



SERIES 7995 ELECTRONIC TOTALIZER

115 AND 230 VAC COUNT INPUT AND POWER MODELS

Manual No. 576013-165

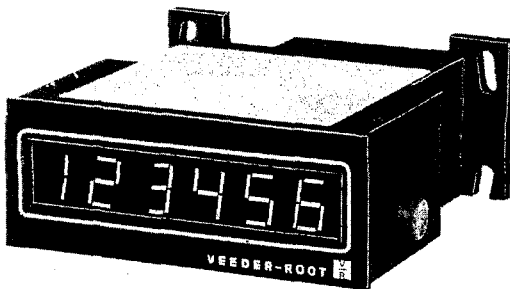


Figure 1. Series 7995 Totalizer.

1. INTRODUCTION

A. GENERAL. The Series 7995 General Purpose Electronic Totalizer is designed and manufactured by Veeder-Root, 125 Powder Forest Dr., P.O. Box 2003, Simsbury, CT 06070-2003.

When a vertical bar | appears adjacent to text or illustrations, information has been added or changed at the last issue date.

Consult Veeder-Root on any unusual application, installation, or possible modification of this basic design.

This totalizer directly replaces most electromechanical general purpose totalizers with base or panel mounting configurations. See Standard Models for identification of differences between specific models.

Optional internal battery standby circuitry prevents the loss of accumulated data during extended power interruptions (up to 500 hours) as well as brief voltage dropouts. The LED display is extinguished during standby operation to conserve battery energy. Upon restoration of normal AC power, the display returns to show the accumulated total, and the battery is automatically recharged. The battery, ordered separately, is easily installed. When operating on battery standby, the totalizer cannot receive counts or be reset.

2. SPECIFICATIONS

A. STANDARD SPECIFICATIONS.

Number of Decades: 6.

Display: 12.7 mm (0.5") red LEDs.

Count Input Characteristics:

Maximum Count Speed: 1500 cpm (25 Hz).

Count Impulse Voltage: 105 to 120 VAC or 210 to 250 VAC depending on model.

Minimum Impulse On-Time or Off-Time: 0.02 seconds (20 milliseconds).

Maximum Impulse On-Time or Off-Time: Unlimited.

Veeder-Root Sensors: Many Veeder-Root sensors and input devices can be used with the 7995, providing maximum application convenience.

Reset: Method depends on specific model.

Manual: To zero by means of pushbutton switch mounted on side of cover.

Remote: To zero by means of a customer supplied switch, contact closure or open collector NPN transistor. Contact burden is 5 VDC at 5 mA. Reset duration is 100 milliseconds minimum.

Operating Power Requirement: 105 to 120 VAC or 210 to 250 VAC, 1.5 watts, 50/60 Hz depending on model.

Connections: Wire leads, 12" length, color coded.

Operating Temperature: 0° to +55°C (+32° to +131°F).

Storage Temperature: -40° to +74°C (-40° to +165°F).

Mounting: Base mount versions standard. See Figure 2. Accessory panel mount kits available.

Materials: Frame: Zinc diecast. Covers: Aluminum.

Net Weight: Approximately 482 g (17 oz) without battery.

Dynapar, Veeder Root, and Eagle Signal Brands:

Sales, Repair, and Application Support:
1675 Delany Rd.
Gurnee, IL. 60031
847-662-4150 Sales/Order Entry Fax
847-782-5277 Applications Support Fax
800-873-8731 Sales/Order Entry
800-234-8731 Applications Support

NorthStar Brand:

Sales, Repair, and Application Support:
1675 Delany Rd.
Gurnee, IL. 60031
847-782-5288 Sales/Order Entry Fax
847-782-5277 Applications Support Fax
800-326-6216 Sales/Order Entry
800-326-6216 Applications Support

Partlow, West, Rustrak, and LFE Brands:

Sales, Repair, and Application Support:
1675 Delany Rd.
Gurnee, IL. 60031
847-662-4150 Sales/Order Entry Fax
847-782-5277 Applications Support Fax
800-873-8731 Sales/Order Entry
800-866-6659 Applications Support

Please disregard all phone numbers and addresses in this manual. The phone numbers and address on this page are the correct phone number and addresses to use for sales, repair, and application support.

B. OPTIONAL BATTERY STANDBY.

Rechargeable Battery Standby: Retains counted data in the event of a failure or purposeful interruption of the AC power line. Automatically recharges upon restoration of power.

Standby Limitation: Fully charged battery retains data for up to 500 hours, typically.

Recharge Cycle Time: Battery fully recharges when allowed 3 minutes (0.05 hours) charge for each hour of discharge (standby operation). For example: 3 day holiday weekend requires standby operation of 87 hours. When power is restored, battery attains full charge within 4.35 hours ($87 \times .05 = 4.35$).

