



Feedwater Center

Model JC-FWC-ND-OIT & JC-FWC-ND



Quick Start Guide

Feedwater Center

Model JC-FWC-ND-OIT

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INTRODUCTION

This guide is designed to simplify the commissioning process by detailing the initial parameters required to properly setup a Preferred Instruments Feedwater Center - Transfer Pump/Surge Tank Control. This guide is to be used in conjunction with the Installation and Operation Manual, SDI-JC-FWC-ND-OIT.

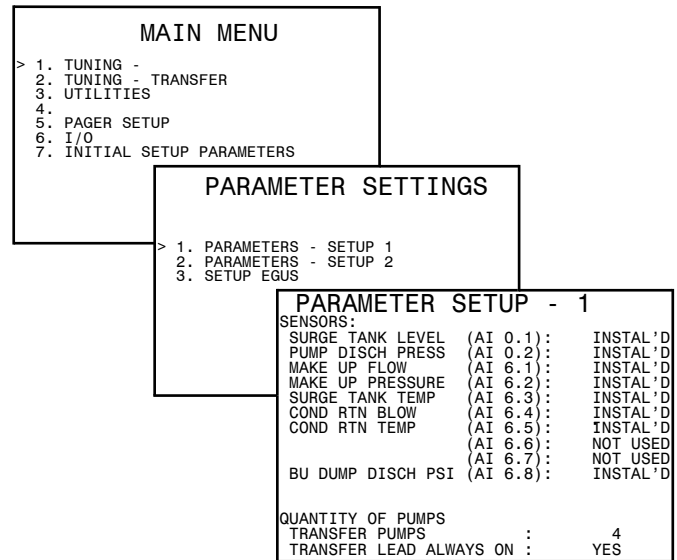
QUICK START GUIDE

INITIAL PARAMETER SETUP

The Preferred Instruments Feedwater Center - Transfer Pump/ Surge Tank Control is designed to be field adjustable for multiple applications. In order to customize to your installation some preliminary settings must be entered.

After initial powerup, the homepage should be displayed. To set initial parameters, Press the MAIN MENU button, and then “7” for Initial Parameter Menu

There is a detailed list of these parameter values found in the operation and instruction manual SDI-JC-FWC that provides an area to record each setting for future use in case the unit must be replaced.



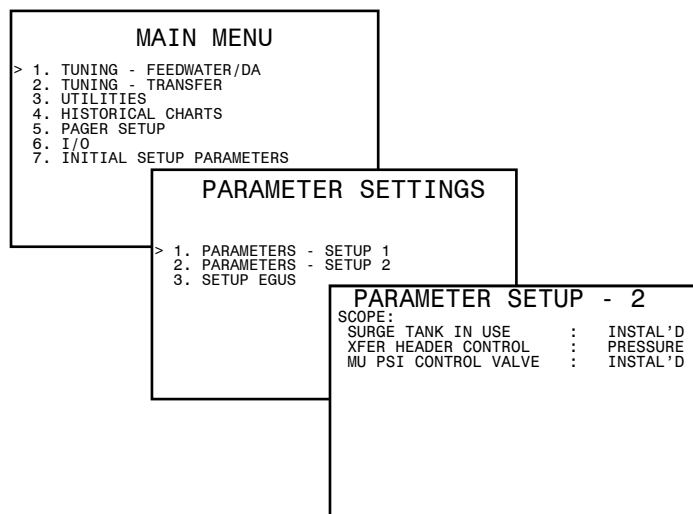
PARAMETERS - INSTALLED DEVICES

PARAMETER - SETUP 1 deals with the installed devices. Set each sensor to INSTAL'D if it is included in this application.

