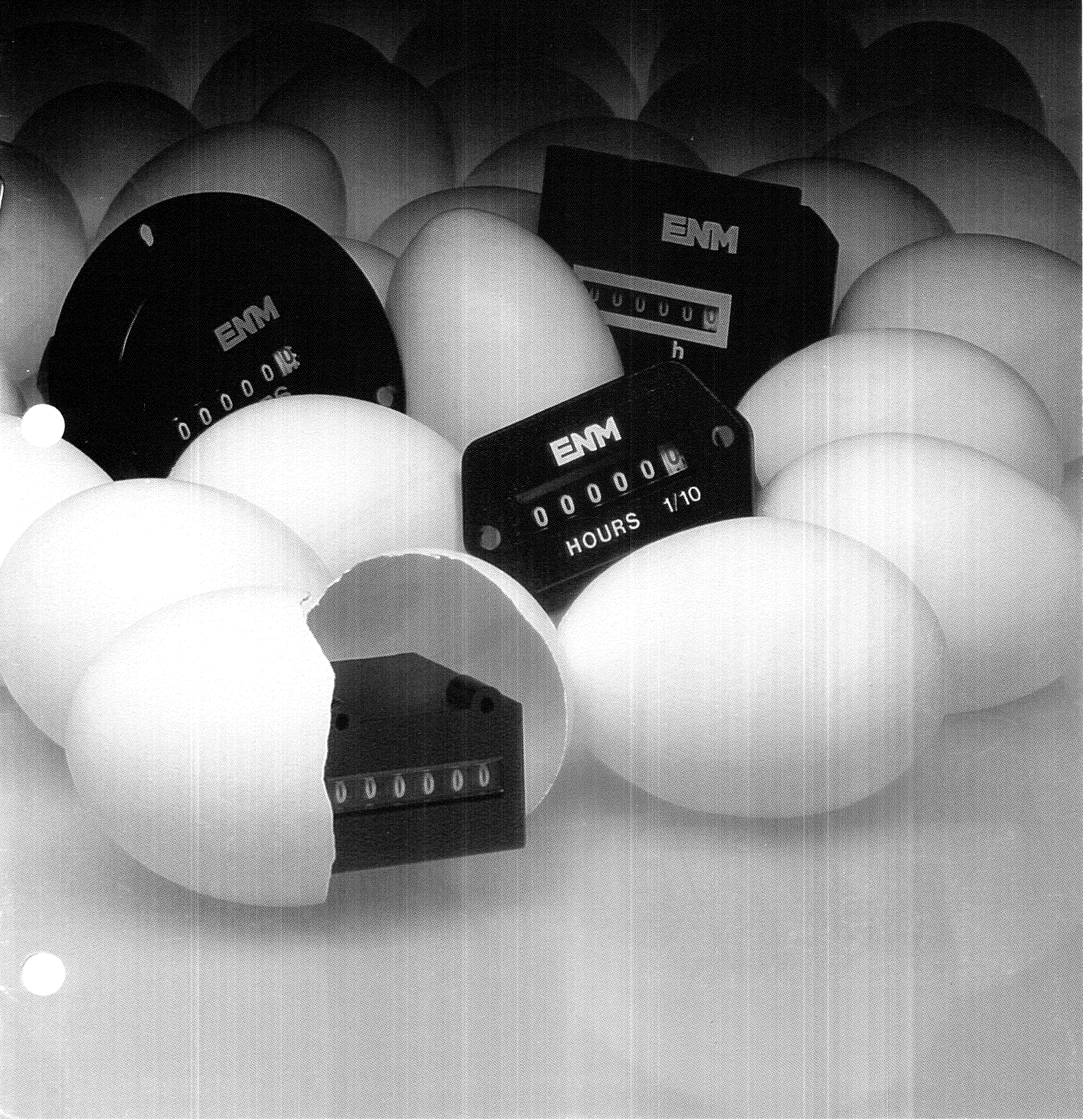


ENM

Counting Instruments



PRODUCTS ARE ONLY PART OF OUR PRINCIPLES

Standard Products

This catalog describes **standard** ENM counting and timing devices which are popularly specified for original equipment applications.

This does not represent all ENM products or variations. If you do not see what you are looking for, ASK FOR IT!

Custom Capabilities

ENM fully recognizes progress is continuous. As you are designing your new product for release to the market, we are also engineering new counting and timing devices to meet your changing needs.

If you determine an existing standard product will not satisfy your particular application, we invite you to utilize our custom engineering capabilities.

In essence, our engineers will work with yours to provide the most efficient solution to any design requirements.

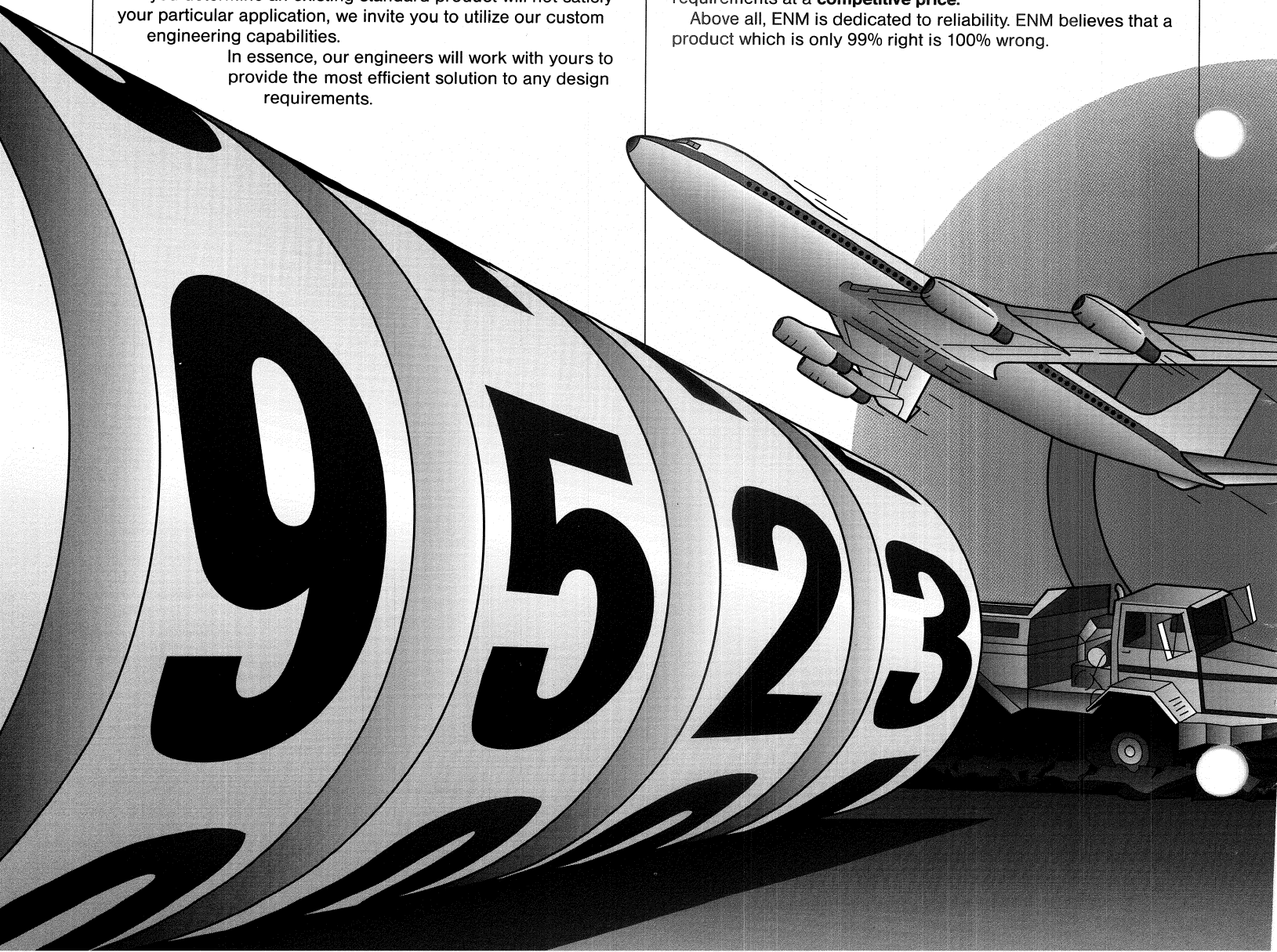
Complete Product Line

ENM is proud to have a product line to cover almost any counting or timing application. With ENM as a supplier, you will have the **highest quality, quickest delivery**, and the **expertise** of almost 40 years experience as an OEM supplier of counters and hour meters on your side.

Quality Engineered

Evaluation of an ENM instrument will evidence **total engineering integrity**. Designing a product to satisfy specifications, performance and life cycle is only part of our discipline. We also face the challenge of furnishing devices for the most specialized requirements at a **competitive price**.

Above all, ENM is dedicated to reliability. ENM believes that a product which is only 99% right is 100% wrong.



Why do I need a counter?

If your machines perform repetitive operations, handle money, measure distance, or count inventory, you need an ENM counter to keep record. ENM counters vary in function and appearance, but they all provide accurate and reliable counting. ENM has all types of counters to suit your needs from hand tallies to sophisticated electronic devices.

Why do I need an hour meter?

If your machines require regular interval maintenance, operate under warranty, or you need the operating time of a device for any reason, you need an ENM hour meter. ENM hour meters provide an accurate means of recording operating time for almost any machine or device on a long term basis.

PRODUCT INDEX

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Electrical products are UL listed and CSA approved.
 Specifications subject to change without notice.
 Request current detailed information.
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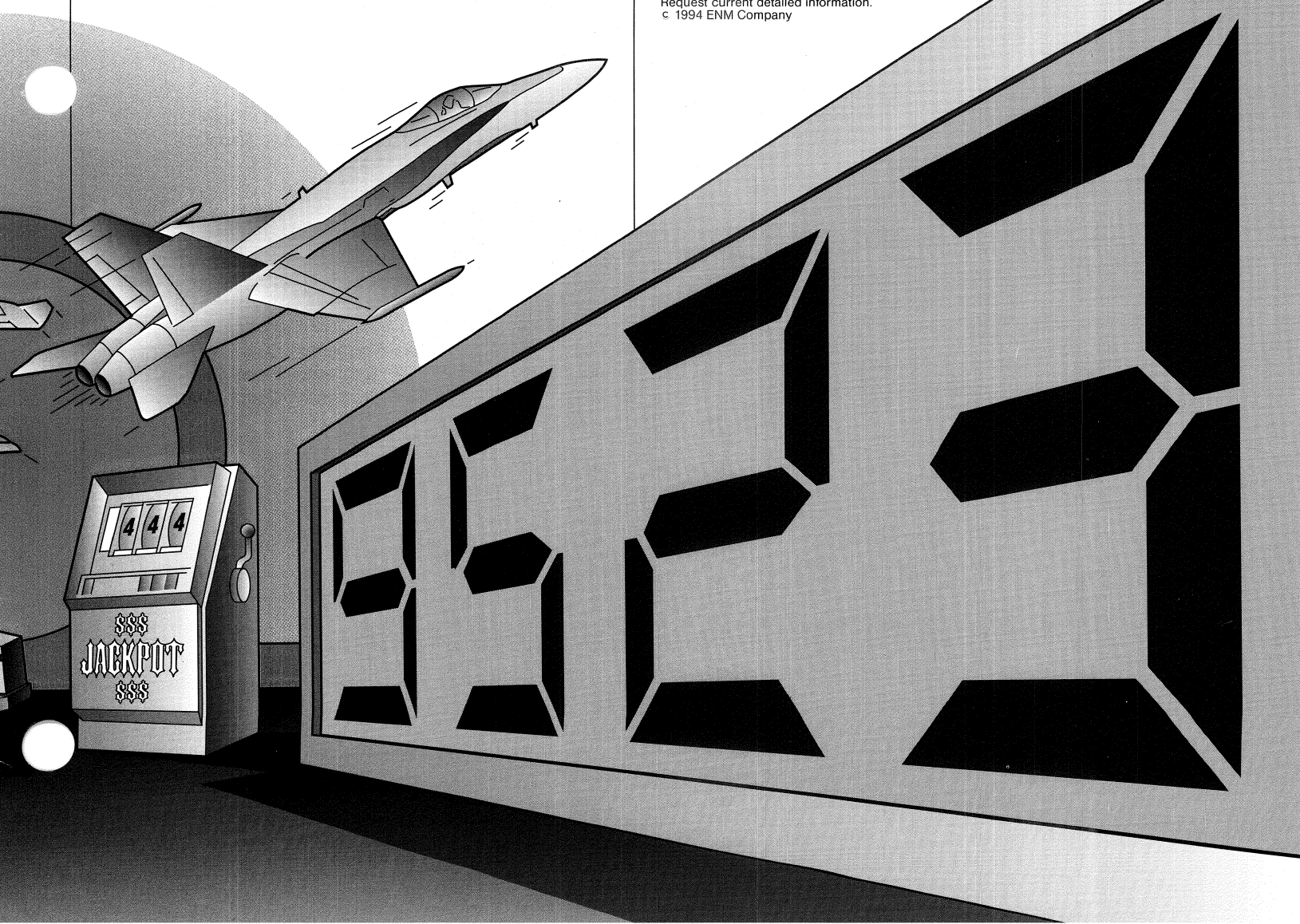


Table of Adding Counters

4

SERIES	PAGE	MOUNTING	RESET	AC VOLTAGE	DC VOLTAGE	DIGITS	FEATURES
E2B	7	BASE		24 - 230	6 - 24	5 - 6	All Steel Enclosure
E2B	7	BACK OF PANEL		24 - 230	6 - 24	5 - 6	All Steel Enclosure
E3B	7	BASE	KNOB	24 - 230	6 - 24	5	All Steel Enclosure
E3B	7	BASE	WHEEL	24 - 230	6 - 24	5	All Steel Enclosure
E4B	8	BACK OF PANEL		24 - 230	6 - 24	7	
E4B	8	PCB		24 - 230	6 - 24	7	
E5E	8	BASE	PANEL	115 - 230	4.5 - 24	5	Push-Button Reset from Front of Panel
E5E	8	REAR	PANEL	115 - 230	4.5 - 24	5	Push-Button Reset from Front of Panel
E6B	9	BACK OF PANEL		24 - 115	4.5 - 24	6	Tamper-Proof Available
E6B	9	REAR		24 - 115	4.5 - 24	6	Tamper-Proof Available
E6B	9	BASE		24 - 115	4.5 - 24	6	Tamper-Proof Available
E6B	9	PCB		24 - 115	4.5 - 24	6	Tamper-Proof Available
E6B	10	PANEL		24 - 115	4.5 - 24	6	Tamper-Proof Available
E8E	10	PCB			4.5 - 24	6	Magnetic, Water, and Shock Proof
E9E	11	PCB		115 - 230	1.5 - 24	7	Low Power Unit Available
E9E	11	BASE		115 - 230	1.5 - 24	7	Low Power Unit Available
E9E	12	PCB		115 - 230	1.5 - 24	7	Low Power Unit Available
E10F	12	BASE			6 - 24	6	Low Cost, Shock Proof
P2G	12	PANEL		115 - 230	1.5 - 24	7	
P2B	12	PANEL		115 - 230	12 - 24	6	
P3B	13	PANEL	WHEEL	115 - 230	12 - 24	5	Thumb Wheel Reset
P4B	13	PANEL	KEY	115 - 230	6 - 24	5	Security Key Reset From Panel
P5A	13	PANEL	PANEL	115 - 230	4.5 - 24	5	Push-button Reset From Panel
P14	13	PANEL		24 - 120	6 - 24	6	
L1	27	PANEL	ELECTRONIC	5 - 250	5 - 250	7	Self-Powered by Internal Lithium Battery
L5	27	PANEL	PANEL	5 - 240	5 - 250	8	Internal Lithium Battery, Push-Button Reset
L7	27	PCB / PANEL	ELECTRONIC		2.6 - 3.4	6	High Speed LCD Counter, Bi-Directional
L7	28	PCB / PANEL	ELECTRONIC			4	Battery Power, Contactless Counting
LCD1101	28	PCB	ELECTRONIC		5 - 80	6	EEPROM Permanent Count Memory
LCD2101	28	PANEL	ELECTRONIC		5 - 80	6	EEPROM Permanent Count Memory
LCD3101	28	BACK OF PANEL	ELECTRONIC		5 - 80	6	EEPROM Permanent Count Memory

