FAT•N

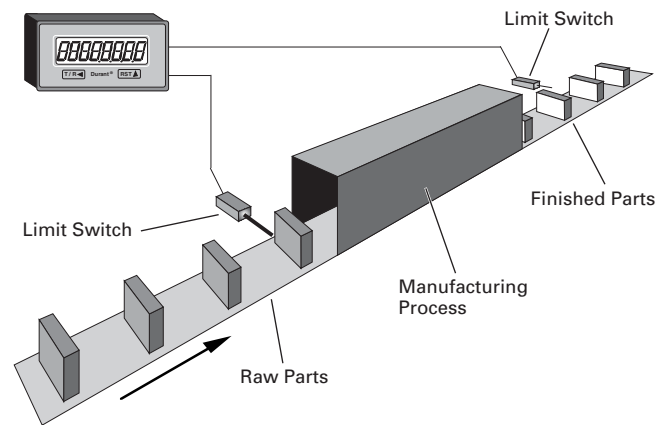## Introduction

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
E5-024-C	■ Non-replaceable battery (min. 8-yr. life) ■ Compact, low cost and high efficiency ■ 8-Digit LCD totalizers ■ Manual or electrical reset ■ Various counting modes/inputs	■ Replacement for mechanical counters ■ Transaction counting ■ Parts counting ■ Position indication or measurement	0.870 x 1.772 (22 x 44)	**22**
E5-_24-E	■ Compact device with bright, LED display ■ Multiple functions available: count, time, rate, multifunction, double-function ■ 24V DC Power	■ Count, measure, time where small package and easy-to-read display required ■ Position display ■ Motor/pulley RPM	0.870 x 1.772 (22 x 44)	**24**
E5-496-E	■ Economical, multifunction display ■ Large, LED characters ■ AC or DC power options	■ Large, easy-to-read display ■ Position display ■ Motor/pulley RPM	1.772 x 1.622 (45 x 92)	**27**
Courier	■ Replaceable lithium battery ■ 8-digit, high-visibility LCD display ■ Optional backlighting ■ Various input options available	■ Portable/mobile/remote flow monitoring (e.g. sewer pumping, pesticide application) ■ Position display, RPM ■ Length measurement (e.g. carpet, cable)	1.299 x 2.677 (33 x 68)	**25**
Eclipse	■ 6-digit, super bright LED display ■ Multiple models available: totalizers, ratemeters, count controls, digital panel meters and flow controls	■ Length measurement and control ■ Flow monitoring and control ■ Process monitoring and display ■ Voltage and current monitoring and display	1.772 x 1.622 (45 x 92)	**28**
Ambassador	■ 8-digit, high-visibility, 2-line LCD display ■ User-configurable control inputs ■ Highly flexible control/display	■ Flow control where simultaneous total and rate display are required ■ Cut-to-length and other simple processes where flexibility of inputs/outputs required	2.667 x 2.667 (68 x 68)	**34**
President	■ Bright LED display w/14 mm characters ■ Simple configuration with 14-button tactile keypad ■ Many different versions fit almost any application	■ Cut-to-length machinery with batching ■ Parts batching/palletizing ■ Die press positioning control ■ Applications where parameter changes are required	2.667 x 5.433 (68 x 138)	**30**
Electromechanical	■ Various price, voltage and size ranges for different duty cycles and environments ■ Long life and always readable display	■ Coin-operated equipment ■ Gaming machines ■ Printing presses ■ Secondary machines (e.g. punch press)	Various Mounting Configurations	**16**
Mechanical	■ Various size ranges for different duty cycles and environments ■ No power supply needed ■ Long life and always readable display	■ Winding and spooling equipment ■ Position display ■ Mechanical piece/cycle counting	Various Mounting Configurations	**3**

Contents

Cat. No. E5-024-C0400

Features

■ Low price and high efficiency
■ Large 8-digit LCD display, height of the figures 0.31 Inch (8 mm)
■ Various counting modes like up/down differential and phase discriminator counting, also with pulse doubling for connection with incremental encoders
■ High voltage input for 10 – 260V AC/DC voltage pulses
■ IP65
■ Screw terminals, RM 5 mm
■ Lifetime of the battery approximately 8 years
■ Locking of the reset key
■ Operating temperature 14 to 140°F (-10 to 60°C)
■ All version of positive or negative counting edge
■ Filter function for bounce-free counting with mechanical contacts

