

Electronics Self Powered LCD Timer, Series TB45



TB45(X)A Voltage input meter
TB45(X)B Free contact hour meter

X: Denotes case style, see back page or ENM sale rep

Features

- High reliability
- Low cost and small size
- Low operating current
- Lithium battery (Non-replaceable)
- Display always on
- 100% sealed (IP68)
- High shock and vibration specs.
- Polarity insensitive
- Silent operating, no moving parts
- Wide voltage range covering most AC/DC applications
- Available with or without reset (after it is programmed)
- Free contact application when power not available
- Solid state electronics
- Quartz Crystal
- Made in the U.S.A.

ENM's Series TB45 is a pre-settable AC/DC hour meter. It features a 6 digit LCD with self-powered CMOS circuitry. The unit is powered by an internal lithium battery. The hour meter can be pre-program using the terminals. The total accumulated time is always displayed. The meter is 100% epoxy encapsulated and protected from shock and vibration to keep out the harshest environments plus provide years of service.

Special functions:

- Allows customer to preset total hours and replace a failed meter without loss of total elapsed time.
- Non-reset version available. After customer preset unit to desired number and run the meter for an hour, the preset and reset function will be disable permanently.

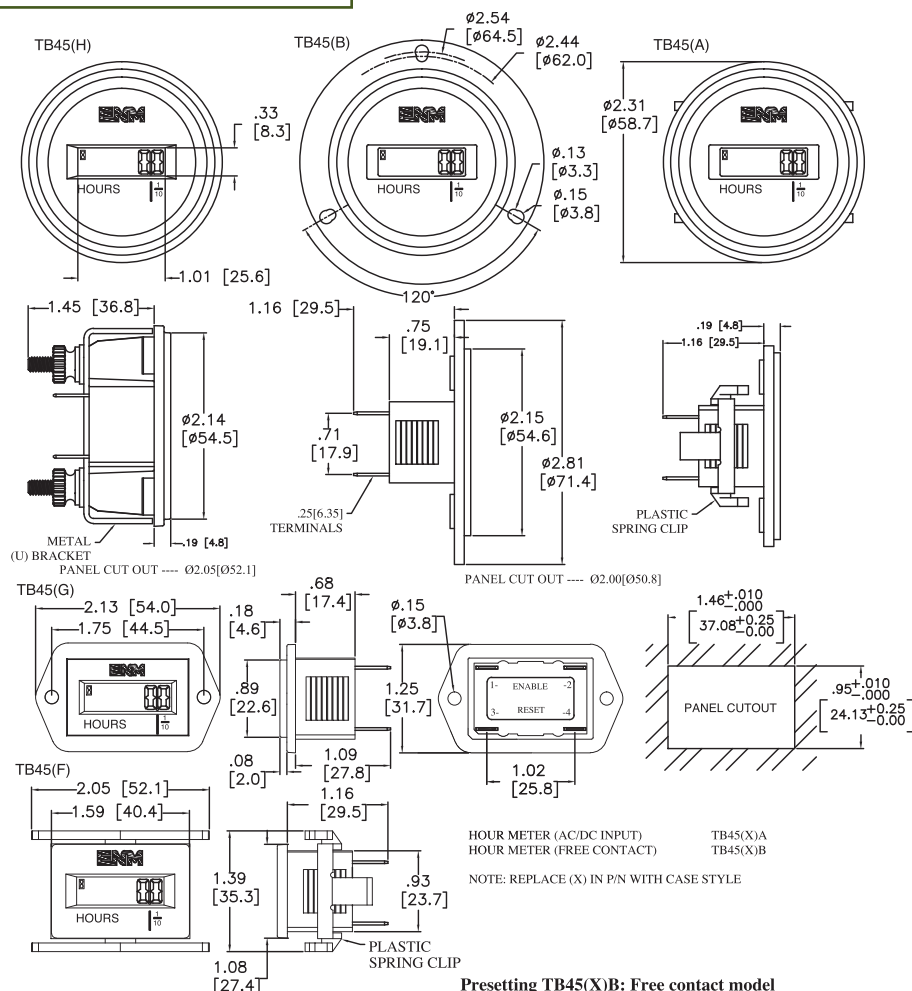
This instrument is ideal for any application that requires reliable count or time keeping for service maintenance schedules in a small space.

