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"Where Quality is Measurable"

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926-ST1LE

Economical Flow Totalizer, Ratemeter and Batcher

Features

- EZ Setup Feature Speeds Instrument Setup

- Setup Diskette

- Advanced Batching Features, Including Quick Batching Sequence

- Menu Selectable Hardware Features

- Two Line LCD or VFD Display

- NEW! - 0-20mA or 4-20mA Analog Output

- NEW! - Attractive Wall Mount Enclosure

- Isolated Pulse Output Standard

- RS-232 Port Standard, RS-485 Optional

- Advanced Printing Capabilities

- Data Logging & Modem Remote Metering Support

- DIN Enclosure with Two Piece Connectors

- DDE Server & HMI Software Available

Description:
The 926-ST1LE Flow Computer satisfies the instrument requirements for a variety of pulse producing flowmeter types in liquid applications.

The alphanumeric display shows measured and calculated parameters in easy to understand format. Single key direct access to measurements and display scrolling is supported. An EZ Setup feature rapidly guides the user through the basic setup.

The 926-ST1LE can be programmed for rate/total indication or batching. The various pulse inputs and outputs can be "soft" assigned to meet a variety of common application needs. The user "soft selects" the usage of each feature while configuring the instrument. A 0-20mA or 4-20mA analog output is standard.

The user can assign the standard RS-232 Serial Port for data logging, transaction printing, or for connection to a modem for remote meter reading. An optional RS-485 serial port using Modbus RTU protocol is available.

A Service or Test mode is provided to assist the user during start-up system check out by monitoring inputs and exercising outputs. The system setup can also be printed.

Specifications:
Environmental
   Operating Temperature: 0°C to +50°C
   Storage Temperature: -40°C to +85 C
   Humidity : 0-95% Non-condensing
   Materials: U.L. approved
Listing: UL/C-UL Listed (File No. E192404), CE Compliant
Display
   Type: 2 lines of 20 characters
   Types: Backlit LCD and VFD ordering options
   Character Size: 0.3" nominal
   User programmable label descriptors and units of measure
Keypad
   Keypad Type: Membrane Keypad
   Keypad Rating: Sealed to Nema 4
   Number of keys: 16
Enclosure
   Depth behind panel: 6.5" including mating connector
   Type: DIN
   Materials: Plastic, UL94V-0, Flame retardant
   Bezel: Textured per matt finish
Power Input
   The factory equipped power option is internally fused. An internal line to line filter capacitor and MOV are provided for added transient suppression.
   110 VAC Power Option: 85 to 127 Vrms, 50/60 Hz
   220 VAC Power Option: 170 to 276 Vrms, 50/60 Hz
   DC Power Option:
         12 VDC (10 to 14 VDC)
         24 VDC (14 to 28 VDC)

Flow Inputs:

  Pulse Inputs:

  Number of Flow Inputs: one (single or quadrature)
  Input Impedance: 10 KΩ nominal
  Pullup Resistance: 10 KΩ to 5 VDC (menu selectable)
  Pull Down Resistance: 10 KΩ to common
  Trigger Level: (menu selectable)
  High Level Input
  Logic On: 3 to 30 VDC
  Logic Off: 0 to 1 VDC
  Low Level Input (mag pickup)
  Sensitivity:
  10 mV or 100 mV
  Minimum Count Speed:
  User selectable (as low as 1 pulse/99 seconds)
  Maximum Count Speed:
  Selectable: 40 Hz, 3000 Hz or 20kHz
  Overvoltage Protection: 50 VDC
  Linearization: Average K or 16 Point linearization with separate
  forward and reverse tables

Control Inputs

  Number of Inputs: 3
  Switch Inputs are menu selectable for Start, Stop, Reset, Lock, Inhibit, Alarm Acknowledge, Print or Not Used.
  Control Input Specifications
  Input Scan Rate: 10 scans per second
  Logic 1: 4 - 30 VDC
  Logic 0: 0 - 0.8 VDC
  Input Impedance: 100 KΩ
  Control Activation:
  Positive Edge or Pos. Level based on product definition for switch usage.

