



**Operating Manual :**

**EI-1000**

**Single Channel Weight  
Indicator/Transmitter**

**Version 1.09 and higher**

**EAGLE MICROSYSTEMS, INC.**

366 Circle of Progress

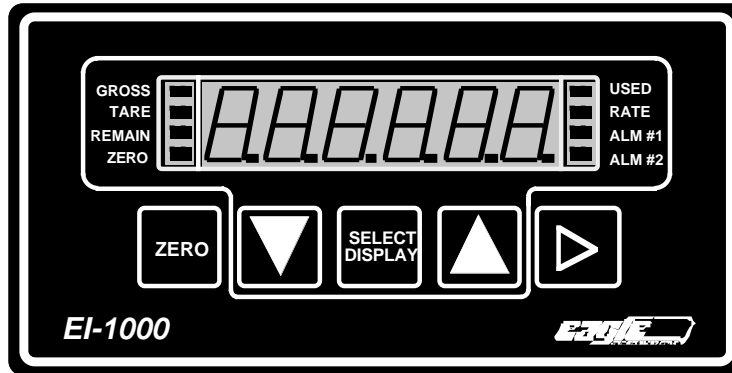
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# QUICK START GUIDE FOR EI-1000 DIGITAL WEIGHT DISPLAY / TRANSMITTER



## INSTALLATION

- 1). Mount the instrument on a wall within 30' of the scale assembly. Refer to the mounting dimension drawing provided with your scale system. The EI-1000 requires 117VAC (+/-10%) power at 48-62Hz and 1/4 amp.
- 2). Wire the scale cable to the "RIGHT SCALE" (J5) connector of the EI-1000 CPU board. Refer to the interconnect drawing supplied with your scale system. Make sure that all connections are made according to function (i.e. + signal to +signal) and not just by color code.

## OPERATION

Your system has been pre-configured and either electronically or mechanically calibrated at the factory. After proper installation it should be ready to operate. The current version of firmware allows you to view the Gross Weight, Tare Weight, Remaining (Net) Weight and Used Weight.

**"ZERO" Key** : Resets zero in "Gross" mode (limited by the preset zero band, 2% or 100%). In "Tare" or "Remaining" mode, the "Zero" Key assigns the current gross weight value as tare and zeros the "Remaining" value. In "Used" mode, the "Zero" Key resets the used value to zero.

**"SELECT" Key**: Use this key to select the desired mode of operation.

**"UP & DOWN Arrow" Keys**: Use these keys to increase or decrease a number being entered or edited, such as "Tare" or "Set Point" values.

**"RIGHT Arrow" Key**: Enables "Digital Thumbwheel" mode for number editing, allowing editing of one digit at a time.

## EI-1000 SET-UP DETAILS

**TO ENTER CALIBRATION or CONFIGURATION MODE:** Press SELECT for 2 seconds  
Use [V] or [^] To Display "CAL" (Calibration Mode) or "CFG" (Configuration Mode). Press [SELECT]  
when desired mode is displayed.

**TO EXIT TO NORMAL OPERATION:** Press SELECT for 2 seconds

**SWITCH S1:** NORMAL SETTING IS ALL "OPEN"

- S1-1 Configuration lock-out (closed)
- S1-2 Extended configuration access (closed)
- S1-3 No function
- S1-4 Calibration lock-out (closed)

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**PUSHBUTTON FUNCTIONS:** [ZERO] [V] [SELECT] [^] [>]

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----- **Operation** -----

- [ZERO] Zeros GROSS weight
- [V] Decrement value (i.e. TARE)
- [SELECT] Select GROSS, TARE\*, REMAINING, USED, & RATE
- [^] Increment value (i.e. TARE)
- [>] Enter "Digital Thumbwheel Mode", Digit right.

\* Depending on OPERATION mode.

