



# SC-310 SERIES

## TIMING RELAY MODULE INSTALLATION GUIDE

### PRODUCT SPECIFICATIONS

POWER REQUIREMENTS:	Voltage	12VDC	24VDC	12VAC	24VAC
	Active	10.0mA	17.0mA	12.0mA	18.0mA
	Relay On	60.0mA	44.0mA	58.0mA	45.0mA
POLARIZED INPUT(S):	Yes, on DC control inputs				
STATUS INDICATOR:	Dual color LED (green = timing active; red = relay energized); one per module position				
CONTACT RATINGS:	Resistive load:	5A @ 30VDC, 120VAC, 240VAC; 1/8HP @ 250VAC			
	Inductive load:	1.5A @ 24VDC, 120VAC, 240VAC			
	Power:	150W, 1200VA			
CONTACT CONSTRUCTION:	Dry form "C" (SPDT)				
ENVIRONMENTAL:	32°F to 120°F (0°C to 49°C) @ 93% RH (@ 32°C), Non-Condensing / Non-Freezing				
WIRING:	Solid or stranded: #12 to #22 AWG terminals				
"/T" VERSIONS:	3.5" wide, low profile snap track provided with mounting screws; optional TK-CL ready				
"/C" VERSIONS:	Backbox:	18ga CRS, plated with 1/2" conduit knockouts top and bottom			
	Cover Material:	MR-311, MR-321: plastic ABS 94V-0 ("/C" Grey, "/C/R" Red)			
		MR-312, MR-313, MR-322, MR-323: 18ga CRS ("/C" Grey, "/C/R" Red)			
APPROVALS:	"/T" versions: UL Recognized Component*				
	(UL864, UOXX2, UUKL2) (UL508, NMTR2) (UL916, PAZX2) (UL2017, UEHX2), File #S3403				
	"/C" versions: UL Listed* (UL864, UOXX, UUKL) (UL508, NMTR) (UL916, PAZX) (UL2017, UEHX), File #S3403				
	*UOXX (UL864) = Control Unit Accessories, System; 2 = Component; 7 = Certified for Canada				
	*UUKL (UL864) = Smoke Control System Equipment, System; 2 = Component				
	*NMTR (UL508) = Miscellaneous Apparatus, System; 2 = Component				
	*PAZX (UL916) = Energy Management Equipment, System; 2 = Component				
	*UEHX (UL2017) = General Purpose Signaling Devices and Systems, System; 2 = Component				

### TIMING RELAY OPERATION BASICS

**DELAY ON:** Delays the transfer of a relay's contacts from the normal (non-energized) state until after a present amount of time has elapsed following application of the control input voltage.

**DELAY OFF:** Automatically returns a relay's contacts to the normal (non-energized) state after a preset amount of time has elapsed following application of the control input voltage, even though the control input voltage remains present. Also known as a "cut off" or "shut down" timer.

**RESET / RESTART:** Removal of control input voltage will "reset" the module. Momentary interruption of the control input voltage will "restart" the module.



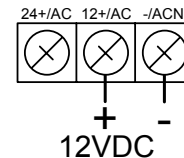
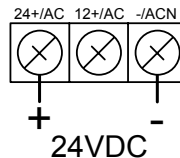
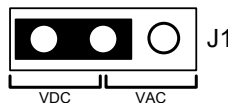
**CAUTION:** DE-ENERGIZE ALL POWER BEFORE INSTALLATION OR SERVICE  
**CAUTION:** DE-ENERGIZE POWER PRIOR TO REMOVING OR INSTALLING JUMPERS  
**NOTE:** INSTALLATION LIMITS UNDER JURISDICTION OF LOCAL AUTHORITY (NFPA STANDARDS 70, 72)

### INSTALLATION STEP 1: Select control input voltage and type (Shipped with J1 in "VDC" position)

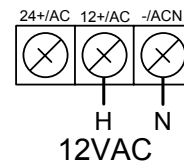
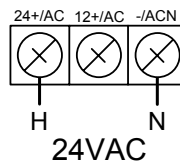
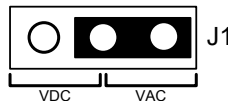
**NOTE:** INPUT POWER SHOULD BE UL LISTED FOR FIRE PROTECTION SIGNALING SYSTEMS WHEN USED FOR FIRE ALARM APPLICATIONS.

