



UDC 3500 Application Note


Real Time Clock Set Up Group

Introduction

This group configures the Real Time Clock option. The Real Time Clock will automatically adjust for Leap Years to make February 29 days long. The Real Time Clock will not automatically adjust for Daylight Savings Time.

Function Prompts

Table 1 CLOCK Group Function Prompts

Function Prompt Lower Display	Selections or Range of Setting Upper Display	Parameter Definition
HOURS	0 to 23	HOURS
MINUTES	0 to 59	MINUTES
SECONDS	0 to 59	SECONDS
YEAR	2005 to 2099	YEAR
MONTH	JANUARY to DECEMBR	MONTH
DAY	1 to 31	DAY
SET CLK?	NO YES	<p>CHANGE CLOCK SETTING?—Change the clock setting?</p> <p>NO—Leave the clock values as they are.</p> <p>YES—Change the values. Pressing the</p>  <p>key sets the clock. Pressing any other key will not set the clock. “YES” will also clear a CLOCKERR diagnostic message.</p>
ADJUST	-31 to +31	<p>ADJUST—The clock speed can be adjusted via this parameter. A setting of zero represents no adjustment.</p> <p>Each positive increment represents a clock change of +10.7 seconds per month. Each negative increment represents a clock change of -5.35 seconds per month. These values correspond to a total adjustment range of between +5.5 and -2.75 minutes per month.</p>



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Maintenance Set Up Group

Introduction

The Maintenance group prompts are part of the HealthWatch feature. These prompts let you count and time the activity of discrete events such as relays, alarms, control modes and others, to keep track of maintenance needs.

Function Prompts

Table 2 MAINTENANCE Group Function Prompts

Function Prompt Lower Display	Selections or Range of Setting Upper Display	Parameter Definition
TIME1		TIMER 1 —The timer tracks the elapsed time of the selected event.
	DISABLE	DISABLE —Disables the timer.
	LASTRES	LAST RESET —Time elapsed since the last reset.
	AL1 SP1	ALARM 1 SETPOINT 1 —Cumulative time Alarm 1 Setpoint 1 was activated.
	AL1 SP2	ALARM 1 SETPOINT 2 —Cumulative time Alarm 1 Setpoint 2 was activated.
	AL2 SP1	ALARM 2 SETPOINT 1 —Cumulative time Alarm 2 Setpoint 1 was activated.
	AL2 SP2	ALARM 2 SETPOINT 2 —Cumulative time Alarm 2 Setpoint 2 was activated.
	AL3 SP1	ALARM 3 SETPOINT 1 —Cumulative time Alarm 3 Setpoint 1 was activated.
	AL3 SP2	ALARM 3 SETPOINT 2 —Cumulative time Alarm 3 Setpoint 2 was activated.
	AL4 SP1	ALARM 4 SETPOINT 1 —Cumulative time Alarm 4 Setpoint 1 was activated.
	AL4 SP2	ALARM 4 SETPOINT 2 —Cumulative time Alarm 4 Setpoint 2 was activated.
	MANUAL	LOOP 1 MANUAL —Cumulative time Loop 1 was in Manual.
	GUAR SK	GUARANTEED SOAK —Cumulative time the process was outside the guaranteed soak band.
	SOOTNG	SOOTING —Cumulative time process was in sooting state
	DIGIN1	DIGITAL INPUT1 —Cumulative time Digital Input 1 was closed
	DIGIN2	DIGITAL INPUT 2 —Cumulative time Digital Input 2 was closed
	DIGIN3	DIGITAL INPUT3 —Cumulative time Digital Input 3 was closed
	DIGIN4	DIGITAL INPUT 4 —Cumulative time Digital Input 4 was closed
	MANUAL2	LOOP 2 MANUAL —Cumulative time Loop 2 was in Manual.




