The HIT-4L is a compact Digital Flow Computer for Liquids with temperature, pressure, and viscosity compensation. The HIT-4L is configurable from the instrument front panel keypad or via Modbus communications.

**Outstanding Features**

- Temperature, Pressure, and Viscosity Compensation
- LCD display for Total, Rate, Temperature and Pressure
- Up to 20-point Linearization
- CSA/ATEX/IECEx hazardous location certifications available
- Internal battery backup
- Data Logging: Hourly Total, Daily Total, Event Logs
- Non-resettable Grand Total
- Full front panel operation with magnetic pointer through enclosure
- 4-20mA analog output proportional to flow rate
- Optional Scaled Pulse or Raw Pulse Output representing an incremental total volume
- Alarm Output with dual set point configurable for Rate or Total
- Magnetically operated switch for Total reset
- Configuration and Totals stored in non-volatile memory. Totals saved when pressing ► button.
- Modbus Communications Protocol via RS485
- Real Time Clock

**Specifications**

**Display:**
- LCD, updated every 1 second

**Total:**
- 8 digits 3/8” high. Resettable using a magnet, a contact closure, front panel keypad or via Modbus communications.

**Total Units:**
- GAL, LIT, FT3, M3, BBL, KG, LB

**Grand Total, Temperature, Pressure:**
- 8 digits 3/8” high
  - Display by pressing the ▲ button.

**Rate:**
- 6 digits 1/2” high

**Rate Units:**
- /SEC, /MIN, /HR, /DAY

**K-factor:**
- The pulses per unit of Total (e.g. pulses/GAL) are configurable in the range 0.001 to 9,999,999

**Linearization:**
- 2-20 points

**Decimal Points:**
- Decimal point positions are configurable for 0, 0.0, 0.00, or 0.000 for rate, total and K-factor.

**Accuracy:**
- Total and Rate: +/-0.01% of reading, +/- 1 count

**Magnetic Pickup Input:**
- Frequency Range: 0.2 Hz to 5000 Hz
- Signal Level: 30mVp-p to 30 Vp-p

**MCP/RF Pickup Input**
- Opto-Isolated
- Frequency Range: 2 Hz to 3000 Hz
- Internal pull-up 10KΩ to +DC
- Signal Level: 0 to +DC
- Low (Logic 0): <1 VDC
- Min Pulse width: 0.1 msec

**Contact Closure Input:**
- Frequency Range: 0 Hz to 5000 Hz
- Internal Pull-up: 220 kΩ to +3.3 VDC

**Reset:**
- Signal Type: Contact closure
- Min Time On: 25 msec
- Internal Pull-up: 35 kΩ to +3.3 VDC
- External Magnet: Activates internal switch

**Analog Output:**
- Type: 4-20 mA follows rate
- Accuracy: 0.02% Full Scale @ 20°C
- Temperature Drift: 40 ppm/°C

**Density/Viscosity Compensation:**
- 2-20 points table
**Temperature Input:**
Type: *4-20 mA, 100Ω RTD DIN385

**Pressure Input:**
Type: *4-20 mA
*4-20 inputs not available with battery or loop power.

**Pulse Output:**
Type: 0-5V TTL, Open Collector (30 VDC, 100 mA max)
Divider: 0.01, 0.1, 1, 10, 100
Pulse Width: Adjustable 4ms to 300ms
Max Frequency: 100 Hz

**Alarm Out with Dual Set Point:**
Type: 0-5V TTL, Open Collector (30 VDC, 100 mA)
Function: Rate or Total

**DC Power/Loop Powered:**
Voltage: 8 to 30 VDC
Current: <24 mA
Loop Burden: 8 VDC
Supply Backup: C-size 3.6V Lithium battery or battery pack for Ex d certified system.
Protection: Reverse polarity, overvoltage

**Battery Powered:**
Two (2) C-size 3.6V Lithium batteries
Battery Life: 2 years typical
Ex System - battery pack (4xAA)
Battery Life: 1 year typical

**Serial Port RS485:**
Protocol: Modbus RTU
Function: Data Logging, Configuration, Process Monitor

**Physical:**
Op. Temperature: -40°F (-40°C) to 176°F (80°C)
Humidity: 0-90% Non-Condensing
Enclosure: NEMA, Aluminum (Approx. 5”x5”x5”, 3 Lbs.)

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**HIT-4L ORDERING INFORMATION**

**A. Enclosure Style**
- (A) NEMA 4X
- (B) Aluminum Casting Powder Coated Enclosure (IP66)
- (C) Stainless steel enclosure (IP66)
- (D) Panel mount
- (E) Panel mount w/door and lock (IP40)
- (F) Panel mount w/clear flexible PVC cover (IP65 front only)
- **Options for 3 and 7**
  - (M) M20 thread
  - (S) Sunshade

**B. Input Power**
- (B) Battery Powered
  - **Note:** Mag only, no analog, pulse, or alarm

**C. Pulse Input**
- (M) Magnetic Coil
- (R) Isolated pulse, RP, Hall
- (RF) Modulated Carrier Coil

**D. Pulse Output**
- (5) 0-5V TTL/CMOS
- (OC) Open Collector
  - **Note:** Not available with (B) or (L) power inputs

**E. Alarm**
- (5) 0-5V TTL/CMOS
- (OC) Open Collector
  - **Note:** Not available with (B) or (L) power inputs

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**Data Logging**
- Hourly Total Log: 768
- Daily Total Log: 378
- Event Log: 345

**Accessing Logs:**
Via Modbus communication
Up to 100 latest flow logs are viewable on the front panel

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**H. Communication Port**
- (T) Internal terminal block
- (U) External USB for Nema 4X

**G. Mounting**
- (X) Remote Mounting
  - (FX) Style 3 or 7 enclosure mounted on turbine
  - (FXHT) Style 3 or 7 enclosure w/8” riser mounted on turbine
  - (F) NEMA 4X mounted on turbine
  - (FHT) NEMA 4X w/8” riser mounted on turbine
  - (NP) NEMA 4X enclosure pipe mounting kit 2” pipe & smaller

**Certified Mounting Options for Style 3 and 7 Enclosures:**
- (MX) Meter mounted. Process temp -40°C to +78°C.
- (MA) Meter mounted w/ ATEX riser. Process temp -40°C to +78°C.
- (RX) Remote mounted. Includes E2 junction box and 1”x3/4” SS adapter.
- (RA) Remote mounted w/ ATEX riser. Includes E2 junction box.
Union Options:
  - (U1) 1”  Ex-proof union for MX or RX
  - (U2) 3/4” Ex-proof union for MA or RA

**F. Compensation Method**
- (X) No Compensation
  - (TP1) Temperature and pressure transmitter inputs (4-20mA)
  - (TP2) 100 OHM RTD/Pressure transmitter (4-20mA)
- (-UVC) Universal Viscosity Curve Correction

**I. Special Features**
- (CE) CE mark required for Europe (pending)
- (X) None

**Enclosure Ex d Ratings: Certified Systems for Style 3 & 7**
- CSA/FM: CLASS I, DIV.1, GR. C,D; CLASS II, DIV.1, GR. E,F,G; CLASS III, T6; Type 4X;
CLASS I ZONE 1 AEx db IIB, T6 Gb IP66
ZONE 21 AEx tb IIC T80°C Db IP66
Ex db IIB T6 Gb; Ex tb IIC T80°C Db; IP66
- ATEX/IECEX:
  - II 2 G Ex db IIB T6 Gb, IP66
  - II 2 D Ex tb IIC T80°C Db; IP66

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The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

The quality system covering the design, manufacture and testing of our products is certified to International Standard ISO 9001.