NEW CWP OPERATORS PANEL (HMI) – KEY DIFFERENCES

This Tech Note defines the key differences between the old E1032 operators panel (P/N 3029306) and the new touch screen X2 base 7 operators panel (P/N W3T572459). The E1032 operators panel, in production since S/N 1000583, has been obsoleted by the manufacturer. Therefore, the X2 base 7 and software program CM2001V2 were implemented on the CWP water system in October 2020.

E1032 and X2 base 7 Similarities
- Both the E1032 and X2 base 7 interfaces with the FX3U-48MR/ES PLC and software program RU0901V3.
- Both the E1032 and X2 base 7 use the same power cable 25-11163.
- Software can be downloaded through a USB 2.0 port on both the E1032 and X2 base 7.

Hardware Differences

Operator panel X2 base 7	Operator panel E1032
Color touch screen with graphically represented buttons	Tactile keypad with small monochrome display
800 × 480-pixel display resolution	240 x 64-pixel display resolution
128 MB RAM Memory	64 MB RAM Memory
200 MB FLASH Memory	12 MB FLASH Memory
9pin DSUB RS422 serial port which uses serial cable W2T913509 (for HMI/PLC communication)	25pin DSUB RS422 serial port which uses serial cable W2T913500 (for HMI/PLC communication)
Panel mount cutout size 186mm x 136mm which fits controller doors: • W3T578705 (101-102) • W3T578704 (104-106)	Panel mount cutout size 166mm x 149mm which fits controller doors: • W3T578249 (101-102) • W3T578250 (104-106)
Does not require periodic replacement of the coin battery.	Requires periodic replacement of the coin battery (4-year PM).
Not supplied with null modem adapter.	Supplied with null modem adapter.

Operator panel X2 base 7	Operator panel E1032
The manuals specific to the X2 base 7 are as follows: • W3T574219 (Installation) • W3T574221 (Operators) • W3T574220 (Service) • W3T574218 (Startup) • W3T574210 (Electrical, H model) • W3T574209 (Electrical, S model)	The manuals specific to the E1032 are as follows: • W3T572849 (Installation) • W3T572850 (Operators) • W3T572851 (Service) • W3T572852 (Startup) • W3T572860 (Electrical, H model) • W3T575877 (Electrical, S model)

Software Differences

Operator panel X2 base 7	Operator panel E1032
Uses software program CM2001V2 (P/N W3T574311).	Uses software program RU0901V2 (P/N W3T575550).
Screen turns black after 5 minutes without operator input and will restore brightness with a finger press.	Screen always on.
GXL logging is not supported.	GXL logging is supported.
Manual operation stop: STOP icon must be pressed and held for 2 seconds (represented by a progress bar).	Manual operation stop: STOP button must be pressed.
Displays a time stamp for the latest disinfection in TECHNICIAN INFO.	Time stamp feature not supported.
Displays a time stamp for the latest heat in TECHNICIAN INFO when return temperature ≥85°C for 10 minutes.	Time stamp feature not supported.
10-minute minimum setting for SAFETY HW (adjustable in TECH INFO LEVEL 3).	1-minute minimum setting for SAFETY HW (adjustable in TECH INFO LEVEL 3).
90-minute minimum setting for RINSE (adjustable in TECH INFO LEVEL 3).	50-minute minimum setting for RINSE (adjustable in TECH INFO LEVEL 3).
Day/Date/Time and the screen title on lower right of all screens.	Day/Date/Time on Main Menu and Tech Info Level 2.
MAIN MENU: LOCAL/REMOTE field removed (always LOCAL).	MAIN MENU: LOCAL/REMOTE field present.

Operator panel X2 base 7	Operator panel E1032
TECHNICIAN INFO LEVEL 2: • DAY/DATE/TIME setting moved to the service menu. • REMOTE mode removed. • EXT. SIGN. TEST moved to the alarm screen and renamed TEST ALARM (no longer code 2 protected). • LOGGING has been removed. • New field for backlight brightness adjustment from 60%-100%.	TECHNICIAN INFO LEVEL 2: • DAY/DATE/TIME setting present. • REMOTE mode present. • EXT. SIGN. TEST present. • LOGGING present.
WATER SAVING CONTROL: • PART REJ. V138 has been removed. • V138 XXX % X F1 has been removed.	WATER SAVING CONTROL: • PART REJ. V138 present. • V138 XXX % X F1 present.
TECHNICIAN INFO LEVEL 3: • LANGUAGE option removed (only English). • Fields related to BIOSMOS removed. • Logging and internal logging fields removed.	TECHNICIAN INFO LEVEL 3: • LANGUAGE option present. • Fields related to BIOSMOS present. • Logging and internal logging fields present.

