

## Beige Case

The Model 53 Electronic Totalizer with 7 or 8 LCD digits is ideal as a replacement for electromechanical totalizers or where external power is not available. Powered by an internal lithium battery these products are highly reliable and provide the user with a choice of several options; with or without reset and multiple count ranges for optimized performance. The case is available in either tan or black.

## Specifications

| Model No. | 53 |
| :--- | :--- |
| Mounting | Panel with clip |
| Display | 7 |
| 8 | LCD figures, 0.32 inch (8mm) high |
| Display Height | 0.32 Inch |
| Display Height | 8 mm |
| No. of Digits | 7 |
| Vih | $20 \mathrm{VAC} / 3 \mathrm{VDC}$ min. |
| Vil | $3 \mathrm{VAC} / 1 \mathrm{VDC}$ max. |
| Input | $20-250$ VAC/VDC |
| Battery | Self-powered (internal lithium battery) |
| Battery Life | 20 years (approx.) |
| Reset Type | $0-40$ counts/second (min. $12.5 \mathrm{~ms}-$ on, $12.5 \mathrm{~ms}-$ off) |
| Speed | Operating: 10 G, Non-operating: 30 G |
| Shock | Operating: 10 to 55 Hz .0 .01 inch (0.25mm) double amplitude, Non-operating: 10 |
| to 55 Hz .0 .03 inch ( 0.75 mm ) double amplitude |  |
| Vibration | 0 to $95 \%$ RH, non-condensing |
| Humidity | -4 to $+140^{\circ} \mathrm{F}$ |
| Operating Temperature | -20 to $+60^{\circ} \mathrm{C}$ |
| Operating Temperature | -40 to $+165^{\circ} \mathrm{F}$ |
| Storage Temperature | -40 to $+75^{\circ} \mathrm{C}$ |
| Storage Temperature |  |


| Approvals | UL Recognized, CSA Certified, CE Compliant |
| :--- | :--- |
| Termination | Terminal block |
| Weight | 2 oz |
| Weight | 57 gm |
| Dielectric | $1000 \mathrm{VAC} 50 / 60 \mathrm{~Hz}$ for 1 minute |
| Accuracy | $100 \%$ (Provided Signal Meets Stated Parameters) |
| Color | Tan |
| Stock Availability | Yes |

Electronic


## Description

The Model 53 Electronic Totalizer with 7 or 8 LCD digits is ideal as a replacement for electromechanical totalizers or where external power is not available. Powered by an internal lithium battery these products are highly reliable and provide the user with a choice of several options; with or without reset and multiple count ranges for optimized performance. The case is available in either tan or black.

## Features

- Lithium battery
- Choice of non-reset or remote reset
- Switch (no-voltage), 3-30VDC, 20-250VAC/VDC


## Options

- Case color
- Mounting adapter plates
- 8 digits
- 5003-001S - gasket
- Low AC voltage (4-30 VAC)


## Specifications

\begin{tabular}{|c|c|c|c|}
\hline Figures: \& 7 or 8 LCD figures, 0.32 " 8 mm ] high \& Weight \& 2 oz. [57g] <br>
\hline \multirow[t]{5}{*}{Reset:
Speed:

8
8 Digit:} \& Remote, manual, and non-reset \& Temperature: \& <br>
\hline \& \& Operating: \& $-4^{\circ} \mathrm{F}$ to $+140^{\circ} \mathrm{F}\left[-20^{\circ} \mathrm{C}\right.$ to $\left.+60^{\circ} \mathrm{C}\right]$ <br>
\hline \& 0-40 counts/second [min. 12.5 ms - on, 12.5 ms - off] \& Storage: \& $-40^{\circ} \mathrm{F}$ to $+165^{\circ} \mathrm{F}\left[-40^{\circ} \mathrm{C}\right.$ to $\left.+75^{\circ} \mathrm{C}\right]$ <br>
\hline \& $0-150$ counts/second [min. 3.3 ms - on, 3.3ms - off] \& Humidity: \& 0 to $95 \% \mathrm{RH}$, non-condensing <br>
\hline \& 0-35 count/second [min14.3ms - on, 14.3 ms - off] \& Vibration \& <br>
\hline \multirow[t]{2}{*}{Inputs:} \& Switch (no-voltage), 3-30VDC, 20-250VAC/VDC \& Operating: \& 10 to $55 \mathrm{~Hz}, 0.01^{\prime \prime}$ [ 0.25 mm ] double amplitude <br>
\hline \& Vih 20VAC/3VDC minimum Vil 3VAC/1VDC maximum \& Non-Operating: Shock \& 10 to $55 \mathrm{~Hz}, 0.03^{\prime \prime}$ [ 0.75 mm ] double amplitude <br>
\hline Power: \& Self-powered (internal lithium battery) \& Operating: \& 10G <br>
\hline Mounting: \& Panel with clip \& Non-Operating: \& 30G <br>
\hline \multirow[t]{2}{*}{Terminations:} \& Terminal block, or connector with 8" [200mm] \& Dielectric: \& $1000 \mathrm{VAC} 50 / 60 \mathrm{~Hz}$ for 1 minute <br>
\hline \& wire leads \& Accuracy: \& 100\% [Provided Signal Meets Stated Parameters] <br>
\hline Battery Life: \& ~20years \& Approvals: \& UL Recognized, CSA Certified, CE Compliant <br>
\hline
\end{tabular}

Note: When interfacing the Model 53 with a Solid State Relay or AC Sensor, the leakage current needs to be considered.

