Customer Support
Moore Industries is recognized as the industry leader in delivering top quality to its customers in products and services. We perform a sequence of stringent quality assurance checks on every unit we ship. If any Moore Industries product fails to perform up to rated specifications, call us for help. Our highly skilled staff of trained technicians and engineers pride themselves on their ability to provide timely, accurate, and practical answers to your process instrumentation questions. Our headquarters and other facilities phone numbers are listed below.

There are several pieces of information that can be gathered before you call the factory that will help our staff get the answers you need in the shortest time possible. For fastest service, gather the complete model and serial number(s) of the problem unit(s) and the job number of the original sale.

Locations

**World Headquarters**
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Fax: 03/440.17.97
info@mooreind.be
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**The Netherlands**
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4003 CD Tiel
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www.miinet.com/nl

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North Perth, Western Australia 6006
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Fax: (08) 9228-4436
sales@mooreind.com.au
www.miinet.com/au
Safety Messages

Please read this manual in its entirety. It should answer most of your questions. For personal and system safety, and for optimum product performance, make sure you thoroughly understand the contents before installing, using, or maintaining this product. Should you still have questions please visit our web site at www.miinet.com or contact any of our sales/support offices nearest you.

Your safety and the safety of others is very important. We have provided many important safety messages in this manual. Please read these messages carefully. These safety messages alert you to potential hazards that could hurt you or others or render damage to units.

All Moore Industries instrumentation should only be used for the purpose and in the manner described in this manual. If you use this product in a manner other than that for which it was intended, unpredictable behavior could ensue with possible hazardous consequences.

Each safety message is associated with a safety alert symbol. These symbols are found in the throughout the manual. The definition of these symbols is described below:

Pay particular attention wherever you see the following symbols:

- **Note** – Information that is helpful for a procedure, condition or operation of the unit.

- **Caution** – Hazardous procedure or condition that could damage or destroy the unit.

- **Warning** – Hazardous procedure or condition that could injure the operator.

**Qualified Personnel**

The Moore Industries’ product/systems described in this manual may be operated only by personnel qualified for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these Moore Industries’ products/systems.

**Proper use of Moore Industries products**

Moore Industries’ products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Moore Industries’. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

We have reviewed the contents of this publication to ensure consistency with the hardware and/or software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions. Specifications and information are subject to change without notice.

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Introduction

The TEMPTATION 2000 RTD Temperature Transmitter (Model T2X) delivers long-term stability in a wide range of basic temperature sensing applications.

The PC programmable, microprocessor-based T2X accepts 2-, 3-, and 4-wire RTD inputs. It provides a proportional 4-20mA output that is linear with temperature, and ready for direct interface with a monitoring/control system.

Setting Up the T2X

Configuring and programming the T2X is simple. Begin by gathering all the necessary equipment (as listed in Table 1), installing the T2X PC Configuration Program onto your computer, then connecting the T2X as shown in Figure 1. It is necessary to connect the T2X to the PC before creating a configuration file.

Connecting the T2X for Configuration

Figure 1. Connecting the T2X to the PC for configuration.
Installing the Software

Before the transmitter can be configured, the T2X PC Configuration Program must be installed on a PC with the following:

- Microsoft Windows based PC;
- 16Mb free RAM;
- 20MB free disk space on hard drive
- Microsoft Windows® 7, 10

Note: One (1) available serial communications (COM 1, 2, 3 or 4) or USB port

Configuring the T2X

The T2X is configured using an easy-to-use PC Configuration Program; there are no internal or external controls to adjust or settings to change. All operating parameters are set using the PC program, then downloaded to the nonvolatile memory of the T2X in the form of a configuration file.

Pages 7-8 of the manual contains all of the instructions for configuring the T2X. Use Figure 2 to find the portion of the screen that you have a question about. The number by that area will correspond with the instructions.
Managing Configuration Files

Once all the parameters for a transmitter are set, they can be saved to disk using the “File” menus and fields.

