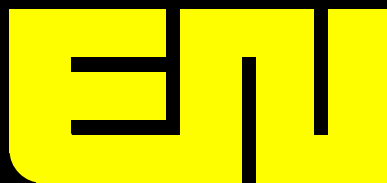


# LARGE DIGIT DISPLAYS



ELECTRO-  
NUMERICS, INC.

# PI SERIES 2 1/4" LED DISPLAYS

## 4 Digit Counter & 4 1/2 Digit Process Loop Displays

Displays for the measurement of Pressure, Temperature, Flow, Level, Count etc.



Models PI 700, PI 800 & PI 700C

### FEATURES

- Large Bright 2 1/4" LED Display
- Readable To 75 Feet
- Process Voltage, Current Loop & Counter Signal Inputs
- Sealed Surface Mount Case
- Broad Range Scaling: 500 to 19,999
- Screw Terminal Connections
- 115Vac Power
- 2 Year Warranty

### OPTIONS

- Excitation Output (1.3 to 24Vdc)
- Analog Output (1mVdc per Count)
- 230Vac Power
- NEMA 4 Enclosure

### DESCRIPTION

These models are 4 digit (9,999 display) **Counters** and 4 1/2 digit (+/-19,999 display) **Process Indicators**. With large bright **2 1/4" tall LED digits**, these models are ideal for monitoring a process or count from a long distance. The sealed surface mount case provides protection in dirty or damp environments. Broad Range Scaling (Process Indicators) and decimal points are accessible from the front by removing an access plug. 115Vac power is provided standard with 230Vac power available as an option. Signals may be dc voltage (1/5V, 0/10V etc.), dc current loop (4/20mA, 0/20mA etc.) or switch closure (Model PI 700C). Options (depending on model) include: Excitation Voltage Output adjustable from 1.3 to 24Vdc to drive transducers, Analog Output of 1mV/count to drive chart recorders or computers and a NEMA 4 enclosure. A **Two-Year Warranty** is standard.

### SPECIFICATIONS

#### SIGNAL INPUT

##### Current Ranges (Model PI 700)

Range	0/20mA	4/20mA
-------	--------	--------

Maximum Input	35mA	35mA
Input Resistance	125 ohm	125 ohm

Standard calibration unless specified: 4mA=0000, 20mA=19,999

##### Counter Inputs (Model PI 700C)

Count	Isolated contact closure, normally open
Resett	Isolated contact closure, normally open

##### Voltage Ranges (Model PI 800)

Range	0/5V	1/5V	0/10V	1/10V
-------	------	------	-------	-------

Maximum Input	130 Vp	130 Vp	250 Vp	250 Vp
Input Resistance	1 Mohm	1 Mohm	1 Mohm	1 Mohm
Bias Current	50 pA	50 pA	5 pA	1 pA

Standard calibration unless specified: 1V=0000, 5V=19,999

#### INPUT CONFIGURATION (Models PI 700 & PI 800)

Configuration	Single-ended, bipolar
Zero	Automatic
Zero Offset Control	0mA to 4mA (PI 700) -0.5 to +1.1Vdc (PI 800)
Span (User Adjustable)	500 to 19,999 counts

#### ACCURACY AT 25°C (Models PI 700 & PI 800)

Maximum Error	+/-0.01% of reading +/-1 count
Linearity	+/-1 digit typical
Span TempCo	+/-0.005% full scale (19,999) per °C max.
Step response	500 ms
Warmup to rated accuracy	10 min

#### A/D CONVERSION (Models PI 700 & PI 800)

Technique	Dual-slope, average value
Polarity	Automatic, (-) sign only
Integration period	330 ms
Read rate	Approximately 2.5 readings per second

#### DISPLAY

Type	7-segment, red-orange LED
Height	57mm (2.25")
Decimal points	Four positions programmable by DIP switch accessible from the front.
Overrange indication	Four right hand digits blink 0000

#### POWER

AC voltages	115Vac +/-15%, 47 to 400Hz 230Vac (optional) +/-15%, 47 to 400Hz
Power Consumption	5W (nominal without EO option)
Output voltage (EO option)	1.3 to 24Vdc @ 30mA max.

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## ENVIRONMENTAL

Operating temperature ..... -10 to +60°C  
 Storage temperature ..... -40 to +85°C  
 Relative humidity ..... 95% at 40°C (non-condensing)  
 Case ..... Sealed against dust and moisture

## MECHANICAL

Dimensions ..... see **Dimensions & Mounting**  
 Weight ..... 2.8lb  
 Case material ..... Vacuum formed ABS  
 Window material ..... Red acrylic, silkscreened

Connectors:  
 Power and Signal ..... Rear access screw-terminal  
 Analog and Excitation Outputs ..... Rear access screw-terminal

Mounting:  
 Surface or Thru-panel ..... see **Dimensions & Mounting**

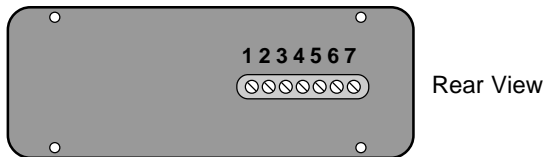
## OUTPUT OPTIONS (Models PI 700 & PI 800)

**Analog Output (AO Option)**  
 Output Voltage ..... 1mV per count displayed  
 Accuracy and Settability ..... +/-1mV  
 Calibration ..... Internally adjustable zero and span

**Excitation Output (EO Option)**  
 Output Voltage ..... 1.3 to 24Vdc at 30mA max.  
 Calibration ..... Internally adjustable

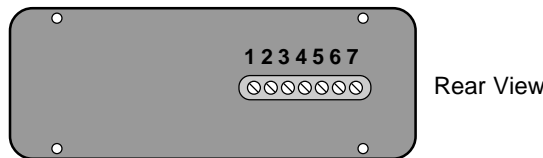
## ELECTRICAL CONNECTIONS

### Models PI 700 & PI 800



- |                         |                                 |
|-------------------------|---------------------------------|
| 1 AC Power Line 1       | 5 Excitation Output (+)         |
| 2 AC Power Line 2       | 6 Signal (-) & Analog Out. Gnd. |
| 3 Analog Output (+)     | 7 Signal (+)                    |
| 4 Excitation Output (-) |                                 |

### Model PI 700C



- |                   |                        |
|-------------------|------------------------|
| 1 AC Power Line 1 | 5 Count Input          |
| 2 AC Power Line 2 | 6 Reset Input          |
| 3 Spare           | 7 +5Vdc (Reset Return) |
| 4 Ground          |                        |

## ORDERING GUIDE

Make a maximum of one entry per box and separate by commas. An asterisk requires no entry.