Service Menu Design (X2 base 7)
- The Service Menu (code 2 protected) is reached on the X2 base 7 HMI by power cycling the panel, touching and holding the screen for approximately 20 seconds and entering code 2. The following options may be useful to access through the Service Menu:
  - Date/Time: adjust Day/Date/Time, time zone, and enable automatic adjustment of daylight savings.
  - Touch Calibrate: the touch screen can be calibrated through this option.

Alarm Screen design (X2 base 7)
- Alarm Screen is accessed by pressing the ALARM icon like the E1032 panel. Differences at the Alarm Screen are:
  - An alarm line must first be selected (by pressing) to acknowledge using the Ack Selected button.
  - Multiple alarms can be acknowledged without selecting the alarm line by pressing the Ack All button.
  - TEST ALARM icon takes the place of ALARM at the Alarm Screen. Pressing this button and pressing "On" at the popup will test all lamps on the indication panel(s) and the alarm buzzer(s).
  - Representation of alarm state is different:
    - "Active" instead of "*"
    - "Acknowledge" instead of "-"
    - "Inactive" instead of "$"
    - "Normal" instead of no symbol

TIME CHANNELS Design (X2 base 7)
- Accessing the TIME CHANNELS is equivalent to the E1032.
- When a Time Channel is selected, a new screen will appear giving the following options:
    - **Show/Edit** an existing Time Period
    - Create a **New** Time Period
    - **Copy** an existing Time Period
    - **Delete** an existing Time Period
    - **Save** must be pressed to retain a change to the Time Period
    - This screen also contains a **SHOW SCHEDULE** "**i**" icon which will show all scheduled Time Periods in the TIME CHANNEL when pressed:
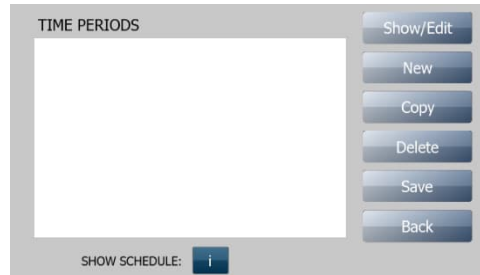
- When **Show/Edit**, **New** or **Copy** is pressed, a Time Period setup screen will appear:
    - A Time Period must be named by pressing the white field next to TIME PERIOD, typing the name on the popup keypad and pressing ⏎.
    - Set the START and STOP time for Time Period operation.
    - Select the days of week for Time Period operation (active days are highlighted yellow).
    - Running a process over midnight requires two Time Periods to be scheduled. START to 24:00 (on day 1) and 00:00 to STOP (on day 2).
    - Time Periods are set using a 24-hour clock. Operator Panel time is managed using A.M./P.M time. Be mindful of this when scheduling Time Periods.
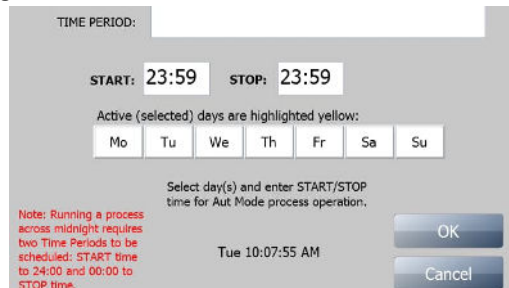
Screen navigation design (X2 base 7)
- Screen navigation differs slightly from the E1032, refer to the screen navigation diagram (for X2 base 7) on the following page:

MAR COR

MAIN MENU

HOME

CONTROL MODE:	MAN/AUT
TEST OPERATION:	### (Enter Code)
REJECT CONTROL:	### (Enter Code)
	MAN/AUT
REJ. CONT. LEVEL 2 SET:	(man)/(aut)

CWP INFO   TECHNICIAN INFO

CWP INFO

FEED WATER:	##.# l/m
PRODUCT WATER:	##.# l/m
RO REJECT:	##.# l/m
RETURN FLOW/HW-CIRC.:	##.# l/m
CONSUMPTION:	##.# l/m
COND. IN:	### µS/cm
COND. OUT:	### µS/cm
RECOVERY RATE:	### %
REJECTION RATE:	##.# %
TEMP RETURN:	### °C
TEMP TANK:	### °C
TANK LEVEL:	EMPTY
	NOT FULL/FULL

TECHNICIAN INFO

DETAILED DISPLAY:	NO/YES
MAX. TEMP. 1 RETURN:	### °C
MAX. TEMP. 2 RETURN:	### °C
LATEST HEAT:	Time Stamp
MANUAL HIGH TEMP. HW:	NO/YES
RUNNING TIME:	### hr
FEED WATER:	### m3
N:o DISINF:	###
LATEST DISINF:	Time Stamp
N:o LEVEL ALARM:	###