**Saving a Configuration File to Disk** - To save a configuration file to disk, click on the “File” button. This brings up an explorer-like window on the left side of the screen. Enter the name of the file you wish to save in the “Selected File Name” box. Select the location for the file to be saved and click “Save”. Answer “Yes” to the dialogue box that pops up to finish saving the file.

**Retrieving a Configuration File from Disk** - To retrieve a file, click on the “File” button. Use the display on the left to locate and click on the file to be retrieved. Click on the “Quit File” button. Answer “Yes” to the dialogue box that pops up to finish retrieving the file. The file can now be downloaded to a T2X.

**Retrieving a Configuration File from a Connected T2X** - To retrieve the configuration file from a connected T2X, simply click “Stop”, then “Get Setup”. The screen will reflect any changes. This file can now be saved or downloaded to a different T2X.

Figure 2. The Temptation 2000 PC Configuration Program provides an easy way to configure your T2X.
1. Selecting Input Type, Wiring, etc.
Use the selection tools in the “Input Type” box to choose the sensor type that the T2X will be reading. Select the appropriate “Input Type” values. Continue to change the remaining areas in “Input Type”, such as ohms and # wires, until the entire “Input Type” area matches the desired parameters for your transmitter.

2. Scaling the Input & Setting the Reverse Output
Scaling the input allows you to set the T2X to scale its output in response to a portion of the total range of the selected input type. In a reverse output application, the T2X output drops in proportion to a rise on input, and rises in proportion to a drop in the input.

To scale the input: To set the scaling, select the “Input Zero” box and enter the value for the desired Input Zero from the application where the T2X is to be employed. Select the “Input Full” box and enter the value for the desired Input Full.

To set reverse output: Follow the instructions to scale the input, but enter a value in the “Input Zero” box that is greater than the Input Full, and a value in the “Input Full” box that is less than the Input Zero.

3. Scaling the Output
The T2X can be configured to scale its 4-20mA output to offset the performance or calibration of other instruments in the process loop. To scale the output, enter the desired Output Zero value in the “Zero Scale Output” box, or use the slide bar to adjust the value. Select the “Full Scale Output” box and enter the desired Output Full value.

4. Setting Miscellaneous Functions
There are several radio buttons on the T2X Configuration Program Main Screen that control additional transmitter functions.

Setting Engineering Unit Readout: Use this setting to have the Configuration Program calculate the Centigrade or Fahrenheit temperature for readout in the “Status” area of the screen.

Setting Input Filtering: Use this radio button setting to filter out noise from the power to the transmitter.

Choosing Between Upscale and Downscale Drive: This button configures the transmitter to drive its output either up to 24mA or down to 3.3mA when a sensor or sensor wiring failure is detected.

5. Enabling/Disabling Broken Wire Detection
During operation, the T2X sends random micro-amp pulses through input wiring to check for broken wiring or a burned-out sensor. This can cause problems with temperature calibrators. To turn this feature off, set the “Calibration” radio button to “Calibration Mode”.

6. Downloading your new T2X Settings
To start the download process, click on the “Stop/Start” button at the bottom of the screen, then on the “Prog” button. This transfers the settings from the software to the memory of the connected transmitter.
Specifications

Performance

<table>
<thead>
<tr>
<th>Input Accuracy:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platinum RTD, ±0.2°C (±0.36°F)</td>
</tr>
<tr>
<td>Nickel RTD, ±0.16°C (±0.29°F)</td>
</tr>
<tr>
<td>Copper RTD, ±1.2°C (±2.16°F)</td>
</tr>
<tr>
<td>Ohms, ±0.4Ω</td>
</tr>
<tr>
<td>Output Accuracy: ±0.05% of span</td>
</tr>
</tbody>
</table>

NOTE: Overall accuracy is determined by combining input and output accuracy. It includes the combined effects of linearity, hysteresis, repeatability, and adjustment resolution. It does not include ambient temperature effect.

