

PREISER SCIENTIFIC

Operating Instructions
For

Z91-2290-83
115V/60Hz
Air Drying Oven

For units manufactured after February 2019

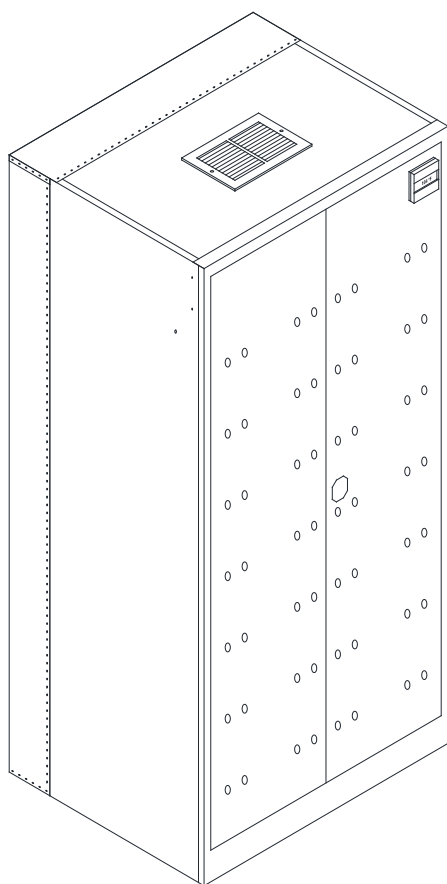
Preiser Scientific

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Z91-2290-83

Air Drying Oven

115V/1/60Hz

Preiser Air Drying Oven 115V/1/60Hz

The Preiser Air Drying Oven provides for the partial drying of coal to bring it to near equilibrium with room temperature before further reduction and division in accordance with ASTM D2013. Oven is often used for drying float/sink samples.

Features

- Large and roomy mechanical convection oven that contains 6 shelves.
- Control panel with solid-state digital temperature control that maintains temperature uniformity throughout the oven using two 24 hour interval timers to operate the heating elements and the fan motor.
- Temperature range from 0-105°F.
- Can be used with a variety of tray sizes.

General Specifications

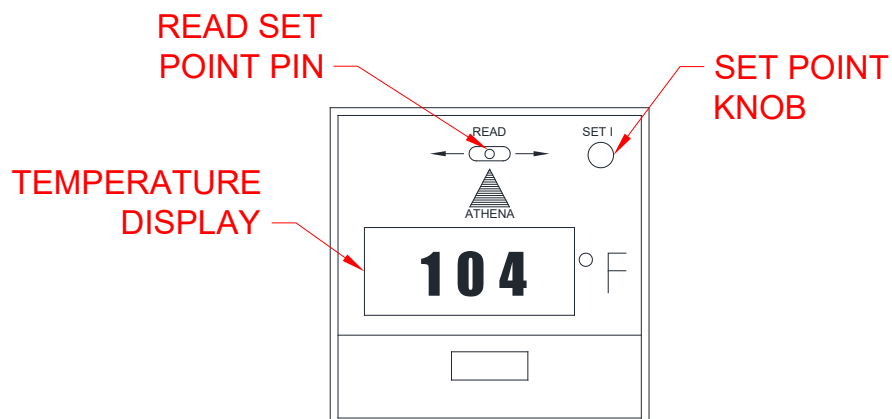
- Dimensions: 35"W x 78 ½"H x 29 ½"D; Weight: 290 lb.
- Power requirement: 115V/60Hz from 20 Amp circuit breaker.
- Solid-state temperature control unit provided with a digital read out fused 2 Amp.

Operating Instructions

Plug the oven in to a 120V receptacle that is fed from at least a 20 Amp circuit breaker. The digital readout of the control unit should now indicate the temperature inside the oven in degrees Fahrenheit. The thermocouple providing a signal to the control unit is attached to and positioned approximately 2 to 3 inches below the center of the most centrally positioned shelf.