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Function Prompt Lower Display	Selections or Range of Setting Upper Display	Parameter Definition
TIME 2	Same as TIME 1	TIMER 2 —The timer tracks the elapsed time of the selected event.
TIME 3	Same as TIME 1	TIMER 3 —The timer tracks the elapsed time of the selected event.
COUNT 1	DISABLE MANUAL AL1SP1 AL1SP2 AL2SP1 AL2SP2 AL3SP1 AL3SP2 AL4SP1 AL4SP2 DIGIN1 DIGIN2 DIGIN3 DIGIN4 OUT1*1K OUT2*1K OUT3*1K OUT4*1K OUT5*1K GUAR SK PWRCYC	COUNTER 1 —The counter counts the number of times the selected event has occurred. DISABLE —Counter is not in use. LOOP 1 MANUAL —Number of times Loop 1 has been in Manual mode. ALARM 1 SETPOINT 1 —Number of times Alarm 1 Setpoint 1 has been activated. ALARM 1 SETPOINT 2 —Number of times Alarm 1 Setpoint 2 has been activated. ALARM 2 SETPOINT 1 —Number of times Alarm 2 Setpoint 1 has been activated. ALARM 2 SETPOINT 2 —Number of times Alarm 2 Setpoint 2 has been activated. ALARM 3 SETPOINT 1 —Number of times Alarm 3 Setpoint 1 has been activated. ALARM 3 SETPOINT 2 —Number of times Alarm 3 Setpoint 2 has been activated. ALARM 4 SETPOINT 1 —Number of times Alarm 4 Setpoint 1 has been activated. ALARM 4 SETPOINT 2 —Number of times Alarm 4 Setpoint 2 has been activated. DIGITAL INPUT 1 —Number of times Digital Input 1 has closed. DIGITAL INPUT 2 —Number of times Digital Input 2 has closed. DIGITAL INPUT 3 —Number of times Digital Input 3 has closed. DIGITAL INPUT 4 —Number of times Digital Input 4 has closed. OUTPUT 1 RELAY x 1000 —Thousands of times Output 1 relay has been activated. OUTPUT 2 RELAY x 1000 —Thousands of times Output 2 relay has been activated. OUTPUT 3 RELAY x 1000 —Thousands of times Output 3 relay has been activated. OUTPUT 4 RELAY x 1000 —Thousands of times Output 4 relay has been activated. OUTPUT 5 RELAY x 1000 —Thousands of times Output 5 relay has been activated. GUARANTEED SOAK —Number of times unit has been in guaranteed soak. POWER CYCLE —Number of times unit's power has



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Function Prompt Lower Display	Selections or Range of Setting Upper Display	Parameter Definition
	PVRANGE FAILSAFE TUNE MANUAL2 PVRANG2 FAILSF2 TUNE2	cycled off and on. LOOP 1 PV RANGE —Number of times Loop 1's PV has been out of range. LOOP 1 FAILSAFE —Number of times Loop 1 has been in Failsafe mode. LOOP 1 TUNE —Number of times Loop 1 has been tuned (manually and automatically) LOOP 2 MANUAL —Number of times Loop 2 has been in Manual mode. LOOP 2 PV RANGE —Number of times Loop 2's PV has been out of range. OOP 2 FAILSAFE —Number of times Loop 2 has been in Failsafe mode. LOOP 2 TUNE —Number of times Loop 2 has been tuned (manually and automatically).
COUNT 2	Same as COUNTER1	COUNTER 2 —The counter counts the number of times the selected event has occurred.
COUNT 3	Same as COUNTER1	COUNTER 3 —The counter counts the number of times the selected event has occurred.
PASSWORD	0-9999	PASSWORD —Entering the designated number resets to zero the timer or counter specified by Reset Type. To designate a number as the password: 1. Set all timers and counters to DISABLE. 2. Enter the desired PASSWORD (0-9999). 3. Select a Reset Type (next prompt). The PASSWORD goes into effect when you press the  key, that is, you can then use it to reset the counters and timers.
RES TYPE	NONE TIMER1 TIMER2 TIMER3 ALL TMR COUNT 1 COUNT 2 COUNT 3 ALL CNT ALL T+C	RESET TYPE —Select which timers and/or counters will be reset to zero when the PASSWORD is entered. NONE —No values will be reset TIMER 1 will be reset TIMER 2 will be reset TIMER 3 will be reset ALL TIMERS will be reset COUNTER 1 will be reset COUNTER 2 will be reset COUNTER 3 will be reset ALL COUNTERS will be reset ALL TIMERS AND COUNTERS will be reset



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Read Maintenance Set Up Group

Introduction

The Read Maintenance group prompts are part of the HealthWatch feature. These prompts let you view the values of the HealthWatch Timers and Counters. All of the values in this Set Up Group are “Read Only” and cannot be changed.

