SPONSLER PRECISION TURBINE FLOWMETERS
PRODUCT OVERVIEW
**WAFER SERIES FLOWMETERS**

- **Sizes**
  ½ to 4" (1.9 to 10.2 cm)
- **Flowrates**
  1.25 to 1,250 US GPM (4.73 to 4,732 LPM)
- **Temperature Range**
  -430° to 450° F, +1000° F optional
  (-256.7° to 232.2° C, +537.8° C optional)
- **Accuracy**
  Liquid: ± 0.5% Linear over a limited 10 to 1 range
  ±0.25 or 0.15 available on request
  Gas: ± 1% of full scale
- **Repeatability**
  ± 0.1%
- **Standard Endfittings**
  Fits between two existing flanges, Optional alignment rings available
- **Standard Material**
  300 Series Stainless Steel

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**PRECISION TURBINE FLOWMETERS**

- **Sizes**
  ¼ to 12" (0.635 to 30.48 cm)
  Consult factory for other sizes
- **Flowrates**
  0.5 to 12,000 US GPM (1.89 to 45,425 LPM)
  0.07 to 12,000 ACFM
- **Temperature Range**
  -430° to 450° F, +1000° F optional
  (-256.7° to 232.2° C, +537.8° C optional)
- **Accuracy**
  Liquid: ± 0.5% Linear over a limited 10 to 1 range
  ±0.25 or 0.15 available on request
  Gas: ± 1% of full scale
- **Repeatability**
  Liquid: ± 0.02% over a limited 10 to 1 range
  Gas: ± 0.25%
- **Standard Endfittings**
  AN Flare, NPT, Flanged
- **Standard Material**
  300 Series Stainless Steel
SANITARY SERIES FLOWMETERS

- Clean in Place with Low Pressure Steam
- 3A Approved and Standard Sanitary — Built to Wisconsin Dairy Standards
- High Accuracy
- AC Sinewave Signal
- Vertical or Horizontal Installation
- Flexible Applications

Standard Sanitary Sizes
¾ to 3" (0.635 to 7.62 cm)

3A Approved Sizes
½ to 4" (1.9 to 10.2 cm)

Flowrates
0.25 to 650 US GPM (0.95 to 2,461 LPM)

Temperature Range
-100º to 450º F (-73.3° to 232.2º C)

Accuracy
± 0.5% Linear

Repeatability
± 0.1%

Standard Endfittings
Tri-clamp

Standard Material
300 Series Stainless Steel
CORROSIVE SERIES FLOWMETERS

Sizes
¼ to 4" (0.635 to 10.16 cm)
Consult factory for other sizes

Flowrates
.25 to 1,250 US GPM
(0.95 to 4,732 LPM)

Temperature Range
-100° to 280° F (-73.3° to 232.2° C)

Accuracy
± 0.5% Linear

Repeatability
± 0.1%

Standard Endfittings
Flanged to ANSI B16.5

Standard Materials
CPVC, Kynar, PTFE

- High Accuracy
- Simple Installation
- Versatile Mounting
- AC Sinewave Signal
- Low Pressure Drop
- Flexible Applications
InSERTION SERIES FLOWMETERS

- Size
  1½" (3.81 cm), fits inside 2" (5.08 cm) NPT riser

- Flow Rates
  Liquid: 2 to 40 ft/sec (0.057 to 1.13 m/sec)
  Gas: 2 to 200 ft/sec (0.057 to 1.13 m/sec)

- Temperature Range
  Liquid: -100º to 350º F (-73.3° to 176.67° C)
  Gas: 2 to 200 ft/sec (0.057 to 1.13 m/sec)

- Temperature Range
  -100º to 350º F (-73.3° to 176.67° C)

- Accuracy
  ± 2% Linear of rate of liquid or gas

- Repeatability
  ± 0.25%

- Maximum Pressure
  Liquid: 150 psig
  Gas: 100 psig

- Standard Material
  300 Series Stainless Steel

*Handwheel units are required for pressures above 150 psig and any high temperature application

