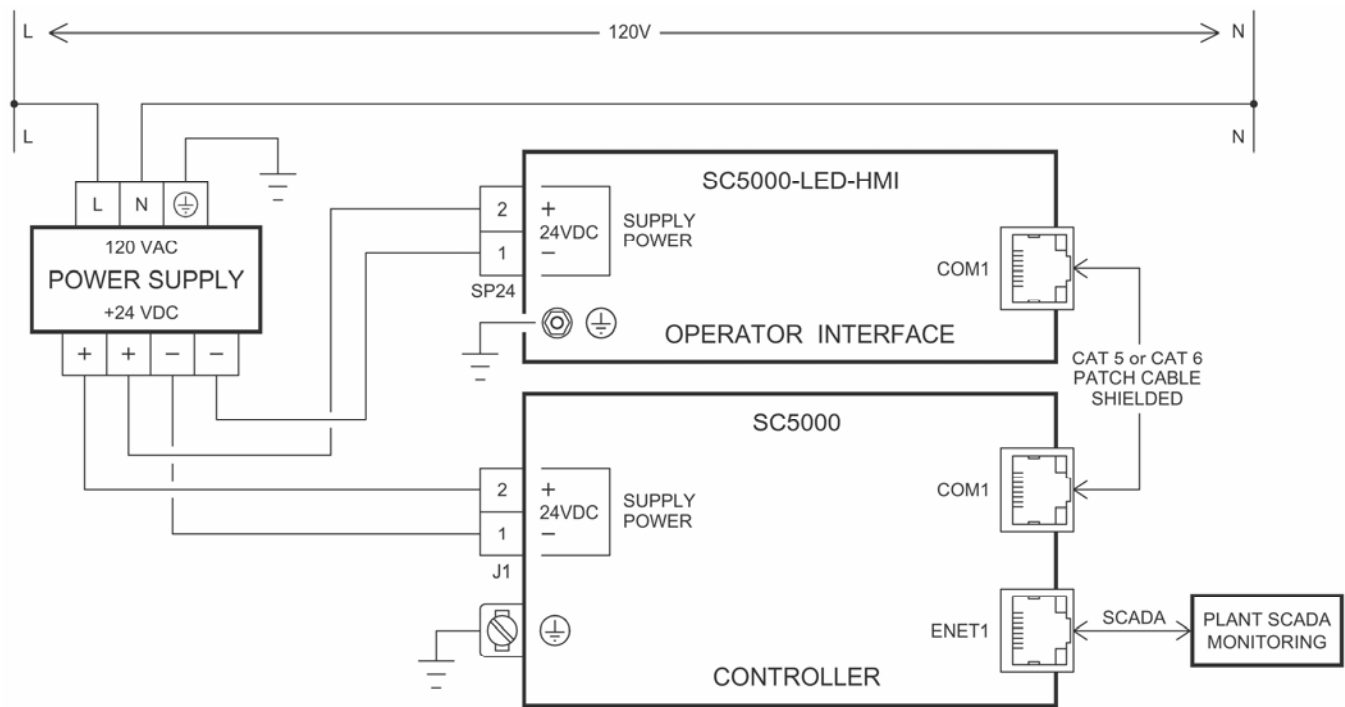
SC5000-LED-HMI MENU

User / Operator Info.	SCADA	Description of Register Contents		
Parameter	Register Address			
Analog Input Calibration				
C.301	40031	Analog Input (AIX1)	Zero Calibration	Analog Input (AIX1) Status Parameter A.299 Is Displayed While Viewing or Changing Parameter C.301 or C.302.
C.302	40032		Span Calibration	
C.303	40033	Analog Input (AIX2)	Zero Calibration	Analog Input (AIX2) Status Parameter A.300 Is Displayed While Viewing or Changing Parameter C.303 or C.304.
C.304	40034		Span Calibration	
C.305	40035	Analog Input (A1)	Zero Calibration	Analog Input (A1) Status Parameter A.301 Is Displayed While Viewing or Changing Parameter C.305 or C.306.
C.306	40036		Span Calibration	
C.307	40037	Analog Input (A2)	Zero Calibration	Analog Input (A2) Status Parameter A.302 Is Displayed While Viewing or Changing Parameter C.307 or C.308.
C.308	40038		Span Calibration	
C.309	40039	Analog Input (A3)	Zero Calibration	Analog Input (A3) Status Parameter A.303 Is Displayed While Viewing or Changing Parameter C.309 or C.310.
C.310	40040		Span Calibration	
C.311	40041	Analog Input (A4)	Zero Calibration	Analog Input (A4) Status Parameter A.304 Is Displayed While Viewing or Changing Parameter C.311 or C.312.
C.312	40042		Span Calibration	
C.313	40043	Analog Input (A5)	Zero Calibration	Analog Input (A5) Status Parameter A.305 Is Displayed While Viewing or Changing Parameter C.313 or C.314.
C.314	40044		Span Calibration	
C.315	40045	Analog Input (A6)	Zero Calibration	Analog Input (A6) Status Parameter A.306 Is Displayed While Viewing or Changing Parameter C.315 or C.316.
C.316	40046		Span Calibration	