Specifications

Capacity:	99999.9 (Hour Meter displays) With Running ICON Other timing is available
Character Height:	Large 6-digits 7mm standard
Operating Voltage:	5-250 AC/DC Free contact requires no voltage
Operating Current:	5V = 0.05mA, 250V = 3mA Voltage input meter
Battery Life:	15+ years
Operating Temperature:	Standard -30°C to +71°C (-22 F to + 159 F)
Humidity:	95% SAE J1378
Vibration Resistance:	SAE J1378
Accuracy:	Better than +/-0.01%
Protected from:	Alternator load dump, inductive switching
Mounting Configuration:	See reverse side for detail

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TB45 Series



Presetting TB45(X)A: Voltage input model

- 1- To go into programming mode, apply AC or DC power to terminals 3&4 for approximately 1 second to reset unit. **Do this 5 times continuously.** (When resetting, the display will flash all 8's then return to 0.0). If at any time the meter is accidentally enabled during this process, the unit will not go into programming mode.
- 2- LCD will blink once in programming mode and show a row of numbers. To increment each digit, momentarily apply AC or DC power to terminals 1&2. Then, to shift from digit to digit, momentarily apply AC or DC power to terminals 3&4.
- 3- Wait approximately 8 seconds after programming to let information be saved to memory. The LCD screen will now show the number programmed.

Presetting TB45(X)B: Free contact model

WARNING: At no point should any power be applied to this version of the meter. The meter will be damaged if power is applied and void any warranty.

- 1- To go into programming mode, momentarily connect (No external power) terminal 1&3 for approximately 1 second to reset unit. **Do this 5 times continuously.** (When resetting, the display will flash all 8's then return to 0.0). If at any time the meter is accidentally enabled during this process, the unit will not go into programming mode.
- 2- The LCD will blink once in programming mode and show a row of numbers. To increment each digit, momentarily connect terminals 1&2 to each other. Then, to shift from digit to digit, momentarily connect terminals 1&3 to each other.
- 3- Wait approximately 8 seconds after programming to let information be saved to memory. The LCD screen will now show the number programmed.

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LIMITED WARRANTY

ENM Company resettable electromechanical counters are warranted to the consumer to be free from defects in material and workmanship for a period of 1 year. All ENM products which fall within the warranty period due to defects in material or workmanship will be repaired or replaced, at ENM's option, without charge to the consumer when returned with proof of purchase to any authorized ENM dealer in the United States, transportation charges prepaid, provided there is no evidence of improper installation, tampering, or other abuse. All implied warranties, including any implied warranty of merchantability or fitness for a particular purpose, shall be limited in duration to the express warranty period specified above. ENM disclaims any liability for consequential damages due to breach of any written or implied warranty on its products. Datasheet information subject to change.

REVISIONS

SYM	DESCRIPTION	DATE	APPROVAL

WARNING: DO NOT CONNECT POWER TO UNIT!

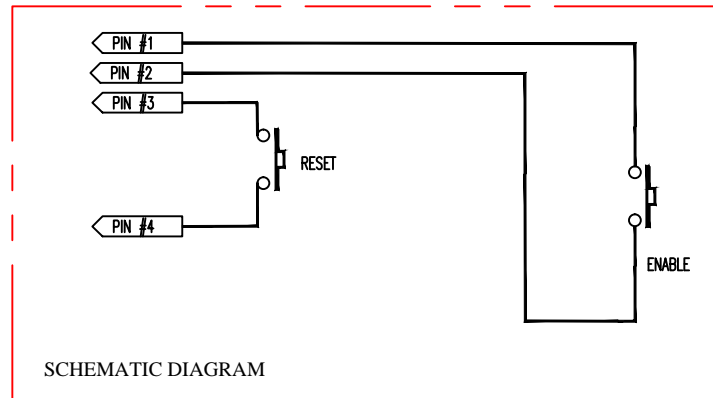
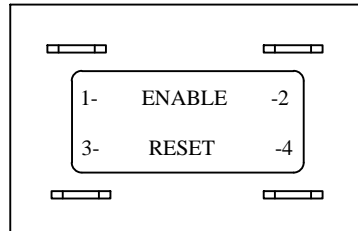
To enable hour meter:

Connect terminal 1 and 2 to each other. Disconnecting 1 and 2 will stop the meter from running.

For meter with reset.

To reset hour meter:

Momentarily connect terminal 3 and 4 to each other.



MATERIAL			FINISH			HEAT TREAT		
DIMENSIONAL TOLERANCES UNLESS OTHERWISE SPECIFIED			TITLE TS212: TB45xB LCD Self Powered Hour Meter			<div>ENM</div> <div>Chicago, Illinois</div>		
FRAC.	DEC.	ANG.						
±1/64	.XXX ±.005	±30"						
	.XX ±.01							
SCALE ~								
NEXT ASSY.			CHECKED DATE			A	TB45xB SER.	1
			APPROVED DATE					

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