DRESSER UTILITY SOLUTIONS

Dresser Measurement

Dresser ROOTS 10C DI-PTZ

Rotary Meter with Digital Instrument Index

Versions: DI-PTZ + LOG, DI-T + LOG, DI-T with monitor pressure + LOG

Small Meter Big Impact

The Dresser ROOTS 10C DI-PTZ rotary meter delivers advanced features in a small package. Sized for applications typically reserved for large diaphragm meters, the 10C allows for ease of installation and clean aesthetics while also providing advanced measurement capabilities typically reserved for large sized rotary meters

Meter Performance

Dresser ROOTS meters are synonymous with reliable long-term accuracy. The Dresser 10C meter continues this legacy with a proven oil free design based on a successful track record of nearly two decades. **With a start rate of only 0.35 acfh, the 10C rapidly climbs to an accuracy of 99% at only 10 acfh (rangeability 100:1). When coupled with Trim Table, rangeability increases to 200:1,** making this meter an excellent tool for accurately capturing gas loads ranging from pilot flows to full capacity.

Developed from the proven IMCW platform, the Dresser PTZ Micro Corrector provides volume correction through a simple-to-use and familiar interface. Features such as improved volume accuracy at low flow, enhanced data logging capability, and reduced accuracy test times combine to offer a complete solution to major customers. The 10C PTZ integral corrector is rated to work in Class I, Div 1 hazardous locations.

Small size with big savings

At 10 pounds, the 10C25 not only reduces the potential for weight related injuries during material handling and installation, the impact is felt in the warehouse as well. With a box size of only 0.77 cubic feet (including a mounted AMR device), storage space is reduced by 70% as compared to a typical 1000 class diaphragm meter. Additionally, the 80% reduction in weight in conjunction with the 70% reduction in meter size directly translates to a notable reduction in transportation costs as well.

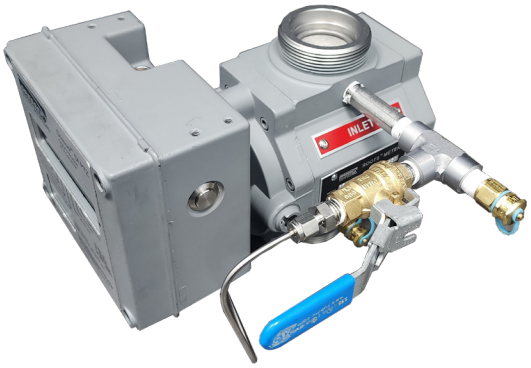
» Familiar user terminal software allows for configuration, calibration and data log downloads
» 1 to 3 data logs provide for years of historical information and are configurable in increments from 1 minute to 1 month; data logs include the option to log live battery voltage
» Audit log maintains a record of configuration and calibration changes
» Alarms notify the user of over-range conditions for pressure, temperature, and flow rate
» Alarm and fault activity is displayed in the data log and audit log reports, and the live data screen
» E2PROM provides non-volatile storage of recorded data and corrector configuration regardless of battery condition
» Uncorrected volume under fault register in E2PROM replicates a backup mechanical index
» Microsoft Excel® formatted reports allow for control and sharing of data

Protection for Metrological Parameters

» Password protection
» Hardware protection (switch) is accessible after metrological physical seal is removed
» Hardware protection for the majority of metrological parameters and password protection for gas composition parameters

Gas Supercompressibility Methods:

» NX19
» AGA 8 Gross Methods
» AGA 8 Detailed Method



Specifications

Criteria	Specifications
Capacity	1000 CFH
Maximum Allowable Operating Pressure (MAOP)	100 psi
Net Weight	9.5 lb
Connections	30 LT/45 LT/ #3, #4 Sprague, 1 1/2" FNPT
Operating Temperature Range	-40 °F to 140 °F (40 °C to 60 °C)

Performance

Meter Accuracy	
Meter Accuracy Error	Less than +/- 1%
Meter Accuracy Correction Range	Error Less Than +/- 1.0% From 0.5% to 10% of Meter Qmax
Volume Correction Accuracy PTZ	0.5% corrected volume in operating temperature range
Volume Input	High speed magnetic pickup in meter magnet cup
Temperature Accuracy	
Gas Measurement Temperature Range	-40°F to +140°F (-40°C to 60°C)
Measurement Temperature Accuracy	+/- 0.5 F. (0.25% C)
Temperature Input	Digital Semiconductor Technology
Pressure Transducer Accuracy	
Gauge Transducer Accuracy	0.02 [%] Error Full Scale at reference temperature 0.04 [%] Error Full Scale at operating temperature range
Absolute Transducer Accuracy	0.2 [%] Error of Reading at reference temperature 0.4 [%] Error of Reading at operating temperature range
Pressure Transducer	Digital piezo resistive transducer technology Transducers are aged for long term stability
Operating Temperature Range	-40°F to 140°F (-40°C to 60°C)
Enclosure	
NEMA 4X (IP66, T4)	
Hazardous Location	
Intrinsically Safe and Non-Incendive System – For Hazardous Locations	Ex ia IIC: Class I, Zone 0; ,
	Class I, Div 1, Groups A, B, C and D
	CSA Approval No. 1224451

Electromagnetic/Radio Frequency Immunity	
Electromagnetic Emission	Nemko Report PRJ0049129-02R1TRFEMMC Nemko Report PRJ0049129-1R1TRFEMC
Immunity to Electromagnetic Radiation and ESD	Passing EN 61000-4-3 requirements Passing EN 61000-4-2 requirements
Battery - Lithium	
Sealed Pack (Replaceable)	15-years nominal life
Long Term Stability	
Pressure	0.1% FS/yr non-cumulative
Temperature	0.3 °F (0.2 °C)/yr non-cumulative
E²PROM Data Log Memory	
Data Log Entries	Over 32,000 date/time stamped entries are available. Number of logs is dependent on customer selection. Less parameters logged equals a greater number of logs
Parameters Logged	Consult IMC/W2 Hardware and Software Manuals for information.

Three Fully Programmable Pulse Outputs

Corrected, Uncorrected, and Alarm/Fault	
Loop Voltage	5-15 VDC
Loop Current	10 mA maximum
Pulse Width	62.5, 125, 187, or 312 ms
Switch Off Resistance	>2 Mohms
Switch On Resistance	<10 ohms
Isolation	2,500 VDC
Output Type	Form A

Dresser Measurement

16240 Port Northwest Drive
Houston, TX 77041
T: 1-800-521-1114
F: 1-800-335-5224

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www.dresserutility.com

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