Battery Life Expectancy: 1000 full discharge/recharge cycles. Many more for partial cycles.

Battery Type: Nickel cadmium. Field replaceable. V-R Part No. 614896-001 Purchased separately. See Accessories.

C. ACCESSORIES.

Panel Mounting Kit with Pushbutton Reset: Part No. 616362-002. Allows Series 7995 to be panel mounted in the same space as many popular electromechanical general purpose counters. Provides pushbutton switch for connection to counter's reset input. For use with Remote Reset Models only.

Panel Mounting Kit with Key Lock Reset: Part No. 616361-002. Allows Series 7995 to be panel mounted in the same space as many popular electromechanical general purpose counters. Lock and key reset is provided which guards against unauthorized or accidental clearing of accumulated totals. For use with Manual Reset Models only.

Battery Kit: Part No. 614896-001. Easily installed inside 7995 counters. Allows use of the unit's battery standby feature. Refer to Standard Specifications, Rechargeable Battery Standby, for description of feature.

D. STANDARD MODELS.

Form Number	Count Input and Operating Voltage	C.S.A. Certified	Count Input Factor	Reset Type	Panel Mount Kit
799526-001	115 VAC	No	X1	Manual	616361-002
799526-011	115 VAC	No	$\div 10$	Manual	616361-002
799526-002	230 VAC	No	X1	Manual	616361-002
799526-012	230 VAC	No	$\div 10$	Manual	616361-002
799536-001	115 VAC	No	X1	Remote	616362-002
799536-002	230 VAC	No	X1	Remote	616362-002
799576-201	115 VAC	Yes	X1	Manual	616361-002
799576-211	115 VAC	Yes	$\div 10$	Manual	616361-002
799576-202	230 VAC	Yes	X1	Manual	616361-002
799576-212	230 VAC	Yes	$\div 10$	Manual	616361-002
799576-401	115 VAC	Yes	X1	Remote	616362-002
799576-402	230 VAC	Yes	X1	Remote	616362-002

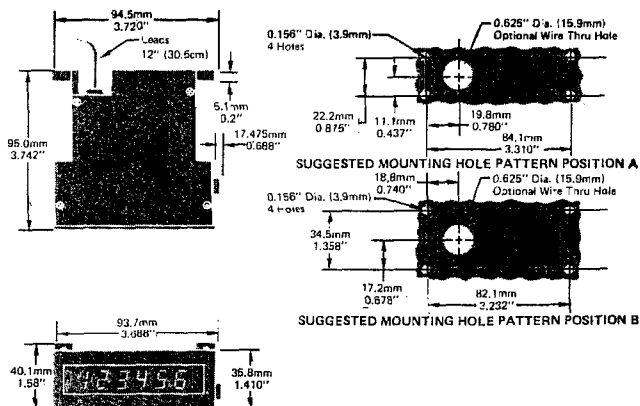


Figure 2. Mounting Dimensions.

3. INSTALLATION

WARNING: IN INSTALLATION AND USE OF THIS PRODUCT, COMPLY WITH THE NATIONAL ELECTRICAL CODE; FEDERAL, STATE AND LOCAL CODES; AND ANY OTHER APPLICABLE SAFETY CODES. IN ADDITION, TURN OFF POWER AND TAKE OTHER NECESSARY PRECAUTIONS DURING INSTALLATION TO PREVENT PERSONAL INJURY, PROPERTY LOSS AND EQUIPMENT DAMAGE. IF INSTALLATION IS TO BE IN A VOLATILE, COMBUSTIBLE OR EXPLOSIVE ATMOSPHERE, THIS PRODUCT MUST BE HOUSED IN AN APPROPRIATE ENCLOSURE AS REQUIRED FOR USE IN SUCH ATMOSPHERE BY NATIONAL ELECTRICAL CODE AND ANY LOCAL APPLICABLE STANDARDS.

A. GENERAL. The counter may be installed in almost any nonexplosive environment free from severe vibration, extreme temperatures and excessive relative humidity, and/or airborne contamination.

B. STANDBY BATTERY INSTALLATION. See the sheet packed with the battery kit, Part No. 614896-001, for installation instructions.

C. PANEL MOUNT INSTALLATION. See the sheet packed with the panel mount kit for installation instructions.

D. BASE MOUNT INSTRUCTIONS. Select the mounting position per Figure 2. Drill mounting screw holes and secure counter to mounting surface with No. 6 screws. Route wire leads through the channel provided. Do not pinch leads between the counter's base and mounting surface.

