

JC Systems By TMC Services

-M384

Model A2192-M384 Chamber Enhancer with "SPLIT BAND SMART STAGING"TM

-M384

Used Exclusively for the Micristar line of controllers.

EPROM version MIS027 "ONLY"

- **SIMPLIFIES SETUP OF CHAMBERS WITH MULTIPLE STAGES OF HEATING/COOLING**
- **HI HEAT & HI COOL POWER RATIO ENABLE ACTION**
Hi Heat/Cool are enabled based on the ratio (%) the Lo Heat/Cool contributes to the total output.
- **SMOOTH LINEAR TRANSITION OF HI OUTPUT**
Provides a smooth linear transition from the Lo to Hi output stages.
- **ELIMINATES DISCONTINUITY SEEN IN TIME DELAY STAGING**
There are no uncontrollable power transitions of the HI Cool/Heat when the controller demand transitions from less than 100% to 100% output demand.
- **MTO (COMPRESSOR TIME OUT) - Fixed at 3 minutes**
- **MTO ACTION - PROM -MIS027**

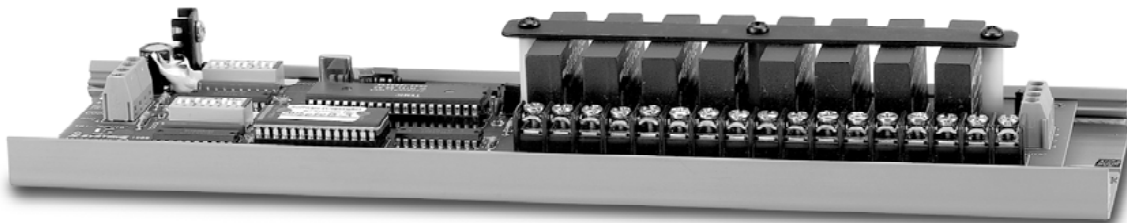
Used on systems with independent cooling and De-humidify compressors (Cool Machine Time Out). Independent MTO outputs provided. The MTO is started whenever a cool signal (TB1-3) is received. Ext. de-humidify MTO is started whenever a signal is received on TB3-2. TB3-3 logic output, TB3-4 +5vdc.

- **SELECT BYPASS FOR LO OR HI COOL**
Lo/Hi Cool Bypass Select Jumper - ON for LO Cool, OFF for HI Cool.
Bypass output is automatically disabled when the MTO times out.
- **EIGHT SOCKETED LOCATIONS**
AC or DC plug-in solid state relays (SSR) for control and staging outputs

INDEPENDENT SECOND CHANNEL INPUT/OUTPUTS ON TB3

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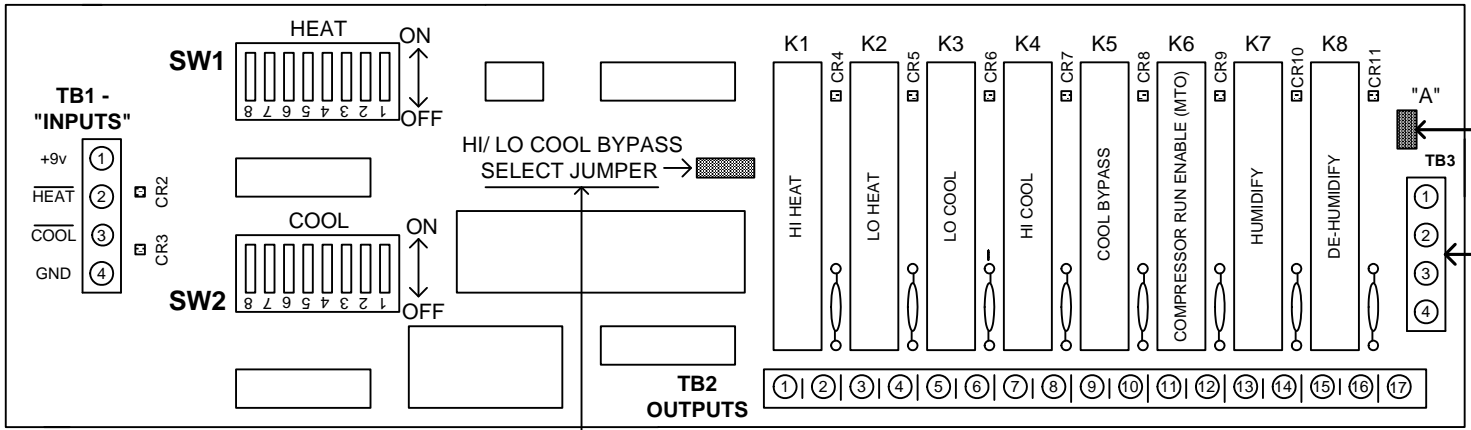
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A2192 Chamber Enhancer mounted in Snap Track, with optional SSR's. Mounting dim. 3" x 12"

JC SYSTEMS By TMC Services, Inc.

