

Dresser Electronic Temperature Compensator (ETC)

Simple and reliable electronic temperature
compensation

Dresser ETC Index delivers accurate temperature compensation

The Dresser Electronic Temperature Compensator (ETC) is a direct replacement alternative for the existing Dresser mechanical Temperature Compensating (TC) indexes on Dresser Series B and Series A (LM-MA) meters.

The simple, easy to read ETC index provides accurate and reliable temperature and fixed factor pressure compensation. Dresser Natural Gas Solutions offers factory installation of the index, optional customization and configuration as well as installation of Automated Meter Reading (AMR) endpoints. The ETC is powered by a lithium battery with an average battery life of 20 years, and stores 150 days of hourly measurement data safely in the on-board non-volatile memory.

Testing is Fast and Simple

Transfer proving time is also dramatically reduced by using the ETC index. The ETC utilizes a one cable system to reduce proving time to less than 5 minutes. Provided as a standard feature on the ETC index, no special software or computer programs are required.

- Reduced TC proving time (~95%) with simple infrared connection to ETC
 - One communication cable to field junction box
 - Directly supported by factory
 - Preconfigured test files

AMR Compatibility

- Interfaces with common commercial AMR devices
- Optional tamper resistant AMR mounting platform
- Itron® AMR devices are factory installed and programmed upon request
- Two user configurable isolated pulse output channels (Form A)
- One isolated alarm output (Form B) provided on indexes with AMR mounting platform

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Infrared ETC Prover Cable Connected to Model 5 Prover Field Junction Box



ETC with AMR device installed

Installation Solutions

- Factory installed index on both new and refurbished Dresser meters
- Factory configured indexes for immediate on-site installation
- Simple field replacement of existing Dresser meter indexes
- Convenient access to mounting screws

Configurable Digital Display

- Tamper-resistant magnetic scrolling of LCD display
- 20 user selectable display screens
- Battery life displayable in both months and voltage
- Flow rate displayable for differential testing

Communication Compatibility

- Dresser MeterWare – communications software compatible with multiple Dresser metering products
- IrDA (Infrared) communications interface
 - Configuration (User Terminal)
 - Prover testing
 - Temperature Calibration
 - Firmware upgrades

Power

- Sealed battery pack - Lithium Thionyl Chloride pack with CSA certified protective circuitry
- Average battery life of 20 years
- Flash memory for permanent information retention without power

Measurement System

- Extremely stable Class A, PT1000 precision RTD
- Range: -40 to 140°F (-40 to 60°C)
- Total ambient temperature effect: Less than 0.1°F (0.05°C) over entire temperature range
- Configurable fixed pressure factor
- Non-volatile memory retains the last 150 days of time stamped logged data

Temperature Accuracy

- -40 to 32°F: +/- 0.4°F (-40 to 0°C: +/- 0.2°C)
- 32 to 140°F: +/- 0.5°F (0 to 60°C: +/- 0.3°C)

Computational Accuracy

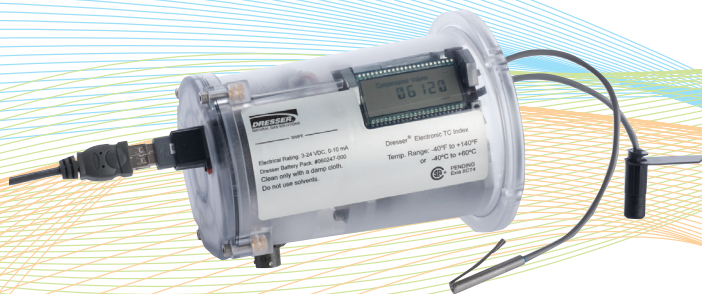
- Computation: +/-0.25% of compensated volume reading

Environmental Conditions

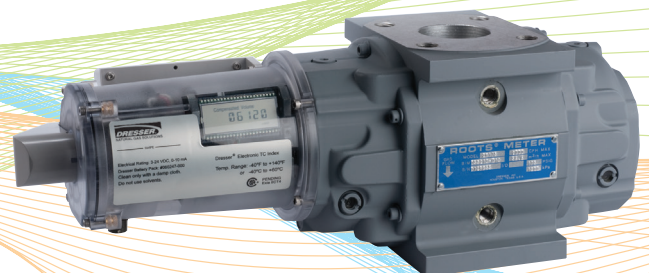
- Ambient temperature range: -40 to 140°F (-40 to 60°C)
- Ambient humidity range: 0 to 100% non-condensing

Certifications

- CSA : Class 1, Div 1, Group A, B, C and D Certification, to C22.2 No. 213 (pending)
- Meets internationally recognized standards for moisture ingress protection (IP 65 and IP 67)
- Electromagnetic compliance per IEC standards
- Electrostatic discharge compliance per IEC standards



ETC Communications Cable



Series B meter with ETC and AMR mounting bracket installed

Pulse Outputs

- Form A (normally open) outputs
 - Two user-selectable Form A outputs
 - Output representation: Compensated, Non-Compensated, Fault or Disabled
 - Pulse rate: User scaleable (x1, x10, x100 or x 1,000 cu. ft)
 - Pulse duration: User scalable (50,150 or 250 ms)
 - AMR compatibility: Any Form A pulse collector such as Itron ERT
- Form B (normally closed) output - AMR version only
 - Dedicated Form B fault output
 - Output Representation: Fault or Disabled
 - User selectable fault output type:
 - Continuous: One 500 ms pulse every 30 seconds while fault is present
 - Latched: Provides a single 500 ms pulse output per each fault and selected alarm
- All pulse outputs are opto-isolated
- 8.2 V is the maximum applied voltage the isolation amplifier presents to the opto-isolaters
 - To maintain compliance with CSA certification, use a suitable intrinsic safety barrier for a Class 1, Div 1, hazardous area for groups A, B, C, and D:
 - Do not exceed the following input values device:
 - « $V_i = 8.2\text{ V}$
 - « $I_i = 10\text{ ma}$
 - The output and power handling capability of a barrier should not exceed:
 - « $V_{out} = 30\text{ V}$
 - « $I_{out} = 50\text{ ma}$
 - For hazardous locations, use a recommended barrier such as Turck Brand IM1-12EX-T Single Channel or IM1-22 EX-R Dual Channel Barrier or equivalents. Refer to IOM:ETC for more information

Dresser Meters & Instruments

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Data Logging

- Data logging - 150 days of hourly logs
 - Logged Data - Time, Stamp, Compensated volume, Non Compensated volume, Line temperature, Battery voltage, Faults and Alarms
 - Audit trail - Parameter, Time Stamp, Old Value and New Value
 - Data exportable to Microsoft® Excel®
- Microsoft and Excel are trademarks of Microsoft Corporation.

Alarms

- High temperature
- Low temperature
- High flow rate
- Low battery
- Volume Input

Faults

- Temperature
- Volume
- Low Battery
- Internal Operation

Warranty

- 4 year ETC index warranty
- 12 year battery warranty

Physical

- Dimensions 6-3/4 x 5-1/4 x 5-1/4
- Weight: 2.50 lbs - Circular version
2.95 lbs - AMR version



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