Stability (max. span):
1 year = ±0.12%
3 years = ±0.21%
5 years = ±0.27%

Measurement Cycle:
Output updates at least 8 times per second

Output Response Time:
256msec typical, 300msec maximum, for the output to change from 10% to 90% for an input step change of 0% to 100%

Ripple: 10mV peak-to-peak measured across a 250ohm load resistor at frequencies up to 120Hz

Performance (continued)

| Over-Voltage Protection:       |
|                                |
| Input, 4Vdc peak, max.;       |
| Output, 48Vdc, max.           |
| Digital Input Filter: User-selectable, 50/60Hz |
| Power Supply and Load Effects: Negligible within specified power limits |
| Load Capability: 670 ohms @ 24V |

Ω = (Supply Voltage - 8V) / 0.024A

Burnout Protection: User-programmable, Upscale to 24mA; Downscale to 3.3mA

Output Current Limiting: 25mA maximum

RTD & Ohms Excitation: 250µA, ±10%

RTD Lead Wire Resistance Maximum: RTD resistance + 2 times the lead wire resistance must be less than 2000 ohms; Recommended <35 ohms per wire for three wire inputs; <5 ohms per wire for 10 ohm Cu inputs

Damping: 0-5 seconds (user selectable)

Ambient Temperature Range:
-40°C to +85°C
(-40°F to +185°F)

Relative Humidity: 0-95%, non-condensing

Ambient Temperature Effect: ±0.03% of span/°C

RF/EMI Immunity:
20V/M@20-1000MHz, when tested according to SAMA standard 33.1.
(10V/m@80-1000MHz, 1kHz AM, when tested according to IEC 1000-4-3-1995)

Noise Rejection:
Common mode: 100dB @ 50/60Hz;
Normal Mode: 70dB typical at 200mV peak-to-peak @ 50/60Hz

Set Up
All settings are made using Moore Industries’ Intelligent PC Configuration Software, and then stored in non-volatile memory

Weight
HPP: 101 g (3.6 oz)
HPP in LH1: 428 g (15.1 oz)
HPP in LH2: 428 g (15.1 oz)
HPP in CH6: 173 g (6.1 oz)

Accessories

Each T2X order comes with one copy of our Intelligent PC Configuration Software (Windows® compatible). To order additional software or cables:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>750-75E05-01</td>
<td>Intelligent PC Configuration Software</td>
</tr>
<tr>
<td>803-039-26</td>
<td>Isolated Serial Configuration Cable (9-pin Serial Port)</td>
</tr>
<tr>
<td>803-040-26</td>
<td>Non-Isolated Serial Configuration Cable (9-pin Serial Port)</td>
</tr>
<tr>
<td>804-030-26</td>
<td>Fuse Protected, Non-Isolated USB Communication Cable (required by ATEX for products installed in Intrinsically-Safe areas)</td>
</tr>
</tbody>
</table>

Don’t See What You Need?
We offer a wide range of temperature assembly choices - this data sheet provides just a few examples. Whatever your temperature assembly needs are, our temperature interface solution experts are ready to help!
## Select one from each category to order: Temperature Transmitter and Enclosure