Examples: **PI 700, EO(12V), (4/20mA=125.80)**  
**PI 700C, 115Vac**

\_\_\_\_\_ **MODEL**  
**PI 700** DC Current Input Indicator  
**PI 700C** Digital Counter  
**PI 800** DC Voltage Input Indicator

\_\_\_\_\_ **POWER**  
 \* 115Vac, 47 to 400Hz  
**230Vac** 230Vac, 47 to 400Hz

\_\_\_\_\_ **NEMA 4 ENCLOSURE**  
 \* Standard enclosure  
**N** NEMA 4 enclosure

**The following options apply only to models PI 700 and PI 800 Process indicators.**

\_\_\_\_\_ **INPUT RANGE**  
**DC Current Measurement**  
 Customer supplied information:  
 1) Minimum input current and minimum display.  
 2) Maximum input current and maximum display.  
 3) Decimal Point Location.  
 Example: 4mA=0000, 20mA=125.80  
 i.e. 4/20mA=125.80

\_\_\_\_\_ **DC Voltage Measurement**  
 Customer supplied information:  
 1) Minimum input voltage and minimum display.  
 2) Maximum input voltage and maximum display.  
 3) Decimal Point Location.  
 Example: 0V=0000, 10V=1000.0  
 i.e. 0/10V=1000.0

\_\_\_\_\_ **SPECIAL SCALING**  
 (Contact factory for possible ranges)  
 \* Standard adjustable scaling range  
**S** Specify scaling i.e. 4mA=500,  
 20mA=19,999

\_\_\_\_\_ **EXCITATION OUTPUT OPTION**  
 \* None  
**EO** 1.3 to 24Vdc Specify output  
 i.e. EO(12V)

\_\_\_\_\_ **ANALOG OUTPUT OPTION**  
 \* None  
**AO** 1mV per count displayed

# 468 & 4XL SERIES PROCESS INDICATORS

## Four Digit, 4", 6" or 9" Voltage and Current Loop Input Displays

Process Displays for the measurement of Pressure, Temperature, Flow, Level etc.



### FEATURES

- Yellow "flip digits" or superbright, outdoor LED digits
- Choice of 4", 6" or 9" tall digits
- Readable to 360 feet (9" Digits)
- Microprocessor electronic design
- Process voltage and current Loop signal inputs
- Sealed surface mount case
- Broad range scaling: 500 to 9,999
- 115Vac Power

### OPTIONS

- 24Vdc Excitation Output (6" Models)
- NEMA 4 Enclosure
- 230Vac or 12Vdc Power

### DESCRIPTION

These models are 4 digit (+/-9,999 display) digital **Process Indicators** accepting **dc voltages** or **current loops** signal inputs. With large bright **4", 6" or 9" tall digits** and microprocessor electronics, these displays are ideal for monitoring a process from a long distance. The sealed surface mount case provides protection in dirty or damp environments. Broad Range Scaling is accessible from the side by removing an access plug. 115Vac power is provided standard with 230Vac or 12Vdc (flip digit models) power available as options. Signal inputs may be dc voltage (1/5V, 0/10V etc.) or dc current loop (4/20mA, 0/20mA etc.). Options include: 24Vdc Excitation Voltage Output for powering transducers, Special Scaling and Decimal Points. An **18 Month Warranty** is standard.

### SPECIFICATIONS

#### SIGNAL INPUT

Voltage Ranges (V suffix)				
Range	0/5V	1/5V	0/10V	1/10V
Maximum Input	130 Vp	130 Vp	250 Vp	250 Vp
Input Resistance	1 Mohm	1 Mohm	1 Mohm	1 Mohm
Bias Current	50 pA	50 pA	5 pA	1 pA

Standard calibration unless specified: 1V=0000, 5V=9,999

#### Current Ranges (I suffix)

Range	0/20mA	4/20mA
Maximum Input	35mA	35mA
Input Resistance	125 ohm	125 ohm

Standard calibration unless specified: 4mA=0000, 20mA=9,999

#### INPUT CONFIGURATION

Configuration ..... Single-ended, bipolar  
 Zero ..... Automatic  
 Zero Offset Control ..... 0mA to 4mA (current loop models)  
 -0.5 to +1.1Vdc (voltage input models)  
 Span (User Adjustable) ..... 500 to 9,999 counts

#### ACCURACY AT 25°C

Maximum Error ..... +/-0.01% of reading +/-1 count  
 Linearity ..... +/-1 digit typical  
 Span TempCo ..... +/-0.005% full scale (9,999) per °C max.  
 Step response ..... 500 ms  
 Warmup to rated accuracy ..... 10 min

#### ANALOG TO DIGITAL CONVERSION

Technique ..... Dual-slope, average value  
 Polarity ..... Automatic, (-) sign only  
 Integration period ..... 330 ms  
 Read rate ..... Approximately 2.5 readings per second

#### DISPLAY

Drive Technique ..... Microprocessor Electronics  
 Type ..... 7-segment, fluorescent-yellow, electromagnetic  
 or red, daylight-bright LED  
 Digit Height ..... 4", 6" or 9"  
 Decimal points ..... Specified at time of ordering  
 Overrange indication (>9,999) ..... Upper segment bars  
 displayed  
 Underrange indication (<-1,999) ..... Lower segment bars  
 displayed

#### POWER

AC voltages ..... 115Vac +/-15%, 50/60Hz  
 230Vac (optional) +/-15%, 50/60Hz  
 DC Voltage ..... 12Vdc +/-10% (flip digit models only)  
 Power Consumption ..... 200W nominal (2A peak current)  
 Output voltage (EO option) ..... 24Vdc @ 500mA max.