Table of Hour Meters

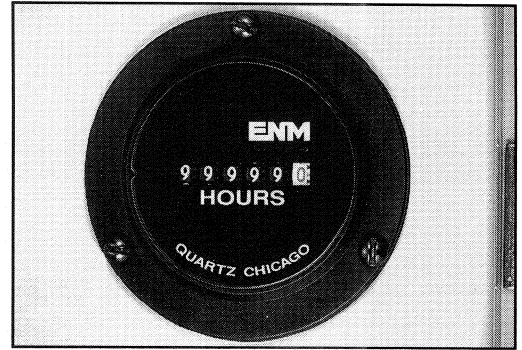


SERIES	PAGE	MOUNTING	AC VOLTAGE	DC VOLTAGE	DIGITS	FEATURES
T12B	18	PANEL	24 - 230		6	Synchronous Motor Driven
T12C	18	BASE	24 - 230		6	Synchronous Motor Driven
T14BH	18	PANEL		8 - 32	6	
T14BG	19	ROUND PANEL		8 - 32	5	
T14B	19	3-HOLE PANEL		8 - 32	5	
T14BH	19	BACK OF PANEL		8 - 32	5	
T18BH	19	PANEL	115 - 230		5	
T18BG	20	ROUND PANEL	115 - 230		5	
T18B	20	3-HOLE PANEL	115 - 230		5	
T18BH	20	BACK OF PANEL	115 - 230		5	
T32	20	PANEL	24 - 220	12 - 110	7	
T32	21	DIN RAIL MOUNT	24 - 220	12 - 110	7	
T33	21	PANEL		5 - 28	7	Low Power Consumption
T33	21	PCB		5 - 28	7	Low Power Consumption
T34	22	PANEL	24 - 230	4.5 - 24	6	Push-Button Reset
T40	22	PANEL		*10 - 80	6	Quartz Operation, Sealed Case, Low Power
T40	22	3-HOLE PANEL		*10 - 80	6	Quartz Operation, NEMA 4X,12 Rated, Low Power
T40	23	SQUARE PANEL		*10 - 80	6	Quartz Operation, Sealed Case, Low Power
T40	23	4-HOLE SQUARE		*10 - 80	6	Quartz Operation, Sealed Case, Low Power
T41	23	BACK OF PANEL		*10 - 80	6	Quartz Operation, Polarity Insensitive, Sealed Case
T41	24	PANEL		*10 - 80	6	Quartz Operation, Polarity Insensitive, Sealed Case
T50	24	PANEL	24 - 230		6	Quartz Operation, Frequency Insensitive, Sealed Case
T50	24	3-HOLE PANEL	24 - 230		6	Quartz Operation, Frequency Insensitive, NEMA 4X,12
T50	24,25	SQUARE PANEL	24 - 230		6	Quartz Operation, Frequency Insensitive, Sealed Case
T50	25	4-HOLE SQUARE	24 - 230		6	Quartz Operation, Frequency Insensitive, Sealed Case
T51	25	BACK OF PANEL	24 - 230		6	Quartz Operation, Frequency Insensitive, Sealed Case
T51	25	PANEL	24 - 230		6	Quartz Operation, Frequency Insensitive, Sealed Case
T60	26	BACK OF PANEL			6	Engine Powered Hour Meter
T60	26	3-HOLE PANEL			6	Engine Powered Hour Meter
T61	26	BACK OF PANEL			6	Engine Powered Hour Meter
T61	26	PANEL			6	Engine Powered Hour Meter
L2	27	PANEL			7	Power Supplied by Internal Lithium Battery, LCD Display
L6	27	PANEL			7	Power Supplied by Internal Lithium Battery, LCD Display

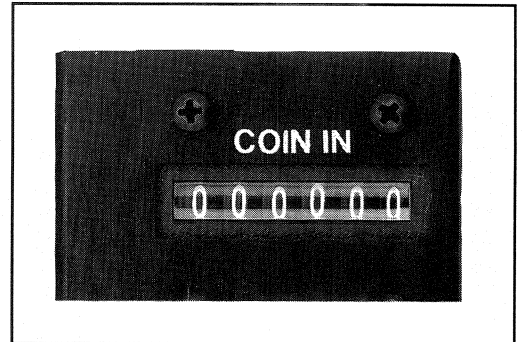
* SPECIAL EXTENDED OPERATING VOLTAGE RANGE

Description of Standard Mounting Types

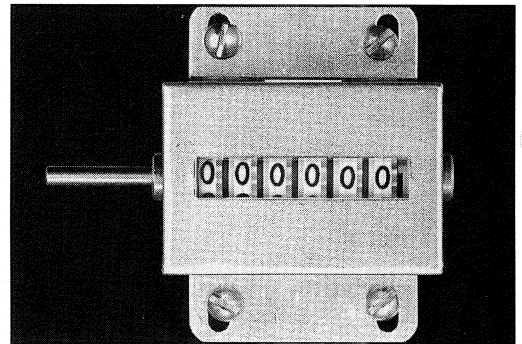
6 Panel - Panel mounting is obtained by cutting a circular or rectangular cut-out in the desired panel and the instrument is inserted with the flange resting on the top of the panel. The instrument is held in place by compressing a plastic or steel spring clip from behind the panel. This type of mounting is very popular because it requires no additional fasteners. Models are also considered panel mounted when they are inserted into a panel cut-out and mounted from the front using a two or more hole flange and fastened with screws from the front of the panel (pictured to the right).



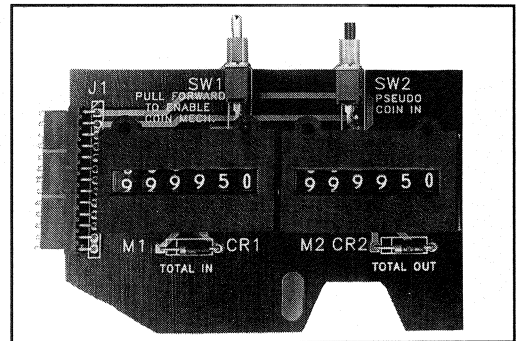
Back of Panel - Back of panel mounting is usually achieved by cutting an opening in a thin panel large enough to read the display. Two or more holes are drilled in the panel and screws are inserted from the front to secure the instrument against the back of the panel wall.



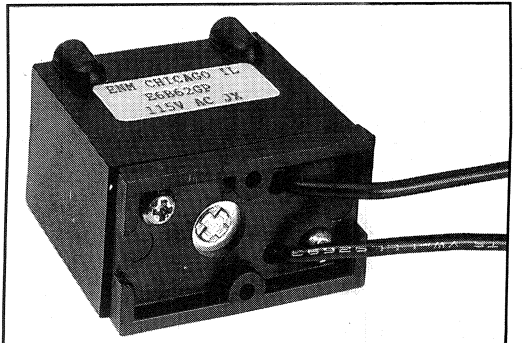
Base - Base mounting is usually a free standing mount and connections are made with a two or more hole flange at the bottom of the unit. This is a standard mount for most mechanical counters and is sometimes used for hour meters when a panel is not available.



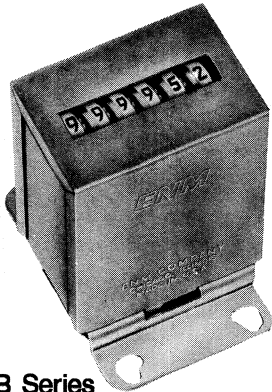
PCB - PC board mounting is common for using counters in add-on PCB modules to electronic machinery. This type of mounting eliminates the need for any wires and multiple counters can be assembled as one unit. The counters are attached by soldering the protruding pins into the PCB and two or more fasteners are also screwed into the bottom of the unit for additional support onto the PC board.



Rear - Rear mounting is similar to PCB mounting except there are no pins for soldering, only two or more holes on the bottom for threaded or self-tapping screws. This is an optional type of mounting used mainly when a suitable panel is not available.



ELECTRICAL COUNTERS



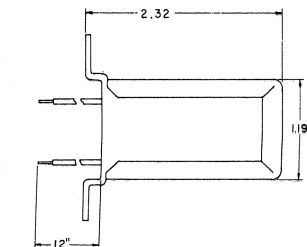
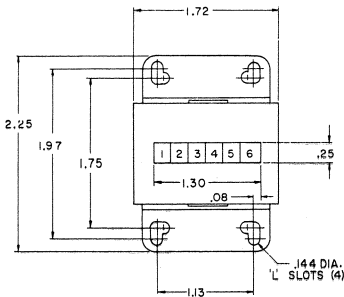
E2B Series General Purpose Counters

The E2B Series is the 'original' ENM counter and it is still one the most durable and dependable counters available. Record up to 999,999 at speeds of 600 counts/min. Universal "L" slots for quick base mounting. A 5-digit version is also available in most voltages.

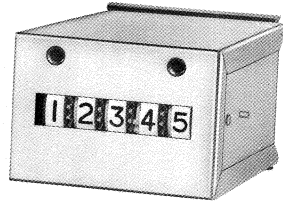
Pulse Length: 50 ms min.
Power: 6 Watts max.

Voltage	Part No.
6-Digit Models	
115 AC	E2B62D
230 AC	E2B61D
24 AC	E2B64D
24 DC	
24 DC	E2B65D
12 DC	E2B612D
6 DC	E2B610D

To order 5-Digit Models:
Substitute a '5' where a '6'
appears in the above part #'s



Technical Data Sheet #101



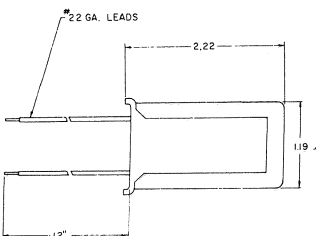
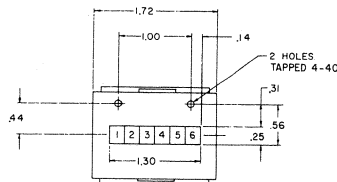
E2B Series Back of Panel Counters

This is the E2B Series in a back of panel mounting style. Record to 999,999 at speeds of 600 counts/min. Mount to back of panel through two pre-tapped No. 4-40 holes. A 6-digit version is also available in most voltages.

Pulse Length: 50 ms min.
Power: 6 Watts max.

Voltage	Part No.
5-Digit Models	
115 AC	E2B52DC05
230 AC	E2B51DC05
24 AC	E2B54DC05
24 DC	
24 DC	E2B55DC05
12 DC	E2B512DC05
6 DC	E2B510DC05

To order 6-Digit Models:
Substitute a '6' where a '5'
appears in the above part #'s



Technical Data Sheet #101

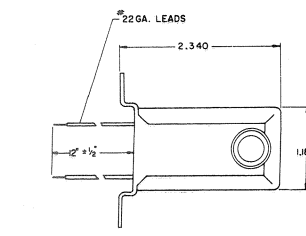
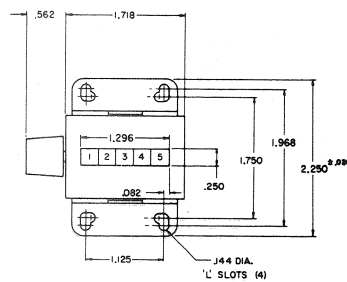


E3B Series General Purpose Counters

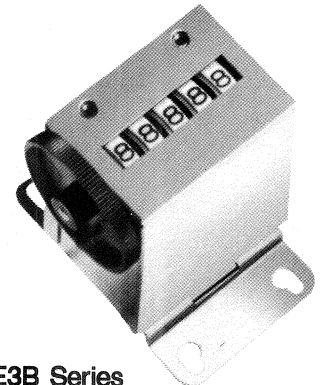
Versatile 5-digit electric impulse counters records to 99,999 at speeds to 600 counts per min. Knob resettable back to zero for repetitive operations. Universal "L" slots for convenient base mounting. For repeated cycle and general purpose applications requiring ease of resetting and long life performance.

Pulse Length: 50 ms min.
Power: 6 Watts max.

Voltage	Part No.
115 AC	E3B52D
230 AC	E3B51D
24 AC	E3B54D
24 DC	
24 DC	E3B55D
12 DC	E3B512D
6 DC	E3B510D



Technical Data Sheet #102

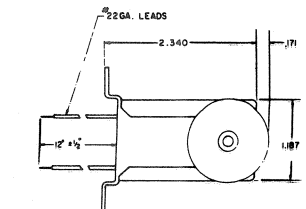
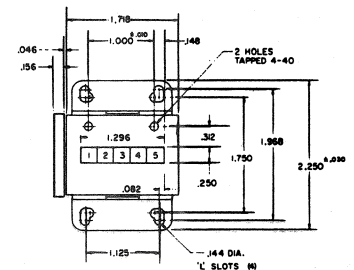


E3B Series Back of Panel Counters

Compact 5-digit electric impulse counters record to 99,999 at speeds to 600 counts per minute. Wheel resettable from front of panel. Mount to back of panel through two pre-tapped No. 4-40 holes.

Pulse Length: 50 ms min.
Power: 6 Watts max.

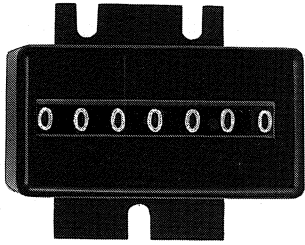
Voltage	Part No.
115 AC	E3B52DC
230 AC	E3B51DC
24 AC	E3B54DC
24 DC	
24 DC	E3B55DC
12 DC	E3B512DC
6 DC	E3B510DC



Technical Data Sheet #102

ELECTRICAL COUNTERS

8



E4B Series Miniature Counters

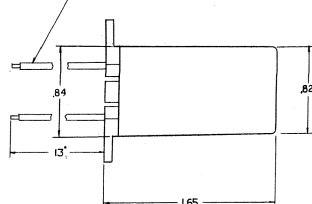
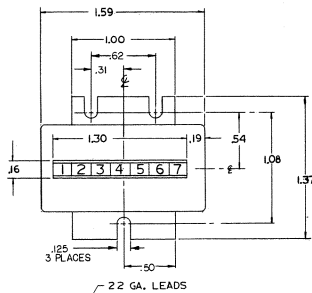
The E4B Series is a miniature 7-digit plastic impulse counter which is adaptable to PCB mounting without causing transient interference. Also suitable for back of panel mounting. Highly applicable to electronic instrumentation and control panel applications where space is limited.

Pulse Length: 35 ms min.
Power: 2.5 Watts

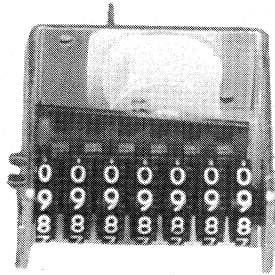
Voltage	Part No.
Base Mount	
115 AC	E4B72D
230 AC	E4B71D
24 AC	E4B74D
24 DC	E4B75D
12 DC	E4B712D
6 DC	E4B710D

PC Board Pin Mount

120 AC	E4B72F
24 AC	E4B74F
24 DC	E4B75F
12 DC	E4B712F
6 DC	E4B710F



Technical Dats Sheet #103

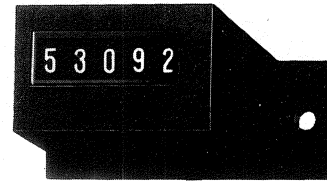
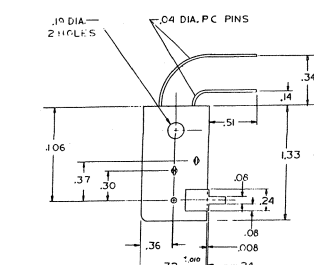
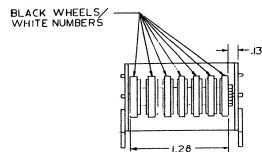
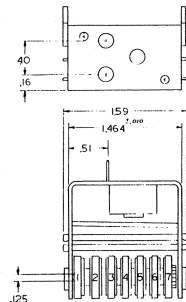


E4B Series Open Frame Miniature Counters

This is the 7-digit E4B Series counter in an open frame configuration specifically designed for PCB mounting.

Pulse Length: 35 ms min.
Power: 2.5 Watts

Voltage	Part No.
115 AC	E4B72F04
24 DC	E4B75F04
12 DC	E4B712F04
6 DC	E4B710F04

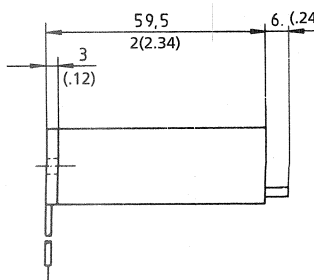
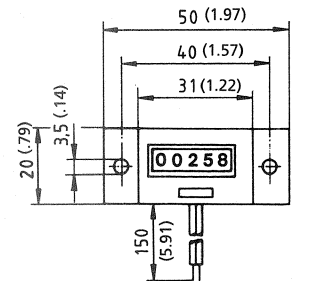


E5E Series Resettable Miniature Counter

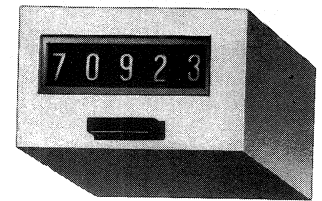
Series E5E is a 5-digit miniature adding counter with manual push-button reset. This versatile low power counter is available in both AC and DC voltages. Counter is protected against shock and vibration to insure a long service life.

Pulse length: 50 ms
Power: 60 mW

Voltage	Part No.
Base Mount	
230 AC	E5E51D
115 AC	E5E52D
24 DC	E5E55D
12 DC	E5E512D
6 DC	E5E510D
4.5 DC	E5E529D01



Technical Data Sheet #104

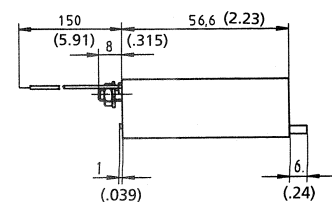
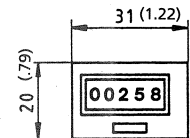


E5E Series Resettable Miniature Counter

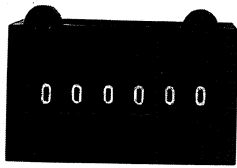
Series E5E is a 5-digit miniature adding counter with manual push-button reset. This versatile low power counter is available in both AC and DC voltages. Counter is protected against shock and vibration for a long service life.