<table>
<thead>
<tr>
<th>Unit</th>
<th>Input Type</th>
<th>Input</th>
<th>Output</th>
<th>Power</th>
<th>Options</th>
<th>Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>T2X TEMPTATION 2000, Non-Isolated PC-Programmable 2-Wire RTD Transmitter</td>
<td>PRG User selectable with PC Configuration Software</td>
<td>4-20MA User scaleable with PC Configuration Software</td>
<td>8-30DC for Intrinsically-Safe 8-42DC</td>
<td>-ISC (Intrinsically-Safe, CSA) -ISE (Intrinsically-Safe, ATEX/LOCIE) -ISF (Intrinsically-Safe, FM Approvals)</td>
<td>HPP Hockey-puck housing for mounting in standard connection heads LH1NS‡ Connection head (FM approved, NEMA 4X, IP66) with two entry ports: ½-inch NPT cable and process–black PBT polyester cover LH1MS‡ Connection head (FM approved, NEMA 4X, IP66) with two entry ports: M20 cable and ½-inch NPT process–black PBT polyester cover NEMA 4X, IP66 connection head with one M20 entry port and one G½ (BSP) entry port (aluminum body with VALOX 357U cover) LH1CS‡ Connection head with two entry ports: M20 cable and G½ (BSP) process–black PBT polyester cover LH1NX Connection head with ½-inch NPT entry and mounting plate for customer’s air duct opening–black PBT polyester cover LH2NS* Explosion-proof connection head with two entry ports: ½-inch NPT cable and process–black metal cover LH2MS* Explosion-proof connection head with two entry ports: M20 cable and ½-inch NPT process–black metal cover</td>
<td></td>
</tr>
</tbody>
</table>

### Model Number Example: T2X / PRG / 4-20MA / 8-42DC [HPP]

## Input Types and Ranges

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Input</th>
<th>Resistance Potentiometer</th>
<th>Minimum Span</th>
<th>Maximum Range*</th>
<th>Conformance Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTD 2-Wire</td>
<td>Platinum</td>
<td>0.003850</td>
<td>0-2200Ω</td>
<td>0-2200Ω</td>
<td>0-2200Ω</td>
</tr>
<tr>
<td></td>
<td>0.03902</td>
<td>100, 200, 300, 400, 500</td>
<td>-200 to 850°C (-328 to 1562°F)</td>
<td>-240 to 960°C (-400 to 1760°F)</td>
<td>-240 to 960°C (-400 to 1760°F)</td>
</tr>
<tr>
<td></td>
<td>0.03916</td>
<td>1000</td>
<td>10°C (18°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nickel</td>
<td>0.00672</td>
<td>120</td>
<td>-80 to 320°C (-112 to 608°F)</td>
<td>-100 to 360°C (-148 to 680°F)</td>
</tr>
<tr>
<td></td>
<td>Copper</td>
<td>0.00427</td>
<td>9.035</td>
<td>-50 to 250°C (-58 to 482°F)</td>
<td>-203.19 to 300.53°C (-333.74 to 572.95°F)</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>0-2200Ω</td>
<td>0-2200Ω</td>
<td>0-2200Ω</td>
<td>100°C(180°F)</td>
</tr>
</tbody>
</table>

* Transmitter will measure ranges outside of the Conformance Range with some degradation to accuracy ratings. Consult the factory for details.
Installing and Connecting the T2X

Now that the T2X has been programmed to your satisfaction, it is ready for installation. The T2X is available in an HPP housing style, but may be enclosed in any one of several types of certified or uncertified connection heads. Consult your local Moore Industries’ Interface Solutions Expert for information on the type of enclosure that best suits your application.

Figure 3. Connecting your T2X to the loop.

Connecting the T2X in an Application

Moore Industries suggests installing the T2X by first mounting the unit in its intended application, then making the electrical connections to input, output, and power. Before any installation, make sure that the unit has been bench checked to ensure that it is configured and calibrated properly for its intended application.
Physical Instructions for Installing an Encapsulated Hockey-Puck (HPP) Instrument and LH2 Field-Mount Enclosure Apparatus

The Physical Instructions Supplement provides references and additional information for safely installing and commissioning a Moore Industries’ Hockey-Puck instrument and LH2 Field-Mount Enclosure Apparatus.

