RATE   1237.0   lbs/h
TOTAL   3895643 lbs

RATE   0.00 gal/s
TOTAL   0   gal

618629

Gas Metering

Metering Industrial Gases with KEP Ratemeter/Totalizers & Flow Computers

General

Gas metering computations are much more complex than simple liquid computations. There are a wide variety of industrial gases and each one brings its own metering challenges. To achieve accurate flow measurement and flow computations, one must challenge certain assumptions, based on the gas type as well as the line pressure and temperature in the application.

UNCORRECTED GAS VOLUME

The following models can be used in applications where line pressure and temperature remain stable and extreme accuracy is not required.
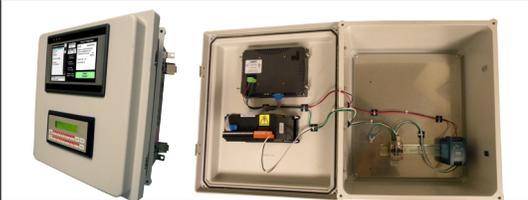
MINItrol (MRT) Totalizer & Ratemeter from Pulse Inputs

- ▶ CSA Certified
- ▶ Separate Scaling Factors For A & B Inputs
- ▶ Display Rate & Total
- ▶ Pulse Input - 10 kHz Max.
- ▶ RS422/RS232 Serial Communication
- ▶ Modbus RTU RS422/RS485/RS232
- ▶ NEMA 4X / IP65 Front Panel
- ▶ Separate Add/Subtract Simultaneous Inputs
- ▶ Quadrature & U/D Direction Control Inputs
- ▶ 30mV Magnetic Pickup Inputs
- ▶ 4-20mA or 0-20mA Analog Output

DESCRIPTION
The MINItrol (MRT) is a 6 digit totalizer and ratemeter with two level, 5 digit preset alarm control of total or rate. Inputs A & B have separate scaling K-factors. The totalizer can be programmed for "A" subtract "B", "A" add "B" or A & B as separate totalizers, with display and control of the "net" total and rate of "A". The MINITROL is also available in 4 other versions. MC2: a two preset totalizer with scaling, MR2: a high/low alarm ratemeter with scaling; The "MC": a totalizing counter only, and the "MR": a rate meter display only.

WEBSITE www.kep.com/flow   **DATASHEET** www.kep.com/mrt

SUPERtrol-1LE (ST1LE) Advanced Ratemeter & Totalizer

- ▶ UL Listed
- ▶ EZ Setup Feature Speeds Instrument Setup
- ▶ Setup Diskette
- ▶ Advanced Batching Features, Including QuickBatching Sequence
- ▶ Menu Selectable Hardware Features
- ▶ Two Line LCD. OLED or VFD Display
- ▶ 0-20mA or 4-20mA Analog Output
- ▶ NEW! - Attractive Wall Mount Enclosure Option
- ▶ Isolated Pulse Output Standard
- ▶ RS-232 Port Standard, RS-485 Optional
- ▶ Advanced Printing Capabilities
- ▶ Data Logging and Modem Remote Metering Support
- ▶ DIN Enclosure with Two Piece Connectors
- ▶ DDE Server & HMI Software Available

DESCRIPTION
The SUPERtrol 1LE (ST1LE) batch controller is a flow rate totalizer for use with pulse producing flowmeter types in liquid applications.

The alphanumeric display shows flow rate and flow total as well as 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 SUPERtrol-I LE 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. The system setup can also be printed.

WEBSITE www.kep.com/flow   **DATASHEET** www.kep.com/st1le

CORRECTED GAS VOLUME

Advanced gas metering systems typically include volumetric flow metering devices, pressure and temperature sensors and a computational device, such as the flow computers listed below. These models allow inputs from a flowmeter as well as temperature and/or pressure sensors to increase accuracy.

ES747ST1 Flow Computer for Liquid & Gas Applications

- ▶ UL Listed
- ▶ Supports Pulse Producing Flowmeters
- ▶ Rate/Total and Batching Functions
- ▶ Universal Viscosity Curve (UVC) and Strouhal/Roshko Advanced Linearization Methods
- ▶ Gas & Liquid Flow Equations (Volume, Mass, Corrected Volume) API 2540, AGA-7 Equations
- ▶ 10 Selectable Fluid Tables
- ▶ Advanced Batching Features: Overrun Compensation, Print End of Batch
- ▶ Menu Selectable Hardware & Software Features
- ▶ Data Logging
- ▶ Two Line LCD or VFD Display
- ▶ Isolated Pulse and Analog Outputs
- ▶ Standard RS-232 Port Standard, RS-485 Optional
- ▶ Windows™ Setup Software DDE Server & HMI Software Available

DESCRIPTION
The ES-747 Flow Computer satisfies the instrument requirements for pulse producing flowmeters in liquid and gas applications. Multiple flow equations and instrument functions are available in a single unit with many advanced features.

