

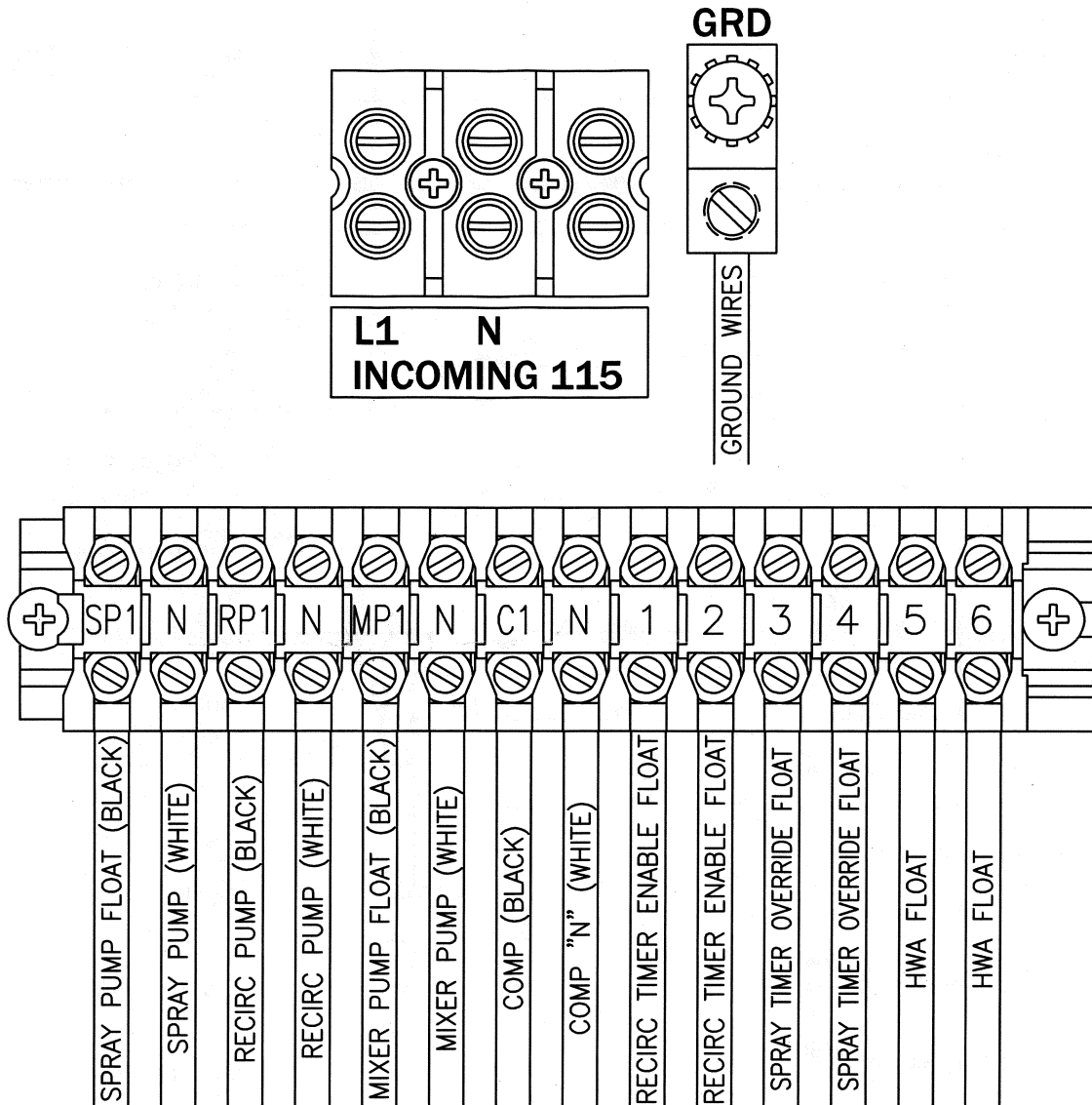
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CONNECTION DIAGRAM

REQUIRED TORQUE FOR TERMINAL BLOCK SCREWS IS 16 in-lbs.