Pulse length: 50 ms
Power: 60 mW

Voltage	Part No.
Rear Mount	
230 AC	E5E51K
115 AC	E5E52K
24 DC	E5E55K
12 DC	E5E512K
6 DC	E5E510K
4.5 DC	E5E529K01



Technical Data Sheet #104

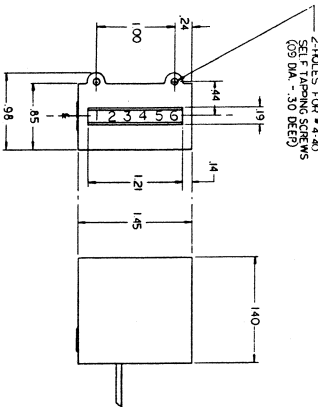


E6B Series Frog-Eye Back of Panel Counter

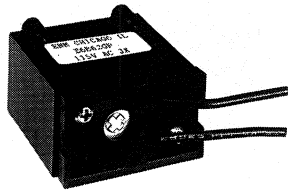
This E6B Series is a miniature frog-eyed counter ideal for vending machines and other coin operated equipment. The robust 6-digit unit has count speed to 600 counts per minute. Optional free wheeling diode for electronic circuit protection. Tamper-proof version also available.

Pulse Length: 50 ms min
Power: 2.5 Watts

Voltage	Part No.
Back of Panel	
15 AC	E6B62GM
24 AC	E6B64GM
4.5 DC	E6B629GM
6 DC	E6B610GM
12 DC	E6B612GM
24 DC	E6B65GM
with diode	
4.5 DC	E6B631GM
6 DC	E6B626GM
12 DC	E6B627GM



Technical Data Sheet #105

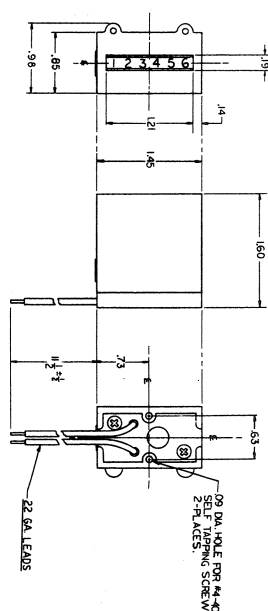


E6B Series Frog-Eye Rear Mount Counter

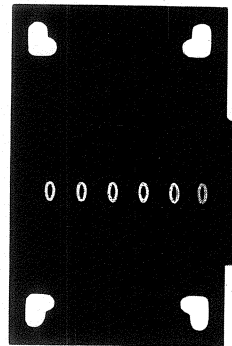
This E6B Series is a miniature counter designed for rear mount. Ideal for vending machines and other coin operated equipment. The robust 6-digit unit has count speed to 600 counts per minute. Optional free wheeling diode for electronic circuit protection. Tamper-proof version also available.

Pulse Length: 50 ms min
Power: 2.5 Watts

Voltage	Part No.
Rear Mount	
115 AC	E6B62GP
24 AC	E6B64GP
4.5 DC	E6B629GP
6 DC	E6B610GP
12 DC	E6B612GP
24 DC	E6B65GP
with diode	
4.5 DC	E6B631GP
6 DC	E6B626GP
12 DC	E6B627GP



Technical Data Sheet #105

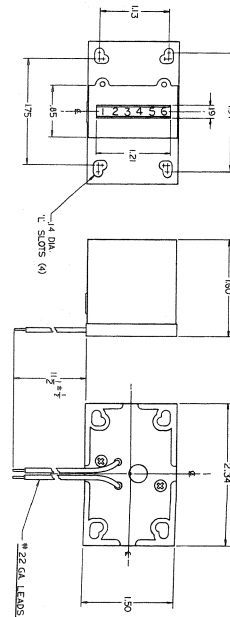


E6B Series Frog-Eye Large Base Mount

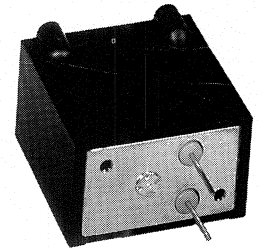
This E6B Series is a miniature counter designed for base mounting. Optional free wheeling diode for electronic circuit protection. Tamper-proof version also available.

Pulse Length: 50 ms min.
Power: 2.5 Watts

Voltage	Part No.
Base Mount	
115 AC	E6B62GN
24 AC	E6B64GN
4.5 DC	E6B629GN
6 DC	E6B610GN
12 DC	E6B612GN
24 DC	E6B65GN
with diode	
4.5 DC	E6B631GN
6 DC	E6B626GN
12 DC	E6B627GN
24 DC	E6B628GN



Technical Data Sheet #105

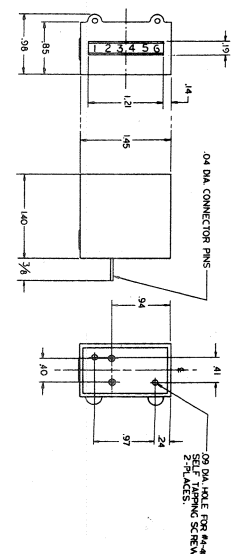


E6B Series Frog-Eye PC Board Mount

This E6B Series is a miniature counter designed for PC board mount. Typical uses include vending machines, slot machines, and any coin operated application that requires accurate and reliable counting. Optional free wheeling diode for electronic circuit protection. Tamper-proof version also available.

Pulse Length: 50 ms
Power: 2.5 Watts

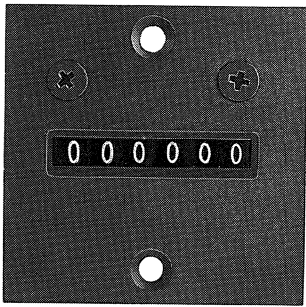
Voltage	Part No.
PCB Mount	
115 AC	E6B62H
24 AC	E6B64H
4.5 DC	E6B629H
6 DC	E6B610H
12 DC	E6B612H
24 DC	E6B65H
with diode	
4.5 DC	E6B631H
6 DC	E6B626H
12 DC	E6B627H
24 DC	E6B628H



Technical Data Sheet #105

ELECTRICAL COUNTERS

10

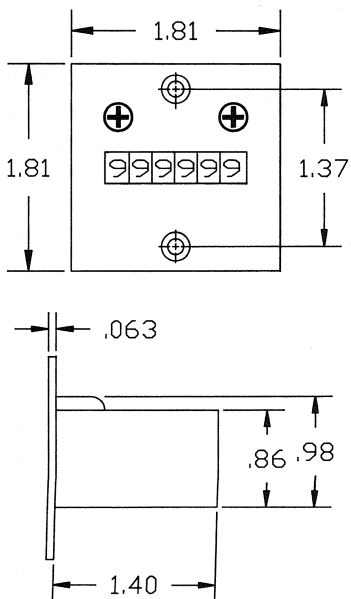


E6B Series Counters Two-Hole Panel Mounted

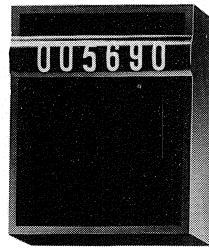
This is the standard E6B Series in a two-hole panel mount version. Optional free wheeling diode for electronic circuit protection. Tamper-proof version also available.

Pulse Length: 50 ms min.
Power: 2.5 Watts

Voltage	Part No.
Panel Mount	
115 AC	E6B62GM36
24 AC	E6B64GM36
4.5 DC	E6B629GM36
6 DC	E6B610GM36
12 DC	E6B612GM36
24 DC	E6B65GM36
with diode	
4.5 DC	E6B631GM36
6 DC	E6B626GM36
12 DC	E6B627GM36
24 DC	E6B628GM36



Technical Data Sheet #106

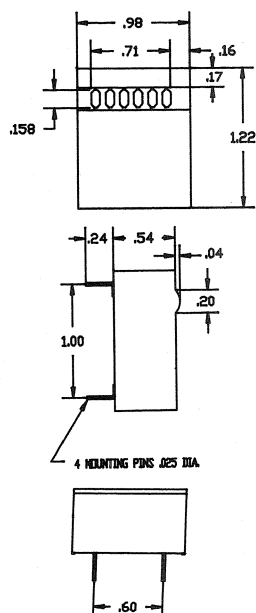


E8E Series Magnetic Proof PCB Counter

The E8E Series is a patented design that is unaffected by magnetic fields that can jam or induce false counts. This design is also water-proof. The 6-digit display features a magnifying window for enhanced readability. Low power consumption and the four mounting pins on the bottom make this counter ideal for PC board applications. Shock-proof model is optional.

Pulse Length: 50 ms
Power: 50 mW

Voltage	Part No.
24 DC	E8E65JR
12 DC	E8E612JR
6 DC	E8E610JR
4.5 DC	E8E629JR
Shock-Proof	
24 DC	E8E65JS
12 DC	E8E612JS
6 DC	E8E610JS
4.5 DC	E8E629JS



Technical Data Sheet #107

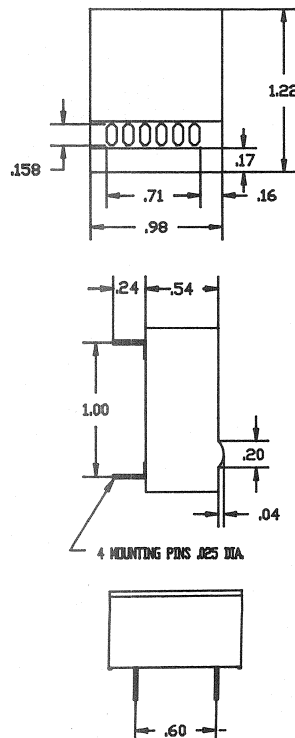


E8E Series Magnetic Proof PCB Counter

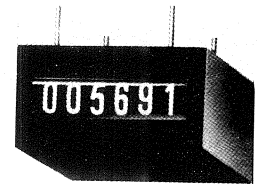
This is the E8E Series with a bottom window location. All E8E units are all standard as magnetic field proof and water-proof with shock-proof available as an option.

Pulse Length: 50 ms
Power: 50 mW

Voltage	Part No.
24 DC	E8E65NR
12 DC	E8E612NR
6 DC	E8E610NR
4.5 DC	E8E629NR
Shock-Proof	
24 DC	E8E65NS
12 DC	E8E612NS
6 DC	E8E610NS
4.5 DC	E8E629NS



Technical Data Sheet #107

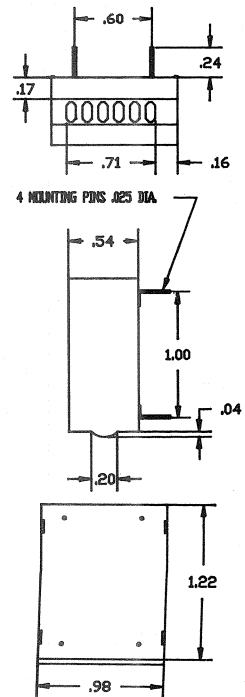


E8E Series Magnetic Proof PCB Counter

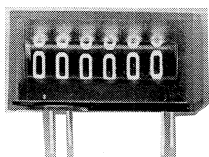
The E8E Series shown above is in a PCB mount with the numerical display on the side wall of the counter and the mounting pins are on the top. This version has all standard features which include magnetic field resistance, water-proof case, and a magnified 6-digit display. A shock-proof version is also available.

Pulse Length: 50 ms
Power: 50 mW

Voltage	Part No.
24 DC	E8E65PR
12 DC	E8E612PR
6 DC	E8E610PR
4.5 DC	E8E629PR
Shock-Proof	
24 DC	E8E65PS
12 DC	E8E612PS
6 DC	E8E610PS
4.5 DC	E8E629PS



Technical Data Sheet #107

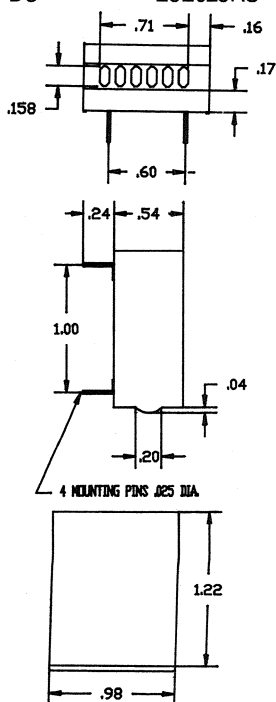


E8E Series Magnetic Proof PCB Counter

The E8E Series shown above is in a PCB mount with the pins on the bottom and the display on the side wall of the counter. This version has all standard features which include magnetic field resistance, water-proof case, and a magnified 6-digit display. A shock-proof version is also available.

Pulse Length: 50 ms
Power: 50 mW

Voltage	Part No.
24 DC	E8E65RR
12 DC	E8E612RR
Shock-Proof	
6 DC	E8E610RR
4.5 DC	E8E629RR
24 DC	E8E65RS
12 DC	E8E612RS
6 DC	E8E610RS
4.5 DC	E8E629RS



Technical Data Sheet #107

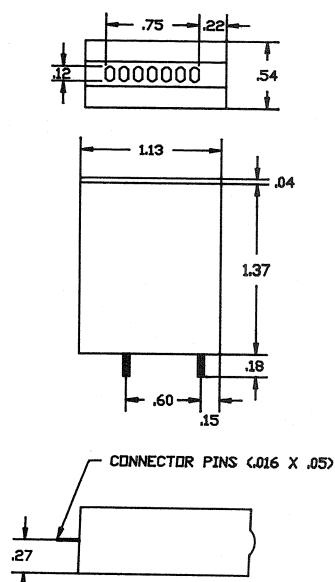


E9E Series Low Power PCB Mount Counter

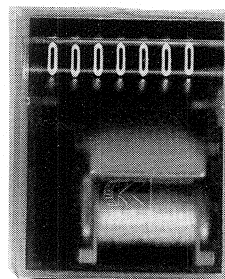
The E9E Series is one of our more versatile 7-digit counters. With its small size and low power requirements, this counter is ideal for various PCB applications. Optional four and five-digit versions and wash-proof versions are also available. A low power (30mW) unit is optional.

Pulse Length: 40-50 ms
Power: 250 mW

Voltage	Part No.
230 AC	E9E71F
115 AC	E9E72F
24 AC	E9E75F
12 AC	E9E720F
24 DC	E9E75F
12 DC	E9E712F
6 DC	E9E710F
4.5 DC	E9E729F01
3.0 DC	E9E713F
1.5 DC	E9E735F



Technical Data Sheet #108

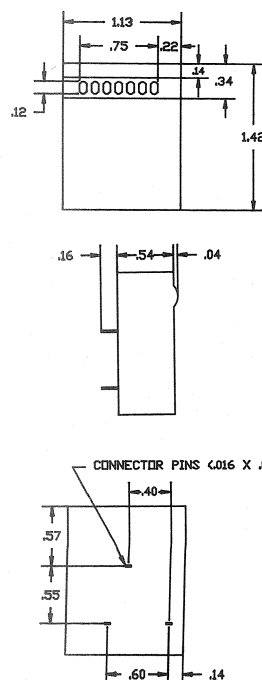


E9E Series Low Power PCB Mount Counter

This is the E9E Series in a pin mount PCB configuration. This unit is also available in wash-proof version and in a wide range of voltages. A low power (30mW) unit is optional.

Pulse Length: 40-50 ms
Power: 250 mW

Voltage	Part No.
230 AC	E9E71LR
115 AC	E9E72LR
24 AC	E9E74LR
12 AC	E9E720LR
24 DC	E9E75LR
12 DC	E9E712LR
6 DC	E9E710LR
4.5 DC	E9E729LR01
3.0 DC	E9E713LR
1.5 DC	E9E735LR



Technical Data Sheet #108

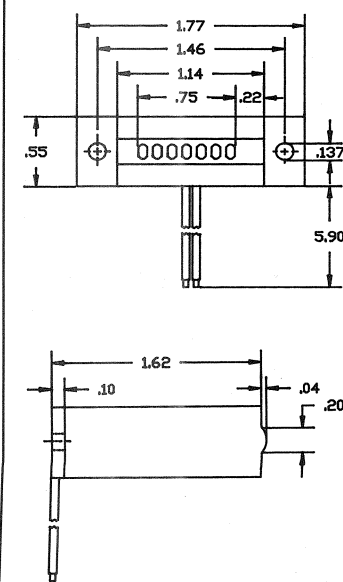


E9E Series Low Power Base Mount Counter

The E9E Series is shown here in our base mount version. With its small size and low power requirements, this counter is ideal for many applications. Four and five-digit versions, along with wash-proof versions are also available. A low power (30mW) unit is optional.

Pulse Length: 40-50 ms
Power: 250 mW

Voltage	Part No.
230 AC	E9E71D
115 AC	E9E72D
24 AC	E9E74D
12 AC	E9E720D
24 DC	E9E75D
12 DC	E9E712D
6 DC	E9E710D
4.5 DC	E9E729D01
3.0 DC	E9E713D
1.5 DC	E9E735D



Technical Data Sheet #108

ELECTRICAL COUNTERS

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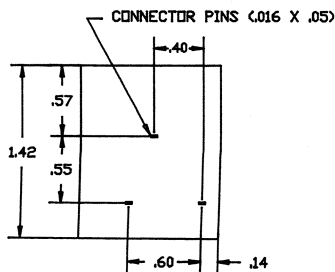
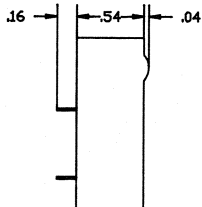
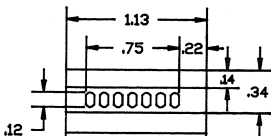


E9E Series Low Power PCB Mount Counter

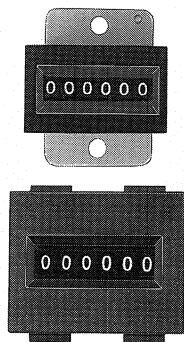
This is the E9E Series in a standard PCB mounting. This model also has most AC and DC voltages. A low power (30mW) unit is optional.