Document: A2192_M384Brochure.pdf Revision: 8/14/2008

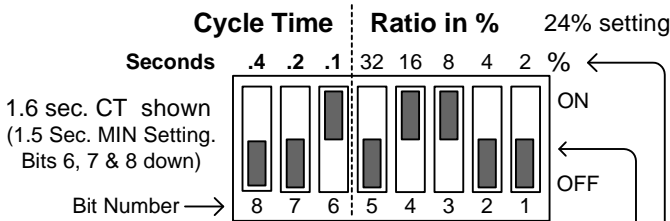


COOL BYPASS SELECT JUMPER:

"ON" = LO STAGE BYPASS, "OFF" = HI STAGE BYPASS

MTO: Fixed at 3 minutes for both cool and de-humidify.

SW1: HEAT, SW2: COOL PROM- MIS027 "ONLY"



TB3: Inputs for second channel of control.

Pin 1 - Humidity
Pin 2 - De-Humidify

Outputs:

Pin 3 - External MTO (De-Humidify)
Pin 4 - +5vdc for external MTO SSR

Jumper "A" must be installed for +5vdc on TB3 Pin 4

"Cycle Time"

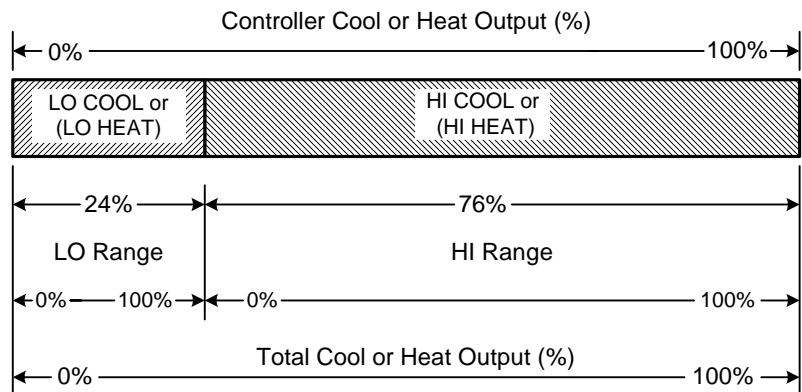
Dip switch setting must match the controller's cycle time setting. Range: 1.5 to 2.2 seconds in 0.1 second increments. ("0" defaults to 1.5 sec.)

"Ratio in %" (Heat or Cool)

Switch setting is determined by the % output the LO Heat or Cool contributes to the total (LO + HI) output. The example shows the LO output being 24% of the total output and the Hi output as 76% of the total output.

The example below represents a LO to HI ratio of appx. 1:3. A controller output of 0 to 24% produces 0 to 100% LO output. A controller output of 24 to 100% produces 0 to 100% HI output. The % output of the total Cooling or Heating is always equal to the % output demand of the controller.

This staging approach provides a constant system gain over the total controller proportional band, and smooth linear transitions from LO to HI ranges of Cooling or Heating.



Bit settings: 5 4 3 2 1 1 = ON, 0 = OFF	% value of LO to total ratio (Heat or Cool)	
0 0 0 0 0	0	Disable HI
0 0 0 0 1	2	
0 0 0 1 0	4	
0 0 0 1 1	6	
0 0 1 0 0	8	
0 0 1 0 1	10	
0 0 1 1 0	12	
0 0 1 1 1	14	
0 1 0 0 0	16	
0 1 0 0 1	18	
0 1 0 1 0	20	
0 1 0 1 1	22	
0 1 1 0 0	24	(Shown)
0 1 1 0 1	26	
0 1 1 1 0	28	
0 1 1 1 1	30	
1 0 0 0 0	32	
1 0 0 0 1	34	
1 0 0 1 0	36	
1 0 0 1 1	38	
1 0 1 0 0	40	
1 0 1 0 1	42	
1 0 1 1 0	44	
1 0 1 1 1	46	
1 1 0 0 0	48	
1 1 0 0 1	50	
1 1 0 1 0	52	
1 1 0 1 1	54	
1 1 1 0 0	56	
1 1 1 0 1	58	
1 1 1 1 0	60	
1 1 1 1 1	62	