C.317	40047	Analog Input (A7)	Zero Calibration	Analog Input (A7) Status Parameter A.307 Is Displayed While Viewing or Changing Parameter C.317 or C.318.
C.318	40048		Span Calibration	
C.319	40049	Analog Input (A8)	Zero Calibration	Analog Input (A8) Status Parameter A.308 Is Displayed While Viewing or Changing Parameter C.319 or C.320.
C.320	40050		Span Calibration	
See Section C.				

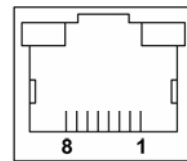
SC5000-LED-HMI MENU

User / Opera- tor Info.	SCADA	Description of Register Contents		
Parameter	Register Address			
Analog Output Calibration				
C.401	40071	Analog Output (AOX1)	Zero Calibration	Output Forced to 819 while viewing C.401
C.402	40072		Span Calibration	Output Forced to 4095 while viewing C.402
C.403	40073	Analog Output (AO1)	Zero Calibration	Output Forced to 819 while viewing C.403
C.404	40074		Span Calibration	Output Forced to 4095 while viewing C.404
C.405	40075	Analog Output (AO2)	Zero Calibration	Output Forced to 819 while viewing C.405
C.406	40076		Span Calibration	Output Forced to 4095 while viewing C.406
C.407	40077	Analog Output (AO3)	Zero Calibration	Output Forced to 819 while viewing C.407
C.408	40078		Span Calibration	Output Forced to 4095 while viewing C.408
C.409	40079	Analog Output (AO4)	Zero Calibration	Output Forced to 819 while viewing C.409
C.410	40080		Span Calibration	Output Forced to 4095 while viewing C.410
C.411	40081	Analog Output (AO5)	Zero Calibration	Output Forced to 819 while viewing C.411
C.412	40082		Span Calibration	Output Forced to 4095 while viewing C.412
C.413	40083	Analog Output (AO6)	Zero Calibration	Output Forced to 819 while viewing C.413
C.414	40084		Span Calibration	Output Forced to 4095 while viewing C.414
See Section D.				