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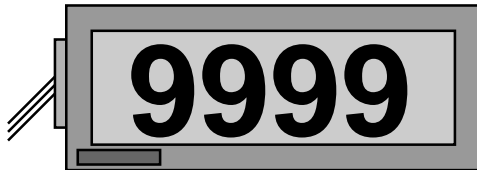
**ENVIRONMENTAL**

Operating temperature ..... -32 to +66°C  
 Storage temperature ..... -40 to +85°C  
 Relative humidity ..... 95% at 40°C (non-condensing)  
 Case ..... Sealed against dust and moisture

**MECHANICAL**

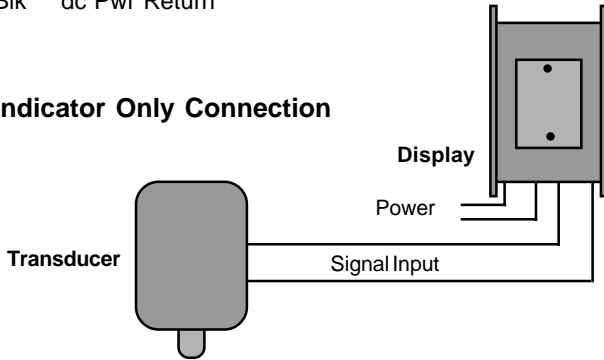
Dimensions ..... see **Dimensions & Mounting**  
 Weight ..... 8.5lb (4"), 12.5lb (6"), 16lb (9")  
 Case material ..... Black painted aluminum, ABS back panel  
 Window material ..... Clear or red (LED models) acrylic  
 Connectons ..... Pigtail leads via conduit box

**ELECTRICAL CONNECTIONS**

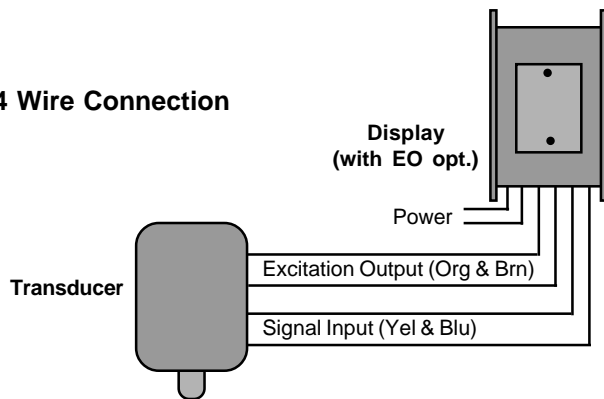


Blk	ac Power Line 1	Org	Excitation Output (+)
Wht	ac Power Line 2	Brn	Excitation Output (-)
Grn	Earth Ground	Yel	Signal (+)
Red	dc Pwr (+)	Blu	Signal (-)
Blk	dc Pwr Return		

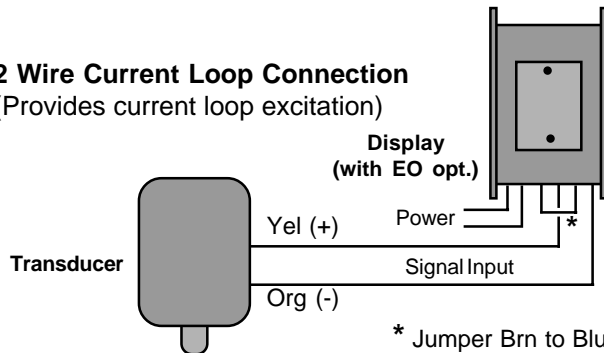
**Indicator Only Connection**



**4 Wire Connection**



**2 Wire Current Loop Connection**  
 (Provides current loop excitation)



**ORDERING GUIDE**

Make a maximum of one entry per box and separate by commas. An asterisk requires no entry.  
 Example: **468-6I, DP, (4/20mA=850.0)**

- MODEL**
- 468-4I** 4", dc Current Loop Indicator
  - 468-6I** 6", dc Current Loop Indicator
  - 468-9I** 9", dc Current Loop Indicator
  - 4XL-9I** 9", dc Current Loop Indicator (LED)
  - 468-4V** 4", dc Voltage Input Indicator
  - 468-6V** 6", dc Voltage Input Indicator
  - 468-9V** 9", dc Voltage Input Indicator
  - 4XL-9V** 9", dc Voltage Input Indicator (LED)

- INPUT RANGE**
- DC Current Measurement**  
 Customer supplied information:  
 1) Min. input current & min. display.  
 2) Max. input current & max. display.  
 3) Decimal Point Location.  
 i.e. 4mA=000.0, 20mA=850.0
- DC Voltage Measurement**  
 Customer supplied information:  
 1) Min. input voltage & min. display.  
 2) Max. input voltage & max. display.  
 3) Decimal Point Location.  
 i.e. 0V=00.00, 10V=90.00

- SPECIAL SCALING**
- \*** (Contact factory for possible ranges)
  - S** Standard adjustable scaling range  
 Specify i.e. 4mA=500, 20mA=9999

- DECIMAL POINT**
- \*** None
  - DP** Specify location i.e. 100.0

- NEMA 4 ENCLOSURE (468-4 only)**
- \*** Standard enclosure
  - N** NEMA 4 enclosure

- POWER**
- \*** 115Vac, 50/60Hz
  - 230Vac** 230Vac, 50/60Hz
  - 12Vdc** 12Vdc (468 Series only)



# PRESETTABLE UP-DOWN COUNTERS

Four and Six Digit, 4", 6" & 9" Count Up/Count Down Counters



## FEATURES

- Count up and Count down
- 4 digit (9999) or 6 digit (999999)
- Choice of 4", 6" or 9" tall digits
- Preset count with keypad entry
- Sealed surface mount case
- 115Vac power

## OPTIONS

- Decimal Point
- NEMA 4 Enclosure (468-4C)
- 230Vac or 12Vdc Power

## DESCRIPTION

These models are 4 digit (9999) or 6 digit (999999) digital **Count Up and Count Down Counters** with large bright **4", 6" or 9" tall digits** and microprocessor electronics. These displays are ideal for viewing a count or total from a long distance. Applications include production units passed, inventory control and crowd control.

