

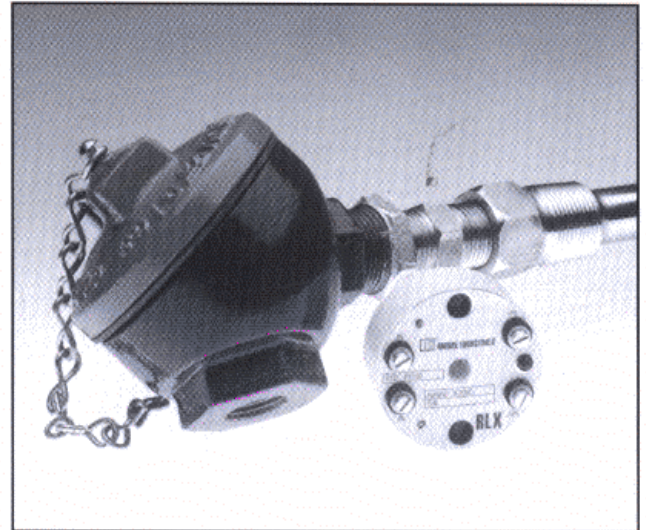
## Description

Compact and economical, these loop-powered linearizing RTD transmitters accept input from 2- and 3-wire platinum RTD's. They convert the temperature input to a 4-20mA signal perfect for interface with an indicator, recorder or another process instrument. Linearization of the RTD signal ensures a highly accurate output (up to  $\pm 0.1\%$  of span) that is linear to the input temperature.

**Complete Temperature Assemblies**—Moore Industries offers a complete line of temperature assemblies for use with the EPRX and the RLX including sensors, thermowells, and fittings. Accessories can be ordered separately, or as ready-to-install temperature assemblies. For information, refer to our Temperature Systems data sheet (#3.99).

## Ordering Specifications

To order, use the bold face data from the Ordering Specifications section of the Specifications table. For assistance, refer to the model number example located at the bottom of the table.

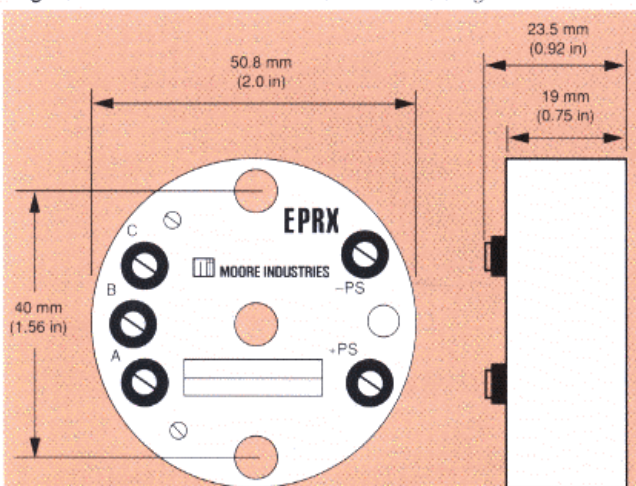


**Compact hockey-puck** housings fit in wide variety of protective connection heads for mounting in almost any rugged field environment.

## Features

- **Highly accurate.** Multi-point linearization ensures exceptional accuracy of  $\pm 0.1\%$  of span.
- **Mount in standard connection heads.** Compact housings install quickly and securely in standard connection heads.
- **Safe for hazardous locations.** Intrinsic safety approvals and explosion-proof/flameproof connection heads provide protection in hazardous areas.
- **Easy access adjustments.** Span and zero adjustments are conveniently located on the front panel to make calibration quick and simple.

**Figure 1.** Outline Dimensions and Terminal Designations



**NOTE:** Terminal designations shown are for the EPRX, which has three input terminals (A, B and C) to accept a 2- or 3-wire RTD. The RLX has two input terminals (A and B) to accommodate 2-wire RTD's only.