Pulse Length: 40-50 ms
Power: 250 mW

Voltage	Part No.
230 AC	E9E71SR
115 AC	E9E72SR
24 DC	E9E75SR
12 DC	E9E712SR
6 DC	E9E710SR
4.5 DC	E9E729SR01



Technical Data Sheet #108

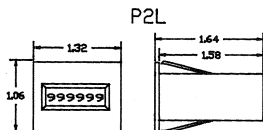
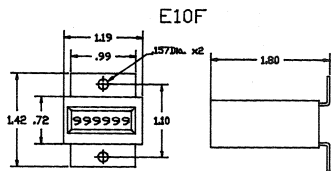


E10 / P2L Series Low Cost DC Counter

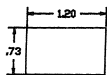
This Series is a value priced counter which includes a choice of two compact mounting styles, a variety of voltages, and comes in a standard tamper-proof and shock-proof design. Suitable for any application that needs a low cost counter, but does not want to sacrifice function or reliability.

Pulse Length: 50 ms
Power: 3.5 Watts

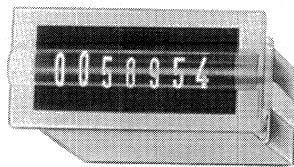
Voltage	Part No.
24 DC	E10F65D
12 DC	E10F612D
6 DC	E10F610D
Panel Mount	
24 DC	P2L65A
12 DC	P2L612A
6 DC	P2L610A



Panel Cut-Out



Technical Data Sheet #109

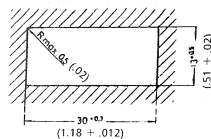
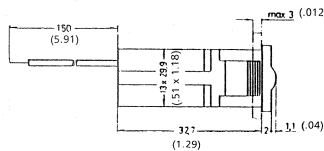
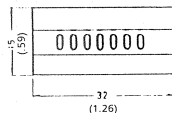


P2G Series Panel Mount Counter

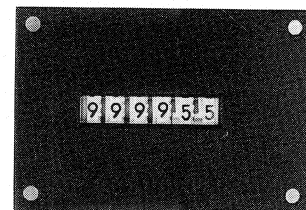
The P2G Series is a snap-in panel mounted version of the E9E counter. This 7-digit counter has all the same features as the E9E including the wide voltage range. Two 6" lead wires are also included. A low power (30mW) unit is optional.

Pulse Length: 40-50 ms
Power: 250 mW

Voltage	Part No.
230 AC	P2G71A
115 AC	P2G72A
24 AC	P2G74A
12 AC	P2G720A
12 DC	P2G712A
6 DC	P2G710A
4.5 DC	P2G729A
3.0 DC	P2G713A
1.5 DC	P2G735A



Technical Data Sheet #108

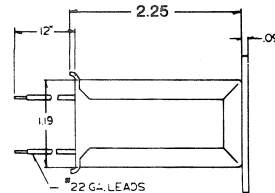
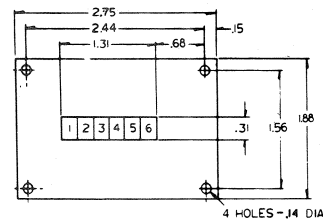


P2B Series 4-Hole Panel Mount Counter

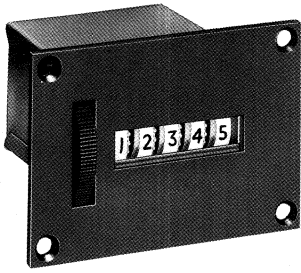
A 6-digit electric impulse counter for adding to 999,999 at speeds to 600 counts per minute. Mounts flush with panel through four .144" dia. holes in a black brush finished face plate. Useful for instruments, control panels, and other general applications.

Pulse Length: 50 ms min.
Power: 6 Watts

Voltage	Part No.
115 AC	P2B62A
230 AC	P2B61A
24 DC	P2B55A
12 DC	P2B512A



Technical Data Sheet #101

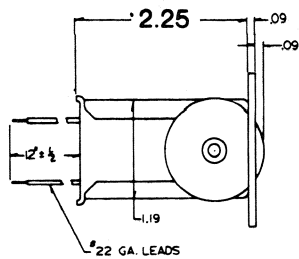
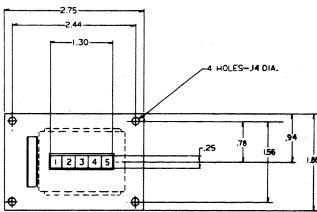


P3B Series 4-Hole Panel Mount Counter

The P3B Series is a 5-digit electric impulse counter for adding to 999,999 at speeds of 600 counts per minute. Wheel-reset back to zero from front of panel. Mounts flush with panel through four .144" dia. holes in black face plate. Reset capability useful for repetitive production or batch processing.

Pulse Length: 50 ms min.
Power: 6 Watts

Voltage	Part No.
115 AC	P3B52A
230 AC	P3B51A
24 DC	P3B55A
12 DC	P3B512A



Technical Data Sheet #101

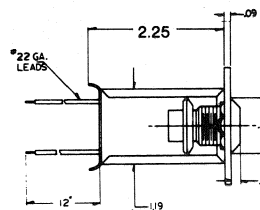
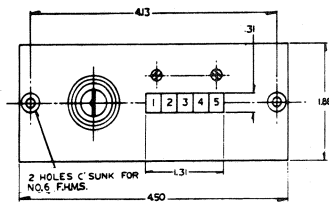


P4B Series Security Key Counter

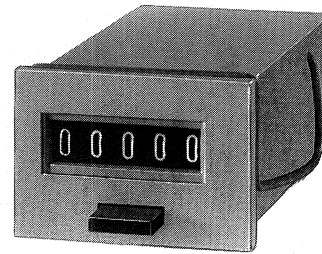
High security 5-digit electric impulse counter requires key to reset from front of panel. Totals at speeds up to 600 counts per minute. Useful for applications that require accurate counts without the worry of malicious or accidental tampering.

Pulse Length: 50 ms min.
Power: 6 Watts

Voltage	Part No.
115 AC	P4B52A
230 AC	P4B51A
24 DC	P4B55A
12 DC	P4B512A
6 DC	P4B510A



Technical Data Sheet #101

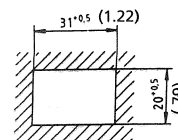
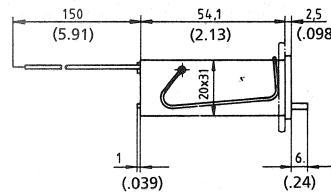
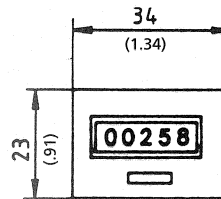


P5A Series Resettable Miniature Counter

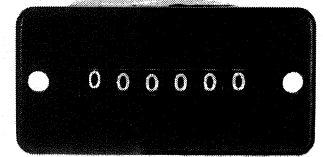
Series P5A is a 5-digit panel mount counter with manual push-button reset. This versatile low power counter is available in both AC and DC voltages. Counter is protected against shock and vibration to insure a long service life. Special voltages available.

Pulse Length: 50 ms
Power: 60 mW

Voltage	Part No.
230 AC	P5A51A
115 AC	P5A52A
24 DC	P5A55A
12 DC	P5A512A
6 DC	P5A510A
4.5 DC	P5A529A01



Technical Data Sheet #110

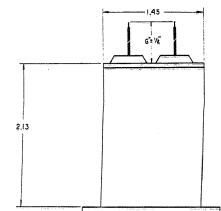
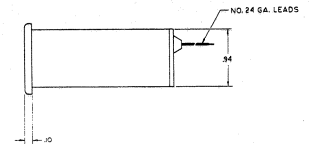
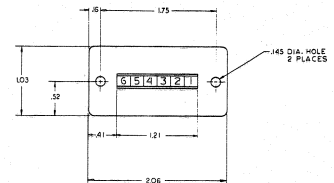


P14 Series Miniature Panel Counters

Miniature panel mounted 6-digit electric counter designed for placement in close proximity to electronic components without creating transient interference. Unit counts at speeds of 600 counts per minute.

Pulse Length: 25 ms min.
Power: 1.60 to 4.48 Watts

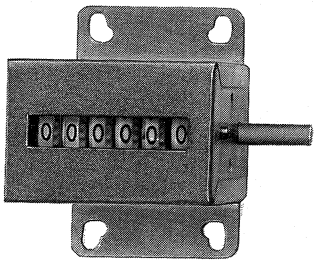
Voltage	Part No.
120 AC	P14B62A
24 AC	P14B64A
6 DC	P14B610A
12 DC	P14B612A
24 DC	P14B65A



Technical Data Sheet #111

MECHANICAL COUNTERS

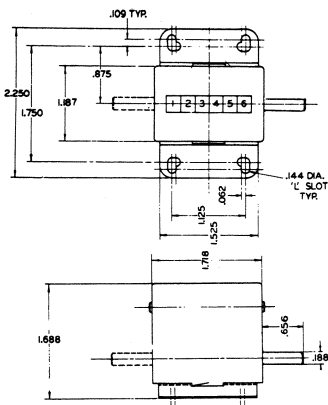
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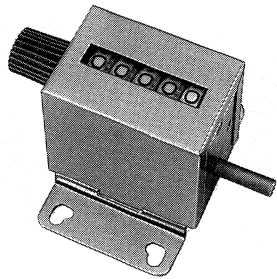
M2BA Series Stroke Counters

Non-resettable 6-digit mechanical stroke totalizer counts to 999,999. Adjustable 3" straight lever oscillates ratchet drive 17° per count at 500 counts per minute. Top coming and a choice of right and left hand or double shafts. Other levers also available (see accessories). Rugged all steel case with universal "L" slots for easy base mounting.

Description	Part No.
Right hand shaft	M2BA60A
Left hand shaft	M2BA60C
Double shaft	M2BA60E



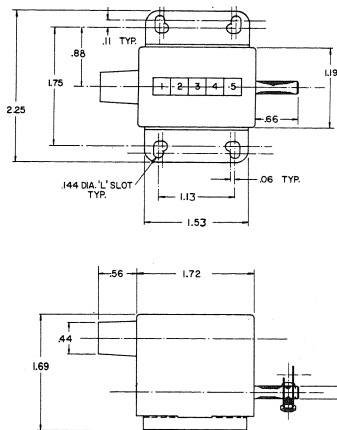
Technical Data Sheet #302



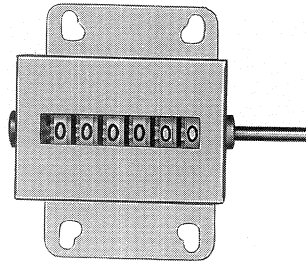
M3CA Series Stroke Counters

Knob resettable 5-digit mechanical stroke counter records to 99,999. Adjustable 3" straight lever oscillates ratchet drive 17° per count at 500 counts per minute. Drive shaft is top coming with choice of right or left hand shafts and other levers (see accessories). Rugged all steel housing with universal "L" slots for simple base mounting.

Description	Part No.
Right hand shaft	M3CA50A
Left hand shaft	M3CA50C



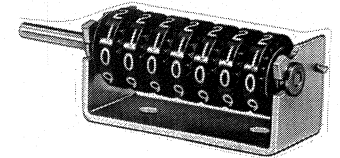
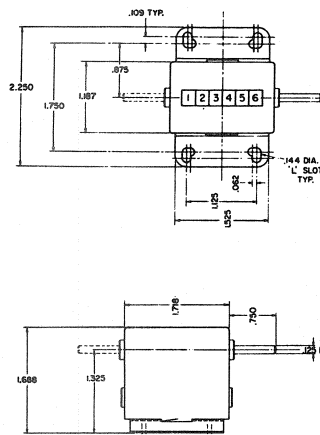
Technical Data Sheet #303



M4B Series Revolution Counters

Non-resettable 6-digit mechanical instrument adds or subtracts up to 999,999 at speeds up to 3,000 counts per minute. Revolution drive indicates one count for every complete revolution. Direct drive indicates ten counts for each revolution. Drive shaft is top coming with a choice of left or right hand shafts. Universal "L" slots for convenient base mounting.

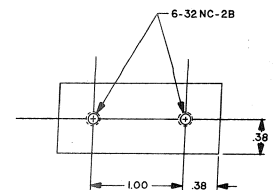
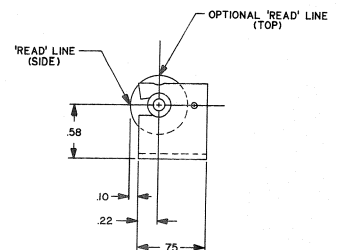
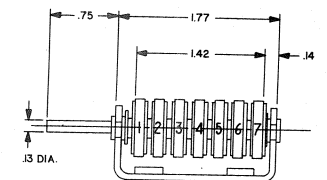
Description	Part No.
Revolution Counter	
Right hand shaft	M4BB60A
Left hand shaft	M4BB60C
Direct Drive	
Right hand shaft	M4BD60A
Left hand shaft	M4BD60C



M5B Series Open Frame Counters

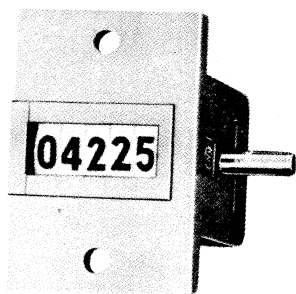
Open frame high speed non-resettable 7-digit mechanical counter offers choice of side or top reading to fit requirements. Adds or subtracts up to 9,999,999 at speeds of 3000 counts per minute. Direct drive indicates 10 counts for each revolution of the left hand, top coming shaft. Also available in top going, right hand, and double shafts. Mounts with two pre-drilled 1/8" tapped holes in base.

Description	Part No.
Left hand shaft, top coming	
Side reading	M5BD70C
Top reading	M6BD70C



MECHANICAL COUNTERS

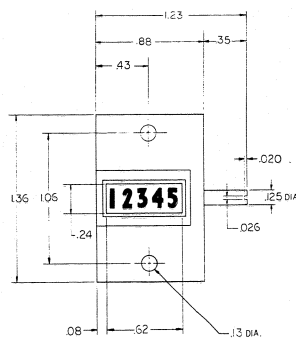
16



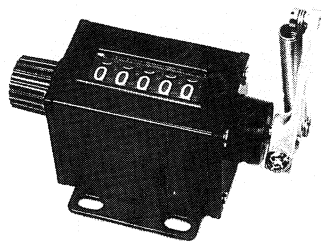
M22 Series Compact Security Counter

Non-resettable 5-digit M22 mechanical counter designed for panel mount.

Description	Part No.
Ratchet	M22Z56
Revolution	M22Z55
Direct Drive	M22Z54



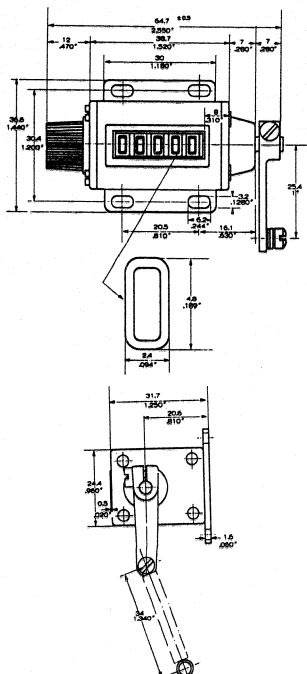
Technical Data Sheet #304



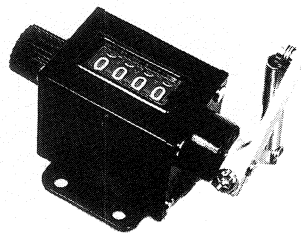
M39 Series Miniature Ratchet Driven Counter

The M39 is one of our popular mechanical counters in a case designed for rugged and corrosive environments. Easy base mounting and manual reset coupled with the long life design make this counter ideal for use on machine tools, vending machines, and many industrial applications. Lever is returned to original position by an internal spring. Units are available in 3, 4, and 5 digit configurations. Units are also available in right or left hand shafts and top coming or top going.

Description	Part No.
5 digit,RH,Top coming	M39CA50A
5 digit,RH,Top going	M39CA50B
5 digit,LH,Top going	M39CA50C
5 digit,LH,Top coming	M39CA50D



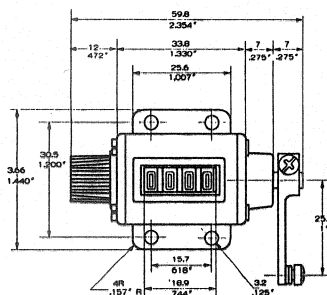
Technical Data Sheet #305



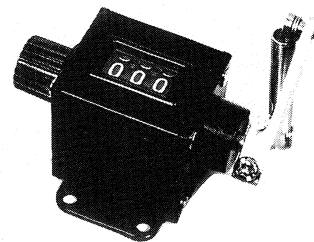
M39 Series Miniature Ratchet Driven Counter

This is the popular M39 Series in a 4 digit configuration.

Description	Part No.
4-digit,RH,Top coming	M39CA40A
4-digit,RH,Top going	M39CA40B
4-digit,LH,Top going	M39CA40C
4-digit,LH,Top coming	M39CA40D



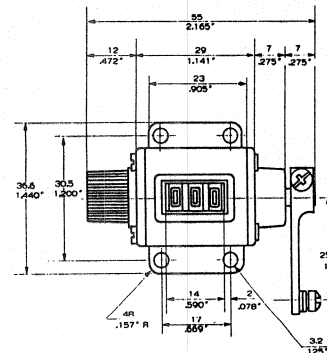
Technical Data Sheet #305



M39 Series Miniature Ratchet Driven Counter

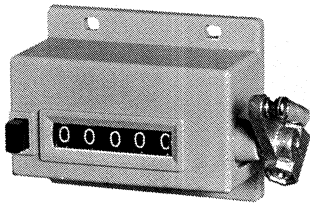
This is the popular M39 Series in a 3-digit configuration.