Instrument Labeling and Identification—The fully assembled apparatus consists of a Moore Industries’ Hockey-Puck unit securely mounted in an LH2 enclosure. Such an apparatus is intended for use in both indoor and outdoor Hazardous (Classified) Locations where a degree of protection from windblown dust and rain, splashing and hose-directed water, and protection from the formation of ice on the enclosure is required. A series of selected Moore Industries’ 2-Wire hockey-puck style units mounted in the LH2 enclosure (consult factory for a list of the certified instruments) are certified as an Explosion-Proof and Dust Ignition-Proof apparatus in accordance with Factory Mutual Research ‘3600’ standard (NEC-based) and as Flame-Proof in accordance with the CENELEC/ATEX Directive 94/9/EC (IEC-based). For applications intended in North America and other related areas, the approval classifications are stated on the externally mounted metal ID Tag to be FM approved as Explosion-Proof for Class I, Division 1, Groups A, B, C and D; Dust Ignition-Proof for Class II/III, Division 1, Groups E, F and G; T6 @ 60°C Maximum Operating Ambient Temperature. In regards to protection from Environmental hazards/effects, the apparatus carries a NEMA Type 4X rating with an Ingress Protection Code of IP66 as per IEC-529. For applications intended in Europe and other related areas, the ID Tag clearly states that the apparatus is certified by ISSeP to be Flame-Proof and marked as such:

II 2GD EEx d IIC; T6 @ Tamb. (-20°C ≤ Tamb. ≤+60°C). The temperature marking for dust atmospheres is up to + 80°C. The maximum power parameters are: Vmax = 42 VDC, Imax = 110 mA and Pmax = 2W. Also, the tag clearly shows the CE marking denoting full compliance with the relevant European Community directives applicable to the Process Instrumentation Industry. For 2-wire transmitters certified and intended to be operated as either Intrinsically Safe, Non-Incendive (Class I, Div. 2) or Type N; the power parameters are clearly stated on both the Instrument ID Label and the Apparatus ID Tag. Also, the power parameters and cabling requirements are stated in the ‘Intrinsically Safe Barrier and Field Installation Diagram’ that is included in the relevant User’s Manuals. This apparatus is designed in such a way that it: a) does not give rise to physical injury or other harm due to contact, b) does not produce excessive surface temperature, infra-red, electromagnetic, ionizing radiation and, c) have no non-electrical dangers.

CAUTION: Read, understand and adhere to the manufacturer’s installation and operating procedures. Substitution of components may impair the instrument’s Intrinsic Safety and/or Non-Incendivity. Keep cover tightly closed. Do not open unit when energized. Do not open unit when either an explosive gas or dust atmosphere is present. Cable entry temperature may exceed 70°C. Cabling to be suitable. Do not allow layers of dust to accumulate on the surfaces of the equipment. Disconnect power before servicing.

Suitability for the Installation—To determine if a unit’s area classification approvals are appropriate for a particular installation, first inspect the classification labeling on the instrument and/or instrument enclosure and the “Control Drawing for Installation” found in the User’s Manual (where applicable). Second, consult the installation criteria for the approval or electrical standard agencies governing your location to determine if the unit’s approvals are suitable for the installation. If the instrument’s labeling matches the agency criteria and/or electrical codes for the area, the unit is suitable for the installation. To determine if the unit’s electrical and environmental specifications are appropriate for the installation, consult the “Specifications” table in the User’s Manual for that instrument. If the instrument’s electrical and environmental characteristics are within the expected ambient operating conditions for the installation, the instrument is suitable for the installation.

CAUTION: If for any reason you are uncertain as to whether the instrument’s specifications or area classifications meet the operational or safety requirements for the installation, consult Moore Industries prior to installation.
Installation of LH Enclosure Apparatus

1. Install the LH2 enclosure onto a surface, temperature thermowell, or onto a standard 2-inch pipe using the mounting hardware. Remove the cap from the LH2 by rotating the cap counter clockwise after unlocking by rotating the locking screw clockwise.

2. Connect input and output wiring in accordance with the connection information found in the User’s Manual for that instrument.

3. Replace the cap to the LH2 by rotating the cap clockwise. Secure (lock) the cap by rotating the locking screw counterclockwise.