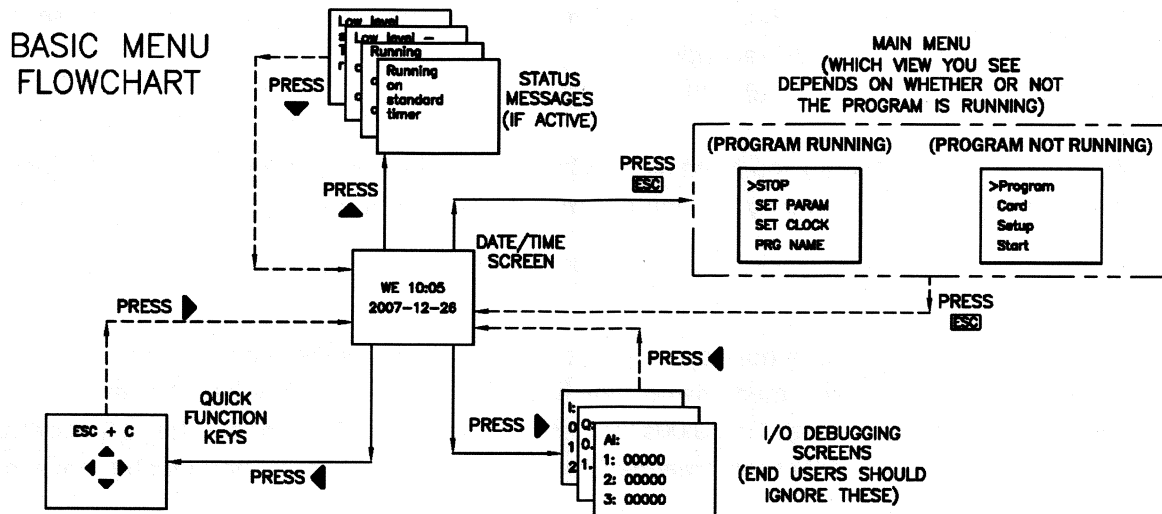


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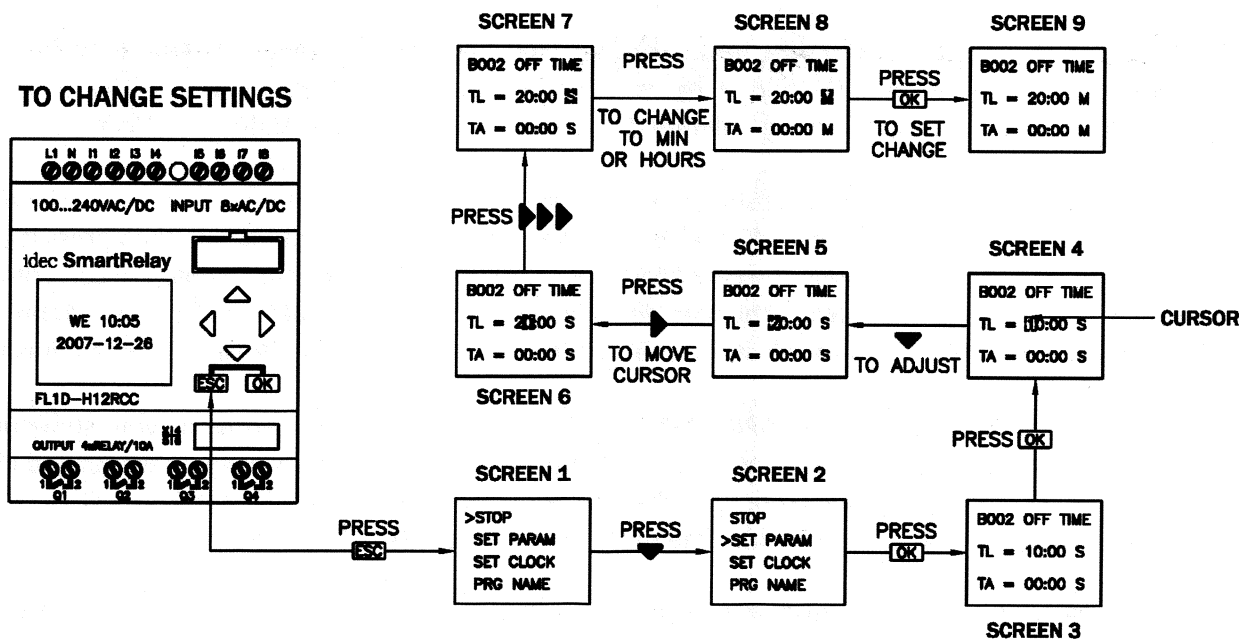


CHANGES		TOLERANCES	DRAWN BY	DATE	TERMINAL CONNECTIONS	
F		DECIMALS .xxx = ±.005	C. BARRICK	12/2/2013		
E		.xx = ±.010	MATERIAL SPECIFICATION: AS NOTED		SCALE:	PART NO.
D		FRACTIONAL			FULL	120105
C		x/x = ±.1/64				
B		ANGLES				
A		x° = ±1/2°				

Refer to the menu flowchart for assistance in navigating to the "main menu". If a message screen is active, first use the up or down keys to find the "date/time" screen. Now you can press "ESC" to display the main menu. From here, press the down arrow key to select "set param". Now the up or down keys will display various parameters as noted on the next page.



Use this example as a guide for changing any of the parameters.



NOTE: "TL" INDICATES THE SETTING
 "TA" INDICATES THE TIME ELAPSED IN CURRENT CYCLE.
 TO SET 93 SECONDS - SET 01:33 M.
 NOTE THAT THIS IS A GENERIC EXAMPLE TO SHOW THE PROCESS
 THIS SPECIFIC SETTING MAY NOT EXIST IN YOUR PANEL

While setting timers, note the following:

“TA” allows you to watch the timer countdown (this is not something you can program / edit)

“T” represents the time setting – this is what you want to edit

Timers may be configured for Hours:minutes, minutes:seconds, or seconds:1/100^{ths} of a second.