Description	Part No.
3-digit,RH,Top coming	M39CA30A
3-digit,RH,Top going	M39CA30B
3-digit,LH,Top going	M39CA30C
3-digit,LH,Top coming	M39CA30D



Technical Data Sheet #305

MECHANICAL COUNTERS & HAND TALLIES



M43 Series Ratchet Driven Counter

This economical totalizer has an all plastic case and is furnished with a die cast arm and return spring. Push-button reset and convenient base mount make this counter ideal for many applications.

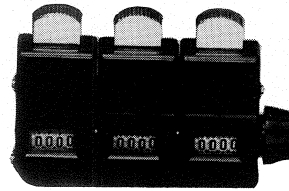
Description	Part No.
Stroke/Base Mnt.	M43FA50B



M24 Series Hand Tally

This hand held plastic tally is perfect for personal counting of events or operations. Unit comes with a reset knob on the side. A black unit is included with a base for desk mounting. A blue unit includes a 36" neck cord.

Description	Part No.
Black Case w/base	M24Z01
Blue Case w/neck cord	M24Z04



MT Series Multi-Tally Counters

ENM's family of tally counters offers a single unit as well as groups of 2, 3, 4, 5, and 6 units. Perfect for traffic studies or similar event counting applications. All single and multi-tally counters can be hand held or mounted.

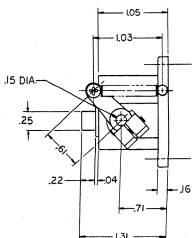
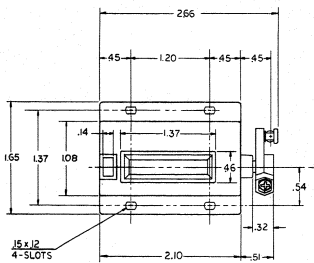
Description	Part No.
Single unit	MT-1
2 unit tally	MT-2
3 unit tally	MT-3
4 unit tally	MT-4
5 unit tally	MT-5
6 unit tally	MT-6



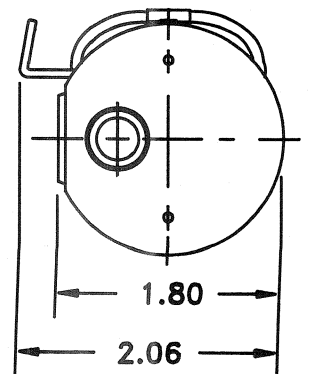
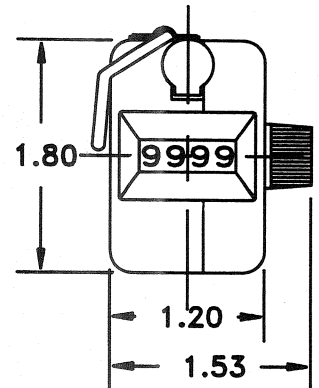
M45 Series Hand and Desk Tally

The M45 Series is a 4-digit counter that fits naturally in the palm of your hand. Perfect for checking attendance, traffic surveys, and countless other counting jobs. The long life design and attractive chrome plated steel casing makes this counter ideal in both function and looks at a low price. A resetting knob is also included on the right side for quick reset. The hand tally can be ordered with a base for desk or wall mounting. Multiple counter arrays up to 10 connected units can also be ordered.

Description	Part No.
Hand-Tally	M45
Desk-Tally	M4501

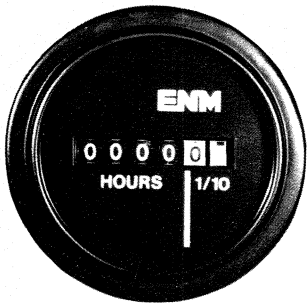


Technical Data Sheet #306



Technical Data Sheet #307

Technical Data Sheet #301

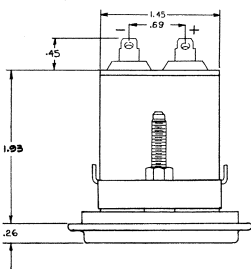
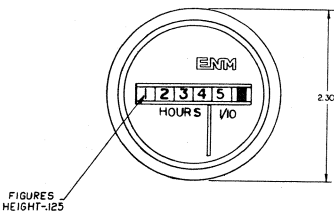


**T14 Series
DC Powered Hour Meter**

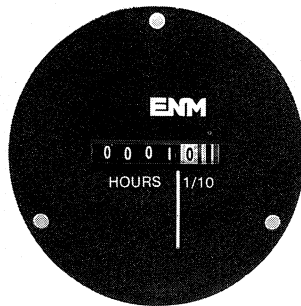
The unit pictured above is the T14 Series in a round SAE bezel bracket mount. Standard unit is supplied with spade terminals, but wire leads can be ordered as an option.

Power: 2.2 Watts

Voltage	Part No.
Stainless Steel Bezel 8-32 DC	T14BG517BC
Black Bezel 8-32 DC	T14BG517BC33



Technical Data Sheet #204

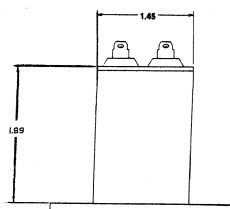
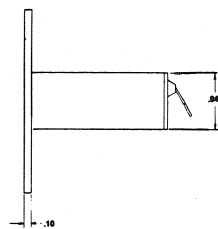
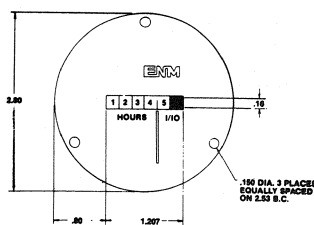


**T14 Series
DC Powered Hour Meter**

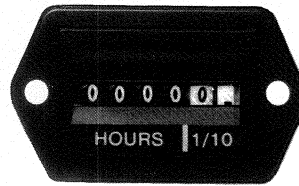
The unit pictured above is the T14 Series in a attractive round 3-hole bezel mount. Standard unit is supplied with spade terminals, but wire leads can be ordered as an option.

Power: 2.2 Watts

Voltage	Part No.
8-32 DC	T14B517BC



Technical Data Sheet #204

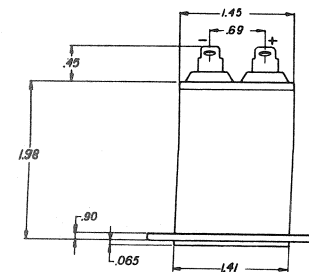
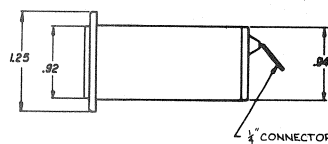
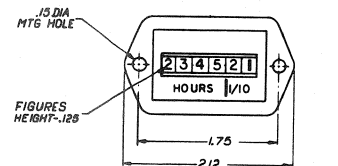


**T14 Series
DC Powered Hour Meter**

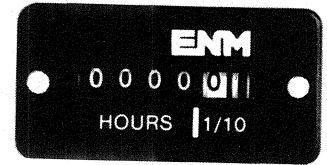
The unit pictured above is the T14 Series hour meter in a functional two-hole mounting style. Standard unit is supplied with wire leads, but spade terminals can be ordered as an option.

Power: 2.2 Watts

Voltage	Part No.
8-32 DC	T14BH517BC73



Technical Data Sheet #204



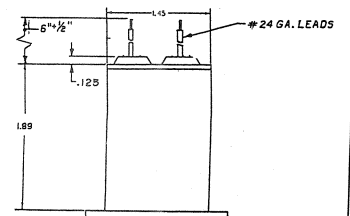
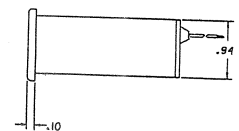
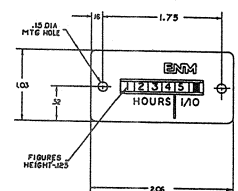
**T18 Series
AC Powered Hour Meter**

Tamper-resistant 5-digit AC hour meters have solid state electronic drive circuitry designed for a long service life. Electro-mechanical indicator can not be erased. No battery back up required. Quartz crystal provides accurate timing. Standard unit is supplied with wire leads, but spade terminals can be ordered as an option.

Power: .3 to .6 Watts

Voltage	Part No.
115 AC, 60Hz	T18BH52BC
230 AC, 60Hz	T18BH51BC
24 AC, 60Hz	T18BH54BC

115 AC, 50Hz	T18BH53BC
230 AC, 50Hz	T18BH511BC
24 AC, 50Hz	T18BH524BC



Technical Data Sheet #205

HOUR METERS

20



T18 Series AC Powered Hour Meter

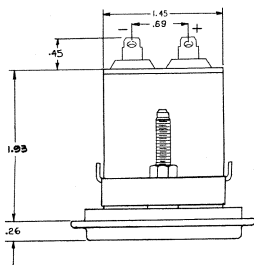
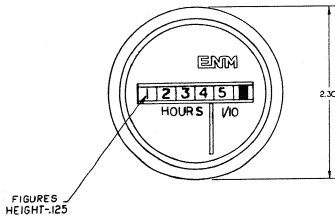
The unit pictured above is a T18 Series in a round SAE bezel bracket mount. Standard unit is supplied with wire leads, but spade terminals can be ordered as an option.

Power: .3 to .6 Watts

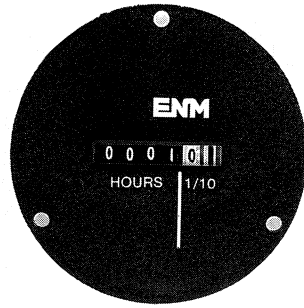
Voltage	Part No.
Stainless Steel Bezel	
115 AC,60Hz	T18BG52BC
230 AC,60Hz	T18BG51BC
24 AC,60Hz	T18BG54BC
Black Bezel	
115 AC,50Hz	T18BG53BC
230 AC,50Hz	T18BG511BC
24 AC,50Hz	T18BG524BC

115 AC,60Hz	T18BG52BC33
230 AC,60Hz	T18BG51BC33
24 AC,60Hz	T18BG54BC33

115 AC,50Hz	T18BG53BC33
230 AC,50Hz	T18BG511BC33
24 AC,50Hz	T18BG524BC33



Technical Data Sheet #205

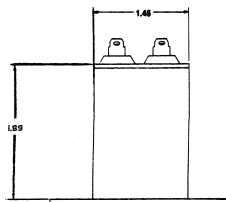
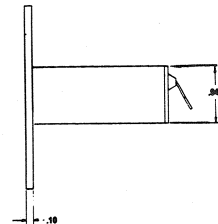
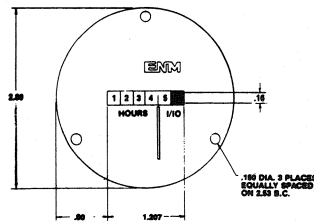


T18 Series AC Powered Hour Meter

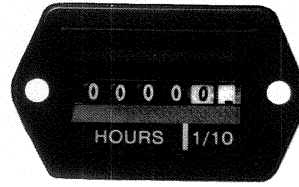
The unit pictured above is the T18 Series hour meter in a attractive, round 3-hole bezel mount. Standard unit is supplied with wire leads, but spade terminals can be ordered as an option.

Power: .3 to .6 Watts

Voltage	Part No.
115 AC,60Hz	T18B52BC
230 AC,60Hz	T18B51BC
24 AC,60Hz	T18B54BC
115 AC,50Hz	T18B53BC
230 AC,50Hz	T18B511BC
24 AC,50Hz	T18B524BC



Technical Data Sheet #205

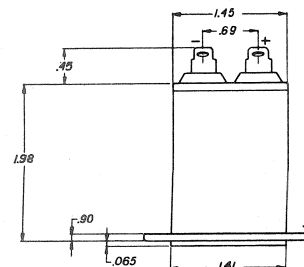
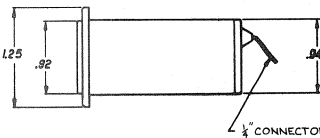
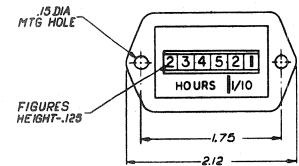


T18 Series AC Powered Hour Meter

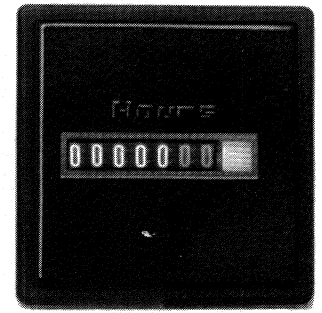
The unit pictured above is the T18 Series hour meter in a functional two-hole mounting style. Standard unit is supplied with wire leads, but spade terminals can be ordered as an option.

Power: .3 to .6 Watts

Voltage	Part No.
115 AC, 60Hz	T18BH52BC09
230 AC, 60Hz	T18BH51BC09
24 AC, 60Hz	T18BH54BC09
115 AC, 50Hz	T18BH53BC09
230 AC, 50Hz	T18BH511BC09
24 AC, 50Hz	T18BH524BC09



Technical Data Sheet #205



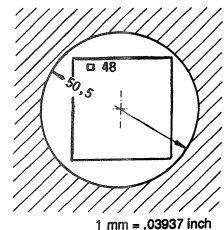
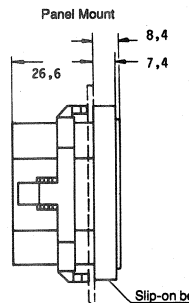
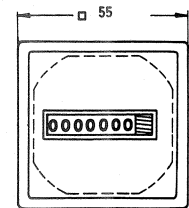
T32 Series AC/DC Panel Mount Hour Meters

Series T32 is a 7-digit synchronous motor driven hour meter in AC voltage and stepper motor driven in DC. This hour meter can withstand even the most rugged applications. The completely insulated housing provides substantial protection against environmental influences. Suitable for 48 mm² and 50.8 mm (2.0") dia. panel cut-outs.

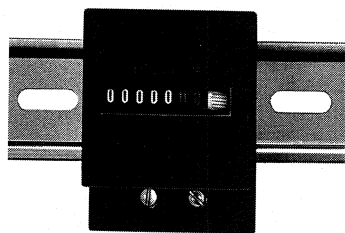
Power: 2.0 Watts @ 220 VAC
180 mW @ 12 VDC

Voltage	Part No.
110 AC	T32BL72D
220 AC	T32BL71D
24 AC	T32BL74D

12-24 DC	T32BL717D
36-80 DC	T32BL742D



Technical Data Sheet #206

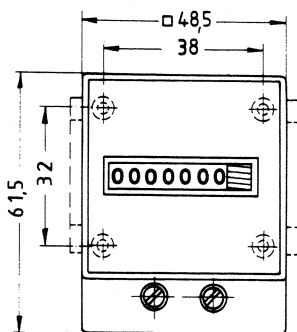


T32 Series AC/DC DIN Rail Mount Hour Meter

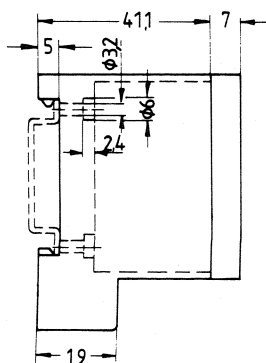
The unit pictured above is the standard T32 Series in a DIN rail mount which is useful when panels are not available. This hour meter is driven by a synchronous motor in AC and a stepper motor in DC. The completely insulated housing provides substantial protection against environmental influences.

Power: 2.0 Watts @ 220VAC
180 mW @ 12VDC

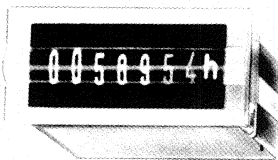
Voltage	Part No.
115 AC	T32F72D
230 AC	T32F71D
24 AC	T32F74D
12-24 DC	T32F717D
36-80 DC	T32F742D



1mm = .03937 IN



Technical Data Sheet #206

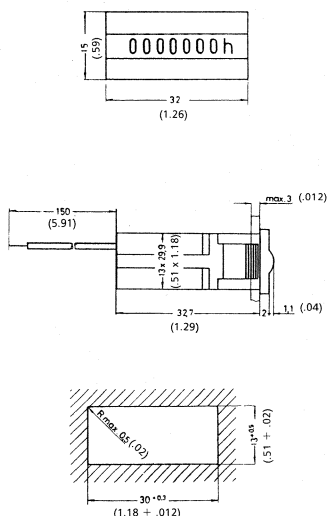


T33 Series DC Miniature Low Power Hour Meter

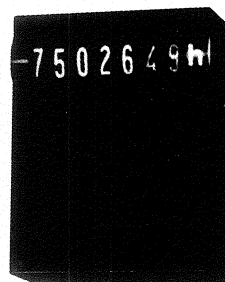
Series T33 miniature hour meters are 7-digit quartz crystal controlled impulse counters. Low power consumption makes this series ideal for applications where power consumption is critical. Pictured above is the panel mounted version which includes a snap-in spring clip for quick mounting.

Power: 10 mW @ 5 VDC
48 mW @ 24 VDC

Voltage	Part No.
5 DC	T33BM733DC
12 DC	T33BM712DC
24 DC	T33BM75DC
12-28 DC	T33BM741D



Technical Data Sheet #207

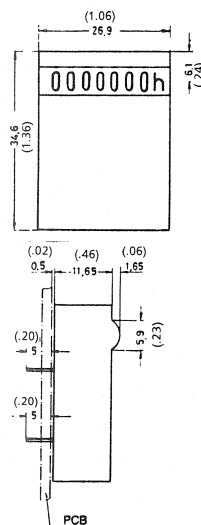


T33 Series DC Miniature Low Power Hour Meter

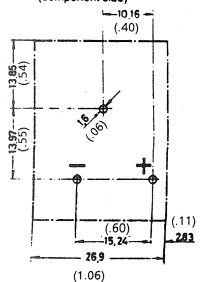
Series T33 miniature hour meters are 7-digit quartz crystal controlled impulse counters. Low power consumption makes this series ideal for PC board applications or any where power consumption is critical. Pictured above is the wide base PCB mount. Wash-proof models also available.