FACTORY VALUE	DESCRIPTION	HELP/COMMENTS
NOT USED	SURGE TANK LEVEL	If the system being set up has a Level sensor on the Surge Tank, turn the 'NOT USED' to 'INSTAL'D'
NOT USED	TRANSFER PUMP DISCH PRESSURE	If the system being set up has a Pressure sensor on the Transfer Pump Header, turn the 'NOT USED' to 'INSTAL'D'
NOT USED	MAKE UP FLOW	If the system being set up has a Flow sensor on the Make Up water line going into the Surge tank, turn the 'NOT USED' to 'INSTAL'D'
NOT USED	MAKE UP PRESSURE	If the system being set up has a Pressure sensor on the Make Up water line going into the Surge tank, turn the 'NOT USED' to 'INSTAL'D'
NOT USED	SURGE TANK TEMPERATURE	If the system being set up has a temperature sensor in the Surge tank, turn the 'NOT USED' to 'INSTAL'D' by using the UP and DOWN arrow keys and highlighting the 'NOT USED' and pressing enter.
NOT USED	COND RTN FLOW	If the system being set up has a Flow sensor on the Condensate return line, turn the 'NOT USED' to 'INSTAL'D'
NOT USED	COND RTN TEMP	If the system being set up has a Temperature sensor on the Condensate return line, turn the 'NOT USED' to 'INSTAL'D'
NOT USED	BACKUP PUMP HEADER PSI	If the system being set up has a Pressure sensor in the Transfer Pump Header, turn the 'NOT USED' to 'INSTAL'D'

PARAMETERS - INSTALLED DEVICES

FACTORY VALUE	DESCRIPTION	HELP/COMMENTS
0	TRANSFER PUMPS	Enter the number of Transfer pumps installed in the system (up to four)
NO	TRANSFER LEAD ALWAYS ON	Enabling this, changing 'NO' to 'YES', will ensure that the Lead Transfer pump runs continuously.



PARAMETERS - SCOPE

PARAMETER - SETUP 2 deals with the scope and type of control being used. A description of the effect of each parameter are provided.

FACTORY VALUE	DESCRIPTION	HELP/COMMENTS
NOT USED	SURGE TANK IN USE	If the system being set up has a Surge tank installed, turn the 'NOT USED' to 'INSTAL'D' by using the UP and DOWN arrow keys and highlighting the 'NOTUSED' and pressing enter.
NOT USED	MAKE UP PSI CONTROL VALVE	If the system being set up has a control valve on the Surge Tank Tank, change 'NOT USED' to "INSTAL'D" This enables the Pressure Control Valve output.
NOT USED	SURGE TANK LEVEL CONTROL VALVE	If the system being set up has a control valve on the Surge Tank, change 'NOT USED' to "INSTAL'D" This enables the Level Control Valve output.

PARAMETERS - ENGINEERING UNITS

The ability to field adjust engineering units has been added to the Feedwater Controller in order to allow each installation to accommodate the installed field sensors. Each Engineering unit listed is editable from the “Set EGU’s” page. For details on how to work with the Global Engineering Unit Editor, please reference the Operation and Installation manual SDI-JC-FWC-ND-OIT.

ID	NAME	VALUE 0%	VALUE 100%	DECPT	HELP/COMMENTS
A1					
A2	ST LVL	0.0	1000	1	Surge Tank Level in “WC
A3					
A4	STF	-50	300	0	Surge Tank Temperature in °F
A5					
A6	MU PSI	0.0	25.0	1	Makeup Pressure in PSI
A7	MU FLO	0	100	0	Makeup Flow in GPM
A8					
A9	CR F	-50	300	0	Condensate Return Temperature in °F
A10	CR FLO	0	100	0	Condensate Return Flow in GPM
A11					
A12	TP VSD	0	60	0	Transfer Pump VSD in Hz
A13	DEMAND	0	100	0	Demand (it is not recommended to change this value)

MODBUS ADDRESSING

MODBUS ADDRESSING NUMBERS

MODBUS: The following information applies to JC-FWC-ND-OIT Feedwater Center-Transfer Pump/Surge Tank Control.

NOTE:

MODBUS addresses below are for the OIT version, this does not include points that are used on the touch screen.

	Default:	Options:
Device Address:	1	1-31
Baud:	19200	1200, 2400, 4800, 9600, 19200, 38400
Parity:	ODD	ODD, EVEN
Data Format:	RTU	RTU, ASCII
Wiring Interface:	RS485, 2 wire, isolated	

NOTE:

For MODBUS information on JC-FWC-ND-OIT Feedwater Center-Transfer Pump/Surge TankControl refer to Installation & Operation manual(SDI-JC-FWC-ND-OIT).