### Certifications (see applicable options and enclosures)



**BASEEFA** (CENELEC) Intrinsically Safe  
EEx ia IIC T4

**BASEEFA** (CENELEC) Type N Ex NII T6  
(RLX only)

**CENELEC** Flameproof. EEx d IIC T6

**SAA** Intrinsically Safe Ex ia IIC T4 (RLX only)

# EPRX & RLX

Low-Cost, Linearizing RTD Transmitters

## Specifications

<p><b>Performance Accuracy:</b> <math>\pm 0.1\%</math> of span (includes the combined effects of linearity, hysteresis and repeatability)</p> <p><b>Power Supply Effect:</b> Negligible within specified limits</p> <p><b>Burnout Protection:</b> Upscale to 28mA, standard (see -DD option for downscale drive)</p> <p><b>Output Current Limiting:</b> 150% of span typical</p>	<p><b>Performance (continued) Load Capability:</b> (Vs -8.5V)/0.2A = ohms (see -LV option for EPRX)</p> <p><b>Ambient Temperature Operation:</b> -40°C to +82°C (-40°F to +180°F)</p> <p><b>Effect on Amplifier:</b> EPRX: <math>\pm 0.01\%</math> of span/°C maximum for spans greater than 15°C; <math>\pm 0.005\%</math> of span/°C typ. RLX: <math>\pm 0.01\%</math> of span/°C typical; <math>\pm 0.02\%</math> of span/°C maximum</p>	<p><b>Adjustments Type:</b> External multiturn potentiometers</p> <p><b>Zero and Span:</b> EPRX: <math>\pm 10\%</math>; RLX: <math>\pm 5\%</math></p> <p><b>Indicator</b> LED indicates adequate power supplied for operation</p> <p><b>Weight</b> EPRX: 74 grams (2.6 ounces) RLX: 62 grams (2.2 ounces)</p>
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## Ordering Specifications

Unit	Input	Output	Power	Options	Housing
<p><b>EPRX</b> (2- or 3-wire RTD input)</p> <p><b>RLX</b> (2-wire RTD input only)</p>	<p>(Specify RTD or potentiometer type and temperature range)</p> <p>RTD Type:  <b>PT1</b> 100 ohm platinum RTD  <b>PT5</b> 500 ohm platinum RTD  <b>PT10</b> 1000 ohm platinum RTD (alpha = .00385 ohms/ohm/°C)</p> <p>Potentiometer Type (EPRX only):  <b>POT2W</b> Current excited (rheostat). Full scale range may be between 10 ohms and 1 K ohms  <b>POT3W</b> Voltage excited potentiometer input, any pot with 1K ohm and 50K ohm end resistance may be used. Specify range in percent of electrical rotation</p> <p>Standard Temperature Input Ranges:  <b>0-50C</b> 0 to +50°C  <b>0-75C</b> 0 to +75°C  <b>0-100C</b> 0 to +100°C  <b>0-120C</b> 0 to +120°C  <b>0-150C</b> 0 to +150°C  <b>0-180C</b> 0 to 180°C  <b>0-200C</b> 0 to +200°C  <b>0-300C</b> 0 to +300°C  <b>0-400C</b> 0 to +400°C  <b>0-125F</b> 0 to 125°F  <b>0-200F</b> 0 to 200°F  <b>0-250F</b> 0 to 250°F  <b>0-300F</b> 0 to 300°F  <b>0-400F</b> 0 to 400°F</p> <p>Custom Input Ranges: To order a °C or °F range (within the limits of the available RTD types), specify the range next to the RTD type in the model number.</p>	<p><b>4-20MA</b> Characterized to compensate for RTD nonlinearities</p>	<p>EPRX:  <b>8.5-42DC</b> (up to 55V without damage)  <b>8.5-28DC</b> (required with -ISE option)  <b>6.5-40DC</b> (-LV option required)</p> <p>RLX:  <b>12-42DC</b>  <b>12-28DC</b> (required with -ISE option)</p>	<p><b>-ISE</b> BASEEFA approved intrinsically safe (8.5-28DC power required for EPRX; 12-28DC power required for RLX)</p> <p><b>-DD</b> Downscale drive to 3.5mA</p> <p><b>-DT</b> Differential temperature input (EPRX only with two 2-wire RTD's; no linearization with this option)</p> <p><b>-LV</b> Low voltage (EPRX only; no LED)</p> <p><b>-N</b> Type N approval for Zone II areas (RLX only; requires F2LS housing)</p> <p><b>-RO</b> Reverse output (EPRX only; not available with -DT option or 3-wire potentiometer input)</p>	<p><b>HPP</b> Hockey-puck housing</p> <p><b>CCP</b> Clip for mounting in CH7 enclosure</p> <p><b>CPP</b> Clip for mounting in 2HG and 2LS enclosures</p> <p><b>2HG*</b> HPP in 2-hub, high glass window, explosion-proof enclosure</p> <p><b>2LS*</b> HPP in 2-hub, solid cover, explosion-proof enclosure</p> <p><b>CH4</b> HPP in cast iron connection head</p> <p><b>CH5</b> Hockey-puck in cast aluminum connection head</p> <p><b>CH6</b> Hockey-puck housing in plastic connection head</p> <p><b>CH7</b> Hockey-puck housing in explosion-proof connection head</p> <p>*When <b>F</b> prefix is added to the model number, unit is CENELEC approved (e.g., <b>F2LS</b>)</p> <p>When <b>P</b> suffix is added to the model number, the unit comes equipped with a base plate and U-bolts for mounting on a 2-inch pipe (e.g., <b>2LSP</b>).</p>

To order, specify: Unit / Input / Output / Power / Options [Housing]

Model number example: EPRX / PT1-0-100°C / 4-20MA / 8.5-42DC / -DD [HPP]

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