**NOTE:** DC COIL INPUT IS POLARIZED

DC TYPE VOLTAGE (Polarized)



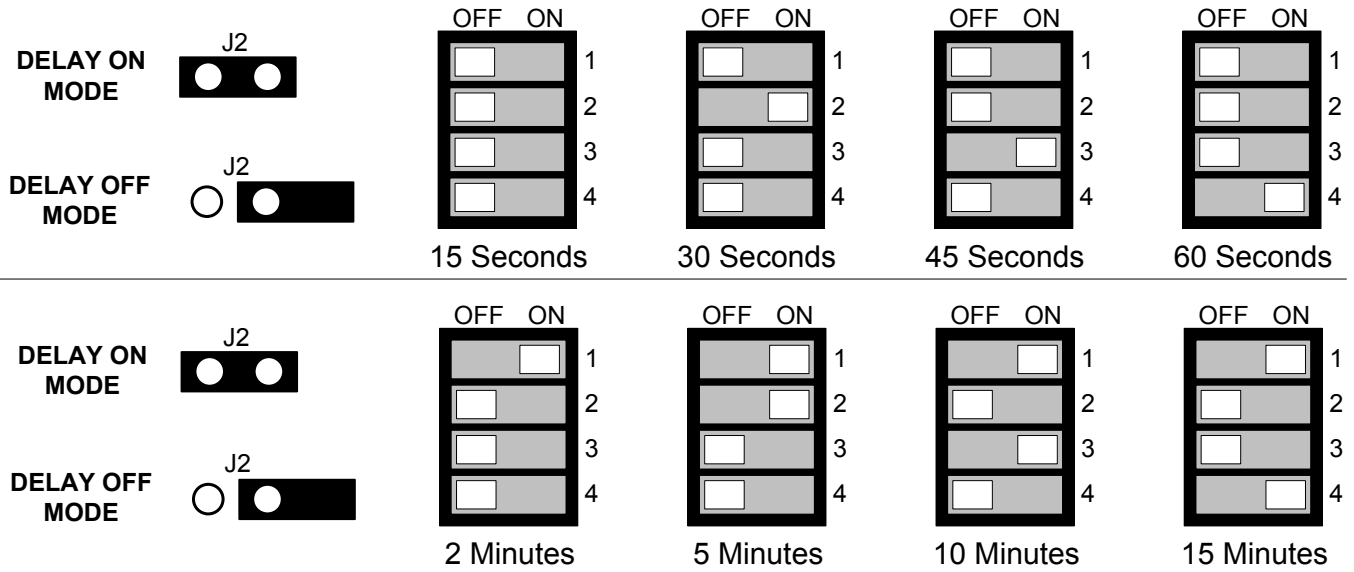
AC TYPE VOLTAGE



RECOGNIZED COMPONENT

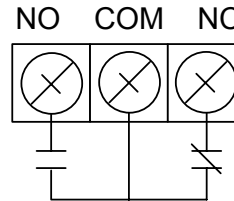
FOR ADDITIONAL APPLICATION INFORMATION AND/OR ASSISTANCE, PLEASE CONTACT OUR TECHNICAL SUPPORT HOTLINE. (888) 332-2241

**INSTALLATION STEP 2:** Select mode and time unit / increment (Shipped with J2 in "DELAY ON" position and Switches 1 through 4 in "OFF" position = 15 seconds)



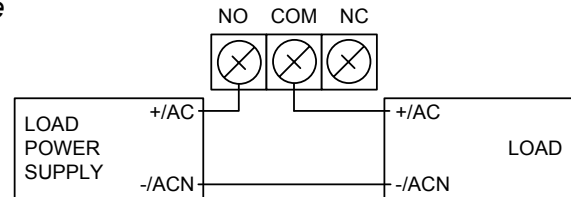
**INSTALLATION STEP 3:** Connect relay contacts to load

Resistive load: 5A @ 30VDC, 120VAC, 240VAC; 1/8HP @ 250VAC  
 Inductive load: 1.5A @ 24VDC, 120VAC, 240VAC  
 Power: 150W, 1200VA



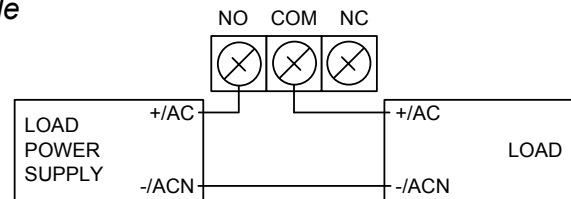
**INSTALLATION EXAMPLE 1:** Use in "DELAY ON" Mode

When control voltage is applied, the status LED is illuminated GREEN for the pre-set delay period. After the delay period, the status LED illuminates RED and the relay turns ON the load.



**INSTALLATION EXAMPLE 2:** Use in "DELAY OFF" Mode

When control voltage is applied, the load is turned ON and the status LED is illuminated RED for the pre-set delay period. After the delay period, the status LED illuminates GREEN and the relay turns OFF the load.



**INSTALLATION EXAMPLE 3:** Use of two timers; one in "DELAY ON" Mode, one in "DELAY OFF" Mode

The same control input voltage source is used in parallel for both timed relay modules.

The load will not turn on until after the "DELAY ON" relay times out. Once the load turns ON, it will remain on until the "DELAY OFF" relay times out. The total load ON time would be the "DELAY OFF" time minus the "DELAY ON" time.

