

FLECK NXT2 TIMER SERVICE MANUAL



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#### **IMPORTANT PLEASE READ:**

- The information, specifications and illustrations in this manual are based on the latest information available at the time of release. The manufacturer reserves the right to make changes at any time without notice.
- This manual is intended as a guide for service of the valve only. System installation requires information from a number of suppliers not known at the time of manufacture. This product should be installed by a plumbing professional.
- This unit is designed to be installed on potable water systems only.
- This product must be installed in compliance with all state and municipal plumbing and electrical codes. Permits may be required at the time of installation.
- It is established that when daytime water pressure exceeds 80 psi (5.5 bar), the maximum pressure rating of 125 psi (8.6 bar) can be exceeded. A pressure regulator must be installed on this system or warranty is voided.
- Do not install the unit where temperatures may drop below 32°F (0°C) or above 120°F (52°C).
- Do not place the unit in direct sunlight. Black units will absorb radiant heat, increasing internal temperatures.
- Do not strike the valve or any of the components.
- Warranty of this product extends to manufacturing defects.
   Misapplication of this product may result in failure to properly condition water, damage to product, or personal injury.
- A prefilter should be used on installations in which free solids are present.
- In some applications local municipalities treat water with Chloramines. High Chloramine levels may damage valve components.
- Correct and constant voltage must be supplied to the controller to maintain proper function.
- The system is intended to treat only potable quality water. It is not intended as the permanent primary treatment of water from a source that is contaminated, such as from radon, pesticides, insecticides, sewage or wastewater.
- This system is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children shall not play with the system.
- Cleaning shall not be made by children without supervision.
- Periodic cleaning and maintenance may be required to function properly.
- $^{\prime}$  All plumbing and electrical should be done in accordance with local codes.
- An uninterrupted power supply is required. The control uses a transformer to supply 24 VDC. Please make sure your voltage supply is compatible with your unit before installation.

#### CALIFORNIA PROPOSITION 65 WARNING

**WARNING:** This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

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#### **FEATURES**



#### TIMER OPERATION

#### Setting the Time of Day

NOTE: Set Time of Day on any unit and the rest of the units in the system will update the Time of Day automatically.



NOTE: Press and hold the Left button to exit without saving.

#### Manually Initiating a Regeneration



NOTE: A manually initiated or queued regeneration can be cleared by pressing and holding the Back button. A system queued regeneration can only be cleared by stepping through a manual regeneration. If regeneration occurs for any reason prior to the delayed regeneration time, the manual regeneration request shall be cleared. Pressing the Extra Cycle button while in regeneration will cause the upper drive to advance to the next step immediately.

#### **Timer Operation During Regeneration**

CYCLE 2/5 DRAW



CYCLE 3/5 RAPID RINSE 00:10:00

# CYCLE 4/5 CYCLE 4/5 CO:12:00

Press the Extra Cycle button during a system queued Regeneration Cycle to immediately advance the valve to the next cycle step position and resume normal step timing.

#### Timer Operation During Programming



#### **Timer Operation During A Power Failure**



NOTE: The time of day on the main display screen will flash for 5 minutes when there has been a power outage. The flashing of the time of day can be stopped by pressing any button on the display.

#### Flow Meter Equipped Timer



# TIMER FEATURES

#### Remote Lock



#### **Regeneration Day Override Feature**

#### Lock Settings (access to Master Programming)

Time Based , Enter Code, \_\_\_\_\_

#### Capacitive Buttons

#### LED Status indicator

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#### Power Loss Backup

. 

#### **Continuous Flow Detect**

 $\begin{array}{c} \mathbf{x} \\ \mathbf{y}_{1} \\ \mathbf{y}_{2} \\ \mathbf{x}_{2} \\ \mathbf{y}_{2} \\ \mathbf{y}_{2$ 

#### Remote Regeneration

#### **Regeneration Types**

Softener/Filter Meter Immediate Day of the Week, 

#### **Reset to Factory Defaults**

17 -----



Power on the unit. When Pentair logo appears, press and hold the Extra Cycle button. The Reset menu appears.









Use the up/down buttons to select.



Press the Extra Cycle button to set the desired option and return to the Service screen.