The solid-state temperature controller automatically controls the operating temperature of the oven. The operating temperature is set in the following manner:

- Press and hold the "Read Set Point Pin" toward the "Set Point Knob."
- The current set point will appear in the digital display.
- While continuing to hold the "Read Set Point Pin," twist the "Set Point Knob" to adjust the selected operating temperature.
- Release the "Read Set Point Pin" and the current temperature inside the oven will reappear in the digital display.



Switch the timers to the "I" position, (Always On) or program the timers using the enclosed timer instructions. The timers can be programmed for a maximum of 8 on/off cycles per day and can also be programmed with different cycles for different days of the week. NOTE: When setting the time on the timers, be sure to also set the current day of the week. (1=Monday, 2=Tuesday, etc.) Also make sure the timers are in sync with one another.

When the power switch is on and timers are activated, the heating elements will begin heating action if the pre-selected operating temperature is above ambient temperature.

The provisions of ASTM Procedure D2013 specify that an oven that is used for air-drying of coal samples should be operated at a temperature from 18° to 27°F above ambient. If the room temperature in which the oven is located is above 104°F, only room air should be circulating through the oven with the heaters turned off. This is accomplished by setting the operating temperature of the control unit to 104°F or lower. Leave the power switch "on." This will provide power for the blower operation only.

Parts List for Air Drying Oven

Z95-2290-06	Timers
Z95-2290-89	Digital Controller
Z95-1000-02	2 Amp Fuse
Z95-2290-87	Blower Motor
Z95-1100-02	Solid State Relay
Z95-2290-50	Heating Element
Z95-2290-90	Probe
Z95-2290-85	Extra Shelves
Z95-2290-95	115V Switch

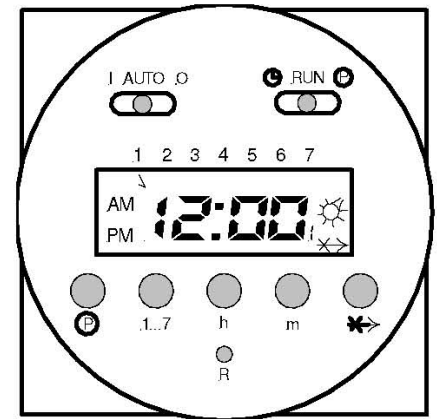
Series 884 digital time clock: setting instructions

This time clock provides flexible timing for daily and/or weekly programming. Setting the 884 is simple and fast by means of push buttons and display prompts. This timer combines 24 hour/7 day timing. Up to 8 on/off operations are allowed for each day for a total of up to 56 switching cycles per week.

Minimum time setting is 1 minute. Lithium battery provides 5 year backup.

Note: to save time you can set up each on/off cycle;

- A) to be unique for each individual day, or
- B) for Monday to Friday (days 1 to 5), or
- C) for weekends only (days 6 & 7), or
- D) for all days except Sunday (days 1 to 6) , or ...
- E) the entire week at one time. This can save a lot of time when programming the "on" and "off" cycles.



Directions: slide the "RUN" switch to "P",

- Press the "1...7" seven times and notice a single arrow will move in steps below the 1-7 numbers, indicating the individual days of the week
- The next time you press the button you will see days 1 to 5 highlighted with arrows (Monday to Friday).
- The next time you press "1...7" you will see arrows highlighting 6 and 7 (weekends).
- The next time you press "1...7" you will see arrows highlighting all days except Sunday
- The next time you press "1...7" you will see arrows highlighting all days of the week.

#1 Setting the current time and current day:

- slide "RUN" switch to left symbol of clock face.
- press 1....7 button until arrow points to current day (1=Monday, 2=Tuesday, etc.). Press " h " then " m " buttons to set the current time. The "PM" indicator shows noon to 11:59 p.m.
- slide "RUN" switch to "run". The clock colon will blink between the hours and minutes.

#2 Setting each cycle to "switch on"

- slide the RUN switch to " P ", a "1" indicates this is the first switch cycle and a "bulb" icon indicates a switch-on condition (circuit closes). (Hint: odd numbers indicate a "switch-on" cycle.)
- press 1....7 button until arrows point to selected day(s) you want this ON cycle to occur. (see **"Note"** above instructing how to choose days of the week)
- press " h " and " m " buttons to show switch-on time, noting the "PM" indicator.