MODBUS ADDRESSING

MODBUS ADDRESSING NUMBERS

Modbus Register Address	Description	Read/ Write Allowed	EGU for register = 10000	EGU for register = 0	Units	Notes:
40001						
40002						
40003						
40004						
40005						
40006						
40007						
40008						
40009						
40010						
40011						
40012						
40013						
40014						
40015						
40016						
40017						
40018						
40019						
40020	Surge Tank Low-Low Level Alarm Setpoint	Y	100	0	%	
40021	Surge Tank Low-Low Level Alarm Delay	Y	100	0	secs	
40022						
40023						
40024						
40025						
40026						
40027						
40028						
40029						
40030						
40031						
40032						
40033						
40034						
40035						
40036	Surge Tank Level for 100% MU Valve	Y	100	0	%	
40037	Surge Tank Level for 0% MU Valve	Y	100	0	%	
40038	Transfer Pump VSD Minimum Speed	Y	60	0	%	
40039	Surge Tank Level Valve Demand	Y	100	0	%	
40040	Surge Tank Level Low Alarm Set point	Y	100	0	%	
40041	Surge Tank Level Low Alarm Time Delay	Y	100	0	Secs	
40042	Surge Tank Level High Alarm Set point	Y	66.6	0	%	
40043	Surge Tank Level High Alarm Time Delay	Y	100	0	Secs	
40044						
40045						
40046						

MODBUS ADDRESSING

Modbus Register Address	Description	Read/ Write Allowed:	EGU for register = 0	EGU for register = 10000	Units	Notes:
40047		Y	0	100	psi	
40048			0	25	psi	
40049		Y	0	100	Secs	
40050		Y	0	25	psi	
40051		Y	0	100	secs	
40052	Transfer Pump Start Lag SP Deviation	Y	0	66.6	"WC	
40053	Transfer Pump Demand Add a Lag	Y	0	100	%	
40054	Transfer Pump Add a Lag Delay	Y	0	100	secs	
40055	Transfer Pump Stop Lag SP Deviation	Y	0	66.6	"WC	
40056	Transfer Pump Demand Stop a Lag	Y	0	100	%	
40057	Transfer Pump Stop a Lag Delay	Y	0	100	secs	
40058	Transfer Pump Add'l Start Lag Delay	Y	0	100	secs	
40059	Transfer Pump Add'l Stop Lag Delay	Y	0	100	secs	
40060	Transfer Pump Quantity	Y	0	100	secs	
40061	Transfer Pump Rotate Runtime Hours	Y	0	100	%	
40062	Transfer Pump 1 Fault Delay	Y	0	100	secs	
40063	Number of Transfer Pumps in System	Y	0	100	pumps	
40064	Transfer Pump Rotate Overlap Time	Y	0	10000	secs	
40065	Transfer Pump Lead	Y	0	100	pump #	
40066	Synchronize Time Value		0	100		
40067						
40068						
40069	spare					
40070	spare					
40071	spare					
40072	spare					
40073	spare					
40074	spare					
40075						
40076	Surge Tank Level		0	66.6	"WC	2
40077						
40078						
40079						
40080						
40081	Surge Tank Make Up water Valve		0	100	%	
40082	Transfer Pump 1 Speed		0	60	%	2
40083	Transfer Pump 2 Speed		0	60	%	2
40084	Transfer Pump 3 Speed		0	60	%	2
40085						
40086						
40087						
40088						
40089						
40090						
40091	Make Up Water Flow		0	100	GPM	