Power: 10 mW @ 5 VDC
48 mW @ 24 VDC

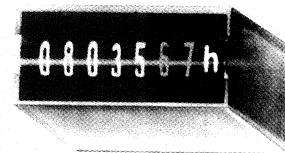
Voltage	Part No.
5 DC	T33EA733DC
12 DC	T33EA712DC
24 DC	T33EA75DC
12-28 DC	T33EA741D



punching diagram (component side)



Technical Data Sheet #207

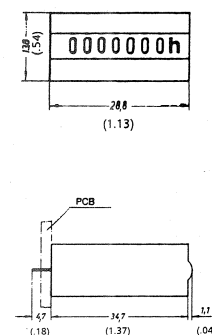


T33 Series DC Miniature Low Power Hour Meter

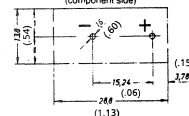
Series T33 hour meters are 7-digit quartz crystal controlled impulse counters. Low power consumption makes this series ideal for PC board applications or where ever power consumption is critical. The narrow base PCB mount is pictured above. Wash-proof models also available.

Power: 10 mW @ 5 VDC
48 mW @ 24 VDC

Voltage	Part No.
5 DC	T33EC733DC
12 DC	T33EC712DC
24 DC	T33EC75DC
12-28 DC	T33EC741D



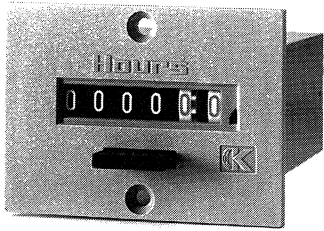
punching diagram (component side)



Technical Data Sheet #207

HOUR METERS

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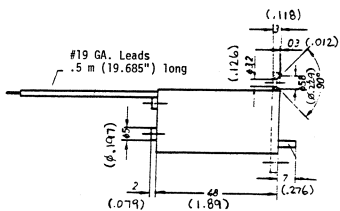
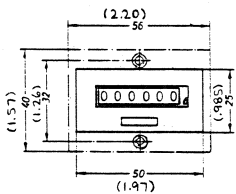


T34 Series Resetable AC/DC Hour Meter

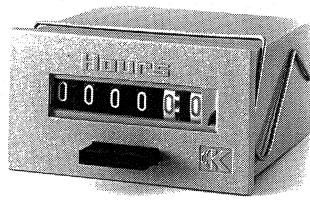
The Series T34 hour meter is a 6-digit resettable electro-mechanical hour meter. Ideal for interval timing where accumulated hours is not needed. This hour meter is driven by a synchronous motor with the same accuracy as non-resettable models.

Power: 2.0 W @ 220 VAC
80 mW @ 12 VDC

Voltage	Part No.
4.5 DC	T34BJ629D
6.0 DC	T34BJ610D
12 DC	T34BJ612D
12-24 DC	T34BJ617D
24 DC	T34BJ65D
24 AC,60Hz	T34BJ64D
115 AC,60Hz	T34BJ62D
230 AC,60Hz	T34BJ61D
24 AC,50Hz	T34BJ624D
115 AC,50Hz	T34BJ63D
230 AC,50Hz	T34BJ611D



Technical Data Sheet #208

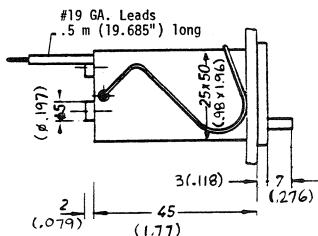
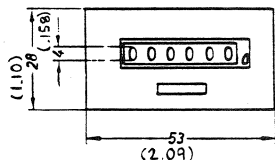


T34 Series Resetable AC/DC Hour Meter

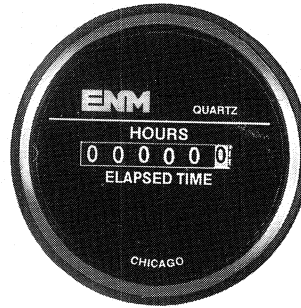
The Series T34 hour meter is a 6-digit resettable electro-mechanical hour meter. Ideal for interval timing where accumulated hours is not needed. This hour meter is synchronous motor driven with the same quartz accuracy as non-resettable models.

Power: 2.0 W @ 220 VAC
80 mW @ 12 VDC

Voltage	Part No.
4.5 DC	T34BN629D
6.0 DC	T34BN610D
12 DC	T34BN612D
12-24 DC	T34BN617D
24 DC	T34BN65D
24 AC	T34BN64D
115 AC	T34BN62D
230 AC	T34BN61D
24 AC,50Hz	T34BN624D
115 AC,50Hz	T34BN63D
230 AC,50Hz	T34BN611D



Technical Data Sheet #209

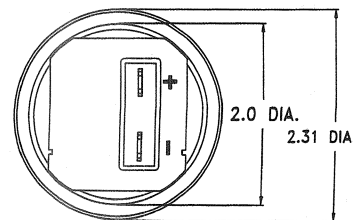
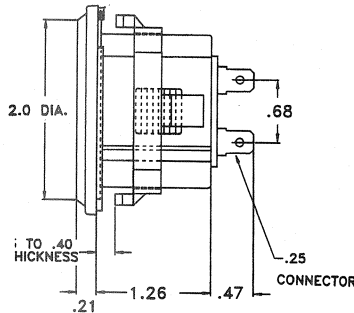
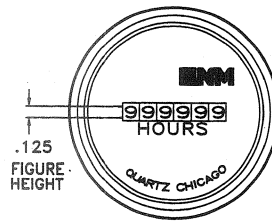


T40 Series Quartz DC Hour Meter

ENM's Series T40 DC hour meter is the answer to applications requiring a low power, economical, and reliable hour meter. This compact tamper-resistant meter is sealed against the environment to provide years of service. A quartz crystal time base insures super-silent operation and accurate time keeping.

Power: .03 Watts @ 12 VDC
.70 Watts @ 48 VDC

Voltage	Part No.
10-80 DC	T40A45



Technical Data Sheet #209

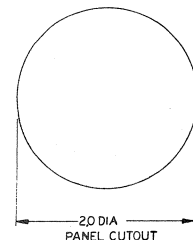
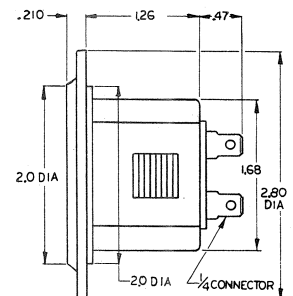
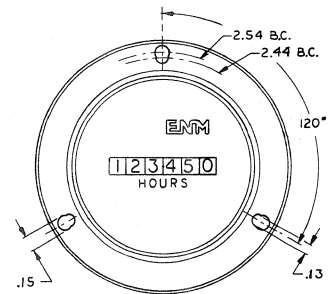


T40 Series Quartz DC Hour Meter

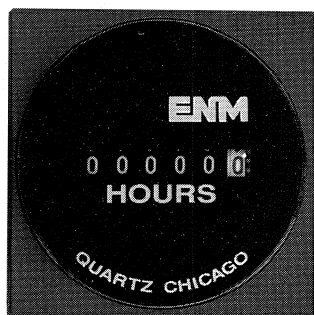
ENM's Series T40 DC hour meter in a large three hole flange. NEMA 4X, 12 rated panel gasket available for water and corrosion resistant panel mounting (see accessories). Completely sealed design. A quartz crystal time base insures super-silent operation and accurate time keeping.

Power: .03 Watts @ 12 VDC
.70 Watts @ 48 VDC

Voltage	Part No.
10-80 DC	T40B45



Technical Data Sheet #209

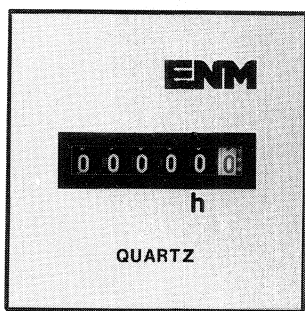


T40 Series Square Mount Quartz DC Hour Meter

This is the standard T40 Series in the attractive 52 mm² panel mount. This hour has all the standard features which includes a 6-digit display, low power requirements, large voltage range, and an environmentally sealed case. A quartz crystal time base insures accurate time keeping.

Power: .03 watts @ 12 VDC
.70 Watts @ 48 VDC

Voltage	Part No.
10-80 DC	T40E45

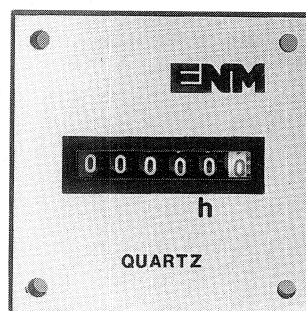


T40 Series Square Mount Quartz DC Hour Meter

The unit pictured above is the 52 mm² panel mount version of the T40 Series with a printed aluminum face plate.

Power: .03 Watts @ 12 VDC
.70 Watts @ 48 VDC

Voltage	Part No.
Brushed Aluminum 10-80 DC	T40E4534
Black Anodized 10-80 DC	T40E4536

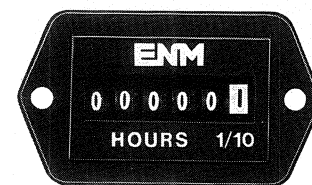


T40 Series Square Mount Quartz DC Hour Meter

This is the four hole version of the square aluminum dial plate. Can be panel mounted with the four holes for an attractive and secure position in your panel.

Power: .03 Watts @ 12 VDC
.70 Watts @ 48 VDC

Voltage	Part No.
Brushed Aluminum 10-80 DC	T40E4535
Black Anodized 10-80 DC	T40E4537

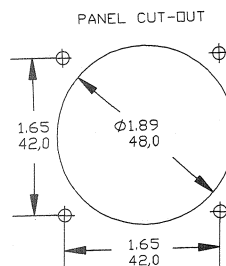
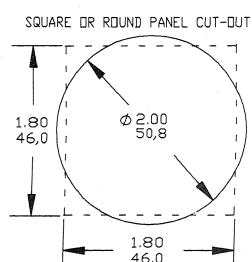
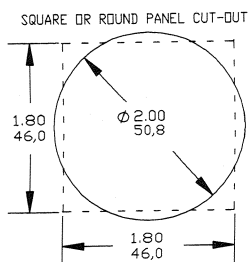
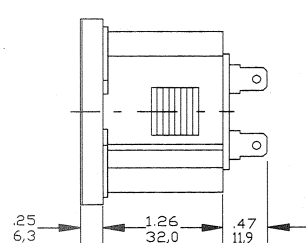
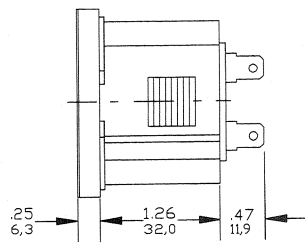
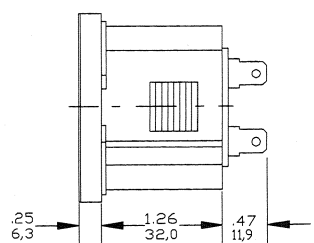
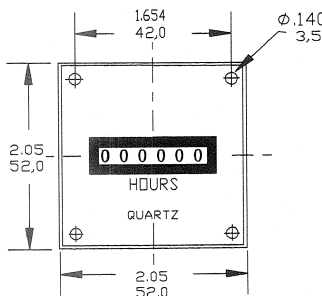
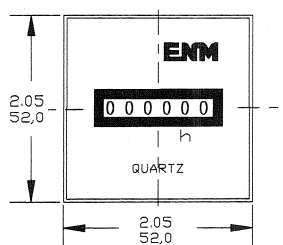
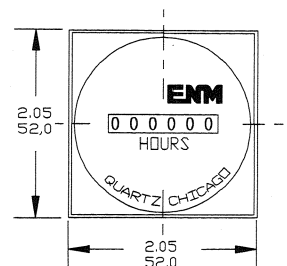


T41 Series Quartz DC Hour Meter

The Series T41 DC hour meter is ideal for applications requiring a low power, reliable, and economical hour meter. This compact tamper-resistant device is sealed against the environment to provide years of reliable service. The solid state electronic circuit is a low power design that insures accurate time keeping over a large voltage range. The high impact plastic case is sealed against the environment. This model is also polarity insensitive.

Power: .03 Watts @ 12 VDC
.70 Watts @ 48 VDC

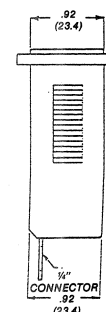
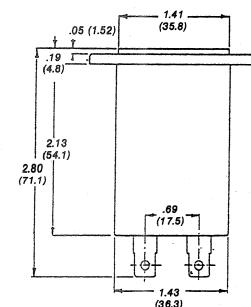
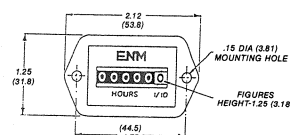
Voltage	Part No.
10-80 VDC	T41E45



Technical Data Sheet #202

Technical Data Sheet #202

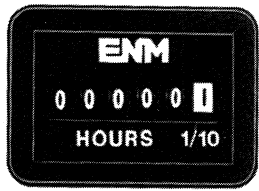
Technical Data Sheet #202



Technical Data Sheet #210

HOUR METERS

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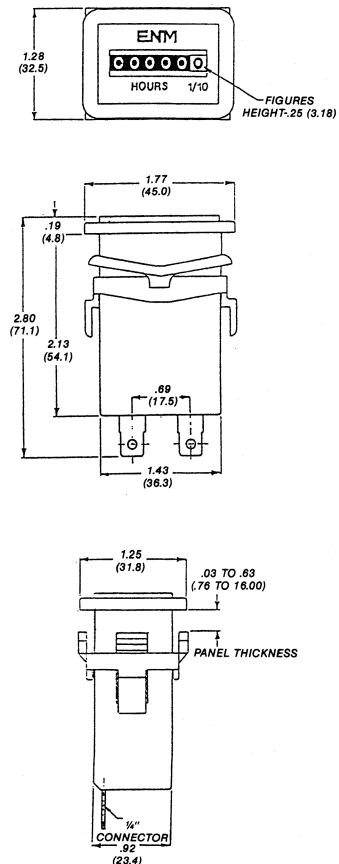


T41 Series Quartz DC Hour Meter

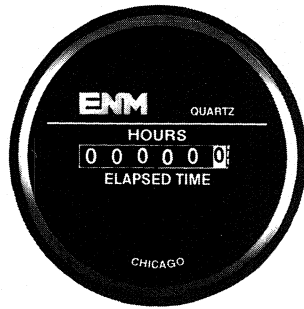
This is the panel mount version of the T41 Series is secured with an easy to install spring clip. No fasteners are required. This unit has all the standard features which includes a 6-digit display, low power design, and a water sealed case. This model is also polarity insensitive.

Power: .03 Watts @ 12 VDC
.70 Watts @ 48 VDC

Voltage	Part No.
10-80 DC	T41D45



Technical Data Sheet #210

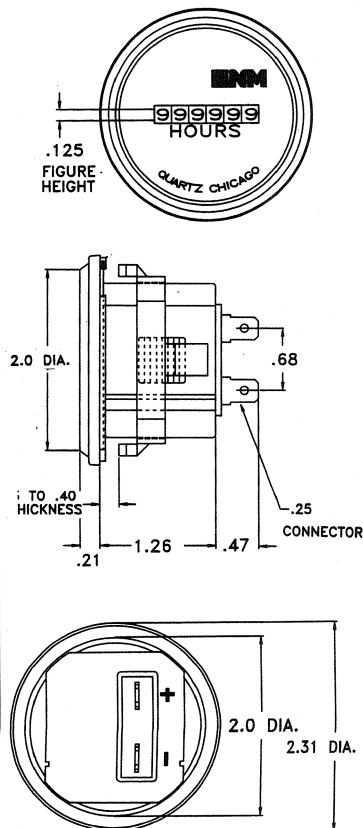


T50 Series Quartz AC Hour Meter

ENM's T50 Series low power AC hour meter is the answer to applications requiring a low power, economical, and reliable hour meter. This compact tamper-resistant meter is sealed against the environment to provide years of service. A quartz crystal time base insures accurate time keeping. This model is also frequency insensitive.

Power: Less than 0.4 Watts

Voltage	Part No.
230 AC	T50A1
115 AC	T50A2
24 AC	T50A4



Technical Data Sheet #211

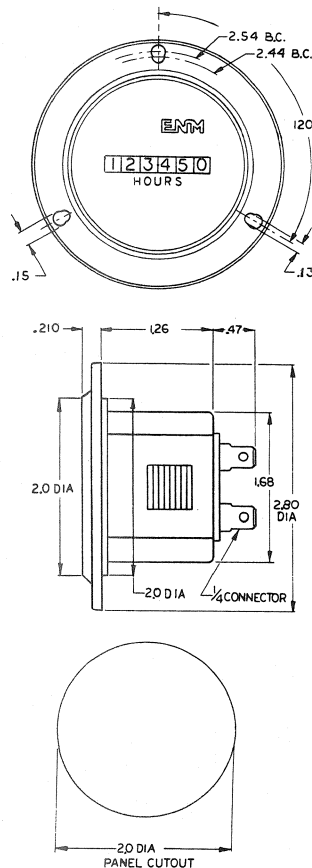


T50 Series Quartz AC Hour Meter

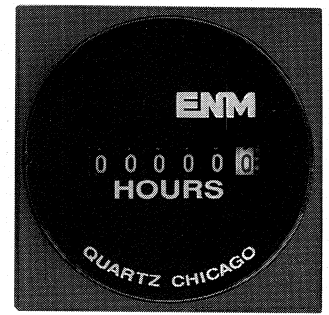
ENM's Series T50 in a large 3-hole flange. This unit has all the standard features which includes a quartz crystal time base in a sealed and tamper-resistant case. NEMA 4X, 12 rated gasket for corrosion and water resistant panel mounting is available (see accessories). This model is also frequency insensitive.