#3 Setting each cycle to "switch off"

- slide RUN switch to " P " press "p" button, note switch cycle number changes to 2 and bulb blinks, indicating switch-off (circuit opens). (Hint: even numbers indicate a "switch-off" cycle.)
- press 1...7 button until arrows point to selected day(s) you want this OFF cycle to occur.
- press " h " and " m " button to select-switch-off time.

* Remember you can repeat the above steps to program up to 8 on/off events for each day of the week. By pressing the lower " P " button you can advance to the desired on/off cycle.

- slide RUN switch to RUN position.
- The clock colon will blink.

#4 Autorun mode

- set time and day and desired switch cycles.
- slide set switch to "RUN" and mode switch to "AUTO". Switching will begin with the next switch-on set time.

#5 To switch the override ON

- slide mode switch to " I ".
- the switch remains on indefinitely (circuit closed).

#6 To switch the override OFF

slide mode switch to " 0 ". The switch remains off indefinitely (circuit open).

#7 Skip cycle

in automatic run mode, press the " X—> " button, the next program is skipped

#8 Setting error

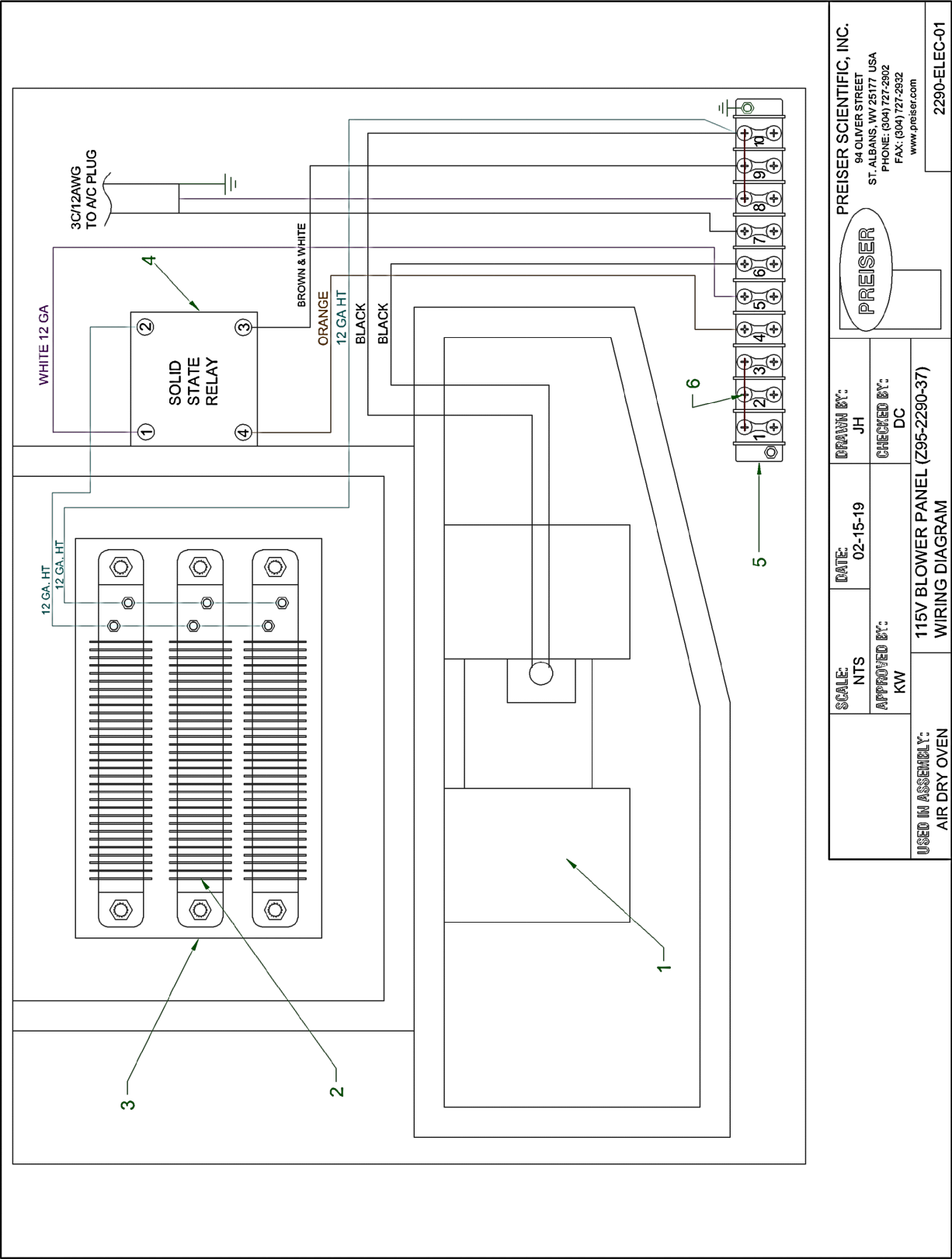
If " EEE " appears, a setting error exists. The switch cycle number in error is shown. Slide set switch to p. press button until cycle is shown. review this and the following setting to correct error slide set switch to " RUN ".