MODBUS ADDRESSING

Modbus Register Address	Description	Read/Write Allowed:	EGU for register = 0	EGU for register = 10000	Units	Notes:
40093	Condensate Return Temperature		-50	300	°F	
40094	Condensate Return Flow		0	100	GPM	
40095	Surge Tank Pump 1 Elapsed Time		0	10000	Hrs	2
40096	Surge Tank Pump 2 Elapsed Time		0	10000	Hrs	2
40097	Surge Tank Pump 3 Elapsed Time		0	10000	Hrs	2
40098						
40099						
40100						
40101						
40102						
40103						
40104						
40105	spare					
40106	Controllr Version					
40107	Surge Tank Pump 4 Speed		0	60	%	2
40108	Surge Tank Pump 4 Elapsed Time		0	10000	Hrs	2x
40109						
40110						
40111						
40112						
40113						
40114						
40115						
40116						
40117						
40118						
40119						
40120						
40121						
40122						
40123						
40124						
40125						
40126						
40127						
40128						

MODBUS ADDRESSING

Note: Modbus address “00xxx” means Holding Register xxx

Modbus Coil Address		Read/ Write Allowed	coil = 0	coil = 1		
00001						
00002						
00003	ST Level Control Valve Auto/Manual	Y	Auto	Manual		
00004						
00005						
00006						
00007						
00008	Transfer Pump Quantity Auto/Manual	Y	Auto	Manual		
00009	Transfer Pump Lead Select Auto/Manual	Y	Rotate	Manual		
00010	Transfer Pump Fault Reset	Y	Reset	Normal		
00011	Remote Alarm Silence	Y	Reset	Normal		
00012						
00013						
00014						
00015						
00016						
00017						
00018	Has Makeup Water Flow	Y	NOT USED	INSTAL'D		
00019	Has Makeup Water Pressure	Y	NOT USED	INSTAL'D		
00020	Has Condensate Return Temperature	Y	NOT USED	INSTAL'D		
00021	Has Condensate Return Flow	Y	NOT USED	INSTAL'D		
00022	Has Surge Tank Installed	Y	Valve	PUMP		
00023						
00024						
00025						
00026						
00027	Transfer Pump Always On	Y	NO	YES		
00028						
00029	Synchronize Time	Y	FALSE	TRUE		
00030	Has Surge Tank Level	Y	NOT USED	INSTAL'D		
00031						
00032						
00033	spare					
00034	spare					
00035	spare					
00036	spare					
00037	spare					
00038	spare					
00039	spare					
00040	Common Alarm		Alarm	Normal		
00041						
00042						
00043						
00044						

MODBUS ADDRESSING

MODBUS ADDRESSING NUMBERS (CONTINUED)

Modbus Coil Address		Read/ Write Allowed	coil = 0	coil = 1		
00045						
00046						
00047						
00048						
00049						
00050						
00051						
00052						
00053						
00054						
00055	Transfer Pump 1 Lead		Is Lead	Not Lead		
00056	Transfer Pump 2 Lead		Is Lead	Not Lead		
00057	Transfer Pump 3 Lead		Is Lead	Not Lead		
00058	Transfer Pump 1 Fault		Alarm	Normal		
00059	Transfer Pump 2 Fault		Alarm	Normal		
00060	Transfer Pump 3 Fault		Alarm	Normal		
00061	Surge Tank Low Level Alarm		Alarm	Normal		
00062	Surge Tank Low-Low Level Alarm		Alarm	Normal		
00063	Surge Tank High Level Alarm		Alarm	Normal		
00064						
00065						
00066						
00067						
00068						
00069	Transfer Pump 1 Active		Start	Stop		
00070	Transfer Pump 2 Active		Start	Stop		
00071	Transfer Pump 3 active		Start	Stop		
00072						
00073						
00074						
00075						
00076						
00077	Surge Tank Low Level Switch		Alarm	Normal		
00078	Transfer Pump 1 On		Start	Stop		
00079	Transfer Pump 2 On		Start	Stop		
00080	Transfer Pump 3 On		Start	Stop		
00081						
00082						
00083						
00084						
00085						
00086	Disable All		Enabled	Disabled		
00087						
00088						
00089						

MODBUS ADDRESSING

MODBUS ADDRESSING NUMBERS (CONTINUED)

