



## **ROOTS® Micro Corrector** **Models PTZ + Log, P + Log and T + Log**



*ROOTS® Micro Corrector, Model PTZ + Log, ID Mount Version*

The ROOTS® Micro corrector is part of the new Micro series of electronic products from Dresser. The Micro Corrector, Model PTZ + Log, calculates corrected volume by measuring live temperature and pressure. Supercompressibility is calculated using the AGA 8/SGERG 88 Gross Characterization Method. The unit has logging capability for 35 days of hourly logs, 48 days of daily logs and 15 months of monthly logs, as well as an audit log which records the last 128 changes to the unit configuration. Designed to be the best value in the industry, available in a variety of mounting styles and in several transducer ranges, the ROOTS® Micro corrector offers versatility at a competitive price. The Micro Corrector is also available in pressure only and temperature only versions.

# ROOTS Meters & Instruments



## Unit Hardware Features

The ROOTS® Micro corrector is the smallest and lightest volume corrector on the market today (the wall/pipe mount version weighs less than 3 pounds!), measuring only 6-1/4 inches in width. It is designed for universal mounting on instrument drive rotary, diaphragm and turbine meters. The Micro Corrector can be instrument drive, wall, pipe, or meter bracket mounted. Additionally, the corrector has two instrument drive options - either with or without uncorrected mechanical counter. The front panel has an "easy to push" scroll button, which eliminates the need for magnets.

## 5+ Year Battery Life

New, low power electronics yield unprecedented battery life - in excess of 5 years. Low battery indication occurs with a minimum of 2 months remaining battery life. This means lower operating and maintenance costs, fewer battery disposal issues, and fewer batteries to purchase and stock.

## Intuitive, Windows® -based Software

After loading the user terminal software under Windows® 95/98/2000, you get everything you need to communicate with your Micro Corrector either through direct connection or remote communication. Using your laptop or desktop PC, the software is easy to use and requires minimal training. One-click screen and data selection make configuration easy. The software includes built-in intelligence, so when you choose an incorrect parameter, your selection will be shaded in red, signaling you to STOP and edit the chosen value.

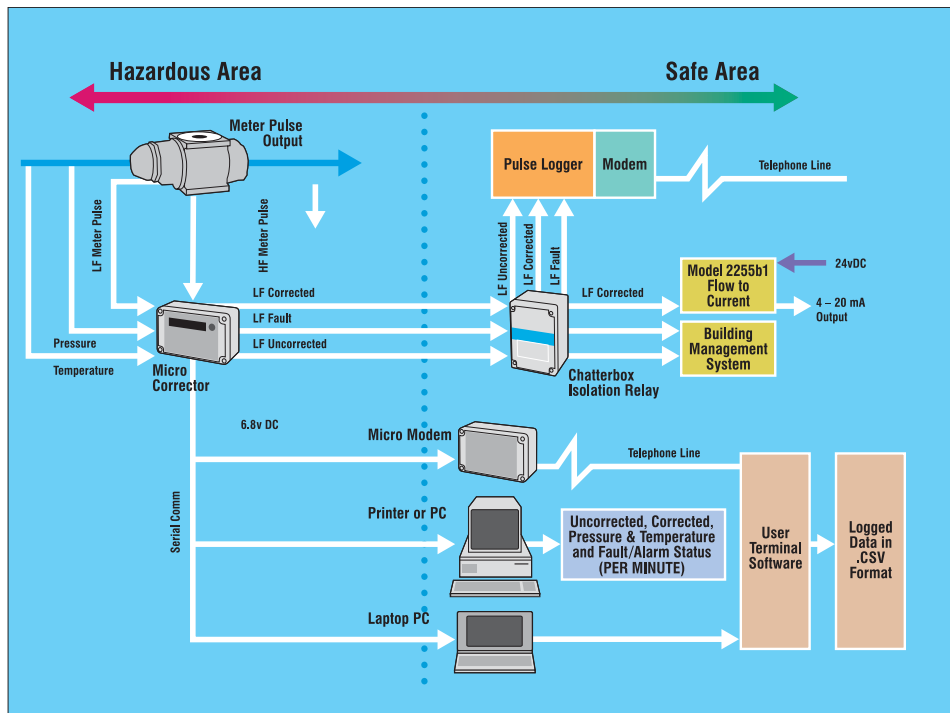
## Chatterbox Isolation Relay

- 2 or 4 Channel options safely isolating meter or corrector pulses from the hazardous area to building management systems
- Battery powered using standard type low cost cells
- One input can be connected up to four isolated output circuits, e.g., a possible configuration is two inputs with each input connected to two outputs offering a large flexibility for pulse outputs
- IP66 enclosure offers flexibility for installation on site
- Battery saving facility reducing the pulse length if the meter contact remains closed