"PC" models have a display mounted keypad which allows a preset number to be entered into the counter. The count may then be incremented or decremented from that number using the keypad or a remote switch. Reset, Count-Up, Count-Down and Preset keys are provided. These models also have a connector to allow use of an accessory Remote Keypad or Remote Control.

"C" models are basic counters that allow count-up or count-down without the preset, keypad or remote keypad connector.

All models provide a conduit box with pigtail leads for connection of ac or dc power, a customer supplied count-up and/or countdown switch and reset switch. The sealed surface mount case provides protection in dirty or damp environments. For additional protection, model 468-4C may be ordered with a NEMA 4 rated enclosure. 115Vac power is provided standard with 230Vac or 12Vdc power optional. Counters may be specified with a decimal point if required. **An 18 Month Warranty** is standard.

## SPECIFICATIONS

### CONTROL INPUTS

By Pigtail Wire Leads

Count-Up Input ..... Contact closure (N.O. switch)  
 Count-Down Input ..... Contact closure (N.O. switch)  
 Reset Input ..... Contact closure (N.O. switch)

Maximum count rate ..... 2 counts per second

"PC" Models have a display mounted keypad which allows Count-Up, Count-Down, Reset (to blank display) and Preset Count input in addition to the pigtail wire leads.

### DISPLAY CONFIGURATION

Model	Digit	Display
468-4C	4"	9999
468-4PC	4"	9999
468-6C	6"	9999
468-6PC	6"	9999
667-4C	4"	999999
667-4PC	4"	999999
667-6C	6"	999999
667-6PC	6"	999999

Drive Technique ..... Microprocessor Electronics  
 Type ..... 7-segment, fluorescent yellow, electromagnetic  
 Height ..... 4", 6" or 9"  
 Decimal points ..... Specified at time of ordering  
 Reset/Zero indication ..... Blank display  
 Overrange indication ..... Repeat count from Zero (blank)  
 Leading Zero Blanking ..... Standard

### ACCURACY AT 25°C

Maximum Error ..... 1 count per 100,000

### POWER

AC voltages ..... 115Vac +/-15%, 50/60Hz  
 230Vac (optional) +/-15%, 50/60Hz  
 DC Voltage ..... 12Vdc +/-10%  
 Power Consumption ..... 200W nominal (2A peak current)

### ENVIRONMENTAL

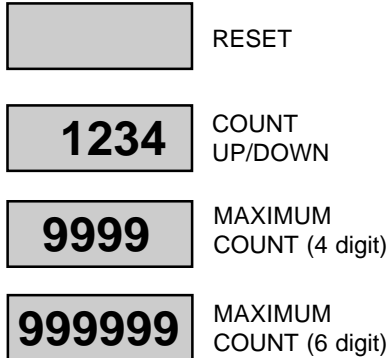
Operating temperature ..... -32 to +66°C  
 Storage temperature ..... -40 to +85°C  
 Relative humidity ..... 95% at 40°C (non-condensing)  
 Case ..... Sealed against dust and moisture

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**MECHANICAL**

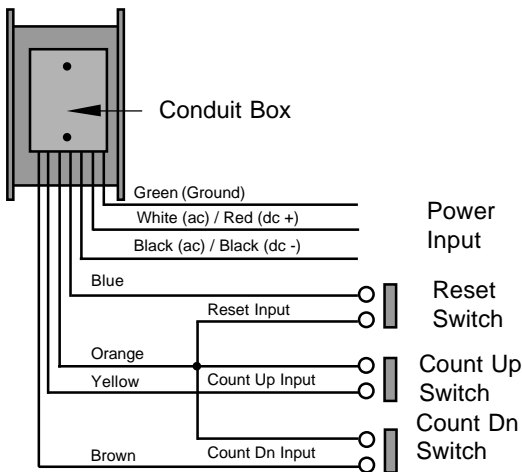
Dimensions ..... see **Dimensions & Mounting**  
 Weight ..... 8.5lb (4"), 12.5lb (6"), 16lb (9")  
 Case material ..... Black painted aluminum, ABS back panel  
 Window material ..... Clear acrylic  
 Connections (Power, Count & Reset) ..... Pigtail leads

**DISPLAY INDICATIONS**



**WIRING AND CONTROLS**

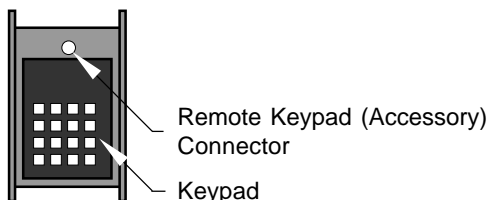
**PIGTAIL WIRE CONTROLS & POWER INPUT**  
(All Models)



Switches are dry contact, normally open (NO) momentary type.