Excitation Voltage

  Menu Selectable: 5, 12 or 24 VDC @ 100 mA (fault protected)

Data Logging

  The data logger captures print list information to internal storage for approximately 1000 transactions. This information can be used for later uploading or printing. Storage format is selectable for Comma-Carriage Return or Printer formats.

Batching Features

  Quick batching sequence, single or dual stage batching, slow fill, auto-batch restart and batch overrun compensation.

Serial Communication

  The serial port can be used for printing, datalogging, modem connection and communication with a computer.
  RS-232:
  Device ID: 01-99
  Baud Rates: 300, 600, 1200, 2400, 4800, 9600, 19200
  Parity: None, Odd, Even
  Handshaking: None, Software, Hardware
  Print Setup: Configurable print list and formatting.
  Print Out: Custom form length, print headers, print list.
  Print Initialization: Print on end of batch, key depression, interval, time of day or remote request.
  RS-485: (optional 2nd COM port)
  Device ID: 01-247
  Baud Rates: 1200, 2400, 4800, 9600, 19200
  Parity: None, Odd, Even
  Protocol: Modbus RTU (Half Duplex)

Relay Outputs

  The relay outputs are menu assignable to (Individually for each relay) Low Rate Alarm, Hi Rate Alarm, Prewarn Alarm, Preset Alarm or General purpose warning (security).
  Number of relays: 2 (4 optional)
  Contact Style: Form C contacts
  Contact Ratings: 5 amp, 240 VAC or 30 VDC

Isolated Pulse output

  The isolated pulse output is assigned to Uncompensated Volume Total.
  Pulse Output Form: Photomos Relay
  Maximum On Current: 25 mA
  Maximum Off Voltage: 30 VDC
  Saturation Voltage: 1.0 VDC
  Maximum Off Current: 0.1 mA
  Pulse Duration:10 mSec or 100mSec (user selectable)
  Pulse output buffer: 256
  Fault Protection
  Reverse polarity: Shunt Diode
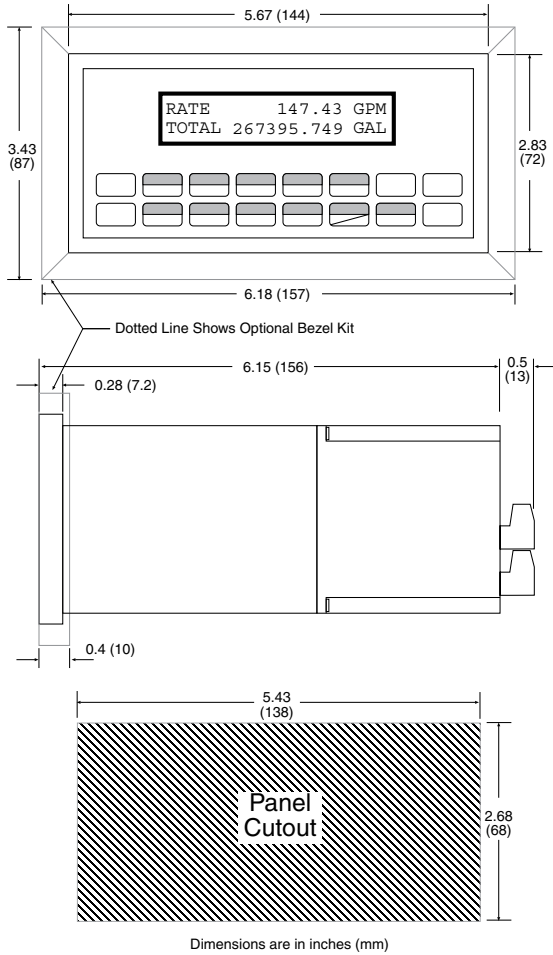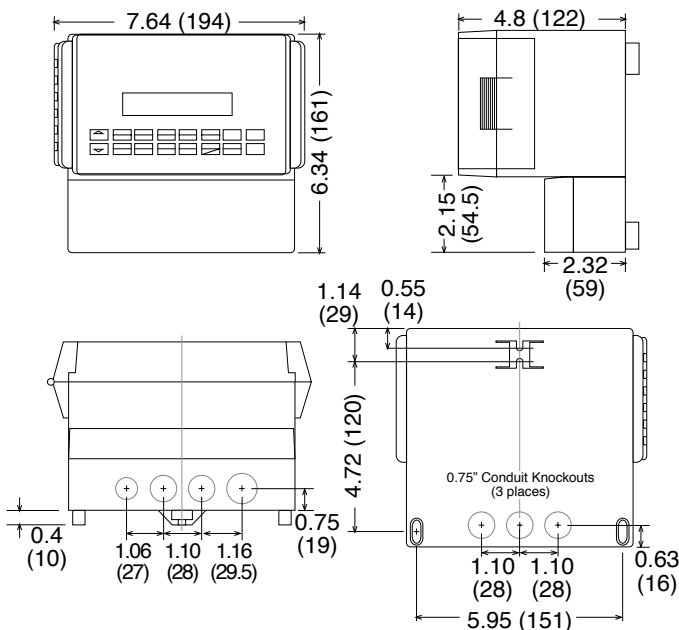
Fig. 1: Standard Dimensions