## Models

| Models | Reset |  |  | Input |  |  | Speed/cps |  | Terminations |  | Color |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | remote | none | manual | switch | 3-30VDC | 20-250VAC/VDC | 40/150 | 40 | term. block | 8" wire leads | Tan | Black |
| 5300-0000 | $X$ |  |  | X |  |  | X |  | X |  | X |  |
| 5300-0001 | $x$ |  |  | X |  |  | X |  | X |  |  | X |
| 5300-0100 | X |  | $x$ | X |  |  | X |  | X |  | X |  |
| 5300-0101 | $x$ |  | X | X |  |  | X |  | X |  |  | X |
| 5300-1000 | X |  |  |  | X |  | X |  | X |  | X |  |
| 5300-1001 | $x$ |  |  |  | X |  | $X$ |  | X |  |  | X |
| 5300-1100 | $x$ |  | X |  | X |  | $x$ |  | X |  | $x$ |  |
| 5300-1010 | X |  |  |  | X |  | X |  |  | $X$ | X |  |
| 5300-1011 | X |  |  |  | X |  | X |  |  | X |  | X |
| 5300-2000 | X |  |  |  |  | X |  | X | X |  | X |  |
| 5300-2001 | $x$ |  |  |  |  | X |  | X | X |  |  | X |
| 5300-2100 | X |  | $x$ |  |  | X |  | X | X |  | X |  |
| 5300-2200 |  | $x$ |  |  |  | X |  | X | X |  | X |  |
| 5300-2201 |  | X |  |  |  | X |  | X | X |  |  | X |

* Items in bold are normally in factory stock.

All part numbers shown are for 7 digit models. Please contact the factory for information on 8 digit models.

## Dimensions



## Operating Instructions




The mounting clip accommodates panel thicknesses up to $1 / 4$ " [ 6.4 mm ].

Panel adapter plates are available in flush and 2 hole mount to fit various panel cutouts. Consult the factory for availability.

Color code for the 8 " $[203 \mathrm{~mm}$ ] lead wires (24AWG) are:

$$
\begin{aligned}
& 1-\text { Yellow } \\
& 2-\text { Blue } \\
& 3 \text { - Black } \\
& 4 \text { - Violet } \\
& 5 \text { - Gray }
\end{aligned}
$$

Terminal block will accept wire sizes from 14 to 24AWG
3-30VDC units are protected for transient voltages up to 50 volts with pulse widths of up to 1 second at a $1 \%$ duty cycle (including reverse polarity).

The operating AC frequency range is 40 to 400 Hertz .

## NOTES:

## INPUT / RESET PARAMETERS

To insure proper performance from totalizers the following minimum input durations are required:

| 0 to 35 cps totalizer | Minimum | 14.3 ms "on" | 14.3 ms "off" | The count is activated on the falling edge. |
| :--- | :--- | :--- | :--- | :--- |
| 0 to 40 cps totalizer | Minimum | 12.5 ms "on" | 12.5 ms "off" | The count is activated on the falling edge. |
| 0 to 150 cps totalizer | Minimum | 3.3 ms "on" | 3.3 ms "off" | The count is activated on the rising edge. |

All resettable totalizers can be reset by a pulse with a minimum duration of 6 milliseconds.

## DUAL RANGE TOTALIZER PROTECTION FEATURE:

Dual range totalizers have a built-in range protection feature. This feature will protect the totalizer from receiving a false signal from the unused input line. Once a totalizer has received an input from pin \#1 or pin \#2, it will only accept inputs from that pin until the unit has been reset. For example, if a totalizer is run in the low speed range and it is determined that a high speed range is preferred, simply switch the input from pin \#2 to pin \#1 and reset the totalizer to de-activate this range protection feature. Conversely, if a totalizer is run in high speed range and it is determined that a low speed range is preferred, simply switch the input from pin \#1 to pin \#2 and reset the totalizer.

## SPECIAL WIRING OPTION

There is an internal connection between pin 3 and pin 5 , a single wire can be used by connecting it to either pin 3 or pin 5 . This option does not apply for units with input of 20-250VAC/VDC or manual reset enable.

## OPTIONAL INPUTS:

Optional control circuity (such as transistors) may be used as inputs provided that such circuitry provides the required parameters of the model used.

## Applications



