

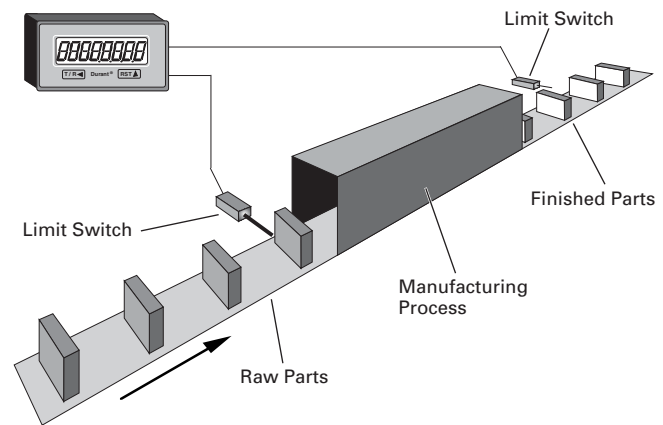
## Product Family Overview

## Introduction

Totalizers are used in a wide variety of applications where accurate totals are needed. Typical applications include counting the number of parts produced, amount of material used, or the number of machine cycles occurring. Totalizers are the simplest and most common type of counter. As an added bonus, some models can perform both totalizing and ratemeter functions.

## Application Example










Parts are fed into a machine or process, an operation is performed, and the finished parts exit the machine or process. The subtract totalizer is used to indicate the number of parts in process.



Application Example

## Totalizer Product Family Overview

Table 1. Product Family Overview

Product Family	Characteristics	Typical Applications	Panel Cutout in Inches (mm)	Page Number
 <i>E5-024-C</i>	<ul style="list-style-type: none"> <li>■ Non-replaceable battery (min. 8-yr. life)</li> <li>■ Compact, low cost and high efficiency</li> <li>■ 8-Digit LCD totalizers</li> <li>■ Manual or electrical reset</li> <li>■ Various counting modes/inputs</li> </ul>	<ul style="list-style-type: none"> <li>■ Replacement for mechanical counters</li> <li>■ Transaction counting</li> <li>■ Parts counting</li> <li>■ Position indication or measurement</li> </ul>	0.870 x 1.772 (22 x 44)	22
 <i>E5-24-E</i>	<ul style="list-style-type: none"> <li>■ Compact device with bright, LED display</li> <li>■ Multiple functions available: count, time, rate, multifunction, double-function</li> <li>■ 24V DC Power</li> </ul>	<ul style="list-style-type: none"> <li>■ Count, measure, time where small package and easy-to-read display required</li> <li>■ Position display</li> <li>■ Motor/pulley RPM</li> </ul>	0.870 x 1.772 (22 x 44)	24
 <i>E5-496-E</i>	<ul style="list-style-type: none"> <li>■ Economical, multifunction display</li> <li>■ Large, LED characters</li> <li>■ AC or DC power options</li> </ul>	<ul style="list-style-type: none"> <li>■ Large, easy-to-read display</li> <li>■ Position display</li> <li>■ Motor/pulley RPM</li> </ul>	1.772 x 1.622 (45 x 92)	27
 <i>Courier</i>	<ul style="list-style-type: none"> <li>■ Replaceable lithium battery</li> <li>■ 8-digit, high-visibility LCD display</li> <li>■ Optional backlighting</li> <li>■ Various input options available</li> </ul>	<ul style="list-style-type: none"> <li>■ Portable/mobile/remote flow monitoring (e.g. sewer pumping, pesticide application)</li> <li>■ Position display, RPM</li> <li>■ Length measurement (e.g. carpet, cable)</li> </ul>	1.299 x 2.677 (33 x 68)	25
 <i>Eclipse</i>	<ul style="list-style-type: none"> <li>■ 6-digit, super bright LED display</li> <li>■ Multiple models available: totalizers, ratemeters, count controls, digital panel meters and flow controls</li> </ul>	<ul style="list-style-type: none"> <li>■ Length measurement and control</li> <li>■ Flow monitoring and control</li> <li>■ Process monitoring and display</li> <li>■ Voltage and current monitoring and display</li> </ul>	1.772 x 1.622 (45 x 92)	28
 <i>Ambassador</i>	<ul style="list-style-type: none"> <li>■ 8-digit, high-visibility, 2-line LCD display</li> <li>■ User-configurable control inputs</li> <li>■ Highly flexible control/display</li> </ul>	<ul style="list-style-type: none"> <li>■ Flow control where simultaneous total and rate display are required</li> <li>■ Cut-to-length and other simple processes where flexibility of inputs/outputs required</li> </ul>	2.667 x 2.667 (68 x 68)	34
 <i>President</i>	<ul style="list-style-type: none"> <li>■ Bright LED display w/14 mm characters</li> <li>■ Simple configuration with 14-button tactile keypad</li> <li>■ Many different versions fit almost any application</li> </ul>	<ul style="list-style-type: none"> <li>■ Cut-to-length machinery with batching</li> <li>■ Parts batching/palletizing</li> <li>■ Die press positioning control</li> <li>■ Applications where parameter changes are required</li> </ul>	2.667 x 5.433 (68 x 138)	30
 <i>Electromechanical</i>	<ul style="list-style-type: none"> <li>■ Various price, voltage and size ranges for different duty cycles and environments</li> <li>■ Long life and always readable display</li> </ul>	<ul style="list-style-type: none"> <li>■ Coin-operated equipment</li> <li>■ Gaming machines</li> <li>■ Printing presses</li> <li>■ Secondary machines (e.g. punch press)</li> </ul>	Various Mounting Configurations	16
 <i>Mechanical</i>	<ul style="list-style-type: none"> <li>■ Various size ranges for different duty cycles and environments</li> <li>■ No power supply needed</li> <li>■ Long life and always readable display</li> </ul>	<ul style="list-style-type: none"> <li>■ Winding and spooling equipment</li> <li>■ Position display</li> <li>■ Mechanical piece/cycle counting</li> </ul>	Various Mounting Configurations	3