# Lock Window 🖶



#### Settings Review



#### **Auxiliary Relays**



#### SYSTEM DEFINITIONS

#### System 4 - Single Unit

#### System 5 (2-8 Units) Parallel Interlock)

#### System 6 (2-8 Units) Parallel Series Regeneration

#### System 7 (2 Units) Alternating Immediate

#### System 8 (2 Units) Alternating Delayed

# System 9 (2-8 Units) Alternating with Standby Units

#### System 14 (2-8 Units) Demand Recall

	ON SETTINGS REVIEW	Example: On: View settings without the ability to alter settings Off: User has ability to alter settings.
	LANGUAGE POPTUGUES ▶ ENGLISH FRANCALS	Example: English, Francais, Duetsch, Italiano, Espanol, Nederlandse, Portugues
	ASSISTANCE NAME 1	Example: 12 characters maximum.
	ASSISTANCE NAME 2	Example: 12 characters maximum.
	ASSISTANCE PHONE	Example: 14 characters maximum.
	SYSTEM 4 ► SYSTEM 5 SYSTEM 6	Example: 4, 5, 6, 7, 8, 9, 14
	2815 VALVE ▶ 2850 2900	<b>Example:</b> 2510, 2750, 2815, 2900, 3150, 3900
	UPFLOW	Example: Upflow Downflow Filter
	RECEN TYPE B SOFTEVER METER DEL SOFTEVER METER I MM TI ME CLOCK	Example: Softener Meter Delayed Softener Meter Immediate Time Clock
	METRIC UNITS D US	Day of the Week. Example: Metric US
	CAPACITY - GRAINS 0023828	Example: Range: 0-9,999,999 grains
		Example: Range: 0-199 GPG
	RESERVE] FIXED VOLUME ▶ WEEKLY RESERVE VARIABLE RESERVE	Example: Fixed Volume Weekly Reserve Variable Reserve
Ē.	BEADTE REGENERATION DELAYED ▶ OFF INMEDIATE	Fixed % Example: Off, Immediate, Delayed
	REMOTE SIGNAL DURATION 1	Example: Range: 1-90 seconds (Service) 60-300 seconds (Standby)
	DAY OVERRI DE/TI ME-DRI VEN J 10 D	Example: Range: Off - 99 Days
	REGEN. TI MEß 02: 00HR	Example: Range: 0 - 23 Hours 59 Minutes.

# MASTER PROGRAMMING MODE FLOW CHART



# DIAGNOSTIC PROGRAMMING MODE FLOW CHART

#### Diagnostic Programming Mode

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# TIME OF DAY PROGRAMMING MODE FLOW CHART

#### Setting the Time of Day

NOTE: Set Time of Day on any unit and the rest of the units in the system will update the Time of Day automatically.



NOTE: Press and hold the Left button to exit without saving.



						Series	Alternating	Alternating	Alternating	Demand Recall	11C MARGIN
Settings Review	×	×	×	×	×	×	×	×	×	×	05 Dn, Off
aɓenɓue	×	×	×	×	×	×	×	×	×	×	English Francais Deutsch Italiano Espanol Nederlands Portuoues
Assistance Name 1, 2 Accietance Dhone	× >	× >	× >	× >	× >	× >	× >	×	× >	× >	Custom
Regen Type	××	×	×	×	×	< ×	××	< ×	××	×	Time Clock Day of the Week Softener/Filter Metered Immediate Softener/Filter Metered Delayed 2510
/alve	×	×	×	×	×	×	×	×	×	×	279 Mr/
Regen Flow Units	××	××	× ×	××	××	× ×	××	××	××	××	Uptitow, Downtiow, Filter US Metric
Remote Regeneration	××	××	××	××	××	××	××	< ×	< ×	××	Off, Immediate, Delayed
Auxilliary 1,2	×	×	×	×	×	×	×	×	×	×	Off, Alarm Based, Cycle Based, Time Based,
Lock Window 1,2	×	×	×	×	×	×	×	×	×	×	0n, 0ff Paddle (0.75", 1", 1.5", 2", 3")
Meter Type			×	×	×	×	×	×	×	×	Turbine (0.75°, 1.25°, 1.5°) Generic
Continuous Flow Detect			×	×	×	×	×	×	×	×	On, Off
Save as Non Factory	×	×	×	×	×	×	×	×	×	×	0n, 0ff
Lock Settings	×	×	×	×	×	×	×	×	×	×	Off, Delayed, Enter Code, Time Based
Day Override/Time Driven	×		×	×	×	×	×	×	×	×	Off-99 Days
Regen Time	×	×		×		×		×			Any
Day of the Week		×				×					SU, MO, TU, WE, TH, FR, SA
Capacity			×	×	×	×	×	×	×	×	0-9,999,999 Grains 0-9,999,999 Grams, 0-560,287 Lx°DH, 0-1,000,000 Lx°FTH, 0-701,557 Lx°EH
Hardness			×	×	×	×	×	×	×	×	0-199 GPG 0-19,999 mg/L, 0-1,402 °EH, 0-199.9 °FTH, 0-112 °DH
International Hardness Units			×	×	×	×	×	×	×	×	աց/է, °EH, °ETH, °DH
Reserve				×		×					Weekly Reserve, Variable Reserve, Fixed %, Fixed Volume
Number of Tanks (Max)	-	-	1	-	8	œ	2	2	8	80	2, 3, 4, 5, 6, 7, 8
Push Settings					×	×	×	×	×	×	0n, Off
Trip Point #1-7 GPM										×	0-1,999 GPM 0-1,569 LPM
Trip Point #1-7 SD Trip Point #1-7 STBD										××	1-90s 60-300s

# NXT2 TIMER ASSEMBLY (2510, 2750, 2850, 2900, 3150, 3900 VALVES)

Item No. QTY Part No. Description

Service Assemblies



NOTE: Conversion Kits do not include wiring harness; save and reuse existing NXT wiring harness. Region-specific power supply is included.

# NXT2 WIRING DIAGRAM



## **POWER SUPPLY CONNECTIONS**

#### Installing the Power Supply:

NOTE: Power Supply includes a harness with 2 black wires that connect to circuit board, see page 15.

2510/2750/2815/2850/2900 Valves:



## ERROR CODES AND TROUBLESHOOTING

#### **Detected Errors**

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NOTE: During the error condition, the control continues to monitor the flow meter and update the volume remaining. Once the error condition is corrected, all units return to the operating status they were in prior to the error. Regeneration queue is rebuilt according to the normal system operation. Or, if more than one unit has been queued for regeneration, then the queue is rebuilt according to which one communicates first.

Message Displayed	Cause For Error	Correction
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