#9 Clear any setting

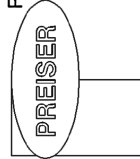
- slide the RUN switch to " P ", press the lower " P " button to show switch cycle you want to clear.
- press 1...7 button until no days are indicated. Repeat for the following switch cycle. This on/off cycle is now inactive.

#10 Clear all

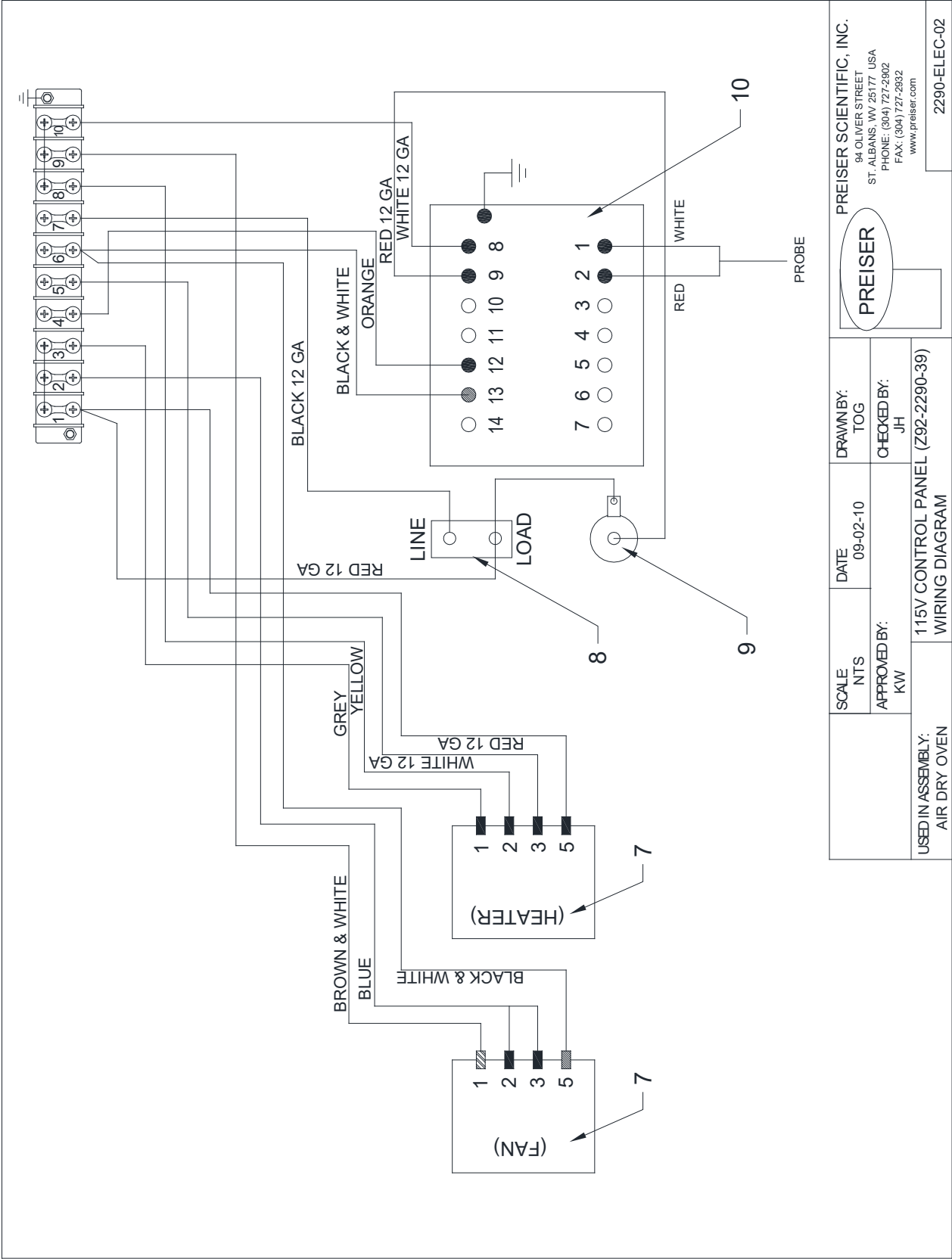
To erase all settings, press " R ".