RATE   147.43 GPM
TOTAL 267395.749 GAL

5.67 (144)
3.43 (87)
2.83 (72)
6.18 (157)

Dotted Line Shows Optional Bezel Kit

6.15 (156)
0.28 (7.2)
0.5 (13)
0.4 (10)

5.43 (138)

Panel Cutout

2.68 (68)

Dimensions are in inches (mm)

Terminal Designations

Terminal	Designation	
1	DC OUTPUT	
2	PULSE IN 1	FLOW IN
3	PULSE IN 2	
4	COMMON	
5	DO NOT USE	
6	DO NOT USE	
7	DO NOT USE	
8	DO NOT USE	
9	CNTR IN 1	
10	CNTR IN 2	SEE USER MANUAL
11	CNTR IN 3	
12	COMMON	
13	PULSE OUTPUT +	
14	PULSE OUTPUT -	
15	ANALOG OUTPUT +	
16	ANALOG OUTPUT -	
17	NC	
18	COM RLY1	
19	NO	
20	NC	
21	COM RLY2	
22	NO	
23	AC LINE	POWER IN / DC +
24	AC LINE	DC -
25	NC	
26	COM RLY3	
27	NO	
28	NC	
29	COM RLY4	
30	NO	

Ordering Information

Example 926-ST1LE   L   1   A   0   P   ET

Series:

Display Type:
L= LCD
V= VFD

Input Type:
1= 110 VAC
2= 220 VAC
3= 12 VDC (10 to 14 VDC)
4= 24 VDC (14 to 28 VDC)

Relays:
A= 2 SPDT Relays
B= 4 SPDT Relays

Network Card:
0= None (STD)
2= RS485/Modbus (optional 2nd COM port)

Mounting:
P= Panel Mount .... (see Fig. 1)
N= NEMA 4 Wall Mount ....(see NEMAtrolST4X)
W= NEMA 12/13 Wall Mount w/ Clear Cover .... (see Fig.2)
E= Explosion Proof (No Button Access) .... (see XHVD 7/4)
X= Explosion Proof (with Button Access) ... (see XTROL 7/4)

Options:
TB = RS485 Terminal Block for Panel Mount Enclosure
ET = Extended Temperature .... (consult factory)
    -4°F to 131°F (-20°C to 55°C)
IM = Internal Modem
M = Modem Power Option

Accessories:
KEPS-KEP1-32
     KEP RS232 for 926-ST1LE • 32 Bit OPC/DDE Server
KEPS-MBS32
     Supports RS485 for 926-ST1LE (Modbus RTU)
Modem Available, see MPP-2400 and MPP-2400N (requires M option)
Serial printer available, see P1000, P295
Ethernet Port Server available, see IEPS
RS-422/485 to RS-232 Communication Adaptor available, see CA285
Remote metering and data collection software available, see TROLlink

Fig. 2: Wall Mount ("W" mounting option) Dimensions

7.64 (194)
4.8 (122)
6.34 (161)
2.15 (54.5)
2.32 (59)
1.14 (29)
0.55 (14)
4.72 (120)
0.4 (10)
1.06 (27) 1.10 (28) 1.16 (29.5)
0.75 (19)
0.75" Conduit Knockouts (3 places)
1.10 (28) 1.10 (28)
0.63 (16)
5.95 (151)