Standards and Certifications

■ UL Recognized
■ CE Marked

Technical Data and Specifications

■ Power Supply: Non-replaceable lithium battery (lifetime approximately 8 years at 68°F (20°C)
■ Display: LCD, 8-digits, height of the figures 0.31 Inch (8 mm)
■ Mode: Adding or subtracting (selectable), counting direction, differential counting or phase discriminator single or dual evaluation (selectable)
■ Display Range: -9999999 – 99999999, with overflow display
■ Reset: Manual and electrical
■ Interference Emissions: EN 55011 Class B, EN 61 000-6-2, EN 61010 Section 1 (only AC versions)
■ Housing; Dark gray RAL 7021
■ Operating Temperature: 14 to 131°F (-10 to 55°C)
■ Ambient Temperature: 14 to 140°F (-10 to 60°C)
■ Storage Temperature: -4 to 158°F (-20 to 70°C)
■ Protection: IP65 (from front)
■ Weight: Approx. 1.76 oz (50 g)
■ Counting Inputs —
  ❑ Counting input of the DC version, max. 30V DC
    – Slow counting input, max. 30 Hz (NPN)
    – Fast counting input, max. 12 kHz (PNP)
    – Switching Level —
      NPN:
      Low 0 – 0.7V, High 3 – 30V DC
      PNP:
      Low 0 – 0.7V, High 4 – 30V DC

❑ Counting Input of the High Voltage Versions: 10 – 260V AC/DC
  – Counting Input: Optocoupler input, max. 30 Hz
  – Min. Pulse Time: 16 mS
  – Switching Level—
    Low: 0 – 2V AC/DC
    High: 10 – 260V AC/DC

■ Counting Direction Switching (only DC versions) —
  ❑ Contact input, open collector NPN (switching at 0V DC)
  ❑ Switching level, NPN — Low, 0 – 0.7V, High 3 – 5V DC

■ Reset Input (only DC and High Voltage) —
  ❑ Minimum pulse time, DC: 50 mS; high voltage: 16 mS
  ❑ Contact input NPN —
    – Low: 0 – 0.7V
    – High: 3 – 30V DC
  ❑ High voltage input, 10 – 260V AC/DC

■ Electrical Reset Key Locking (for DC and AC) —
  ❑ Contact input, open collector NPN (switching at 0V)
  ❑ Switching level, NPN — Low, 0 – 0.7V, High 3 – 5V DC

Product Selection

Table 28. Product Selection — 1/32 DIN LCD, Totalizers

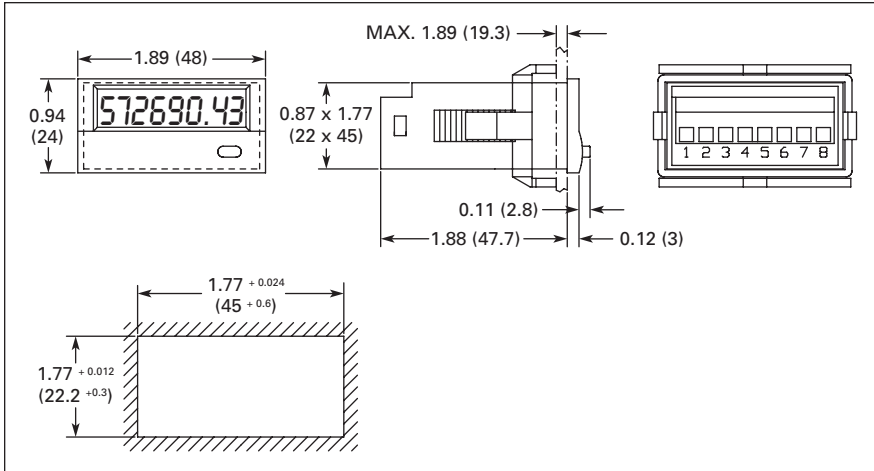| Description	Catalog Number	*
8-digit LCD Totalizer, Battery Power		
0.94 x 1.89 Inch (24 x 48 mm)	**E5-024-C0400**	
10 – 260V Input 0.94 x 1.89 Inch (24 x 48 mm)	**E5-024-C0408**	
Count Up/Down 0.94 x 1.89 Inch (24 x 48 mm)	**E5-024-C0410**	

Dimensions

Figure 37. 1/32 DIN LCD, Totalizers — Approximate Dimensions in Inches (mm)

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