4. Connect a ground wire between the ground screw on the LH2 enclosure to an appropriate earth ground.

Figure 4. Installation dimensions for LH2 enclosure.
Recommended Ground Wiring Practices

Moore Industries recommends the following ground wiring practices:

Any Moore Industries product in a metal case or housing should be grounded. The protective earth conductor must be connected to a system safety earth ground before making other connections. All input signals to, and output signals from, Moore Industries' products should be wired using a shielded, twisted pair wiring technique. Shields should be connected to an earth or safety ground. For the best shielding, the shield should be run all the way from the signal source to the receiving device. (see Note below)

**Note:** Some of Moore Industries’ instruments can be classified as receivers (IPT2, IPX2, etc.) and some can be classified as transmitters (TRX, TRY, etc.) while some are both a receiver and a transmitter (SPA2, HIM, etc). Hence, your shield ground connections should be appropriate for the type of signal line being shielded. The shield should be grounded at the receiver and not at the signal source.

CE Conformity

Installation of any Moore Industries’ products that carry the CE marking must adhere to the guidelines in the Recommended Ground Wiring Practices section in order to meet the EN 61326 requirements set forth in the applicable EMC directive.

Dimensions

*Figure 5. Dimensions of the T2X.*
Installation in Hazardous Locations

This section contains important information regarding installation of the T2X in Hazardous Area Locations.

Maximum operating parameters of the "COM" port for use in Non-Hazardous areas shall not exceed 3.0V, 300uA and 240uW.
Specific Conditions of Use
The following instructions must be adhered to when the T2X is used in hazardous locations and potentially explosive atmospheres.

cFMus Installations

Intrinsically Safe Applications
Class I,II,III, Division 1, Groups A-G  T6 Ta = 60°C
Class I, Zone 0 AEx ia IIC  T6 Ta = 60°C

The T2X shall be installed in an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standards.

No connections shall be made to the communications “COM” port in Hazardous (Classified) Locations.

Entity Parameters can be found in Control Drawing 100-100-38 included in this manual.

Nonincendive Applications
Class I Division 2, Groups A-D T6 Ta = 60°C

The T2X shall be installed in an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standards.

No connections shall be made to the communications “COM” port in Hazardous (Classified) Locations.

European Union Installations
(ATEX 2014/34/EU Directive)

Intrinsically Safe Applications – Category 2G
II 2 G Ex ib IIB T6

The apparatus is intrinsically safe. It can be used in potentially explosive atmospheres. The equipment must only be associated with certified intrinsically safe associated apparatus and these combinations must be compatible as regards intrinsic safety

The electrical parameters of the certified associated intrinsically safe apparatus must not exceed any of the following values : (terminals +ps, -ps) Uo ≤ 30V; Io ≤ 110mA; Po ≤ 0.82W

The “COM” port must not be used in a hazardous area.

Operating ambient temperature: -40°C to +60°C

The specific parameters of the mode(s) of protection can be found in Control Drawing 100-100-38 in this manual.
CSA Installations

Intrinsically Safe Applications
Class I, Division 1, Groups A-D  T6  Ta = 60°C

The model T2X is of open type unit Certified as a component for use only in other equipment where the suitability of the combination is to be determined by the authority having jurisdiction.

The T2X is intrinsically safe when installed per drawing number 100-100-38 included in this manual.

Entity Parameters can be found in Control Drawing 100-100-38.

Non Incendive Applications
Class I, Division 2, Groups A-D  T6 Ta = 60°C

The model T2X is of open type unit Certified as a component for use only in other equipment where the suitability of the combination is to be determined by the authority having jurisdiction.