Power: Less than 0.4 Watts

Voltage	Part No.
230 AC	T50B1
115 AC	T50B2
24 AC	T50B4



Technical Data Sheet #211

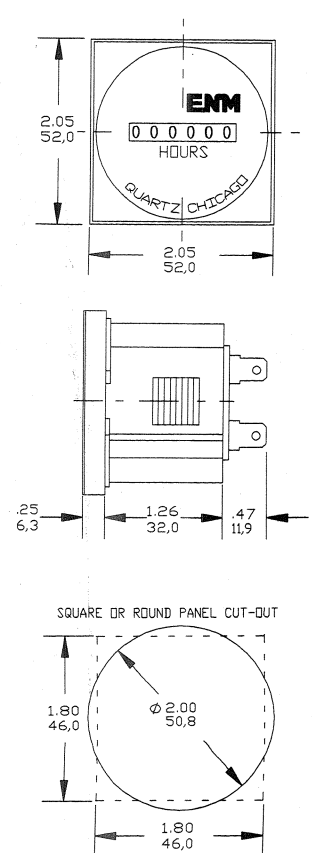


T50 Series Quartz AC Hour Meter

This is the standard T50 Series in the attractive 52 mm² panel mount. This hour meter has all the standard features which includes a 6-digit display, low power requirements, accurate quartz time base, and an environmentally sealed case. This model is also frequency insensitive.

Power: Less than 0.4 Watts

Voltage	Part No.
230 AC	T50E1
115 AC	T50E2
24 AC	T50E4



Technical Data Sheet #201

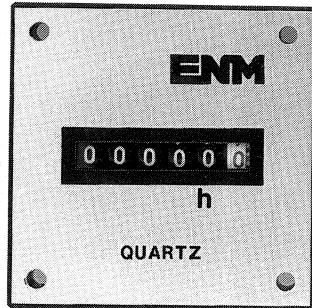


T50 Series Square Mount Quartz AC Hour Meter

The unit pictured above is the 52 mm² panel mount version of the T50 Series with a printed aluminum face plate. This unit has all the standard features of the T50 Series including low power requirements, quartz crystal time base, and a water sealed case. This model is frequency insensitive. Black anodized dial plates are also available.

Power: Less than 0.4 Watts

Voltage	Part No.
15 AC	T50E213
230 AC	T50E113
24 AC	T50E413

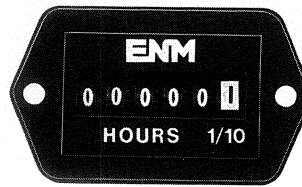


T50 Series Square Mount Quartz AC Hour Meter

This is the four hole version of the square aluminum dial plate. Can be panel mounted with the four holes for an attractive and secure position in the panel. This unit has all the standard features of the T50 Series. This model is frequency insensitive. Black anodized dial plates are also available.

Power: Less than 0.4 Watts

Voltage	Part No.
115 AC	T50E211
230 AC	T50E111
24 AC	T50E411

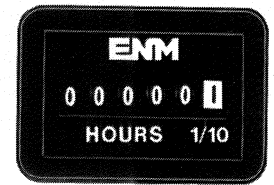


T51 Series Quartz AC Hour Meter

The T51 Series hour meter is the AC version of the T41 Series. The electronics are driven by the same quartz crystal time base. The T51 was designed for use on test and recording equipment, provide maintenance control, and for establishing warranty programs. This unit is also water sealed and frequency insensitive.

Power: .50 Watts

Voltage	Part No.
115 AC	T51E2
230 AC	T51E1
24 AC	T51E4

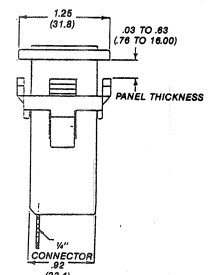
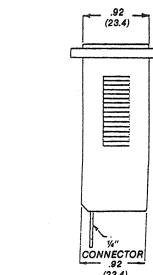
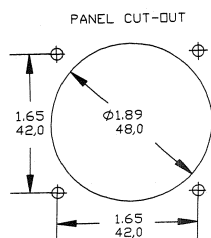
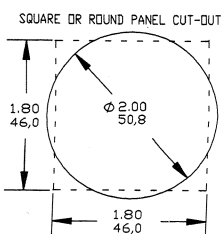
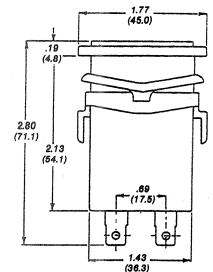
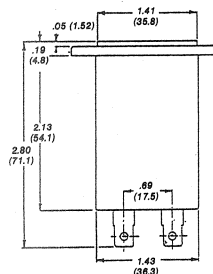
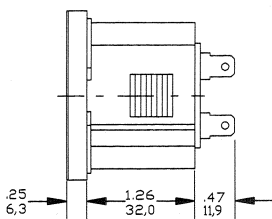
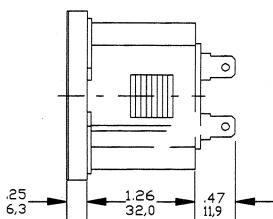
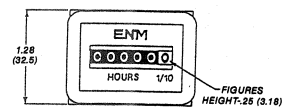
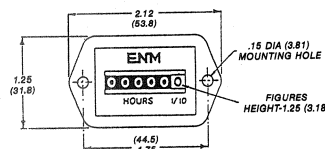
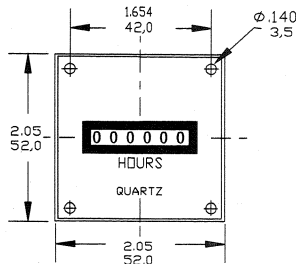
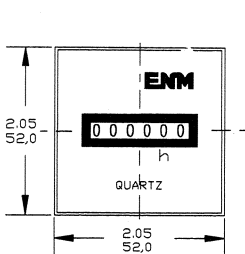


T51 Series Quartz AC Hour Meter

This panel mounted hour meter is secured with an easy to install spring clip. No additional fasteners are required. This unit is also water sealed and frequency insensitive.

Power: .50 Watts

Voltage	Part No.
115 AC	T51D2
230 AC	T51D1
24 AC	T51D4



Technical Data Sheet #201

Technical Data Sheet #201

Technical Data Sheet #212

Technical Data Sheet #212

HOUR METERS

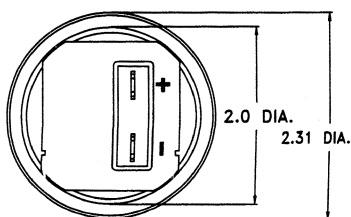
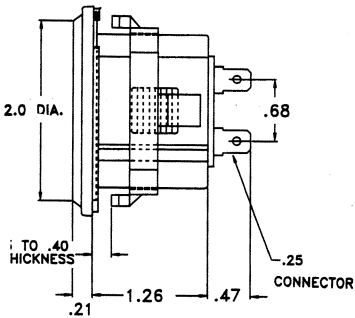
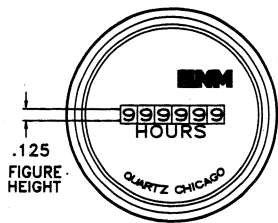
26



T60 Series Engine Powered Hour Meter

The T60 Series engine powered hour meter was originally designed for use on lawnmowers, but new circuitry allows this series to be used on any engine which is powered by a magneto or alternator.

Power	Part No.
Alternator 4-40 Volt	T60A96
Magneto 4-15 Volt	T60A91



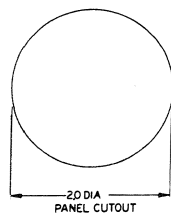
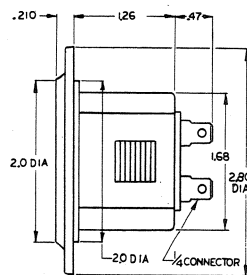
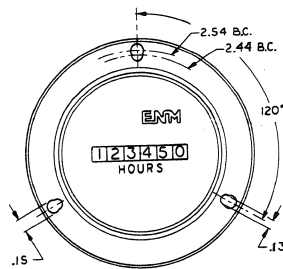
Technical Data Sheet #213



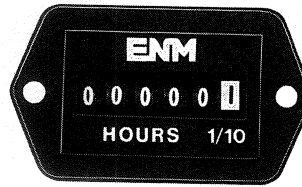
T60 Series Engine Powered Hour Meter

This is the T60 Series in a large three hole flange. This series incorporates innovative circuitry for use with magneto power or alternator power.

Power	Part No.
Alternator 4-40 Volt	T60B96
Magneto 4-15 Volt	T60B91



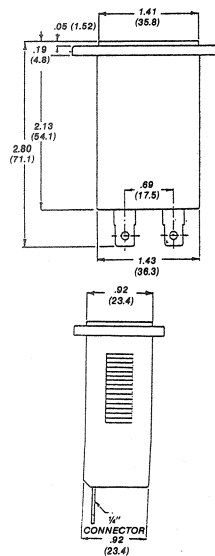
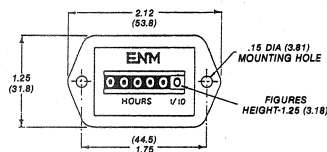
Technical Data Sheet #213



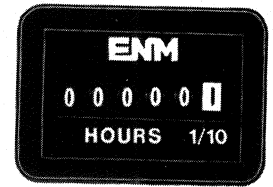
T61 Series Engine Powered Hour Meter

The T61 Series hour meter is specifically designed to be used for engine power. The first model is powered by the alternator of a two or four stroke engine. A special circuit design compensates for alternator noise and operates over a large voltage range. A second unit can be powered by the magneto of a two-stroke engine. Some applications include lawnmowers, pumps, farm equipment, or use on anything that is engine powered.

Power	Part No.
Alternator 4-40 Volt	T61E96
Magneto 4-15 Volt	T61E91



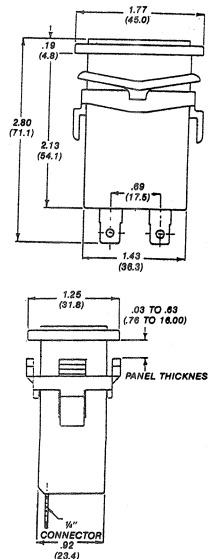
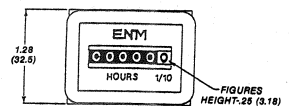
Technical Data Sheet #214



T61 Series Engine Powered Hour Meter

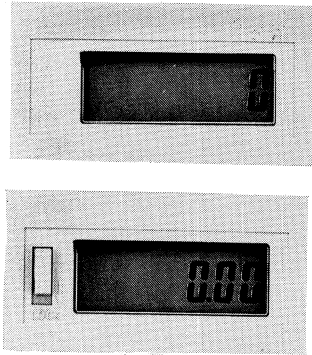
The T61 Series hour meter is specifically designed to be used for engine power. The first model is powered by the alternator of a two or four stroke engine. A special circuit design compensates for alternator noise and operates over a large voltage range. A second unit can be powered by the magneto of a two-stroke engine. Some applications include lawnmowers, pumps, farm equipment, or use on anything that is engine powered.

Power	Part No.
Alternator 4-40 Volt	T61D96
Magneto 4-15 Volt	T61D91



Technical Data Sheet #214

ELECTRONIC COUNTERS & HOUR METERS

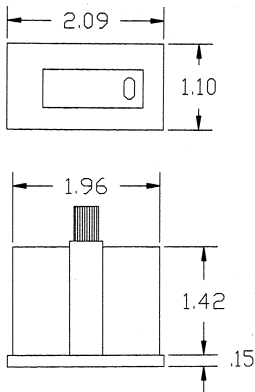


L1 Series LCD Counter
L2 Series LCD Hour Meter

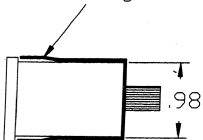
Compact electronic counters and hour meters are powered by an internal lithium battery. No external power is required. Both counter and hour meter can be activated by a dry contact input or a 5-250 volt input. This series includes an external electronic reset, 7-digit LCD display, and a battery life of 8-10 years. Optional push-button reset and base mount are also available.

Description	Part No.
Panel Mount (Pictured Above)	
Dry contact input	L1AB7AA
	L2AB7AA
5-250 V pulse input	L1AB7CA
	L2AB7CA
Base Mount	
Dry contact input	L1CB7AA
	L2CB7AA
5-250 V pulse input	L1CB7CA
	L2CB7CA

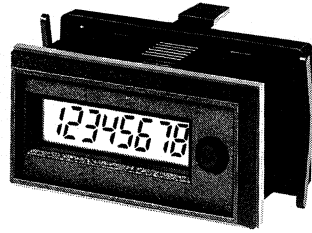
TO ORDER THE PUSH-BUTTON RESET: REPLACE THE 4TH DIGIT FROM THE LEFT WITH AN "A"



Mounting Bracket



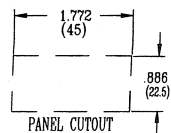
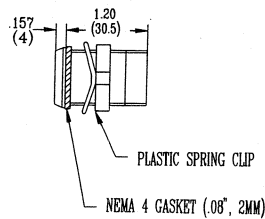
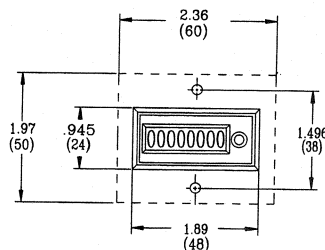
Technical Data Sheet #405



L5 Series High Speed LCD Pulse Counter

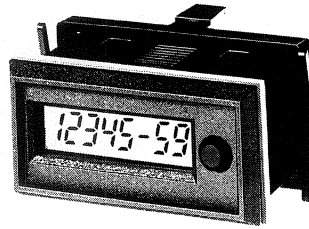
The L5 Series is a AC/DC, high speed, pulse counter that features an 8-digit LCD display. The CMOS circuit can handle up to 2500 counts per second. Powered by its own lithium battery, this totalizing counter has a front panel reset and an external reset input. External connections are made by a standard plug-on connector with color coded wire leads. NEMA 4 panel gasket and spring clip included for a sealed panel mount. 5-240 volt pulse adapter is also available.

Description	Part No.
8-digit, LCD counter with 9.5" wire leads	L5A
8-digit, LCD counter with 5-240 Volt adapter	L5C



MAX PANEL THICKNESS .295", 7.5MM

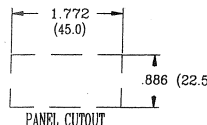
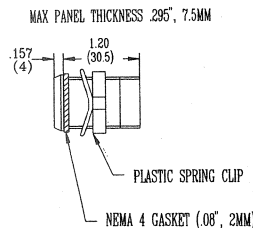
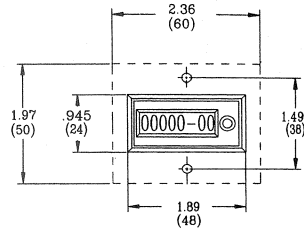
Technical Data Sheet #401



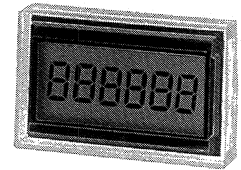
L6 Series Self-Powered LCD Hour Meter

ENM's series L6 Series AC/DC hour meter features a 7 digit LCD display with a self-powered CMOS circuit. Powered by an internal lithium battery, these timers have a front panel reset and an external electronic reset. This model has two operating modes; hours/minutes or hour/hundredths. External connections are made by a standard plug-on connector with color coded 9.45" (24 cm) wire leads. This model is ideal for accurate operating time applications where power is not readily available. Optional models have a 5-240 volt triggering adapter.

Description	Part No.
2 timing modes, 9.5" wire leads	L6A
Hours/mins display, w/ 5-240 V adapter	L6C
Hours/100ths display, w/ 5-240 V adapter	L6D



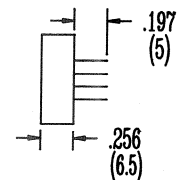
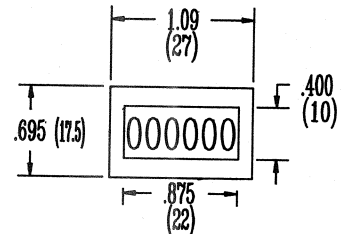
Technical Data Sheet #402



L7 Series High Speed PCB Counter

The L7 Series AC/DC pulse counter features a 6 digit LCD display with the latest CMOS circuitry that consumes less than 5µA of current. This model is ideal for ultra-high counting requirements (up to 10,000 counts per second in two directions!) Mounting can be PCB or panel mounted with supplied bezel. This model can also be configured to count electro-mechanical contact closure events using an external resistor and capacitor. Similarly the supply voltage (2.6-3.4 VDC) can be increased using an external resistor and a 3V Zener diode.