LO-FLO SERIES FLOWMETERS

- Orifice Sizes
  0.020 to 0.175" (0.05 to 0.444 cm)

- Flowrates
  0.002 to 3 US GPM (7.6 to 11356.24 cc/min)
  In 12 overlapping ranges

- Temperature Range
  -430º to 450º F +1000º F optional
  (-256.7° to 232.2° C +537.8° C optional)

- Repeatability
  ± 0.25%

- Standard Endfittings
  AN Flare, NPT, Flanged

- Standard Material
  300 Series Stainless Steel

- Portable
- Low Maintenance Costs
- AC Sine Wave Signal
- Installation and Removal without Disabling Line
- Hand Wheel Insertion Flowmeter for High Pressure Lines*
- Custom and Standard Design

INSERTION SERIES FLOWMETERS

- • Low Maintenance Cost
  • Liquid and Gas Measurement
  • 12 Overlapping Flow Ranges
  • AC Sine Wave Signal Output
  • Encapsulation Options Available for High Pressure, High or Low Temperature or Extreme Corrosive Environments

- Orifice Sizes
  0.020 to 0.175" (0.05 to 0.444 cm)

- Flowrates
  0.002 to 3 US GPM (7.6 to 11356.24 cc/min)
  In 12 overlapping ranges

- Temperature Range
  -430º to 450º F +1000º F optional
  (-256.7° to 232.2° C +537.8° C optional)

- Repeatability
  ± 0.25%

- Standard Endfittings
  AN Flare, NPT, Flanged

- Standard Material
  300 Series Stainless Steel

*Handwheel units are required for pressures above 150 psig and any high temperature application
IT 400: RATE INDICATOR AND TOTALIZER

- Battery Operated
- 20 Point Linearization
- Independent Rate Indicator and Totalizer
- Resettable Totalizer
- Backlit Display
- Datalog Feature Available as Option (RS-232 Option Required)
- User-friendly Programming

Input Power
5 to 48 VDC, Reverse Polarity Protected

Internal Power
D Lithium Battery

Temperature Rating
Operating: -22° to 167° F
(-30° to 75° C)
Storage: -40° to 185° F
(-40° to 85° C)

Enclosure
Explosion Proof Aluminum

Serial Communications
RS-232 (optional)

Signal Input
Magnetic, RF Modulated (external power required), Pulse

Temperature Compensation
Two Wire RTD (optional)

Outputs
Scaled Pulse, Rate (4-20 mA), Alarm (optional)

Approvals
NMI approved, meets all Handbook 44 requirements for cryogenics

INDUSTRIAL SERIES AMPLIFIERS TRANSMITTERS

- Output Proportional to Flow
- Short Circuit Protection
- Explosion Proof Enclosure
- Mounted Directly to Meter
- Sensitivity Field Adjustable
- Low Cost

3-Wire Analog Transmitter (SP711-3)
- 0 to 5 or 0 to 10 VDC Output
- 12 to 28 VDC
- Linearily converts frequency output to an equivalent voltage output

Pulse Amplifier (SP714)
- 6 to 28 VDC
- 5 mA @ 24 VDC
- Linearily converts sinewave output to a square wave pulse

Loop Powered 4-20 mA Transmitter (SP712-2)
- 2-Wire 4-20 mA Loop Powered Output
- Linearily converts frequency input to an equivalent 4-20 mA current output

Modulated Carrier Amplifier (SP717)
- 6 to 28 VDC
- 30 mA @ 24 VDC
- Converts a carrier frequency to a square wave pulse (RF pickup coil required)

Modulated Carrier Analog Transmitters for Current or Voltage (SP718)
- Input Voltage: 110 VAC, 60 Hz, or 12 to 16.5 VDC
- Linearily converts carrier frequency to equivalent analog output