----- **Calibration** -----

- [ZERO] Zero weight / Abort number entry
- [V] Decrement digit
- [SELECT] Enter value
- [^] Increment digit
- [>] Initiate number entry / right digit

----- **Configuration** -----

- [ZERO] Abort number entry
- [V] Decrement parameter or value
- [SELECT] Toggle between parameter/value & enter number entry
- [^] Increment parameter or value
- [>] Initiate number entry and select digit

----- **Power-up function** -----

- [ZERO] Display/pushbutton/4-20mA output/relay output tests
- [V] none
- [SELECT] Load Typical Values
- [^] none
- [>] Initialize all memory.

## EI-1000 SET-UP DETAILS (Cont'd)

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### CALIBRATION

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1. Enter calibration mode as described above.
2. Remove all weight from the scale.
3. Press [ZERO]. The display will read zero.
4. Place a known weight on the scale.
5. Use [V] & [Λ] to match the displayed value to the calibration weight value.
6. Exit calibration mode by pressing and holding [SELECT] for 2 seconds.

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### CONFIGURATION

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1. Enter configuration mode as described above.
2. Refer to the key functions described above to select and change parameters.
3. Exit configuration mode by pressing and holding [SELECT] for 2 seconds.

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### CONFIGURATION PARAMETERS

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#### 01 AUTO CONFIGURATION \*

USER	USER DEFINED
1	DCS302 (ONE CHANNEL ONLY)
2	EDS400
3	DS750
4	WT3600x1
5	WT3600x2
6	ECS1500
7	WP1000
8	VF100 BULK SCALE

#### 02 OPERATION

- 1: Standard weight indicator
- 2: Not Used
- 3: Automatic
- 4: NBG

#### 05 LOW LEVEL SETPOINT ALARM #1

Value

#### 08 LOW LEVEL SETPOINT ALARM #2

Value

## EI-1000 SET-UP DETAILS (Cont'd)

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### CONFIGURATION PARAMETERS (Cont'd)

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\* The following parameters are displayed if AUTO CONFIGURATION is set to OFF.

#### 10 DISPLAY FULLSCALE

10 to 500000, Value is in lbs or kgs

#### 11 DISPLAY RESOLUTION (division)

1 , 2 , 5 ,  
10 , 20 , 50 ,  
100 , 200 , 500 ,  
0.001 , 0.002 , 0.005 ,  
0.01 , 0.02 , 0.05 ,  
0.1 , 0.2 , 0.5

#### 12 AVERAGE

1, 2, 4, 5, 8, 10, 15, 20, 30 (samples averaged)

#### 13 PUSH TO ZERO RANGE

2, 10, 50, and 100 % of full scale

#### 14 AUTO-ZERO BAND

off, 0.5, 1, 3, 5, 10 divisions

#### 15 MOTION BAND

off, 1, 3, 5, 10 divisions

#### 16 THRESHOLD

Value to sense cylinder on scale

#### 17 REMAINING START

Auto-start value for remaining, i.e. 150# for 150# cylinder or 2,000# for ton cylinder.

#### 18 PUSH TO TARE ENABLE

YES: ZERO pushbutton will zero the remaining weight (0 = remaining = gross - tare)  
NO: ZERO pushbutton is inactive in the remaining weight mode.

## 50 ANALOG OUT REPRESENTATION

Gr Gross weight  
rE Remaining weight  
RA Rate

## 51 ANALOG OUT FULLSCALE

Value

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## EXTENDED CONFIGURATION PARAMETERS

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### 80 ANALOG OUTPUT CALIBRATION: 4.0 mA Test Signal Out

set - no visual change

### 81 ANALOG OUTPUT CALIBRATION: 20.0 mA Test Signal Out

set - no visual change

### 82 Dynamic ANALOG OUT: View current analog output value in mA

Display range 0.00 to 21.00 mA

### 83 Set mA Test Signal Output

set output from 4.0 mA to 20.0 mA in 1.6 mA steps.