“05:10m” means 5 minutes, 10 seconds

“05:10s” means 5 seconds and 10/100^{ths} of a second.

00:90m is not a valid setting; you must use 1:30m instead. Seconds cannot exceed 59 (values after the “:” have a range that is limited by the unit of time – 59 for minutes and seconds, 99 for 1/100^{ths} of seconds)

OFF_TIME: Set the “off” duration of a dose cycle – which in turn operates the recirculation pump. The cycle is set up as an “off-start” timer, meaning nothing happens until the off time has expired.

Default setting: T=00:30m (Set T = 00:00s for demand mode – IE: No timer cycles, float control only)

*****Default value only recommended for testing purposes, must be adjusted once installed**

ON_TIME: Set the “on” duration of a dose cycle – which in turn operates the recirculation pump. This will follow completion of the “off” count.

Default setting: T=01:00m

*****Default value only recommended for testing purposes, must be adjusted once installed**

SPR_T1-3 1: Spray timer, Set the start time for the spray pump. Note that this timer operates in conjunction with the physical date and time of day. You must set the date and internal clock correctly. Also note that the time is set using “military time” – 0:00 to 23:59 where 0:00 is 12:00am.

To set the clock, use the flow chart shown here to navigate to the “main menu”. Press the down arrow twice to select “set...”. Press “ok”. “Clock” is selected by default. Press “ok” again, then press it one more time. Now you are editing the date/clock. Use the up or down keys to change the current value. Use the left or right keys to select the next digit. Once you have set the day and the clock, keep pressing the right arrow key to select the year. Continue editing the date. Press “ok” when finished.

Now, if you navigate back to the “**SPR_T1-3 1**” parameter, you can finish setting up your spray timer.

D: Each letter represents a day of the week. This time “cam” of the timer will apply the on and off time for each day that is selected. Days that are not selected are simply blanked out with a “-” mark.

ON: Turn the pump on at this specific time of the day, run for “**SPR_ON**” time (see next page)

SPR_T1-3 2 ... SPR_T4-6 3: More “pages” of the same timer. These allows you to specify a different “on” and “off” time for other days of the week. You could also set each page such that **D** = MTWTFSS and have up to 6 events per day.

SPR_T default settings:

SPR_T1-3 1:	SPR_T1-3 2:	SPR_T1-3 3:	SPR_T4-6 1:	SPR_T4-6 2:	SPR_T4-6 3:
D = MTWTFSS	D = MTWTFSS	D = MTWTFSS	D = MTWTFSS	D = _____	D = _____
ON = 21:30	ON = 00:00	ON = 1:11	ON = 03:30	ON = 0:00	ON = 0:00

SPR_ON: Set the duration of a spray dose (only operates while running in spray mode). Only begins counting after a spray event is triggered. (see “**SPR_T..**” on previous page)

Default setting: T=00:30m (run for 30 seconds at each spray event)

ENA_DLY: The “Enable” float in conjunction with the dose timer cycle allows operation of the recirculation pump. It is advisable to use a float here in order to prevent the pump from running while the tank is low or empty. However, you may simply “jump out” the float terminals with a piece of wire if this is not a possibility. The “**ENA_DLY**” requires that the float remain on for a specified period of time before allowing the pump to operate. This removes contact chatter due to bouncing floats.

Default setting: T=00:50s (Minimum recommended setting)

OVR_DLY: The “override” float bypasses the spray timer and forces the spray pump to run if the tank is in danger of overflowing. “**OVR_DLY**” requires that the float remain on for a specified period of time before allowing the pump to operate. This removes contact chatter due to bouncing floats.

Default setting: T=00:50s (Minimum recommended setting)

CSR_DLY: Each pump is monitored for current. If the pump is called to run but the CSR detects no current, an alarm will sound off. This delay provides some time for the sensor to respond to the current so that nuisance tripping is avoided. This setting should be suitable as-is. Adjustment should only be considered as a last resort option.

Default setting: T=01:00s (Minimum recommended setting)

RCRC_DLY: Allows delaying the recirculation cycles by a set number of days after initial installation. The number of days remaining before the cycle is allowed to run will be displayed in one of the message screens. To adjust this parameter, you must **ONLY** edit the “**STV**” setting. **Changes to other settings will break this function!!!** After setting STV to a new value, you must cycle the power to update the setting in the PLC and make it “active”.

Default setting: STV=36 (Wait 36 days after initial power up)

Resetting counters / ETMs:

Press and hold “ESC”, then press one of the direction keys as noted below to reset the each event

“ESC” + **UP**: Reset spray pump cycle counter and elapsed time meter

“ESC” + **DOWN**: Reset recirculation pump CC and ETM

“ESC” + **LEFT**: Reset CSR alarm count and ETM

“ESC” + **RIGHT**: Reset High Water and air loss alarm count and ETM

