

# INTELLECT-69

## RateMeter / Totalizer From Analog Inputs

### Features

- High/Low Scaling From Front Panel
- 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
- RS422/232 Serial Communications (optional)
- 4-20mA Output (optional)
- Square Root Extraction (optional)
- Rate Per Day Feature (optional)



### Description:

Featuring 6 digits of bright, 7-segment LED displays, the Intellect-69 is an integrating totalizer/ratemeter which accepts analog signal inputs. The unit can be field programmed to accept 4-20mA, 0-20mA, 0-5V, 0-10V or 1-5V signals. An optional Square Law input is available for inputs that require square root extraction. A 4-20mA output option is available to control strip recorders or to transmit linear signal other peripherals. Two assignable set points are standard. The high and low scaling settings are programmable from the front panel. By pressing the "view" button, the unit will display: integrated total, rate, peak or valley. Press the "lock" key once to freeze the display. RS422 or RS232 serial communications are available options for data communication with a host computer.

### Specifications:

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

**Input Power:** 110, 220 VAC  $\pm$  15% or 12 to 24VDC.

Current: max. 300mA DC or 10.0VA (10W) at rated AC voltage.

**Output Power:** (AC powered units only) + 24VDC @ 50mA regulated  $\pm$ 5% (100 mA available on request)

### Temperature:

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

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

**Humidity:** 0-90% Noncondensing

**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.

### Input:

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

Optional: Square Law 4-20mA, 0-20mA, 0-5V, 0-10V or 1-5V is available for inputs that require square root extraction.

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

**Overvoltage Protection:** 50 V

**Overcurrent Protection:** 50 mA

**Resolution:** 14.5 Bits

**Listing:** CE Compliant, CSA Listed (File No. LR91109), NRTL/C pending

**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.

### Control Outputs:

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

Optional: 2 each Form C SPDT 5 Amp @ 120/240 VAC or 28 VDC.

**Set Points:** The two control set points can be set at any number from 0 to 59999. The set point outputs can be assigned to rate or total. The unit comes standard with two open collector control outputs. Two 5 Amp, Form C relays are optional. The outputs are programmable from .01 to 599.99 sec or latched until reset when assigned to the total and a hysteresis (alarm range) when assigned to the rate.

**Rate Display:** Updates 2 times per second, Accurate to 4.5 digits. Set "low" greater than "high" for inverted display (LINEAR ONLY). A user programmable low cutoff inhibits indications at low flow rates.

**Totalizer:** Integrates from the rate reading and accumulates up to 6 digits of total count. A totalizer divider allows the total to be divided by 1, 10, 100 or 1000. This feature is especially useful for users who deal with high total volumes.

**Analog Output:** The unit can be ordered with an optional 4-20mA output which is proportional to the rate display. The high and low settings are programmable from the front panel. Set "low" greater than "high" for inverted output. A sinking driver generates a corresponding linear current through the external devices. The output updates with each update of the rate. Accuracy is  $\pm$ .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).