### 84 Clip mA output

ON: Range 4-20 mA -  $\leq 0$  to  $\geq$ full-scale

OFF: Range 3-21 mA -  $< 0$  to  $>$ fullscale

### 90 mV/V SIGNAL IN (dynamic) View actual mV/V input from scale.

-0.50000 to 3.75000 mV/V - view only - can't be set.

### 91 mV/V DEAD ZERO- Read or edit current mV/V zero value.

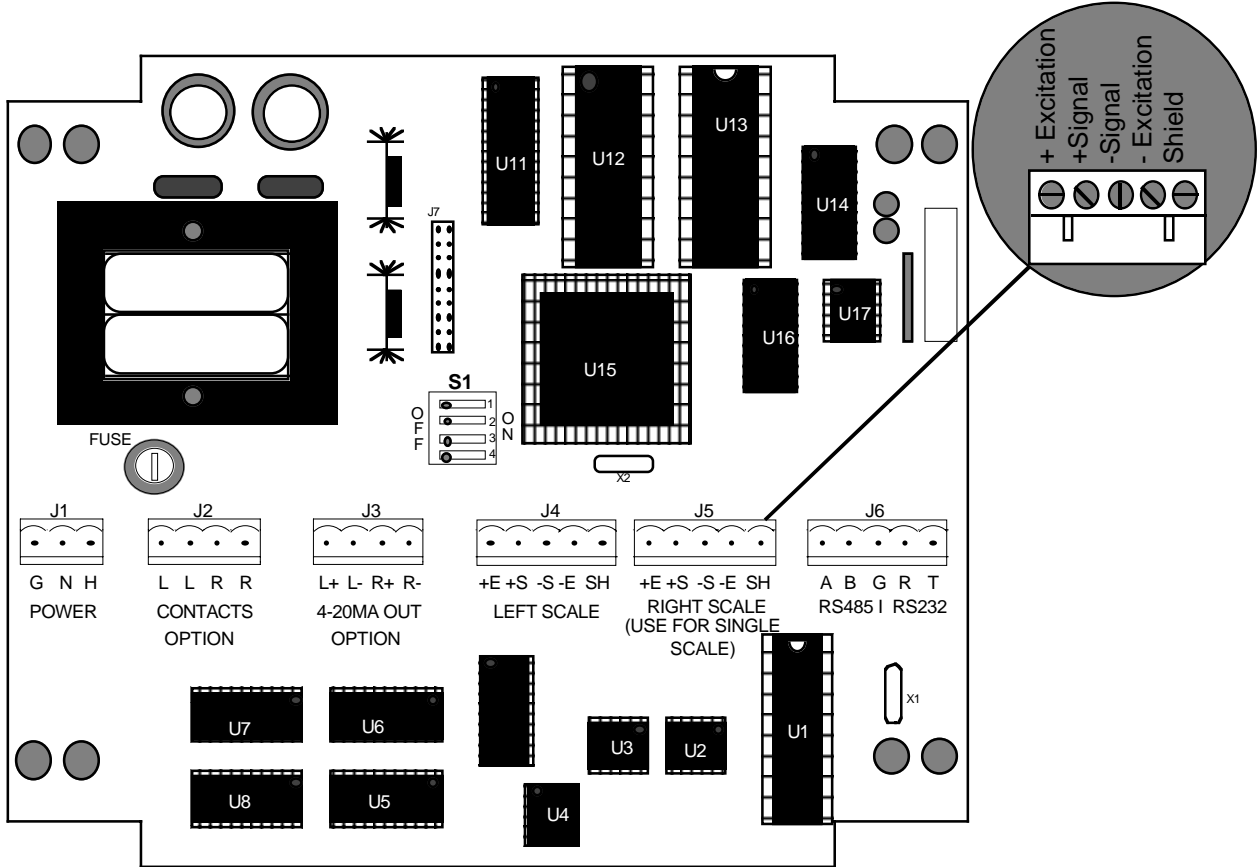
-0.40000 to 3.00000 mV/V - This value can be entered

### 92 mV/V SPAN- Read or edit current mV/V span value for full scale (see parameter10)

0.10000 to 3.10000 mV/V - This value can be entered

# FIELD WIRING

## EI-1000/EI-2000 CPU BOARD



CONNECTION	FUNCTION
J1	117 V AC Power input
J2	Relay contacts. Only right channel is active. (Option).
J3	Analog output. Only right channel is active.
J4	Left scale connector. Disabled by jumper plug.
J5	Scale signal connector.
J6	RS485/RS232 communication connector (Option).