## Courier Series — Durant®



Courier Series

## Features

- 8-digit totalizer
- 1/Tau ratemeter
- Scaling capabilities
- Remote reset terminal
- 0.43-inch (10.9 mm) display
- Front panel reset
- NEMA 4X

## Standards and Certifications

- CE Marked

## Technical Data and Specifications

## Power

- Internal Battery: 3V, Lithium
- Life expectancy: 5 years +
- Replacement Part: 36367-202

## Backlight

10 – 30V DC @ 30 mA max.

**Note:** Derate operating temperature 1°C/  
Volt above 17V DC.

- Reverse polarity protected

## Physical

- Operating Temperature: -4 to 158°F (-20 to 70°C)
- Storage Temperature: -4 to 158°F (-20 to 70°C)
- Operating Humidity: 60% Non-condensing.
- Weight: 2.2 oz. (62 g) net.
- Display Size: 0.43" (10.9 mm) high
- Front Panel Rating: NEMA 4X when mounted with gasket provided
- Case Material: Cylolac X-17

## Totalizer

- Type: UP counting
- Digits: 8

## Count Accuracy

- 100% when operated within specifications

## DC Common (Terminal 1) Count Inputs

- Input B (Terminal 2) Low speed input designed for contact closures to DC common
  - Speed: 0 to 20 Hz
  - Min. Low Time: 10 mS
  - Min. High Time: 40 mS
  - Input Impedance: 101k Ohm
  - Voltage Thresholds —
    - Low: 0 – 0.4V DC
    - High: 2.0 – 28V DC
    - Max. High: 28V DC

- Input A (Terminal 3) High speed input requiring a voltage source such as a current sourcing sensor or a current sinking sensor used with the provided pull up resistors
  - Speed: 0 to 10 kHz
  - Min. Low Time: 80 mS
  - Min. High Time: 20 mS