4. WIRING

A. LINE SURGE PROTECTION.

CAUTION: WHILE THE AC POWER AND COUNT INPUTS ARE PROTECTED AGAINST SPIKES BY A VARISTOR, AVOID CONNECTING COUNTERS IN PARALLEL OPERATION WITH SOURCES OF HIGH VOLTAGE TRANSIENTS WHERE THE ENERGY TO BE ABSORBED BY THE INTERNAL VARISTOR EXCEEDS 10 JOULES.

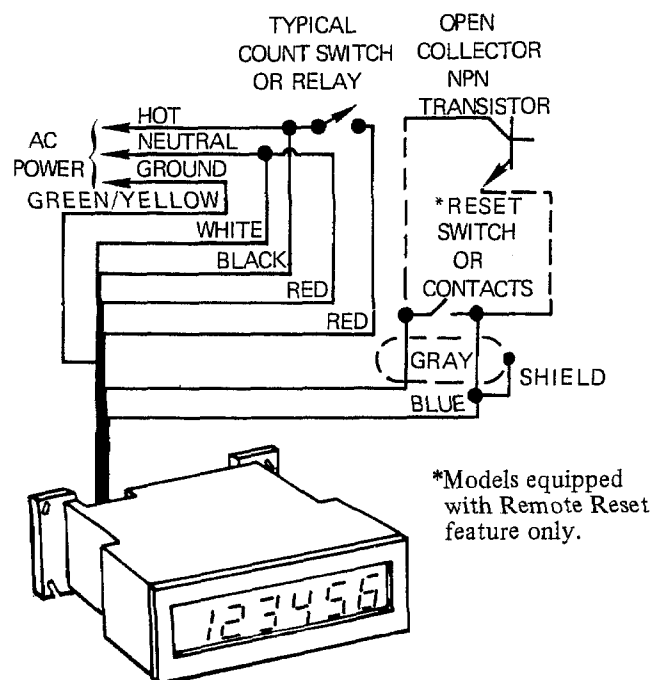


Figure 3. Connecting Series 7995.

6. SERVICE

A. REPAIR. NO attempt to repair the counter should be made by users or their agents. The compact design of the counter, made possible by the use of integrated circuits and other solid state devices, makes special knowledge and unique test equipment essential if serious damage to the electronic circuits is to be avoided. We therefore recommend that the counter be returned to a Veeder-Root authorized electronic service center or the factory for repair or adjustment. See Paragraph B for instructions.

B. SHIPMENT. If the counter must be returned to a Veeder-Root authorized electronic service center or factory for repair, perform the following steps:

1. Explain, in writing, the nature of the problem as accurately as possible. List the person(s) to be contacted in the event communication is required.
2. Place the letter along with the counter and its packing materials in its box.
3. Place in an overwrap box. Address to the nearest authorized Electronic Service Center or:

Service Department
VEEDER-ROOT LTD.
Kilspindie Road
Dundee DD2 3QJ
SCOTLAND
Tel: 44-382-833033
Fax: 44-382-834382

Service Department
Digital Products
VEEDER-ROOT
125 Powder Forest Drive
P.O. Box 2003
Simsbury, CT 06070-2003
Tel: (203) 651-2700
Telex: 277844 VROOT UR
Fax: (203) 651-2750

Service Department
VEEDER-ROOT
(Australia) PTY LTD.
82 Herald Street
Cheltenham, Victoria 3192
AUSTRALIA
Tel: 61 (3) 584-3800
Fax: 61 (3) 583-8450

Service Department
VEEDER-ROOT
OF CANADA, LTD.
26 Fieldway Road
Etobicoke, Ontario M8Z3L2
CANADA
Tel: (416) 239-3094
Fax: (416) 239-2653

4. All shipments must be prepaid.

7. DAMAGE CLAIMS AND WARRANTY

A. DAMAGE CLAIMS

1. Thoroughly examine the enclosure as soon as it is received. If damaged, write on the face of the freight bill a complete and detailed description of the damage. Have the carrier's agent sign the description.

Note: Insist that the carrier's agent verify the inspection and sign the description.

2. Immediately notify the delivering carrier of damage or loss. This notification may be given either in person or by telephone. Written confirmation must be mailed within 48 hours. Railroads and motor carriers are understandably reluctant to make adjustments for damaged merchandise unless inspected and reported promptly.

3. Risk of loss of, or damage to merchandise remains with the Buyer. It is the Buyer's responsibility to file a claim with the carrier involved.