Blk	ac Power Line 1	Blu	Reset
Wht	ac Power Line 2	Yel	Count Up
Grn	Earth Ground	Brn	Count Down
Red	12Vdc Pwr (+)	Org	Reset & Count Com-
mon	Blk		dc Pwr Return

**KEYPAD CONTROLS AND PRESET COUNT**  
(PC MODELS ONLY)



**ORDERING GUIDE**

Make a maximum of one entry per box and separate by commas. An asterisk requires no entry.  
 Example: **468-4C, DP (999.9)**

<input type="checkbox"/>	<b>MODEL</b>
<b>468-4C</b>	4", 4 Digit Basic Counter
<b>468-4PC</b>	4", 4 Digit Presettable Counter
<b>667-4C</b>	4", 6 Digit Basic Counter
<b>667-4PC</b>	4", 6 Digit Presettable Counter
<b>468-6C</b>	6", 4 Digit Basic Counter
<b>468-6PC</b>	6", 4 Digit Presettable Counter
<b>667-6C</b>	6", 6 Digit Basic Counter
<b>667-6PC</b>	6", 6 Digit Presettable Counter
<input type="checkbox"/>	<b>DECIMAL POINT</b>
*	None
<b>DP</b>	Specify location, i.e., 999.9
<input type="checkbox"/>	<b>NEMA 4 ENCLOSURE</b>
	Model 468-4C only
*	Standard enclosure
<b>N</b>	NEMA 4 enclosure
<input type="checkbox"/>	<b>POWER</b>
*	115Vac, 50/60Hz
<b>230Vac</b>	230Vac, 50/60Hz
<b>12Vdc</b>	12Vdc
<input type="checkbox"/>	<b>ACCESSORIES</b>
<b>PB500-X</b>	Remote Pushbutton for Count or Reset inputs.
<b>RK600-X</b>	Remote Keypad Duplicates all functions of the counter mounted keypad.
<b>RC100-X</b>	Remote Control Duplicates keypad functions of count up, count down, and reset with large pushbuttons.
	<b>X=length in feet. Standard is 25'. Available in 5' increments to 50'.</b>

# 468 SERIES TIMERS

## Four Digit, 4" & 6" Count Down Timers



### FEATURES

- Large 4" or 6" Digits
- Readable To 240 Feet (6" Digits)
- Down Timers (Hrs:Min or Min:Sec)  
Programmable with Repeat Function  
Start/Stop and Clear Inputs
- Sealed Surface Mount Case
- Conduit Box Connections
- 115Vac Power

### OPTIONS

- Relay Outputs
- 230Vac or 12Vdc Power

### DESCRIPTION

These models are 4 digit, 99:59 display **Programmable Time Down Timers** with large bright **4" or 6" tall digits** and microprocessor electronics. These timers are ideal for viewing a time interval from a long distance. Applications include worker time/motion studies, productivity training and sports. The sealed surface mount case provides protection in dirty or damp environments. These units may be specified to display in Hrs:Min or Min:Sec. A display mounted keypad is provided to allow **presetting** a time, **start/stop** and **repeat time**. 115Vac power is provided standard with 230Vac or 12Vdc power available as options. Options include: Relay Output at 00:00. Accessories include a Remote Keypad and Remote Control. An **18 Month Warranty** is standard.

### SPECIFICATIONS

#### CONTROL INPUTS

##### (By display mounted keypad)

Start or Re-start the timing sequence ..... START/STOP  
Stop or Time-out the timing sequence ..... START/STOP  
Preset a count down time ..... R (Preset/Repeat)  
Repeat a preset time ..... R (Preset/Repeat)  
Clear timing sequence to 00 : 00 ..... C (retains preset)  
Numeric preset time entr ..... (0 thru 9)

#### DISPLAY CONFIGURATION

Model	Digit	Display
468-4TH	4"	99 : 59 (Hrs : Min)
468-6TH	6"	99 : 59 (Hrs : Min)
468-4TM	4"	99 : 59 (Min : Sec)
468-6TM	6"	99 : 59 (Min : Sec)

#### ACCURACY AT 25°C

Maximum Error ..... 0.001% timing interval

#### DISPLAY

Drive Technique ..... Microprocessor Electronics  
Type ..... 7-segment, fluorescent yellow, electromagnetic  
Height ..... 4" or 6"  
Zero indication ..... 00 : 00  
Leading Zero Blanking ..... Standard

#### POWER

AC voltages ..... 115Vac +/-15%, 50/60Hz  
230Vac (optional) +/-15%, 50/60Hz  
DC Voltage ..... 12Vdc +/-10%  
Power Consumption ..... 200W nominal (2A peak current)

#### ENVIRONMENTAL

Operating temperature ..... -32 to +66°C  
Storage temperature ..... -40 to +85°C  
Relative humidity ..... 95% at 40°C (non-condensing)  
Case ..... Sealed against dust and moisture

#### MECHANICAL

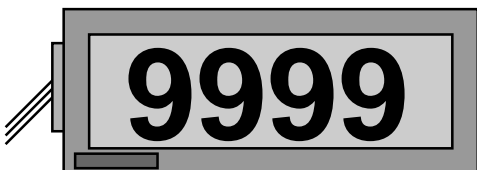
Dimensions ..... see **Dimensions & Mounting**  
Weight ..... 8.5lb (4"), 12.5lb (6")  
Case material ..... Black painted aluminum, ABS back panel  
Window material ..... Clear acrylic  
Connectors:  
Power and relay output (R option) ..... Pigtail leads



## DISPLAY INDICATIONS

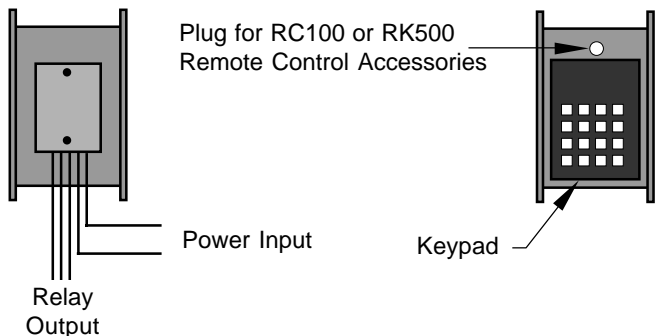
<b>00 : 00</b>	ZERO TIME
<b>1 : 40</b>	PRESET TIME (RECALL)
<b>99 : 59</b>	MAX. TIME

## ELECTRICAL CONNECTIONS



Blk	ac Power Line 1	<b>(Optional Relay Output)</b>	Brn	Relay N.C.
Wht	ac Power Line 2		Vio	Relay N.O.
Grn	Earth Ground		Org	Relay COM
Red	12Vdc Pwr (+)			
Blk	dc Pwr Return			

## WIRING AND CONTROLS



## ORDERING GUIDE

Make a maximum of one entry per box and separate by commas. An asterisk requires no entry.