Function Prompts

Table -3 READ MAINTENANCE Group Function Prompts

Function Prompt Lower Display	Selections or Range of Setting Upper Display	Parameter Definition
DAYS 1	0 to 9999	Shows elapsed time of Timer 1 in Days.
HRS.MIN1	00.00 to 23.59	Shows elapsed time of Timer 1 in Hours and Minutes.
DAYS 2	0 to 9999	Shows elapsed time of Timer 2 in Days.
HRS.MIN2	00.00 to 23.59	Shows elapsed time of Timer 2 in Hours and Minutes.
DAYS 3	0 to 9999	Shows elapsed time of Timer 3 in Days.
HRS.MIN3	00.00 to 23.59	Shows elapsed time of Timer 3 in Hours and Minutes.
COUNTS 1	0-9999 (1 = 1000 counts for output relays 1 to 5)	Shows the value of Counter 1.
COUNTS 2	Same as COUNTS 1	Shows the value of Counter 2.
COUNTS 3	Same as COUNTS 1	Shows the value of Counter 3.



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Time Events Set Up Group

Introduction

This group appears only when the Real Time Clock option is installed. These selections allow the user to program the instrument to perform specific functions at the same time of day five or seven days a week or on one specific date and time. Up to two independent functions can be configured.

Function Prompts

Table 4 TIME EVT Group Function Prompts

Function Prompt Lower Display	Selections or Range of Setting Upper Display	Parameter Definition
EVENT 1	NONE ALM1SP2 ALM2SP2 ALM3SP2 ALM4SP2 STrSP/R TIMER AUTO MAN FS USE SP1 USE SP2	EVENT 1 —The function performed by this event. NONE ALARM 1 SETPOINT 2 (NOTE 1) ALARM 2 SETPOINT 2 (NOTE 1) ALARM 3 SETPOINT 2 (NOTE 1) ALARM 4 SETPOINT 2 (NOTE 1) START SETPOINT PROGRAM OR RAMP TIMER AUTOMATIC MODE (NOTE 2) MANUAL MODE AT FAILSAFE OUTPUT (NOTE 2) CONTROL TO LOCAL SETPOINT 1 (NOTE 2) CONTROL TO LOCAL SETPOINT 2 (NOTE 2)
TIME 1	5DAY WK 7DAY WK DAYofWK CALENDR	TIME 1 —Time of first event. FIVE DAY WEEK —The configured event will occur at the same time Monday through Friday. SEVEN DAY WEEK —The configured event will occur at the same time Sunday through Saturday. SAME DAY EVERY WEEK —The configured event will occur once a week at the configured time. CALENDAR —The configured event will occur once at a specific date and time.
HOUR 1	0 to 23	HOUR —24 Hour setting
MINUTE1	0 to 59	MINUTE —60 Minute setting
MONTH 1	JANUARY – DECEMBR	MONTH —Month of the Year (NOTE 3)
DAY 1	1 to 31 1 to 7	DAY —Day of Month or Week When “CALENDR” is configured: Day of the month (NOTE 5) When “DAYofWK” is configured: Day of the week (Sunday = 1, Saturday = 7) (NOTE 4)



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Function Prompt Lower Display	Selections or Range of Setting Upper Display	Parameter Definition
EVENT 2	Same as Event 1	EVENT 2
TIME 2	Same as Time 1	TIME 2
HOUR 2	Same as Hour 1	HOUR 2
MINUTE2	Same as Minute1	MINUTE 2
MONTH 2	Same as Month 1	MONTH 2 (NOTE 3)
DAY 2	Same as Day 1	DAY 2 (NOTE 4)

NOTE 1: When triggered, the configured alarm becomes active for 1 minute and then turns off. The Time Event setting is in addition to whatever the Alarm X Setpoint 2 Type (where X = 1, 2, 3 or 4) is configured for and effectively acts as an OR condition.

NOTE 2: These prompts are loop dependent. When only one loop is configured, then both EVENT 1 and EVENT 2 operate on Loop 1. When Two Loops or Cascade are configured, then these prompts for EVENT 1 operate only on Loop 1, while these prompts for EVENT 2 operate only on Loop 2.

NOTE 3: These prompts appear only when the TIME 1 or TIME 2 configuration is "CALENDR".

NOTE 4: These prompts appear only when the TIME 1 or TIME 2 configuration is "CALENDR" or "DAYofWK".

NOTE 5: The range of DAY 1 or DAY 2 is restricted based upon the MONTH 1 or MONTH 2 selection. For example, a selection of APRIL for the MONTH 1 configuration will restrict the DAY 1 configuration to a range of 1 to 30.