**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 4X/IP65 front panel).

**Shipping Weight:** 2 lbs.

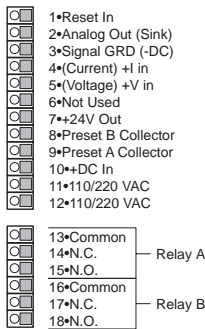
**Accuracy:**

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

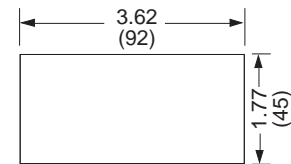
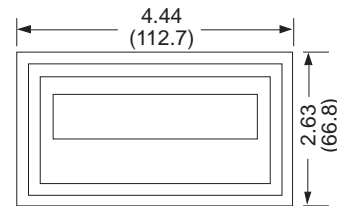
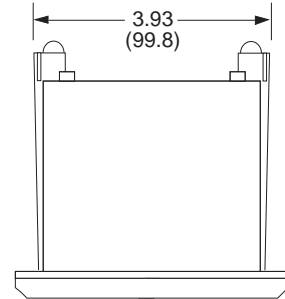
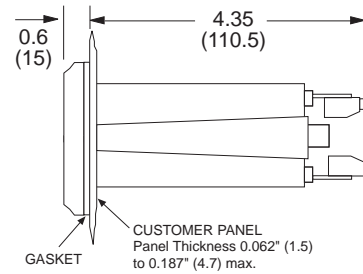
Square Law: (above 5% of bottom range) 0.1%  
(5V inputs .4%) Worst case over complete range: 2%

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

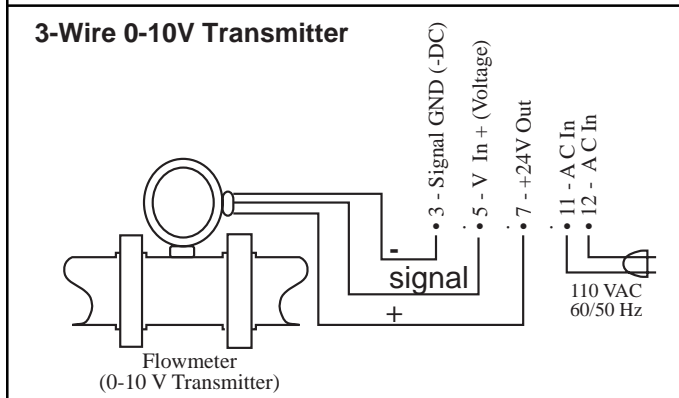
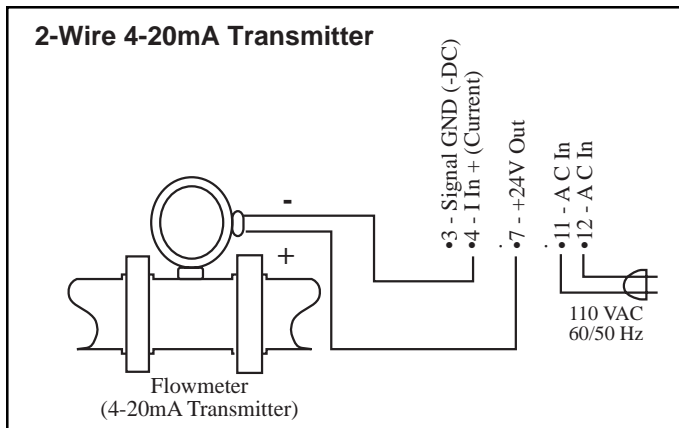
**WIRING:**



**Dimensions:**



Flow Instruments  
RATEMETERS/TOTALIZERS



**Ordering Information**

**Example:** INT69RT A L 1 A C1

<b>Series:</b>	INT69RT = Ratemeter / Totalizer
	INT69R = Ratemeter Only
	INT69T = Totalizer Only
<b>Operating Voltage:</b>	A = 110 VAC ± 15% or 12 to 24 VDC
	B = 220 VAC ± 15% or 12 to 24 VDC
<b>Inputs:</b>	L = Linear (standard)
	S = Square Law (optional)
<b>Control outputs:</b>	1 = 2 - Open Collector Outputs (standard)
	2 = 2 - 5 Amp Form C Relays (optional)

**Options (Multiple Options Available)**

- A = Analog Output (4-20 mA)
- D = Rate per Day, Hour or Minute
- C1 = RS 232 communications
- C2 = RS 422 communications

**Accessories**

- Separate non keyboard panel order #34235
- Separate keyboard panel - order #34234
- NEMA 4X wall mount enclosure available, see NEMA-1/8DIN
- XHV 7/4 Explosion Proof Housing available, see XHV7/4
- Serial printer available, see P1000, P295
- Ethernet Port Server available, see IEPS
- RS-422/485 to RS-232 Communication Adaptor available, see CA285