NOTE 1: CPU BOARD IS COMMON TO BOTH THE EI-1000 AND EI-2000 INSTRUMENTS.

NOTE 2: **FOR THE EI-1000 SINGLE CHANNEL INDICATOR, ONLY THE RIGHT CHANNEL IS ACTIVE.** J4 IS DISABLED WITH A FACTORY-INSTALLED JUMPER PLUG. **DO NOT REMOVE THE JUMPER PLUG.**

NOTE 3: WIRE SCALE CABLE TO J5 CONNECTOR PER DIAGRAM ON FOLLOWING PAGE.

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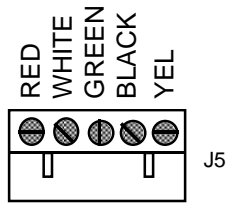
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## CONNECTOR WIRING

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### ECS-1501 CYLINDER SCALE

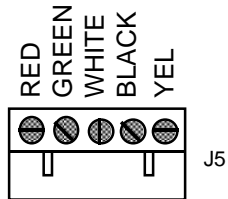


ECS1500 series Load Cell (USE RIGHT CHANNEL ONLY)

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### EDS400, DS750, LP4300, C3600P AND WT3600 SCALES

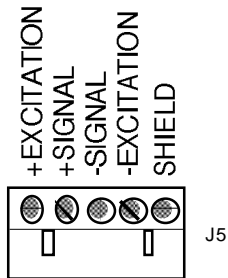


RIGHT CHANNEL ONLY

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### BIN AND HOPPER SCALES

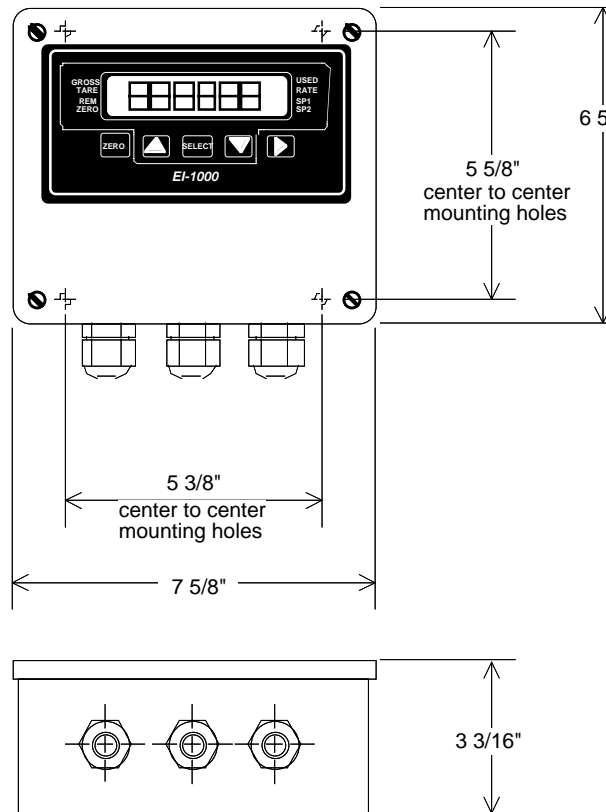


RIGHT CHANNEL ONLY

# INSTALLATION

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## Wall Mounting Dimensions



Enclosure conforms to: NEMA 3, 4, 4X, 12

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## SPARE PARTS

1. INDICATOR CPU BOARD: EAGLE P/N 110267
2. INDICATOR DISPLAY BOARD: P/N 110271