Modbus Coil Address		Read/ Write Allowed	coil = 0	coil = 1		
00090						
00091	Transfer Pump 1 Start		Start	Stop		
00092	Transfer Pump 2 Start		Start	Stop		
00093	Transfer Pump 3 Start		Start	Stop		
00094						
00095						
00096						
00097						
00098						
00099						
00100						
00101	Surge Tank MU Valve in Auto		Auto	On or Off		
00102						
00103	Spare		Yes	No		
00104	Spare		Yes	No		
00105	Transfer Pump 1 Speed in Auto		Auto	On or Off		
00106	Transfer Pump 2 Speed in Auto		Auto	On or Off		
00107	Transfer Pump 3 Speed in Auto		Auto	On or Off		
00108	Transfer Pump 4 Speed in Auto		Auto	On or Off		
00109	Transfer Pump 4 Lead		Is Lead	Not Lead		
00110	Transfer Pump 4 Fault		Alarm	Normal		
00111	Transfer Pump 4 Active		Start	Stop		
00112	Transfer Pump 4 On		Start	Stop		
00113	Transfer Pump 4 Start		Start	Stop		

TROUBLESHOOTING

INPUT/OUTPUT BLOCK NUMBERS

Input and output block numbers are assigned according to the physical hardwired address. Knowing the signal channel number and I/O board slot number will allow you to determine the block number. The following table provides block numbers for all Feedwater Center Models. Disregard block numbers above the number of pumps in each model.

Block Numbers	Wiring Location		Description
	Board/Slot	I/O Channels	
600	CPU/0	AI.0.1	Surge Tank Level
601	CPU/0	AI.0.2	Pump Discharge PSI
602	CPU/0	RO.0.1	Common Alarm Relay
615	DIN/1	DI.1.1	Transfer Pump 1 On
616	DIN/1	DI.1.2	Transfer Pump 2 On
617	DIN/1	DI.1.3	Transfer Pump 3 On
618	DIN/1	DI.1.4	Transfer Pump 4 On
619	DIN/1	DI.1.5	
620	DIN/1	DI.1.6	Surge Tank Level LoLo
621	DIN/1	DI.1.7	
622	DIN/1	DI.1.8	
623	DIN/1	DI.1.9	
624	DIN/1	DI.1.10	
625	DIN/1	DI.1.11	
626	DIN/1	DI.1.12	
627	DIN/1	DI.1.13	
628	DIN/1	DI.1.14	
629	DIN/1	DI.1.15	Disable All (BAS Contact)
630	HOA- ROUT/2	HO.2.1	Transfer Pump 1 Start Circuit
631	HOA- ROUT/2	HO.2.2	Transfer Pump 2 Start Circuit
632	HOA- ROUT/2	HO.2.3	Transfer Pump 3 Start Circuit
633	HOA- ROUT/2	HO.2.4	Transfer Pump 4 Start Circuit
634	HOA- ROUT/2	HO.2.5	
635			
636			
637			
645			
646			
647			
648			
649			

TROUBLESHOOTING

INPUT/OUTPUT BLOCK NUMBERS (CONTINUED)

Block Numbers	Wiring Location		Description
	Board/Slot	I/O Channels	
660			
661			
662			
663			
664			
675	A/M-AOUT/5	AM.5.1	Transfer Pump 1 Speed
676	A/M-AOUT/5	AM.5.2	Transfer Pump 2 Speed
677	A/M-AOUT/5	AM.5.3	Transfer Pump 3 Speed
678	A/M-AOUT/5	AM.5.4	Transfer Pump 4 Speed
679	A/M-AOUT/5	AM.5.5	Transfer Make Up Water Valve
690	AIN/6	AI.6.1	Make Up Water Flow
691	AIN/6	AI.6.2	Make Up Water Pressure
692	AIN/6	AI.6.3	Surge Tank Temperature
693	AIN/6	AI.6.4	Condensate Return Temperature
694	AIN/6	AI.6.5	Condensate Return Flow
695	AIN/6	AI.6.6	Spare
696	AIN/6	AI.6.7	Spare
697	AIN/6	AI.6.8	Backup Pump Discharge Pressure

NOTES:

REVISION HISTORY

REV	Description
0.0	FIRST ISSUE (02/13/2019)

SDI-FWC-ND-OIT-QS
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