Description	Part No.
Uni-directional	L7A
Bi-directional	L7AS
With panel mount bezel	
Uni-directional	L7B
Bi-directional	L7BS



Panel Cutout: 1.157" x .866" (29.4 mm x 22.0 mm)

Technical Data Sheet #403

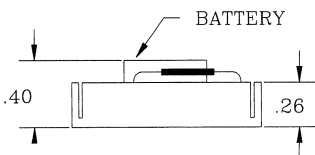
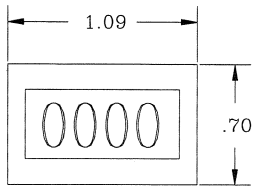
ELECTRONIC COUNTERS & HOUR METERS



L7 Series Self-Powered 4 Digit Miniature Counter

The L7 Series is a battery powered counter designed for use in applications where there is very limited space and power is not available. The L7E is a 4-digit counter with wire leads for a contact closure input (no power required). The L7F is the same counter, but with a magnetic reed switch for contactless count input of mechanical or electro-mechanical events. Standard mounting is either PCB or panel mounted with a supplied two-piece bezel.

Voltage	Part No.
1.5 V Cell Battery Included 4-Digit LCD Counter w/wire leads	L7E
1.5 V Cell Battery Included 4-Digit LCD Counter w/magnetic reed switch	L7F



Technical Data Sheet #404

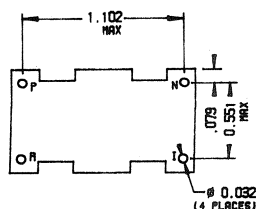
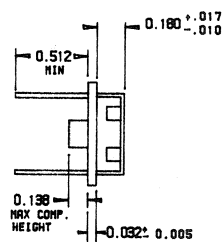
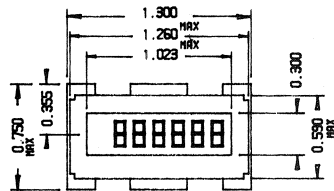


1101 Series DC Pulse PCB Counter

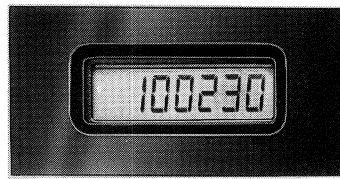
The ENM Series 1101 PCB pulse counter features a 6-digit, 7 segment LCD display with powerless data backup using EEPROM technology. These models are ideal for applications where small space and high speed counting are required. An external reset is also available.

Memory: EEPROM
Count Speed: 500 Hz

Voltage	Part No.
5-7 DC w/reset	LCD1111
5-7 DC	LCD1121
12-24 DC w/reset	LCD1131
12-24 DC	LCD1141
24-48 DC w/reset	LCD1151
24-48 DC	LCD1161
36-80 DC w/reset	LCD1171
36-80 DC	LCD1181



Technical Data Sheet #406

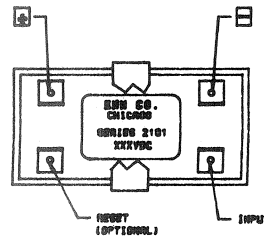
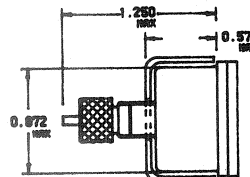
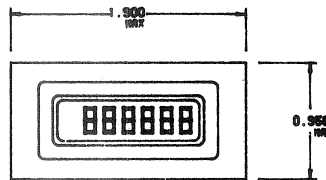


2101 Series DC Pulse Panel Mount Counter

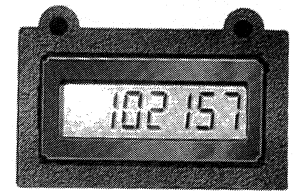
This is the 1101 Series in a panel mount version. This series also has the optional external reset.

Memory: EEPROM
Count Speed: 500 Hz

Voltage	Part No.
5-7 DC w/reset	LCD2111
5-7 DC	LCD2121
12-24 DC w/reset	LCD2131
12-24 DC	LCD2141
24-48 DC w/reset	LCD2151
24-48 DC	LCD2161
36-80 DC w/reset	LCD2171
36-80 DC	LCD2181



Technical Data Sheet #406

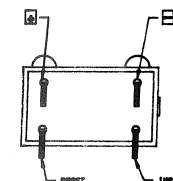
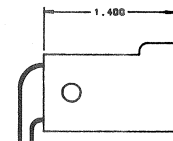
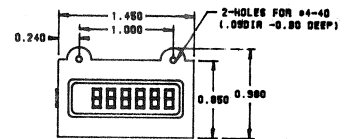


3101 Series DC Pulse Counter (Back of Panel)

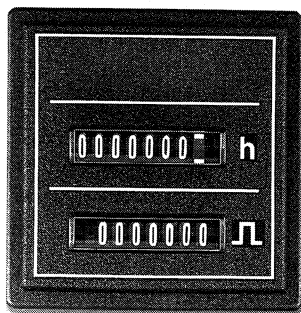
The unit pictured above is the 1101 Series in a two screw "Frog eye" mount that includes four wire leads on the back for the power, count input, and reset.

Memory: EEPROM
Count Speed: 500 Hz

Voltage	Part No.
5-7 DC w/reset	LCD3111
5-7 DC	LCD3121
12-24 DC w/reset	LCD3131
12-24 DC	LCD3141
24-48 DC w/reset	LCD3151
24-48 DC	LCD3161
36-80 DC w/reset	LCD3171
36-80 DC	LCD3181



Technical Data Sheet #406



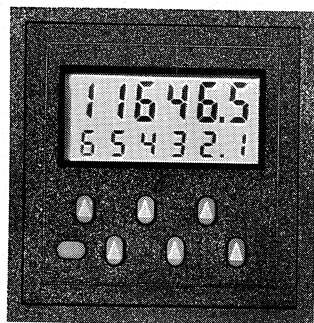
D9400 Series Dual-Purpose Pulse Counter / Hour Meter

This combination instrument consists of an hour meter as well as an event counter. In the standard version, the event counter keeps track of the number of pulses while the hour meter measures the accumulated time of all the pulses in hours. Optional unit counts pulses and records elapsed time separately. Hour meter reads up to 99,999.99 hours and counter reads up to 9,999,999 pulses. Hour meter is driven by a synchronous motor in AC and a stepping motor in DC.

Voltage	Part No.
12-24 DC	D9437-A
36-80 DC	D9436-D
24 AC	D9438-C
115 AC	D9439-F
230 AC	D9440-H

To order with counter and hour meter as separate functions add "s" after the above p/n's.

Call for Technical Data Sheet

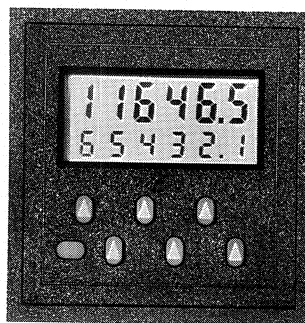
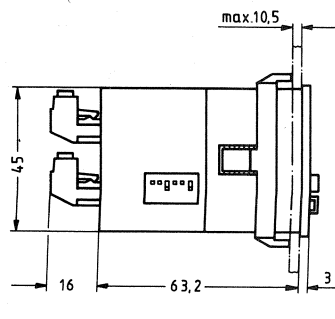
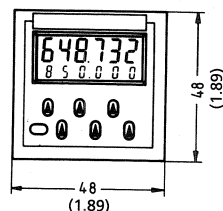


D9621 Series Electronic Preset Counter / Timer

6-digit LCD presetting counter with 2-line display for counter reading and presetting. Can be used as pulse or time presetting counter. Counter presets easily via separate presetting keys allocated to each digit. Data is saved by means of a replaceable 5 year lithium battery. This series can operate on both AC and DC power. This counter also features a 48mm x 48mm DIN housing for panel cutout of 45mm x 45mm. Two plug-in screw-type terminals are used for the power connection. Mounting bezels and other accessories included.

Voltage	Part No.
115 AC / 10-30 DC	D9621
230 AC / 10-30 DC	D9620

Call for Technical Data Sheet

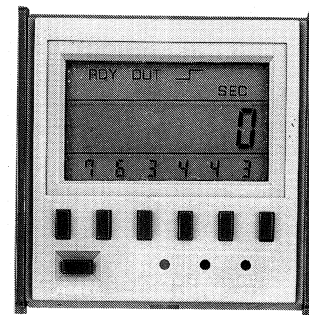
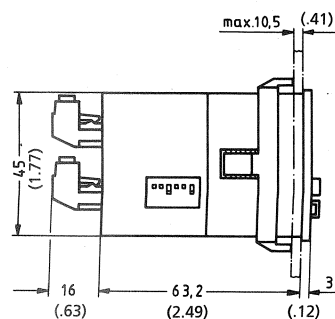
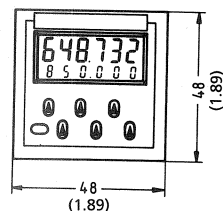


D9622 Series Preset Programmable Counter

D9622 Series is a 6-digit self-powered, presetting, and programmable counter with a 2-line display for counter reading and preset reading. Unit is powered by a replaceable internal lithium battery for data retention up to 8 years. This counter features a 48mm x 48mm DIN housing for panel cut-out of 45mm x 45mm. Includes 2 lithium batteries, various mounting bezels, and other accessories.

Pulse Voltage	Part No.
12-250 AC/DC	D9622

Call for Technical Data Sheet



PE96Z Preset Electronic Counter / Timer

Programmable counter can be used as a preset timer or counter. Reset can be actuated manually, externally, or automatically. Can be ordered in either a count-up or a count-down configuration. Battery backup provides over 10 years memory retention. New input circuit enhances contact reliability. Preset 6-digit unit has a zero-suppressed large LCD display.

Voltage	Part No.
Count-up	
110/230 AC	PE96Z06
24 DC	PE96Z07
Count-down	
110/230 AC	PE96Z08
24 DC	PE96Z09

Call for Technical Data Sheet

Technical Data Sheet #407

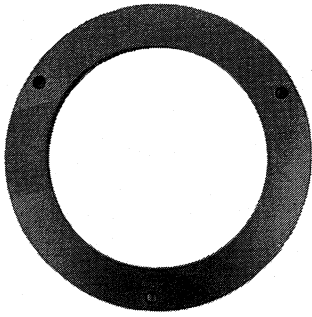
Technical Data Sheet #408

Technical Data Sheet #409

Technical Data Sheet #410

ACCESSORIES

30

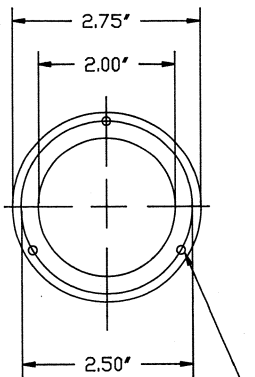


Panel Gasket
UL/NEMA 4X,12

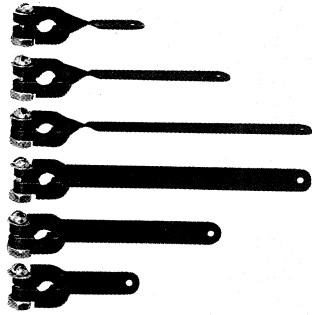
This UL listed gasket was designed and tested for use with the T40B and T50B series hour meters for water sealed panel mounting. Material is heat, oil resistant, and resists compression set. Designed to protect electronic panels against moisture and corrosion from periodic wash-downs or accidental submersion. Stainless steel mounting hardware is also available.

Description	Part No.
NEMA Gasket	A40047-S

NEMA Gasket
w/ Mounting Hardware B20017



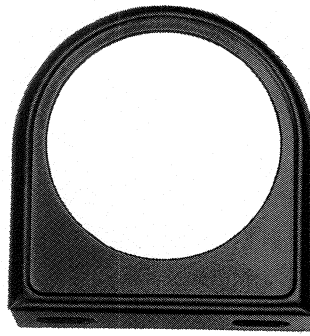
.100" Dia. undersize for #6 screw
3 Holes Equally Spaced



B15000 Series
Mechanical Counter Levers

A variety of levers can be purchased separately or as standard with the M2BA and M3CA Series stroke counters.

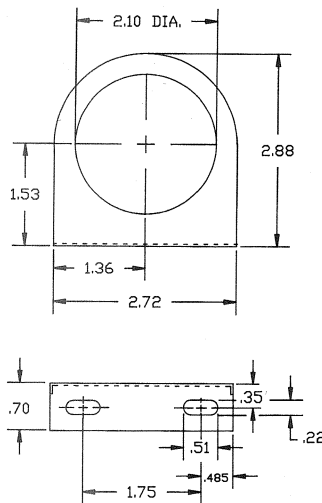
Description	Part No.
1" straight	B15005A
2" straight	B15005C
3" standard	B15005E
1" twisted	B15004A
2" twisted	B15004C
3" twisted	B15004E



Mounting Bracket for T40
and T50 Series Hour Meter

This mounting bracket was designed for mounting the T40A and T50A Series hour meters in areas where a panel is not available, such as underneath a dashboard. This steel "L" bracket is coated with a durable black coating and two elliptical holes allow for variable screw size.

Description	Part No.
L-Bracket	A15042

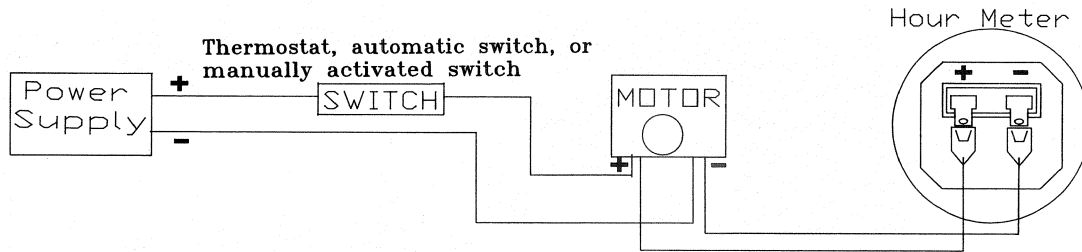


Panel Mount Kit for T40B &
T50B Series Hour Meters

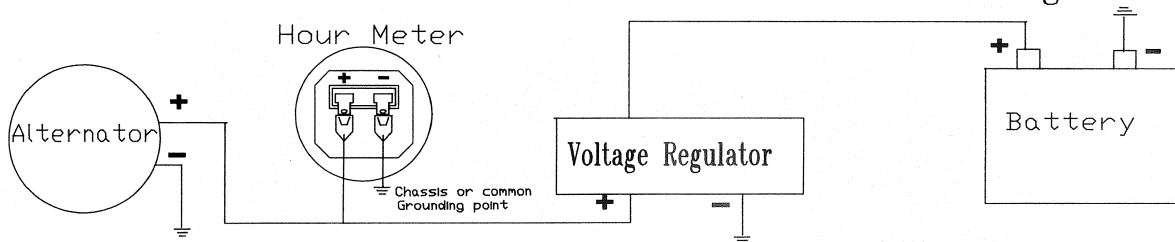
This mounting kit is designated for use with the T40B and T50B Series hour meters for securing the three-hole flange into panel cut-out. Kit consists of three #6 stainless steel machine screws, lock washers, and hex nuts.

Description	Part No.
Mounting Kit	B20014

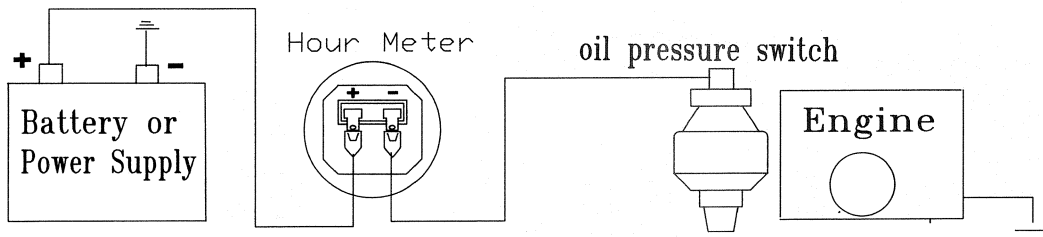
Connection for any DC (polarity indicated) or AC powered hour meter



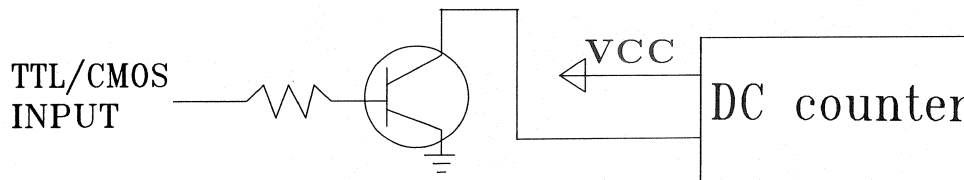
Connection for T60 and T61 hour meters to obtain true engine run time



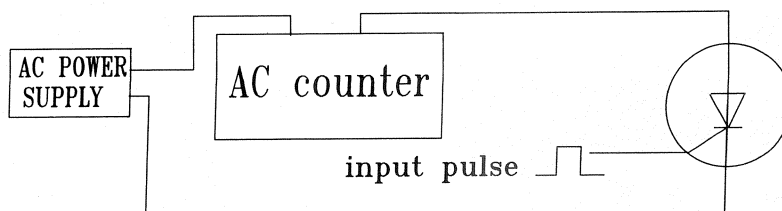
Connection for any DC powered hour meter for engine run time



Connection for any DC pulse counter interfaced to TTL/CMOS circuitry



Connection for any AC pulse counter to electronic circuitry





WARRANTY

ENM Company warrants that the product shall be free from defects in material and workmanship for a period of one year. While within warranty, ENM Company will correct any defect by repair or replacement, F.O.B. Factory. ENM Company shall not be liable for any consequential damage. If the product has been misapplied or otherwise improperly used, or exceeds the life or operating characteristics, the Warranty will not apply. Special extended warranties available to our customers upon prior written arrangement.

ENM

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