Loop Powered Modulated Carrier 4-20 mA Transmitter (SP720-2)
- Combines modulated carrier with the convenience and accuracy of 4-20 mA transmitter

Enclosure
Explosion Proof Aluminum

Serial Communications
RS-232 (optional)

Signal Input
Magnetic, RF Modulated (external power required), Pulse
CRYOGENIC DELIVERY SYSTEMS

- Dual Microprocessors
- 10 Point Linearization
- User-friendly Menu-driven Programming
- Temperature Compensation for 8 Individual Products
- Complete Audit Trail
- Complete System Alarm Display
- Versatile Mounting Configurations

FLOW COMPUTERS FOR LIQUID AND GAS APPLICATIONS

- Internal Data Logging
- Isolated Pulse and Analog Outputs
- DDE Server and HMI Software Available
- Attractive Wall Mount Enclosure
- Liquid Gas, Steam, and Heat Flow Equations*

Input Power
9 to 26 VDC, 3W Typical 8W Maximum

Internal Power
Lithium Battery Pack

Temperature Rating
-40° to 125° F (-40° to 50° C)

Physical Dimensions
9.75" x 7.5" x 3.75"
(24.8 x 19.1 x 9.5 cm)

Display
240 x 128 Full Graphic with CCFL Backlight

Signal Input
0 - 2500 HZ, 50mv RMS @ 10 HZ

Sensor Inputs
(1) RTD and 4-20 mA Loop or
(2) 4-20 mA Loops

RTD
Platinum 1000 Ohms

Outputs
(2) Form C 2A Relays, 4-20 mA for Rate, I.R. Data Port, Optional RS-232, and Optional Bluetooth

Input Power
9 to 26 VDC, 3W Typical 8W Maximum

Internal Power
Lithium Battery Pack

Temperature Rating
-40° to 125° F (-40° to 50° C)

Physical Dimensions
9.75" x 7.5" x 3.75"
(24.8 x 19.1 x 9.5 cm)

Display
240 x 128 Full Graphic with CCFL Backlight

Signal Input
0 - 2500 HZ, 50mv RMS @ 10 HZ

Sensor Inputs
(1) RTD and 4-20 mA Loop or
(2) 4-20 mA Loops

RTD
Platinum 1000 Ohms

Outputs
(2) Form C 2A Relays, 4-20 mA for Rate, I.R. Data Port, Optional RS-232, and Optional Bluetooth

Input Power
110 VAC, 220 VAC, 12 VDC (10 to 14 VDC), 24 VDC (14 to 28 VDC)

Inputs
(1) Pulse, (1) Analog

Temperature Range
Operating: 32° to 122° F (0° to 50° C)
Storage: -40° to 185° F (-40° to 85° C)

Outputs
(2) Form C 5 A Relays, (2) Analog Pulse—0-20 mA or 4-20 mA, (1) Isolated Pulse—open collector NPN or 24 VDC pulse

Physical Dimensions
6.18" x 3.43" x 6.15"
(157 x 87 x 156 cm)

Serial Communications
RS-232 and RS-485

Display
2 Line 20 Characters, VFD

Keypad
16 Key Membrane Keypad Sealed to NEMA 4

*SP4000 only
The Liquid Controls Group provides custody transfer solutions for the control and management of high-value fluids and gases. In 2001, IDEX combined Corken, Liquid Controls and Sampi to form the Liquid Controls Group. Together, they used their combined resources to design valuable new products and offer cost-effective pump and meter solutions. They laid the foundation for LCG’s successful program of collaboration and innovation. With the additions of Liquid Controls Sponsler, TopTech Systems and Faure Herman, LCG quickly became a dependable, single source provider, large enough to supply comprehensive solutions yet flexible enough to customize solutions for unique needs. Today, the Liquid Controls Group has a strong global presence with seven business units in five countries, over 500 distributors on six continents, and six industry leading brands.

**YOUR CUSTOMERS — OUR CUSTOMERS**

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