CONNECTION DIAGRAM

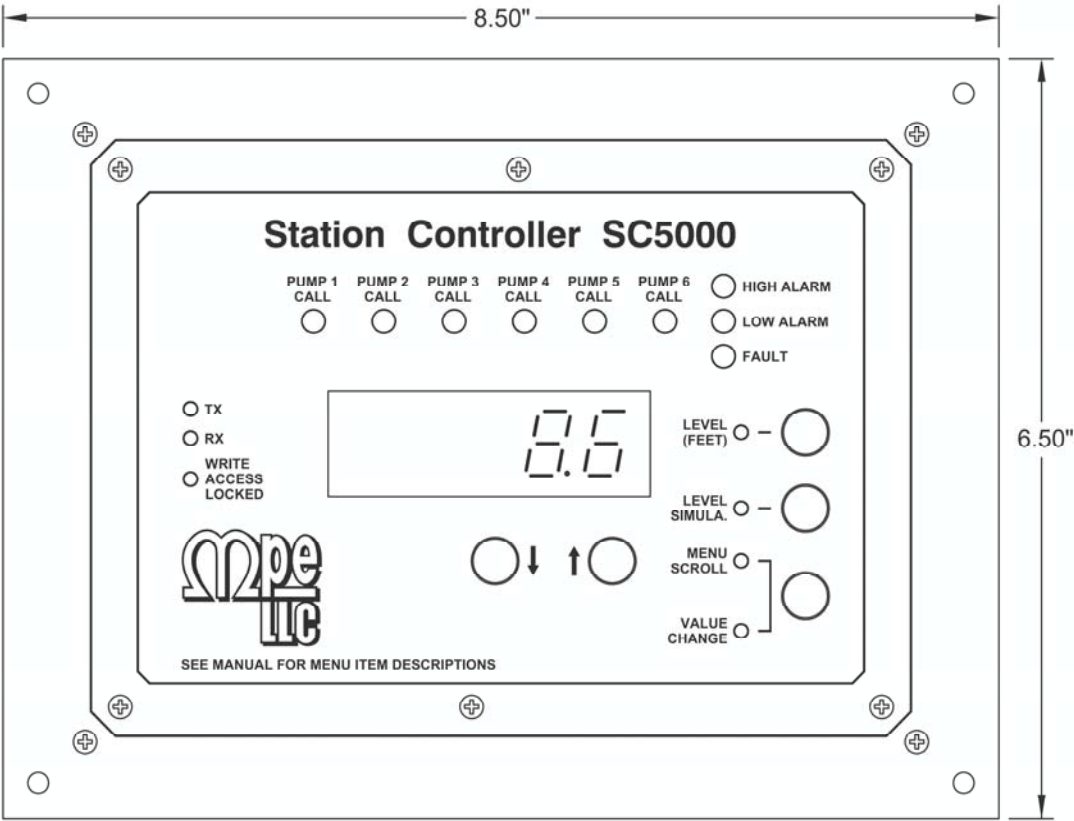


RJ45 Connector

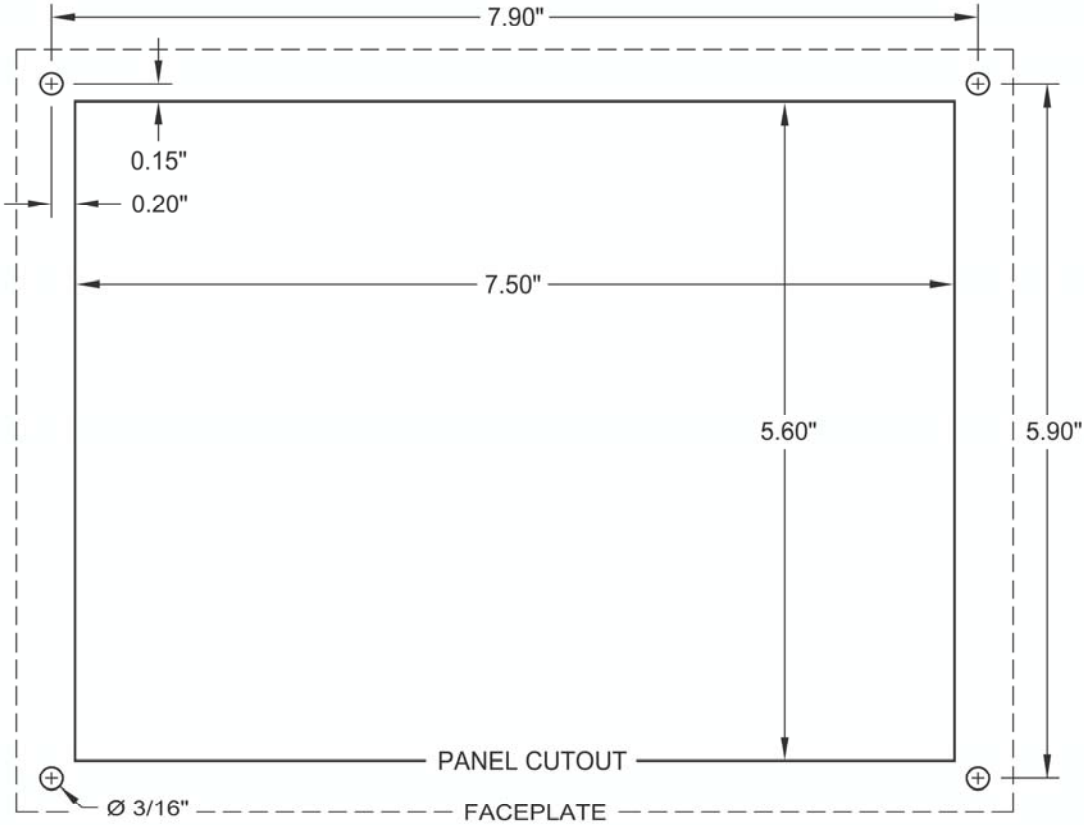


RJ45 Connector

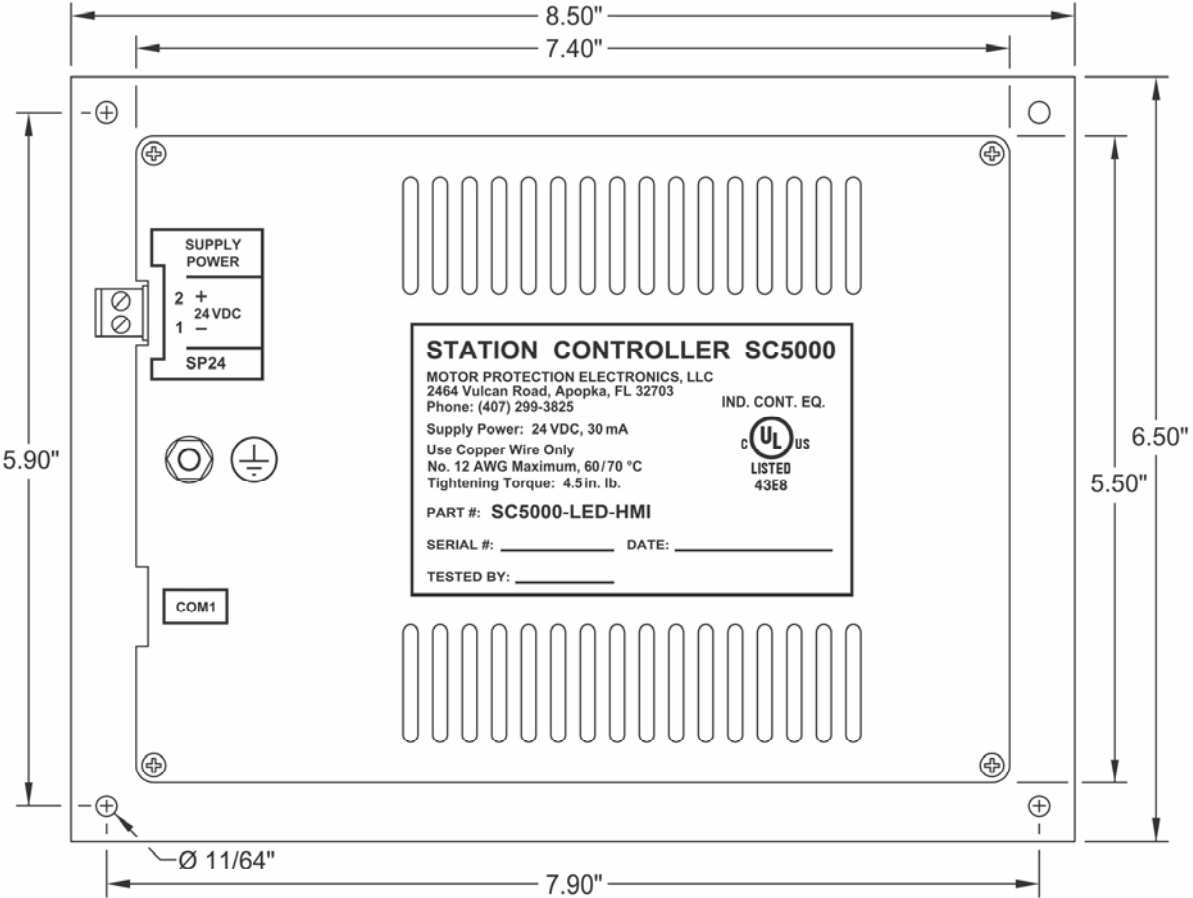
ENCLOSURE FRONT



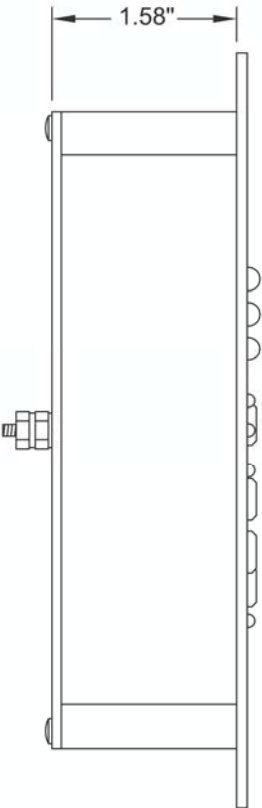
PANEL CUTOUT



ENCLOSURE REAR



ENCLOSURE LEFT SIDE



ENCLOSURE RIGHT SIDE