TECH LEVEL 3   PROGRAM VERSION

TECH LEVEL 2

PROGRAM VERSION

PROGRAM TO:	WRO H/S
PLC PROGRAM:	#########
HMI PROGRAM:	#########

(Code 2)

(Code 3)

TECHNICIAN INFO LEVEL 3

CWP 100 TYPE:	WRO H/
	WRO S
COUNTER:	
START UP:	### (5)m
SAFETY HW:	### (10)m
DISINF. INTAKE:	### (15)m
CIRCULATION:	### (15)m
RINSE:	### (90)m
SB PAUSE:	### (120)m
SB RUN:	### (10)m
TEST RUN:	### (20)m
TIME STOP OP:	## (5)m
POST RUN:	### (60)m
REG. TEMP. L:	## (61)°C
	## (63)°C
REG. TEMP. H:	## (91)°C
	## (92)°C
TEMP. ALARM:	## (84)°C
MAX. RETURN TEMP WRO °C:	
ON:	## (32)°C
OFF:	## (28)°C
FLOW ALARM F1:	## l/m
RESTART DIS:	### (30)m
RESTART OP:	#### (60)s
FLUSH HW RO1:	## (5)m
V-TEST P.1-3:	# (2) l/m
P.4:	## (10) l/m
F4 CONST. CHANGE:	NO/YES
(F4: ##.# l/m)	
t:	#### ms
k:	#.#
LOAD STANDARD SETTINGS:	No/Yes/Exit
CHANGE OF DATA REG:	
REG:	D ####
VALUE:	#####
NEW:	#####
SET:	No/Yes/Exit
TIMER:	T: ###
COUNTER:	C: ###

ADVANCED WS

TECHNICIAN INFO LEVEL 2

"TOTAL STOP: LINK 69-70 AND PRESS STOP"	
CHOICE:	
FAST STEPPING:	NO/YES
LOCAL:	MAN/AUT
STOP OPERATION:	MAN/AUT
STOP HW-CIRC:	MAN/AUT
POST RUN:	NO/YES
STANDBY FLUSH:	YES/NO
STANDBY TO LOOP:	NO/YES
FLOW ALARM IN OPERATION:	YES/NO
LEAK ALARM DURING HW-CIRC:	NO/YES
EXTERNAL INDICATION OFF:	NO/YES
OPERATION BUZZER:	NO/YES
LIMIT VALUES:	
COND. WARNING:	### µS
COND. HIGH:	### µS
LEAKAGE ALARM HW-CIRC:	
INTEGRATED HEAT:	## l/m
NORMAL HW-CIRC:	## l/m
ADJUSTMENT:	
FEED WATER µS:	### %
PRODUCT WATER µS:	### %
TEMP. COMPENSATION:	#.# %
FEED:	### µS
PROD:	### µS
TEMP. TANK:	###.# °C
Z =	###.#
G =	###.#
TEMP. RETURN:	###.# °C
Z =	###.#
G =	###.#
INLET FLOW F1:	### %
##.# l/m	
REJECT FLOW F2:	### %
##.# l/m	
RETURN FLOW F4:	### %
##.# l/m	
COUNTERS:	
START UP:	## m
SAFETY HW:	### m
DISINF. INTAKE:	## m
CIRCULATION:	## m
RINSE:	### m
SB PAUSE:	### m
SB RUN:	### m
TEST RUN:	### m
TIME STOP OP:	## m
POST RUN:	### m
SCREEN BRIGHTNESS ADJUSTMENT:	60-100%

WS CONTROL   TIME CHANNELS

HIGH TEMP PERIOD 1   INTEGRATED HEAT 1
HIGH TEMP PERIOD 2   INTEGRATED HEAT 2
OPERATION 1   HOTWATER CIRC. 1
OPERATION 2   HOTWATER CIRC. 2
OPERATION 3   HOTWATER CIRC. 3

TIME PERIOD:

START: 23:59   STOP: 23:59

Active (selected) days are highlighted yellow:

Mo	Tu	We	Th	Fr	Sa	Su

OK

Cancel

ADVANCED WATER SAVING

MIN. FLOW V138:	#.# l/m
RESET:	#.# l/m
HYSTERESIS WCF:	## %
P-FACTOR:	###
PULSE LENGTH:	## s
PULSE CYCLE:	### s
START PULSE:	## s

WATER SAVING CONTROL

VALVE 138:	AUT/MAN
	open/OPEN
	close/CLOSE
F1 (INLET):	##.# l/m
F2 (REJECT):	##.# l/m
F4 (RETURN):	##.# l/m
F5 (CONSUM.):	##.# l/m
RECOVERY SET:	## %
HIGH TEMP. DIV:	## °C
RESET:	## °C

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