Maintaining the T2X

Moore Industries suggests a quick check for terminal tightness and general unit condition every 6-8 months, depending upon the severity of conditions. Things such as ambient vibration, corrosive atmospheres, extreme heat or cold, etc., can play a role in shortening the service life of any piece of electronic equipment. Always adhere to any site requirements for programmed maintenance.
ANZEx [TRX-R only]

- Terminals
  +PS -PS
- Ui = 30V
- li ≤ 110mA
- Po = 0.825W
- Pl ≤ 0.82W
- Ci = 5.2nF
- Li = 0mH

- Terminals
  1, 2, 3, 4
- RTD & T/C

- Uo = 6.51V
- lo = 110mA
- Po = 532mW
- Co = 2.26uF
- Le ≤ 1.4mH

Hazardous 'Classified' Locations/Areas:

- CSA International
  Intrinsically Safe: Class I, Div. 1, Groups A-D.
  Non-Incendive: Class I, Div. 2, Groups A-D.

- FM
  Intrinsically Safe: Class I, II, III, Div. 1, Groups A-D.
  Non-Incendive: Class I, II, Div. 2, Groups A-D.

- T2X RTD Temperature Transmitter

Input device must be 'Agency' approved per application area (CSA, FM, LCI, TestSafe, etc.)

Notes:

1. Apparatus which is unspecified except that it must not be supplied from, or contain under normal or abnormal conditions a source of potential with respect to earth in excess of 250 VRMS or 250 VDC which is considered to be the Safe Area's maximum voltage.

2. The barrier or other associated apparatus must be approved by the "specific" (CSA/FM/LCI, etc.,) certifying agency for I.S. connections in "Class I, Division 1, Groups A-G" locations. The output voltage 6.2VDC (Voc, Vs or Vo) ≤ 30VDC and the output current (Isc, It or Io) must not exceed 110 mA. Also, it must be installed per the manufacturer's guidelines.

3. The combined capacitance and Inductance of the interconnecting cables and the PC Prop. Transmitters must not exceed the values indicated on the Associated Apparatus.

4. For FM applications, installation must be in accordance to "ANSI-P12.6" (Installation of I.S. Systems for Hazardous 'Classified' Locations) and the National Electric Code 'ANSI/NFPA 70'. Also, a dust-tight conduit seal must be used when installed in Class II and Class III environments. For CSA applications, adhere to the 'Canadian Electric Code C22.1' most current publication on I.S. installation guidelines. For ATEX applications, adhere to 'EN 60079-14:1997' or any equivalent, most current and pertinent publication on I.S. installation guidelines.

5. Warning: Substitution of components may impair the Intrinsic Safety of the unit, DO NOT open the unit when either energized or if an explosive gas/dust atmosphere is present. Disconnect power before servicing. Also, read, understand and adhere to the manufacturer's installation and operating procedures.

6. The maximum power parameters of the COM port (to be used only in safe/non-hazardous areas) are: Vmax = 3.0 VDC, Imax = 300 µA, Pmax = 240 µW.
NOTES:

1. TO PRINT THIS LABEL: JOB SPECIFIC MODEL, SERIAL NUMBER, TAG NUMBER, AND YEAR OF MANUFACTURE WILL BE DOWNLOADED FROM THE MENTOR DATA FILE AND PRINTED ALONG WITH THE FIXED TEXT AND GRAPHICS (SUPPLIED BY THE LEGI 93 DATA FILE) TO CREATE THE FINISHED LABEL.

2. THE FIXED TEXT AND GRAPHIC FIELDS FOR THIS LABEL ARE STORED UNDER NO. 200-251-1893 IN THE LEGI 93 LABEL MACHINE COMPUTER HARD DISK.

3. MATERIAL: .002 SILVER, IDENTIPLATE (MII P/N 200-304-00) DIE CUT AS SHOWN ABOVE. REFER TO LABEL SPEC. DRAWING 200-304-00.
**NOTES: UNLESS OTHERWISE SPECIFIED**

1. TO PRINT THIS LABEL: DOWNLOAD THE FIXED TEXT AND GRAPHICS (SUPPLIED BY THE LEGI DATA FILE) TO CREATE THE FINISHED LABEL.

2. THE FIXED TEXT AND GRAPHIC FIELDS FOR THIS LABEL ARE STORED UNDER NO. 200-251-1908 IN THE LEGI LABEL MACHINE HARD DISK.