**Note:** The above times are with a 0 – 5.0V swing.

- Input Impedance: 2k Ohm above 5V DC
- Voltage Thresholds —
  - Low: 0 – 1.2V DC
  - High: 2.0 – 28V DC
  - Max. High: 28V DC

## Reset Input

- Reset Input (Terminal 4) designed for contact closures to DC common
  - Min. Low: 0.25 to 1 sec. (reset is maintained)

**Note:** The required pulse width varies with count speed, scale factor and number of digits displayed.

- Voltage Thresholds —
  - Low: 0 – 0.4V DC
  - High: 2.0 – 28V DC

## Front Panel Reset Enable

- Front Panel Reset Enable (Terminal 5)
  - Operation: Level sensitive (maintained)

Courier Series — Durant®

Product Selection

Table 30. Product Selection — Courier Series, 8-digit LCD

Description	Catalog Number	*
Totalizer, Battery	53300400	
Add/Subtract (10k Hz, PNP input) Totalizer, Battery	53300401	
Add/Subtract (20 Hz, NPN/Contact input) Totalizer, Battery	53300402	
Quadrature (10k Hz, PNP input) Totalizer, Battery	53300403	
Totalizer/Ratemeter, Battery	53300405	
Totalizer/Ratemeter @ 100 Hz, Battery	53300465	
RMF Panel Mount Totalizer, Key Reset, 60 – 160V AC/DC Count Input	53300800	
RMF Panel Mount Totalizer, Dry Contact Input	53300850	
RMF Panel Mount Totalizer, 60 – 160V AC/DC Count Input	53300851	
Totalizer — Extended Temperature Range, Battery	53301400	
Totalizer — 1/Tau Ratemeter — Extended Temperature Range	53301404	
Totalizer/Ratemeter — Extended Temperature Range, Battery	53301405	
Totalizer/Ratemeter, Mag Pickup, Battery	53301475	
Backlight Totalizer, Battery	53302400	
Backlight Add/Subtract (10k Hz, PNP input) Totalizer, Battery	53302401	
Backlight Add/Subtract (20 Hz, NPN/Contact input) Totalizer, Battery	53302402	
Backlight Quadrature (10k Hz, PNP input) Totalizer, Battery	53302403	
Backlight Totalizer/Ratemeter, Battery	53302405	

When Ordering Specify

When ordering Courier series electronic totalizers and ratemeters, specify Order Numbers according to the features selected.

Dimensions

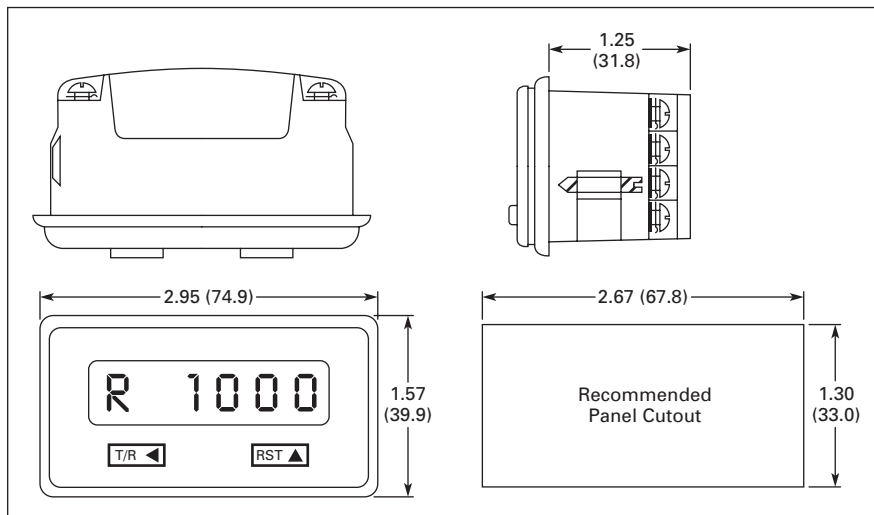


Figure 39. Courier Series Totalizers — Approximate Dimensions in Inches (mm)