4. Immediately advise your Veeder-Root representative, distributor, or the factory so that we may assist you.

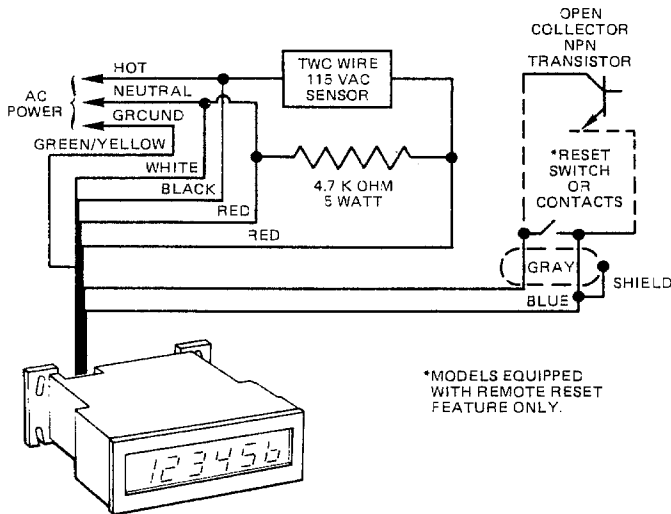


Figure 4. Connecting a Two Wire 115 VAC Sensor to Series 7995 AC Input Model.

B. CONNECTING SERIES 7995. Connect the Series 7995 to 115 or 230 VAC depending on model, and the count switch as shown in Figure 3. On Remote Reset Model, connect the blue and gray wires to the reset switch remote contact or open collector NPN transistor.

If the blue and gray leads must be lengthened, use shielded wire to reduce the chance of electrical interference.

C. VEEDER-ROOT INPUT DEVICES. Many Veeder-Root sensors interface with the Series 7995. See Figures 3 and 4 for connecting diagrams.

5. OPERATION

All 7995 totalizers with a X1 count input factor register one count each time a count input is present. Models with a $\div 10$ count input factor register one count for each of ten count inputs.

Count switches or relay contacts which exhibit unusually high degrees of contact bounce may cause erroneous totals or limit the speed of the counter. If this occurs, replace the switch or relay with one having better bounce characteristics.

To reset manual reset models, press the button on the side of the case. To reset remote reset models, activate the switch or transistor connected to the blue and gray wires. Counts will not register during reset.

In normal operation when the counter has power applied, or reset to zero, two zeros appear on the display in the first and second decades. When counting, count quantities with an odd number of digits display a leading zero. For example, 100 appears on the readout as 0100.

B. WARRANTY AND CONDITIONS

1. WARRANTY. We warrant that this product shall be free from defects in material and workmanship for a period of one year from the date of shipment thereof or the product's total rated life, whichever first occurs. Within the warranty period we shall repair or replace such products which are returned to us with shipping charges prepaid and which are determined by us to be defective. This warranty will not apply to any product which has been subjected to misuse, negligence, or accident; or misapplied; or used in violation of product manuals, instructions, or warnings; or modified or repaired by unauthorized persons; or improperly installed.

2. INSPECTION. You shall inspect the product promptly after receipt and shall notify us at our Simsbury office, in writing, of any claims, including claims of breach of warranty, within thirty days after you discover or should have discovered the facts upon which the claim is based. Your failure to give written notice of a claim within the time period shall be deemed to be a waiver of such claim.

3. LIMITATION OF REMEDY AND WARRANTY. The provisions of Paragraph 1 are our sole obligation and exclude all other remedies or warranties, express or implied, including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE; whether or not purposes or specifications are described herein. We further disclaim any responsibility whatsoever to you or to

any other person for injury to person or damage to or loss of property or value caused by any product which has been subjected to misuse, negligence, or accident; or misapplied; or used in violation of product manuals, instructions, or warnings; or modified or repaired by unauthorized persons; or improperly installed.

4. LIMITATION OF DAMAGES. Under no circumstances shall we be liable for any incidental, consequential or special damages, losses or expenses arising from this contract or its performance or in connection with the use of, or inability to use, our product for any purpose whatsoever.

5. LIMITATION OF ACTIONS. No action regardless of form arising out of this contract may be commenced more than one year after the cause of action has accrued, except an action for nonpayment.

6. COLLATERAL PROMISES. There are no representations, warranties, or conditions express or implied, statutory or otherwise except those herein contained, and no agreements or waivers collateral hereto shall be binding on either party unless in writing and signed by you and accepted by us at our Simsbury office.

7. INTERPRETATION. Rights and liabilities arising out of any contract with us shall be determined under the Uniform Commercial Code as enacted in Connecticut.

Warranty revised November 1, 1990

VEEDER-ROOT 
Digital Products

125 Powder Forest Drive, Post Office Box 2003, Simsbury, CT 06070-2003 TEL: (203) 651-2700, FAX: (203) 651-2750

AUSTRALIA: Cheltenham, Victoria • BRAZIL: Sao Paulo • CANADA: Etobicoke • FRANCE: Rungis • SCOTLAND: Dundee • WEST GERMANY: Neuhausen/Filder