Example: **468-4TH, R, 230Vac**

<input type="checkbox"/>	_____	<b>MODEL</b>
	<b>468-4TH</b>	4", 4 Digit Timer (Hrs:Min)
	<b>468-6TH</b>	6", 4 Digit Timer (Hrs:Min)
	<b>468-4TM</b>	4", 4 Digit Timer (Min:Sec)
	<b>468-6TM</b>	6", 4 Digit Timer (Min:Sec)
<input type="checkbox"/>	_____	<b>RELAY OUTPUT AT 00:00 TIME</b>
	*	None
	<b>R</b>	3 sec. contact closure, 0.5A Form C
<input type="checkbox"/>	_____	<b>POWER</b>
	*	115Vac, 50/60Hz
	<b>230Vac</b>	230Vac, 50/60Hz
	<b>12Vdc</b>	12Vdc
<input type="checkbox"/>	_____	<b>ACCESSORIES</b>
	<b>RC500-X</b>	Remote Control for Start/Stop, Clear and Repeat functions.
	<b>RK500-X</b>	Remote Keypad. Duplicates all functions of Timer mounted keypad.

**X**=length in feet. Standard is 25'. Available in 5' increments to 50'

# "SCOREBOARD" REMOTE DISPLAYS

Four, Five and Six Digit; 6" & 9" Remote Indicators



## FEATURES

- Serial 20mA or RS232 input
- Choice of 6" or 9" tall digits
- Superbright LED or "flip" digits
- Readable to 360 feet (9" digits)
- 4 (9999), 5 (99999) or 6 (999999) digits
- Microprocessor electronics
- Sealed surface mount case
- Conduit box connections
- 115Vac power

## POWER OPTIONS

- 230Vac or 12Vdc (flip digits)

## DESCRIPTION

These models are 4 digit (9999 display), 5 digit (99999 display) or 6 digit (999999 display) serial input **Digital Remote Displays**. With large bright **6" or 9" tall digits** and microprocessor electronics, these displays are ideal for viewing data from a long distance. The sealed surface mount case provides protection in dirty or damp environments. These displays are passive input and will accept ASCII data from many different manufacturers weighmeters. Signal inputs are 20mA serial or RS232 depending on the data source being used. Displayed information is accepted at a rate of 1200 baud with a maximum of approximately 2.5 updates per second. 115Vac power is provided standard with 230Vac or 12Vdc (flip digit models only) power available as options depending on the model. An **18 Month Warranty** is standard.

## SPECIFICATIONS

### SIGNAL INPUT

Data Connections ..... 2 wire ASCII, voltage or current  
 Voltage Inputs (RS232) ..... 0 to 5V portion of signal only  
 Current Inputs ..... 0 to 20mA opto-isolated

### DISPLAY CONFIGURATION

Model	Digit Height	Display Type	Display
468-6RD	6"	"Flip" Digit	9999 to -999
467-9RD	9"	"Flip" Digit	9999 to -999
587-6RD	6"	"Flip" Digit	99999 to -9999
587-9RD	9"	"Flip" Digit	99999 to -9999
687-6RD	6"	"Flip" Digit	999999 to -99999
687-9RD	9"	"Flip" Digit	999999 to -99999
4XL-6RD	6"	Outdoor LED	9999 to -999
4XL-9RD	9"	Outdoor LED	9999 to -999
5XL-6RD	6"	Outdoor LED	99999 to -9999
5XL-9RD	9"	Outdoor LED	99999 to -9999
6XL-6RD	6"	Outdoor LED	999999 to -99999
6XL-9RD	9"	Outdoor LED	999999 to -99999

### DISPLAY

Drive Technique ..... Microprocessor Electronics  
 Type ..... 7-segment, fluorescent yellow, electromagnetic or discrete daylight readable LED  
 Height ..... 6" or 9"  
 Decimal points ..... Specify with order  
**Display Indications:**  
 No data loop ..... Center dashes or HELP  
 Lost or no data ..... Blank display  
 Leading Zero Blanking ..... Standard  
 Negative Sign ..... Displayed to left side  
 Error Codes (Er-XX) ..... Indicate errors in data transmission

### DATA

Baud Rate ..... 1200 baud  
 Display Update ..... 4 digit: 2.7 updates per second max.  
 5 & 6 digit: 1.8 updates per second max.  
 Digits ..... 4, 5 or 6 digits, 6 digits max.

Data Format: # / D D D D D D / Note 1 / CR  
 # Pound Sign Decimal 035  
 D Numeric Data, 6 digits max. Decimal 048 to 057  
 Note 1 This area may contain up to 4 non-numeric characters such as Lb, Kg etc. These characters will not be displayed.  
 CR Carriage Return

### POWER

AC voltages ..... 115Vac +/-15%, 50/60Hz  
 230Vac (optional) +/-15%, 50/60Hz  
 DC Voltage (Flip Digit Only) ..... 12Vdc +/-10%

### ENVIRONMENTAL

Operating temperature ..... -32 to +66°C  
 Storage temperature ..... -40 to +85°C  
 Relative humidity ..... 95% at 40°C (non-condensing)  
 Case ..... Sealed against dust and moisture

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## MECHANICAL

Dimensions ..... see **Dimensions & Mounting**

Weight:

Digit Size	4 Digit	5 Digit	6 Digit
6"	12.5lb	16.5lb	18.0lb
9"	22lb	43.0lb	45.0lb

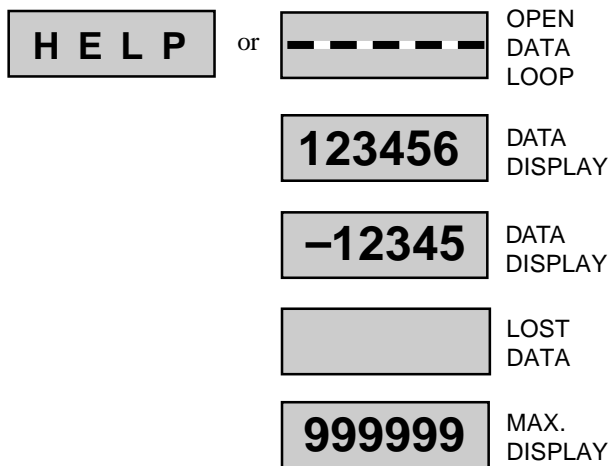
Case material ..... Black painted aluminum, ABS back panel

