ADTECH
Analog-Digital Technology, Inc.

Electronic Integrator/Totalizer

Model No. LIT 56 Linear Integrator

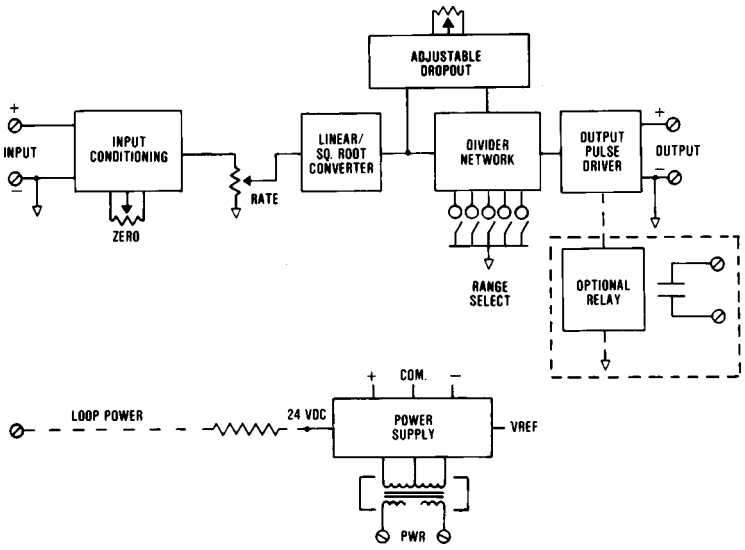
Model No. SIT 58 Squared Integrator

The Adtech Model LIT 56 converts linear analog inputs into a variable pulse rate output proportional to the input. Its companion, the SIT 58, converts the analog input into a variable pulse rate output proportional to the square root of the input.

These units handle all standard process voltage and current inputs and provide a 24 VDC pulse output capable of driving most electromechanical counters. A relay contact output can be provided as an option. For electronic counters, an optional voltage pulse output is also available. A complete range of totalizers, options T 10 through T 14, is available.

Zero, rate, and drop-out controls are provided by infinite resolution multiturn potentiometers. Recalibration to other ranges is convenient via simple strap selection of output ranges and the adjustable drop-out feature.

Loop power (24 VDC at 35 mA) for two-wire transmitter excitation is available as option O 15.



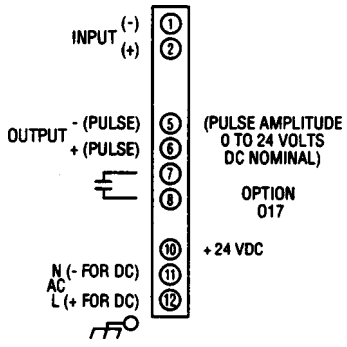
Typical Applications

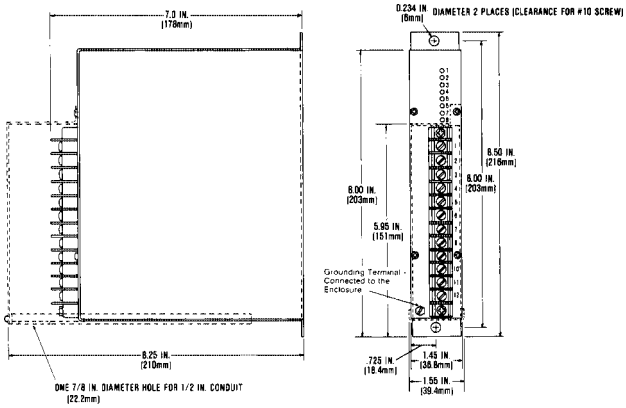
- **Energy totalizer, BTU, KWH**
- **Voltage or current to frequency (telemetry transmitter)**
- **Amp hour totalizer**
- **General voltage to frequency conversion**
- **Flow totalizer from linear flow signals into engineering units**
- **Flow totalizer from squared flow signals into engineering units**

Features

- **DC Current Inputs:** 4-20 mA, etc.
- **DC Voltage Inputs:** 1-5 VDC, etc.
- **High Input Impedance:** 10 megohms minimum at 5 VDC
- **Zero-Based Inputs:** Current and voltage
- **Range Adjustment:** 1,000,000:1
- **Adjustable Dropout:** 0-20%
- **Repeatability:** ±0.02% of span
- **High Accuracy:** ±0.1% of span
- **Two-Wire Transmitter Excitation--Optional**
- **Voltage Pulse Output For Electronic Counters--Optional**

Connections/Dimensions





Input/Output

Input Signals
4-20 mA DC (Z in 250 ohms)
10-50 mA DC (Z in 100 ohms)
0-1 mA DC (Z in 5k ohms)
0-10 mA DC (Z in 500 ohms)
1-5 VDC (Z in 10 megohms)
0-5 VDC (Z in 10 megohms)
0-10 VDC (Z in 1 megohm)
Other zero-based current and voltages are available.

Output Signals
Output pulse rate: 0-10 to 0-70,000 per hour full scale
24 VDC nominal into 100 ohms minimum,
50 millisecond pulse width nominal
Voltages lower than 24 VDC: Specify (Option O21)
10 to 1,000 counts per second output: (Option O 59)

Performance

Calibrated Accuracy: ±0.1%
Linearity: ±0.1% maximum, ±0.04% typical
Repeatability: ±0.05% maximum
Temperature Stability: ±0.01%/°F maximum, ±0.004%/°F typical
Load Effect: ±0.01% zero to full load
Response Time: 150 milliseconds
Temperature Range: 0° to 140°F (-18° to 60°C) operating; -40° to 185°F (-40° to 85°C) storage
Power Supply Effect: ±0.05% for a ±10% power variation
Note: All accuracies are given as a percentage of span.

Power

115VAC: 50/60 Hz, 0.7 PF	(Standard)	**48 VIDC:** Isolated	(Option P3)
12 VDC: Isolated	(Option P8)	**125 VDC:** Isolated (105-140 VDC)	(Option P4)
24 VIDC: Non-isolated	(Option P1)	**230 VAC:** 50/60 Hz, 0.7 PF	(Option P5)
24 VIDC: Isolated	(Option P2)		

Note: All units 3 watts maximum, and a ±10% power variation unless noted.

Mechanical

Electrical Classification: General purpose
Connection: Barrier terminal strip (3/8" spacing, No. 6 screws)
Controls: Multiturn zero, rate, and drop-out controls
Mounting: Surface mounting standard. See Housings Section for options.
Weight: Net Unit: 2.6 pounds (1.18 kilograms); Shipping: 3.0 pounds (1.36 kilograms)

Options

Option Number	Description
I 14	Voltage inputs to 200 VDC, 1 megohm min. impedence; current inputs of 100 mA max.
I 18	Low impedance DC current inputs [1/10 of standard (Z)] (LIT 56 only)
O 15	Two-wire transmitter excitation
O 17	Internal mercury-wetted relay
O 21	Output pulse voltages lower than 24 VDC--specify
O 59	10-1,000 CPS output
H 10	Thin-line conduit mounting plate and terminal cover
H 13B, H 14B, H 15B	NEMA 4, 7, and 12 enclosures
H 16	PFA 12 high-density, plug-in enclosure

Ordering Information
- Model number
- Input signal
- Output pulse rate and pulse voltage
- Prime power with option no.
- Input/output options
- Housing and miscellaneous options

Please refer to the Housing and/or Option Section for more specific and detailed information.

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