

# ES-756

## Features

- Set Scaling From Front Panel
- Separate Scaling of Rate and Total
- 2 Set Points Assignable To Rate or Total
- Display Rate, Integrated Total and Peak & Valley
- 0-5V, 0-10V, 1-5V, 4-20mA or 0-20mA Analog Input
- NEMA 4X/IP 65 Front Panel
- +24V Output Power For Peripherals
- Scaled Pulse Output on Output A or B
- 4-20mA Output (optional)
- Square Root Extraction (optional)

## Description:

Featuring 6 digits of bright, 7-segment LED displays, this unit is an integrating totalizer/ratemeter which accepts analog signal inputs. The unit can be field programmed to accept 0-20mA, 4-20mA, 0-5V, 0-10V or 1-5V signals. A 4-20mA output option is available to control strip recorders or other peripherals. A scaled pulse output setting is available and can be assigned to either Output A or B. The full scale setting is programmable from the front panel. By pressing the "view" button, the unit will display: integrated total, rate, peak or valley.

## Specifications:

**Display:** 6 digit, .55" high, 7 segment, red orange, LED.

**Input Power:** 110 VAC  $\pm$  15% or 12 to 24VDC.

Current: maximum 300 mA DC or 8.0 VA at rated AC voltage.

**Output Power:** (AC powered units only) + 24VDC @ 100mA regulated  $\pm$ 5%

## Temperature:

Operating: +41°F (5°C) to +130°F (+54°C).

Storage: -40°F (-40°C) to +200°F (93°C).

**Memory:** EEPROM stores data for ten years if power is lost.

## Reset:

Front Panel: resets displayed values and control outputs.

Remote: 4-30VDC positive edge, resets totalizer and control outputs.

## Output:

Type: Open collector sinks 250mA from 30VDC when active.

Usage: rate alarm, total alarm, scaled pulse output for remote totalizers.

**Analog Out:** The full scale setting is programmable from the front panel. A sinking driver generates a corresponding linear current through the external devices. The output updates with each update of the rate. Accuracy is  $\pm$ 0.25% FS worst case. Compliance voltage must be 3 to 30 VDC non inductive. (The unit can provide the DC source as long as the drop across the devices being driven does not exceed 21V).

## Ratemeter / Totalizer From Analog Inputs with Separate Scaling of Rate & Total



## Input:

Type: 0-20mA, 4-20mA, 0-5V, 0-10V or 1-5V selectable from the front panel.

**Input Impedance:** Current: 100 $\Omega$ ; Voltage: 115K $\Omega$

**Calibration:** The unit does all of the calibrations internally. There are no potentiometers to adjust and the unit never needs to be removed from the case.

**Set Points:** Two set points are provided. The set point outputs can be assigned to rate or total or pulse scaling. The unit comes standard with two open collector control outputs. The outputs are programmable from 0.01 to 599.99 sec or latched until reset when assigned to the total or pulse and a hysteresis (alarm range) when assigned to the rate.

**Rate Display:** Updates 5 times per second, Accurate to 4.5 digits.

**Totalizer:** Integrates from the rate reading and accumulates up to 6 digits of total count. The time base (seconds, minutes, hours or days) and totalize conversion factor are field programmable from the front panel.

**Programming:** Decimal points, Scaling from 0 to 59999 units per selected time base, set points, input type, security lock code, and assigning outputs are all programmable from the front panel.

**Housing:** Standard 1/8 DIN, high impact ABS plastic case (NEMA 4/IP65 front panel).

**Shipping Weight:** 2 lbs.

**Overvoltage Protection:**

50 V

**Overcurrent Protection:**

50 mA

**Resolution:** 14.5 Bits

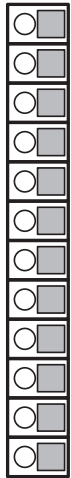
## Accuracy:

<u>RANGE</u>	<u>% FS ERROR</u> (worst case)	<u>% FS ERROR</u> (typical)
4-20 mA	0.1%	.05%
0-10 VDC	0.2%	0.1%
0-5 VDC	.25%	.15%
1-5 VDC	.25%	.15%

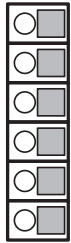
Square Law: (above 5% of bottom range) 0.1%  
(5V inputs .4%) Worst case over complete range: 2%