Window material ..... Clear or red (LED models) acrylic

Connectors:

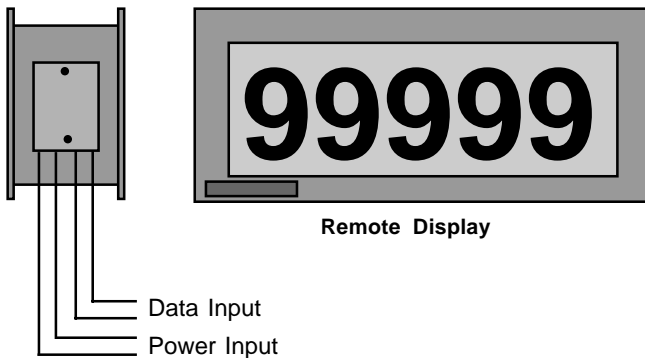
Power and Data input ..... Pigtail leads

## DISPLAY INDICATIONS



Note: Some programs may display HELP instead of center dashes to indicate an open data loop.

## ELECTRICAL CONNECTIONS

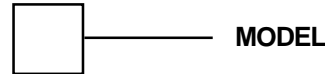


Blk	ac Power Line 1	Yel	Data (+), TX(+)
Wht	ac Power Line 2	Blu	Data Return
Grn	Earth Ground		
Red	dc Pwr (+)		
Blk	dc Pwr Return		

## ORDERING GUIDE

Make a maximum of one entry per box and separate by commas. An asterisk requires no entry.

Example: **587-6RD, 230Vac**



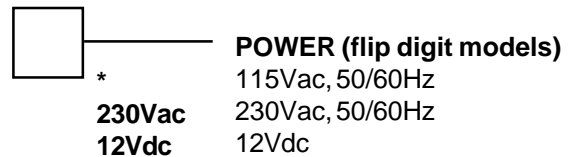
### Flip Digit Models

<b>468-6RD</b>	6", 4 Digit Remote Display
<b>467-9RD</b>	9", 4 Digit Remote Display
<b>587-6RD</b>	6", 5 Digit Remote Display
<b>587-9RD</b>	9", 5 Digit Remote Display
<b>687-6RD</b>	6", 6 Digit Remote Display
<b>687-9RD</b>	9", 6 Digit Remote Display

### Outdoor LED Digit Models

<b>4XL-4RD</b>	6", 4 Digit Remote Display
<b>4XL-6RD</b>	9", 4 Digit Remote Display
<b>5XL-6RD</b>	6", 5 Digit Remote Display
<b>5XL-9RD</b>	9", 5 Digit Remote Display
<b>6XL-6RD</b>	6", 6 Digit Remote Display
<b>6XL-9RD</b>	9", 6 Digit Remote Display

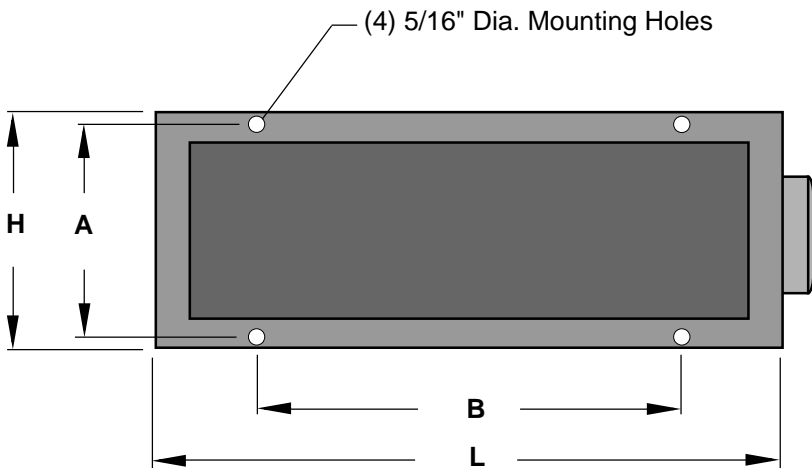
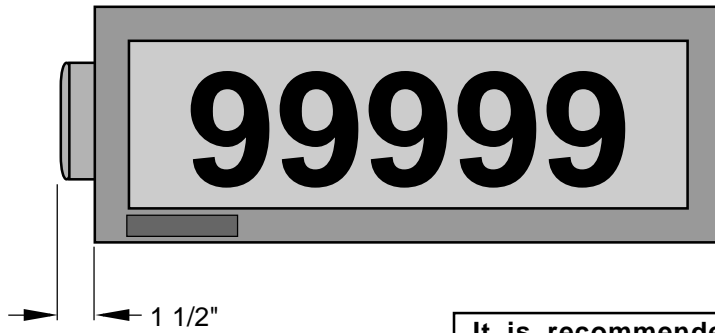
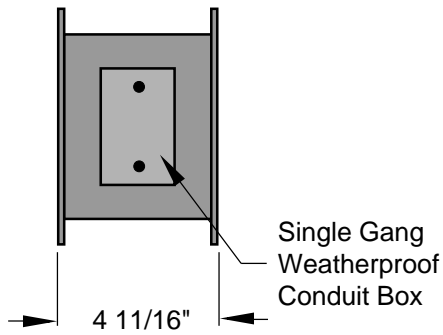
Also see our Mighty-5C-RD in the Micro Series Catalog



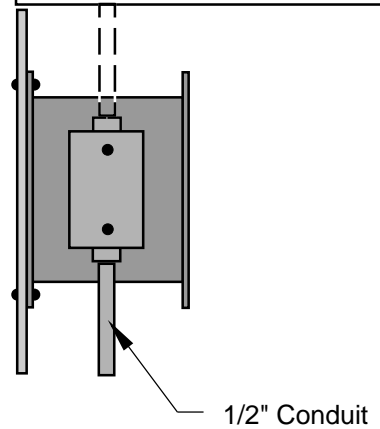
\* **POWER (LED digit models)**  
90 to 264 Vac or Vdc is standard on LED models

# DIMENSIONS and MOUNTING

All Models with 4", 6" or 9" Tall Digits



It is recommended that these displays be protected from direct exposure to weather.