WEBSITE www.kep.com/flow	**DATASHEET** www.kep.com/es747

ES749ST2 Flow Computer with NX-19 Gas Equations

- ▶ "EZ Setup"- Guided Setup for First Time Users
- ▶ NX19 Gas Equations
- ▶ Utility Metering - Natural Gas, Compressed Air, Steam, Heating/Cooling, Chilled Water
- ▶ Menu Selectable Hardware & Software Features
- ▶ Two Line LCD, OLED or VFD Display
- ▶ Internal Data Logging Option
- ▶ Isolated Pulse and Analog Outputs Standard
- ▶ RS-232 Port Standard, Provides Power for Modem
- ▶ RS-485 Optional
- ▶ Windows™ Setup Software
- ▶ Stacked DP Transmitters
- ▶ DDE Server & HMI Software Available
- ▶ Remote Metering by Wireless or Modem

DESCRIPTION
The Model ES749 has become the work horse of flow computers for utility metering, solving a wide variety of flow metering challenges. Based on the popular SUPERtrol II, the ES749 accepts common pulse and analog inputs from nearly all of the flow meters commonly encountered in utility metering of steam, heated and chilled water, industrial gases, and liquid flow applications. Two compensation inputs are provided to facilitate the handling of a wide range of standard applications in a single unit. Energy, mass, volume and corrected volume equations can be solved, and a variety of standard outputs, the internal data-logger, and communication options round out the offering.

WEBSITE www.kep.com/flow	**DATASHEET** www.kep.com/es749

Custom Metering Systems Gas Metering Made Easy!

- ▶ Custom Metering System Using Flow Computers & Touchscreen Interfaces
- ▶ Many Configurations Available
- ▶ Choose From Our Wide Selection of Enclosures and Accessories.
- ▶ Custom Wiring and Accessory Mounting is Also Available

WEBSITE www.kep.com/flow	**DATASHEET** n/a

P295 Miniature Slip Printer & P1000 Dot Matrix Roll Printer

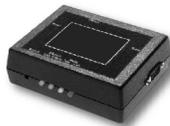| P295	► Worlds Smallest Slip Printer ► Only 1.6 Kg ► Epson's ESC/POS Command Set ► Easy-To-Use Touch Panel ► Four Print directions ► Auto eject	P1000	► Compact Serial Printer for Field Use ► Uses Standard 2.25" Plain Paper Roll ► 24 or 40 Column Printing ► Standard Epson™ Ribbon ► Internal 2KB Buffer ► RS232 With Selectable Baud Rate ► Operates for 2 Hours on Internal Batteries for Hand Held Applications

DATASHEET www.kep.com/p295   **DATASHEET** www.kep.com/p1000

Gateways Provide Support for Modbus RTU, Modbus TCP and BACnet/IP Protocols

WEBSITE www.kep.com/gateway   **DATASHEET** see web site for individual datasheets

Enclosures We offer a wide variety of enclosures to fit your needs

WEBSITE www.kep.com/enclosure

KEP-CM Contract Manufacturing

Our capabilities encompass:
► Printed Circuit Board (PCB) Review
► Printed Circuit Assembly
► Prototype Assembly
► Cable and Harness Assembly
► Full Box Build and Electromechanical Assembly
► Function Testing

DESCRIPTION
KEP-CM is the contract manufacturing division of Kessler-Ellis Products. We provide quality, competitively priced, electronic sub-assembly services. Our services range from wire stripping and kitted jobs to complete turnkey projects. Our experience in electronic and mechanical assemblies includes wire cutting and termination, cable assemblies, complete chassis assemblies, and PCB population including through-hole device (THD) and surface-mount technology (SMT). We also provide quick turnaround prototypes. We are an ISO9001 registered company.

WEBSITE www.kep.com/kepcm

About KEP

Kessler-Ellis Products (KEP) designs, manufactures and services Industrial, Process, Automation and Control products. Our products include flow instrumentation, counters/timers/rate meters, PLC operator interfaces, HMI software and a Contract Manufacturing division. Founded in 1961 by Corson Ellis Jr., as a distributor of electromechanical counting devices. The company quickly expanded into a full line manufacturer of electronic counters. KEP is an ISO 9001 registered company designing, manufacturing and servicing reliable, quality products suitable for all industries. We are proud of our company and the people who work for us. KEP is deeply committed to satisfying our customers.