**Temperature Stability:** Will not drift more than 20 parts per million per °C from 5°C to 54°C

**WIRING:**

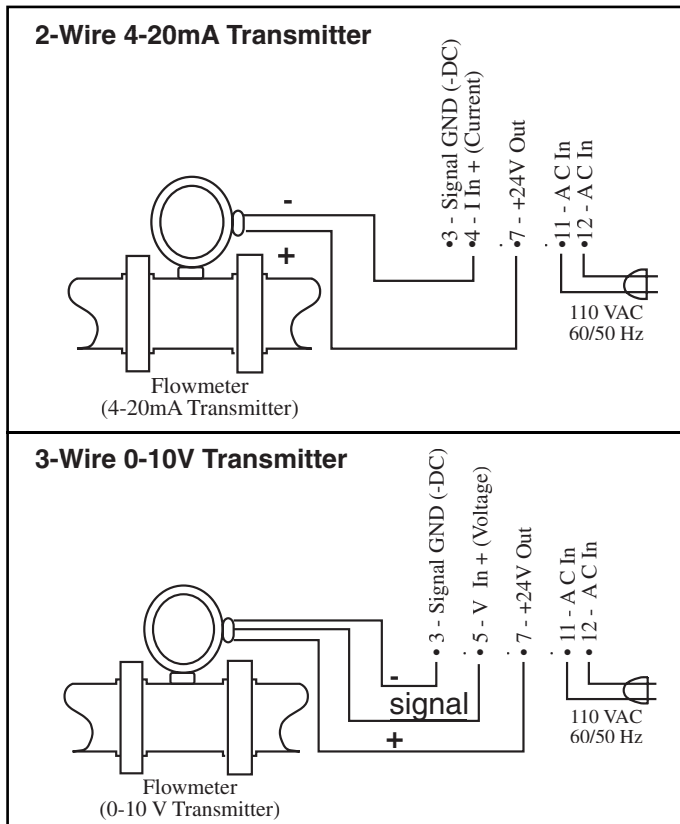
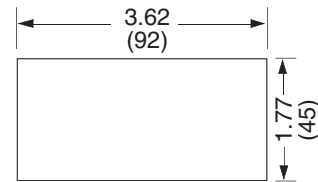
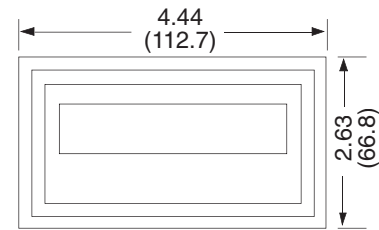
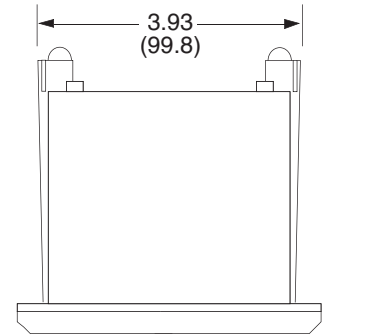
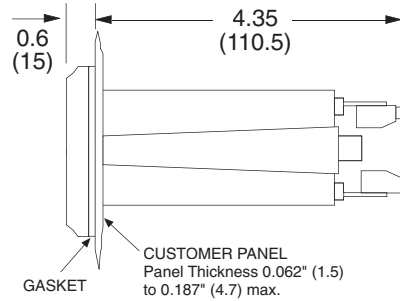


- 1•Reset In
- 2•Analog Out (Sink)
- 3•Signal GRD (-DC)
- 4•(Current) +I in
- 5•(Voltage) +V in
- 6•Not Used
- 7•+24V Out
- 8•Preset B Collector
- 9•Preset A Collector
- 10•+DC In
- 11•110/220 VAC
- 12•110/220 VAC



- 13•Common
  - 14•N.C.
  - 15•N.O.
  - 16•Common
  - 17•N.C.
  - 18•N.O.
- Relay A
- Relay B

**Dimensions:**



**ES756INT69 Ratemeter/Totalizer**

**Example: ES756INT69RT A L 1 A**

- Series:** \_\_\_\_\_
- ES756 INT69RT=** Ratemeter / Totalizer
- Operating Voltage:** \_\_\_\_\_
- A= 110 VAC ± 15% or 12 to 24 VDC
  - B= 220 VAC ± 15% or 12 to 24 VDC
- Inputs:** \_\_\_\_\_
- L= Linear
  - S= Square Law (Linear or Square Law menu selectable)
- Control outputs:** \_\_\_\_\_
- 1= 2 - Open Collector Outputs (standard)
  - 2= 2 - 10 Amp Form C Relays (optional)
- Options** (Multiple Options Available) \_\_\_\_\_
- A= Analog Output (4-20 mA)

**Accessories**

Separate non keyboard panel order #34235

Separate keyboard panel - order #34234

NEMA 4X wall mount enclosure available, see LCN4X & NEMA-1/8DIN

XHV 7/4 Explosion Proof Housing available, see XHV7/4