Typical Mounting and Connection

## DIMENSIONS

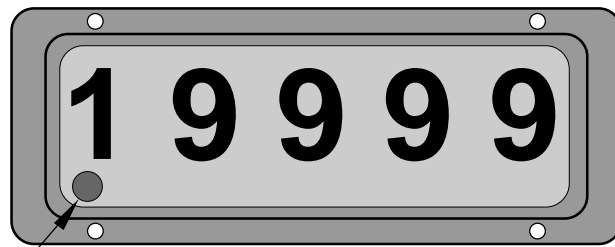
DIGIT SIZE	MODEL	L	H	B	A
4"	468-4V, I, C, PC	16 3/4	7 7/8	10 1/2	6 7/8
	468-4TH, TM	18 3/4	7 7/8	12 1/2	6 7/8
	667-4C, PC	25	7 7/8	16 3/4	6 7/8
6"	468-6V, I, C, PC	25	9 3/4	16 3/4	8 3/4
	468-6TH, TM	25	9 3/4	16 3/4	8 3/4
	4XL-6RD, 468-6RD	25	9 3/4	16 3/4	8 3/4
	5XL-6RD, 587-6RD	38 3/4	9 3/4	30 1/2	8 3/4
	6XL-6RD, 687-6RD	38 3/4	9 3/4	30 1/2	8 3/4
	667-6C, PC	38 3/4	9 3/4	30 1/2	8 3/4
9"	4XL-9V, I, C; 468-9V, I	38 3/4	13 3/4	30 1/2	8 3/4
	467-9C	38 3/4	13 3/4	30 1/2	8 3/4
	4XL-9RD, 467-9RD	38 3/4	13 3/4	30 1/2	8 3/4
	5XL-9RD, 587-9RD	61 3/8	13 3/4	53 1/8	12 3/4
	6XL-9RD, 687-9RD	61 3/8	13 3/4	53 1/8	12 3/4

Dimensions Are In Inches +/- 1/8"

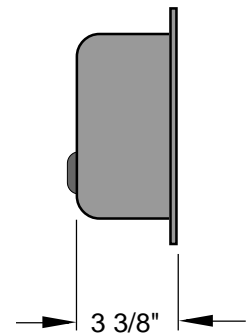
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# DIMENSIONS and MOUNTING

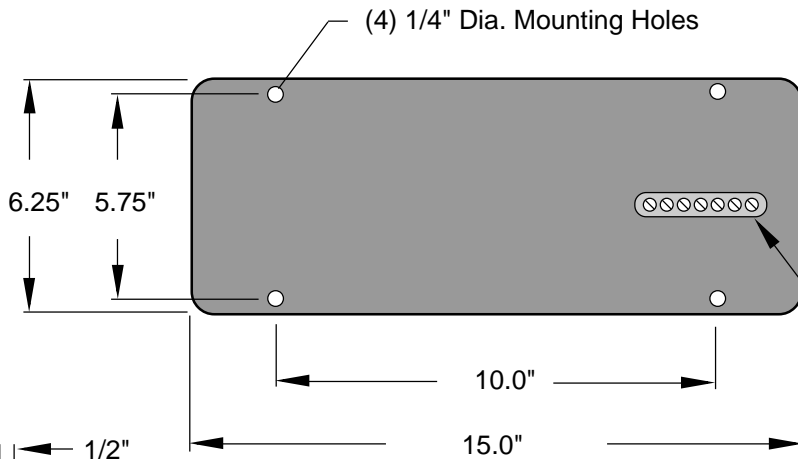
Models PI 700, PI 800 & PI700C with 2 1/4" Tall Digits



Calibration Potentiometer and Decimal Point Access Plug



It is recommended that these displays be protected from direct exposure to weather.



1/2"

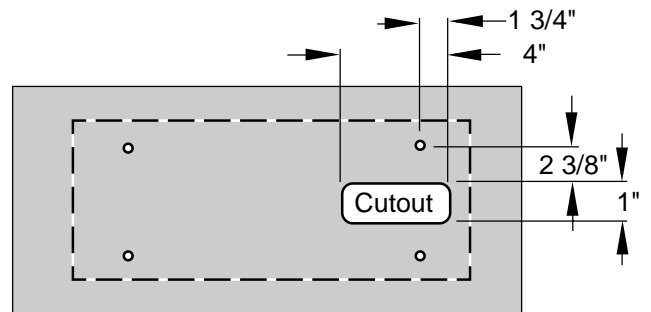
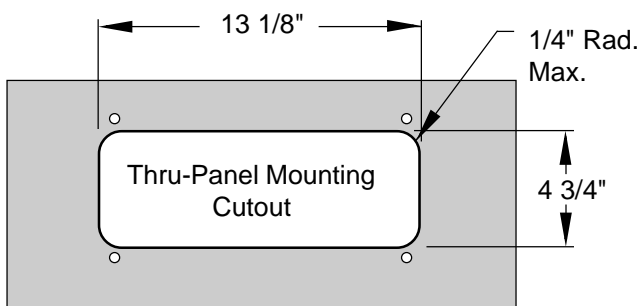
(4) 1/2" Dia. Spacers.  
Length = 2 1/2" — Panel Thickness

Thru-Panel Mounting

Raised Surface Mounting

Flush Surface Mounting

(4) 1/2" Spacers



ELECTRO-NUMERICS, INC.

Tel: (800) 854-8530 or (951) 699-2437 Fax: (951) 695-7246 for Applications Assistance

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# **LARGE** DIGIT DISPLAYS

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**QUALITY  
PERFORMANCE  
RELIABILITY  
COST**



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