## Micro Modem

- Line powered, no batteries required
- European (CTR21) & US approvals (FCC68)
- Plug & Play design, no set up required, reduced installation and start-up costs
- The Micro Modem supports the Micro Corrector for remote meter communications
- IP66 metal housing offering flexibility during installation

**PRODUCT  
DATA**



## Wide Range of Communication Capabilities

The ROOTS® Micro corrector has local and remote RS-232 communication capability. It works with the Micro Modem which interfaces with commercially available modems with bell 212A compatibility, that utilize the Hayes command set. Additionally, the unit has dual communication call out capability allowing appropriate personnel notification in the event of a fault or alarm condition. Pulse outputs are available which allow you to easily adapt to your communications network or to provide a separate connection for your customer. The Micro Corrector is MV-90 compatible.

## Total System Integrity

Data in the Micro Corrector is stored in E<sup>2</sup>PROM memory. The robust all-weather enclosure is rated IP-66 (NEMA 4X). Additionally, the unit has been thoroughly tested for EMI-RFI immunity and has the CE mark. The Micro Corrector is certified as intrinsically safe. The audit trail allows you to view the last 128 parameter changes and if a fault condition occurs, the display defaults to an error message. Password protection prevents unauthorized use.

## Approvals

- ATEX
- EECS
- NMi
- EN 12405
- CSA

# ROOTS® Micro Corrector

## Models PTZ + Log, P + Log and T + Log

### Measurement Resolution:

Pressure: 0.01 PSI (1mbar)

Temperature: 0.1°C

### Accuracy over Full Temperature Range of -40°F to +140°F (-40°C to +60°C):

**Pressure:** +/- 0.25 % of reading

**Temperature:** +/- 0.9°F (0.5°C)

### Combined Corrected Volume Accuracy:

+/- 0.5% typical

### Battery Characteristics:

Factory supplied alkaline battery pack with life exceeding 5 years. Low battery indication occurs with at least 2 months remaining battery life. Inexpensive, intrinsically safe battery pack is easily changed on site. It is environmentally friendly – no special handling or disposal.

### Physical Characteristics:

**Mounting Styles:** Wall, Pipe, Instrument drive,

**Dimensions:** 6-1/4 in W x 3-7/8 in H  
(4-5/8 in over connectors) x  
2-1/2 in D

160 mm W x 100 mm H  
(118mm over connectors) x  
62 mm D

**Weight:** 2 lbs., 12 oz. (1.25 Kg)

**Operating Temperature:** -40°F to +140°F  
(-40°C to +60°C)

**Ambient Humidity:** Up to 95% sustained outdoor exposure

**Storage Temperature:** -60°F to +180°F  
(-50°C to +80°C)

**Approvals for Intrinsic Safety:** Certified for EEx ia IIC T4 Tamb = -40°F to +140°F (-40°C to +60°C), (zone 0) EEC Cert. No. Ex 98E2082 ATEX BAS98ATEX 1083 (Class I, Div. I, Group A, B, C and D hazardous locations). CSA approval no. 122445 I

**Enclosure:** IP66 (NEMA 4X)

**EMC:** EN50081-1 and EN 50082-2. Meets FCC class B requirements. EMI/RFI immunity at 10V/m, 0.1 to 1000 MHz, CE Mark

### Volume Input:

Reed switch, solid state or Wiegand pulser type low frequency inputs accepted

### Pulse Outputs (Telemetry Outputs):

5-15VDC applied loop voltage

10 mA maximum current loop

Pulse width configurable to 125 msec, 187 msec and 312 msec

Channels electrically isolated to 2500VDC

Switch off resistance > 2 Mohms

Switch on resistance < 10 ohms

*3 pulse outlets available:*

Uncorrected Volume

Corrected Volume

Fault/Alarm indication

### Long Term Availability:

**Pressure:** 0.1% of full scale per year, non-cumulative

**Temperature:** 0.3°F (0.2°C) per year, non-cumulative

### Power Requirements:

**Operating Voltage:** to 6.6VDC (internal or external power supply)

**Operating Current:** Typical 100 µA

**Battery Lifetime:** Minimum 5 years, typical configuration assuming live P and T measurements and Z calculation every 30 seconds, one 15 minute user terminal connection per week

### Instrument Drive Pulser:

Reed Switch technology

1 pulse per ID revolution

3-25VDC applied loop voltage

10 mA maximum loop current

Pulse width > 50 msec

Switch off resistance > 2 Mohms

Switch on resistance < 10 ohms



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