3. MATERIAL: 0.02 SILVER, ULTRATEC (MI P/N 200-304-00) ROLL STOCK

4. REFER TO LABEL SPEC. DRAWING 200-304-00. ADHESIVE BACKING IS UV/ASA APPROVED HIGH PERFORMANCE ACRYLIC PRINTING IS WITH BLACK UL/CSA THERMAL TRANSFER RIBBON (801-003-96).

5. ALL MATERIAL MUST BE ROHS COMPLIANT.

6. PC-Prog. RTD Temp. Transmitter

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**Certified Product**

This is a certified "Related" or "Schedule" drawing. No modifications are permitted without written consent of Executive Management or the Certifying Agency (schedule dwgs.).
Warranty Disclaimer

Moore Industries ("The Company") makes no express, implied or statutory warranties (including any warranty of merchantability or of fitness for a particular purpose) with respect to any goods or services sold by the company. The company disclaims all warranties arising from any course of dealing or trade usage, and any buyer of goods or services from the company acknowledges that there are no warranties implied by custom or usage in the trade of the buyer and of the company, and that any prior dealings of the buyer with the company do not imply that the company warrants the goods or services in any way.

Any buyer of goods or services from the company agrees with the company that the sole and exclusive remedies for breach of any warranty concerning the goods or services shall be for the company, at its option, to repair or replace the goods or services or refund the purchase price. The company shall in no event be liable for any consequential or incidental damages even if the company fails in any attempt to remedy defects in the goods or services, but in such case the buyer shall be entitled to no more than a refund of all monies paid to the company by the buyer for purchase of the goods or services.

Any cause of action for breach of any warranty by the company shall be barred unless the company receives from the buyer a written notice of the alleged defect or breach within ten days from the earliest date on which the buyer could reasonably have discovered the alleged defect or breach, and no action for the breach of any warranty shall be commenced by the buyer any later than twelve months from the earliest date on which the buyer could reasonably have discovered the alleged defect or breach.

Return Policy

For a period of thirty-six (36) months from the date of shipment, and under normal conditions of use and service, Moore Industries ("The Company") will at its option replace, repair or refund the purchase price for any of its manufactured products found, upon return to the Company (transportation charges prepaid and otherwise in accordance with the return procedures established by The Company), to be defective in material or workmanship. This policy extends to the original Buyer only and not to Buyer's customers or the users of Buyer's products, unless Buyer is an engineering contractor in which case the policy shall extend to Buyer's immediate customer only. This policy shall not apply if the product has been subject to alteration, misuse, accident, neglect or improper application, installation, or operation. THE COMPANY SHALL IN NO EVENT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

To return equipment to Moore Industries for repair, follow these four steps:

1. Call Moore Industries and request a Returned Material Authorization (RMA) number.

   Warranty Repair –
   If you are unsure if your unit is still under warranty, we can use the unit's serial number to verify the warranty status for you over the phone. Be sure to include the RMA number on all documentation.

   Non-Warranty Repair –
   If your unit is out of warranty, be prepared to give us a Purchase Order number when you call. In most cases, we will be able to quote you the repair costs at that time. The repair price you are quoted will be a “Not To Exceed” price, which means that the actual repair costs may be less than the quote. Be sure to include the RMA number on all documentation.

2. Provide us with the following documentation:
   a) A note listing the symptoms that indicate the unit needs repair
   b) Complete shipping information for return of the equipment after repair
   c) The name and phone number of the person to contact if questions arise at the factory

3. Use sufficient packing material and carefully pack the equipment in a sturdy shipping container.

4. Ship the equipment to the Moore Industries location nearest you.

The returned equipment will be inspected and tested at the factory. A Moore Industries representative will contact the person designated on your documentation if more information is needed. The repaired equipment, or its replacement, will be returned to you in accordance with the shipping instructions furnished in your documentation.