



You in Control

SC-410 SERIES SEQUENCING RELAY MODULE

PRODUCT DESCRIPTION

The SC-410 Series Sequencing Relay modules provide convenient, programmable timed pattern control functionality for a large range of applications. The module may be easily field configured (and re-configured) on demand for control input voltage type and contact switching sequence patterns.

The SC-410 incorporates an extremely accurate microprocessor-based digital sequencing circuit for repeatable reliability and long life. In addition, each module includes a dual color LED, which provides visual status of control input voltage, sequence circuitry activation and relay contact state. Module reset is accomplished by simply removing and/or momentarily interrupting the control input voltage. Sequencing relays may be used in cascaded and paralleled configurations (and/or matrixes of both) for nearly endless custom application functionality. The SC-410 Series Sequencing Relay is suitable for Fire Alarm, Security, Access Control, CCTV, HVAC, Industrial Process Control, Energy Management, Lighting Control and General Purpose applications.



SC-41 I/T

FEATURES

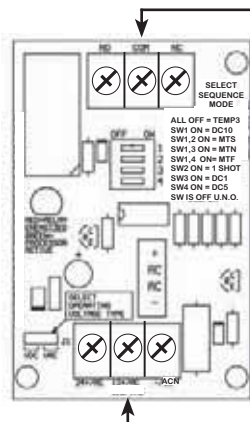
- ❖ Control input voltage choices of 12 or 24 VAC/VDC
- ❖ DC type control inputs are polarized for use in supervised circuits and polarity reversal logic applications
- ❖ Sequencing mode choices of :
 - One Shot
 - Temporal (ANSI Temporal Code 3)
 - Duty Cycle (including 1, 5 and 10 minute “ON” time choices)
 - March Time Beat (including 30, 60 and 120 beats/minute choices)
- ❖ Accurate microprocessor digital pattern (or sequence) timing to 1/1,000,000th of a second
- ❖ All programming choices are easily field configured or re-configured without special tools
- ❖ Dual color LED status indicator yields “No-Tools” diagnostics; green for sequencing circuitry active and red for relay energized
- ❖ On board 5A dry form “C” (SPDT) contact for direct load switching and reverse logic functionality
- ❖ “/C” versions mounted in sturdy enclosures with LED viewing port(s)
- ❖ “/C/R” versions with red covers for NYC and other uses
- ❖ “/T” versions come complete with track and mounting hardware - track is pre-configured for an optional DIN/“A” series rail mounting clip (TK-CL)
- ❖ Comprehensive selection of Listings and Approvals

WIRING

(TYPICAL FOR ONE MODULE POSITION)

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

NOTE: DC CONTROL INPUTS ARE POLARIZED.



SPDT Contact:

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

Control Input Voltages:

12 (9.6-13.2) VAC/VDC @ 62mA
24 (19.2-26.4) VAC/VDC @ 47mA



RECOGNIZED COMPONENT



CSFM LISTED
PENDING

MEA ACCEPTED
PENDING

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**A
HALMA
GROUP
COMPANY**

SEQUENCING OPERATIONS

ONE SHOT: Yields a relay contact transfer for one second after a sixty second delay upon control voltage input, provided the control input voltage is still present after the sixty second delay.

TEMPORAL: Yields a relay contact transfer at an ANSI Temporal (Code 3) rate as long as the control voltage is present.

DUTY CYCLE: Yields a repeated transfer of relay contacts on and off (for equal intervals) at a preset interval, as long as the control voltage is present. Options include one, five and ten minute on/off intervals.

MARCH TIME BEAT: Yields a repeated transfer of relay contacts on and off (for equal intervals) at a preset beats-per-minute (BPM) frequency, as long as the control voltage is present. Options include the following:

March Time Slow: 30BPM (0.5Hz); relay contacts are on for 1 second, off for 1 second

March Time Normal: 60BPM (1Hz); relay contacts are on for 0.5 second, off for 0.5 second

March Time Fast: 120BPM (2Hz); relay contacts are on for 0.25 second, off for 0.25second

PRODUCT SPECIFICATIONS

MODEL NUMBER	MODULE POSITIONS	TRACK MOUNTED H X W X D	ENCLOSURE MOUNTED H X W X D	COVER MATERIAL	UL* FILE S3403/*E232859
SC-411/C	1		5.13" (131mm) 3.13" (80mm) 2.50" (64mm)	Grey ABS 94V-O Plastic	UOXX UOXX7 UUKL NKCR* PAZX UEHX
SC-411/C/R	1			Red ABS 94V-O Plastic	
SC-411/T	1	3.50" (89mm) 2.13" (54mm) 1.50" (38mm)			UOXX2 UOXX8 UUKL2 NKCR2* PAZX2 UEHX2
SC-414/C	4		5.13" (131mm) 9.50" (241mm) 2.50" (64mm)	Plated 18ga CRS	UOXX UOXX7 UUKL NKCR* PAZX UEHX
SC-414/C/R	4			Red 18ga CRS	
SC-414/T	4	3.50" (89mm) 8.50" (215mm) 1.50" (38mm)			UOXX2 UOXX8 UUKL2 NKCR2* PAZX2 UEHX2

POWER REQUIREMENTS:

Voltage	Active	Relay On
12VDC	10mA	62mA
12VAC	13-26mA ¹	58mA (1Depending on program selection)
24VDC	16mA	47mA
24VAC	20mA	44mA

POLARIZED:

Yes, on DC control inputs

STATUS INDICATOR:

Dual color LED; Green = sequencing circuit active; Red = relay energized

CONTACT CONSTRUCTION:

Dry Form "C" (SPDT)

CONTACT RATINGS:

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

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 plastic snap track with mounting screws; optional TK-CL ready

"C" VERSIONS:

Backbox: 18ga CRS, plated with 1/2" conduit knockouts top and bottom

*UOXX (UL864) = Control Unit Accessories, System; 2=Component; 7=Certified for Canada; 8=Component Certified for Canada

*UUKL (UL864) = Smoke Control System Equipment, System; 2=Component

NKCR (UL508) = Auxiliary Devices; 2=Component

*PAZX (UL916) = Energy Management Equipment, System; 2=Component

*UEHX (UL2017) = General Purpose Signaling Devices and Systems, System; 2=Component

NOTICE: The information contained in this document is intended only as a summary and is subject to change without notice. The products described have specific instructional/installation documentation, which covers various technical, approval, code, limitation and liability information. Copies of this documentation along with any general product warning and limitation documents, which also contain important information, are provided with the product and are also available from Air Products and Controls Inc. The information contained in all of these documents should be considered before specifying or using the products. Any example applications shown are subject to the most current enforced local/national codes, standards, approvals, certifications, and/or the authority having jurisdiction. All of these resources, as well as the specific manufacturer of any shown or mentioned related equipment, should be consulted prior to any implementation. For further information or assistance concerning the products, contact Air Products and Controls Inc. Air Products and Controls Inc. reserves the right to change any and all documentation without notice.