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SCALE: NTS	DATE: 02-15-19	DRAWN BY: JH
	APPROVED BY: KW	CHECKED BY: DC
USED IN ASSEMBLY: AIR DRY OVEN		
115V BLOWER PANEL (Z95-2290-37) WIRING DIAGRAM		
2290-ELEC-01		

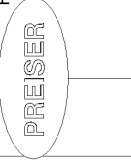


SCALE NTS APPROVED BY: KW	DATE 09-02-10	DRAWN BY: TOG	CHECKED BY: JH	115V CONTROL PANEL (Z92-2290-39)	
				USED IN ASSEMBLY: AIR DRY OVEN	WIRING DIAGRAM
<div>PREISER</div>				PREISER SCIENTIFIC, INC. 94 OLIVER STREET ST. ALBANS, WV 25177 USA PHONE: (304) 727-2902 FAX: (304) 727-2932 www.preiser.com	
				2290-ELEC-02	

ITEM	DESCRIPTION	PART #
1	115V BLOWER MOTOR	Z95-2290-87
2	115V HEATING ELEMENTS (3)	Z95-2290-50
3	DURABOARD INSULATION	Z95-2290-45
4	SOLID STATE RELAY	Z95-1100-02
5	TERMINAL BLOCK (10 TERMINAL)	95-1001-11
6	JUMPERS (4)	95-1001-12
7	DIGITAL TIMERS (2)	Z95-2290-06
8	TOGGLE SWITCH (SPST)	Z95-2290-95
9	FUSE HOLDER (2 AMP FUSE)	Z95-1002-01
10	DIGITAL CONTROLLER	Z95-2290-89

NOTES:

1. INSTALL 2 JUMPERS TO CONNECT TERMINALS 1, 2, AND 3.
INSTALL 2 JUMPERS TO CONNECT TERMINALS 8, 9, AND 10.
2. ALL WIRES FROM CONTROL PANEL TO TERMINAL BLOCK
ARE 64" LONG.
3. ALL WIRES ARE 20 AWG UNLESS NOTED

SCALE: NTS		DATE: 02-15-19	DESIGNED BY: JH	 PREISER SCIENTIFIC, INC. 94 OLIVER STREET ST. ALBANS, WV 26177 USA PHONE: (304) 727-2902 FAX: (304) 727-2932 www.preiser.com
APPROVED BY: KW		CHECKED BY: DC		
USED IN ASSEMBLY: AIR DRY OVEN		115V WIRING DIAGRAM INDEX		2290-ELEC-03