



see next page

- Universal Input Reduces Inventory Levels
- Eliminates Ground Loops
- Low Profile Design

# TRANSPAK™ T280

Isolated Universal 2-Wire Transmitter for  
Pt-100 RTD, Thermocouple, & mV

Miniature Thermal-Head Mounted,  
1000VDC Input to Output Isolation



- Hinged Cover Protects Potentiometers from the Environment
- Embedded Terminals

## Description

The T280 is an isolated, 2-wire temperature and mV input transmitter designed to fit in a standard industrial thermal-head. The T280 supports Pt-100 RTD and thermocouple inputs as well as voltages up to 100mV. Thermocouples supported include B, E, J, K, L, N, R, S and T. If thermal-head mounting is not required, the T280 can either be mounted directly on a bulkhead or to a DIN rail using the included DIN rail clip.

Three different series make up the T280 family. The -1xxx units are for Pt-100 RTD inputs. The default configuration from the factory is 3-wire, but the units can be easily reconfigured for 2-wire, as explained in the installation instructions. The -2xxx units are for thermocouple inputs and the -3xxx units are for millivolt inputs.

The list of model numbers shows our most popular ranges. Contact the Technical Services Group for information about other ranges.

*Head Mount Enclosure*



## Specifications

### Input

Thermocouple: B, E, J, K, L, N, R, S, T  
 RTD: Pt-100, 2-wire or 3-wire  
 mV: 100mV max.

### Input Span

Thermocouple: 5mV min. span  
 RTD: 20°C min. 500°C max.  
 mV: 5mV min span  
 Adjustability:  
 ±15% for both zero & span

### Output Span

4-20mA, limiting @ <28mA

### Burnout Detection

Upscale

### Linearity

Thermocouple/mV:  
 Better than ±0.1% of span, linear to mV input  
 RTD:  
 Better than ±0.1% of span, linear to temperature

### Stability

Thermocouple/mV:  
 0.02% of span/°C (25mV input)  
 RTD:  
 0.02% of span/°C (100°C span)

### T/C CJC

<0.05°C/°C of ambient temperature

### Isolation

1000VDC

### Supply Voltage

10 to 40VDC polarity protected

### Maximum Load

$R_{max} = (V_{supply} - 10V)/20mA$

### Operating Temperature

-20°C to +70°C

### Humidity

0 to 95% RH, non-condensing

### Agency Approvals

CE Compliance per EMC directive 89/36 EEC

## Models

### Thermocouple Models

T280-2000-JC	0 to 500°C
T280-2001-JC	0 to 760°C
T280-2002-JC	-200 to 600°C
T280-2003-JF	0 to 1000°F
T280-2004-JF	0 to 1400°F
T280-2005-JF	-350 to 1100°F
T280-2006-KC	0 to 500°C
T280-2007-KC	0 to 1000°C
T280-2008-KC	0 to 1200°C
T280-2009-KC	-270 to 500°C
T280-2010-KF	0 to 1000°F
T280-2011-KF	0 to 2000°F
T280-2012-KF	0 to 2500°F
T280-2013-KF	-450 to 1000°F
T280-2014-TC	0 to 250°C
T280-2015-TC	0 to 400°C
T280-2016-TC	-270 to 400°C

### Thermocouple Models (cont'd)

T280-2017-TF	0 to 500°F
T280-2018-TF	0 to 750°F
T280-2019-TF	-450 to 750°F
T280-2020-JC	0 to 400°C
T280-2021-JF	0 to 500°F
T280-2023-JF	200 to 600°F
T280-2024-KF	0 to 1500°F
T280-2025-SC	0 to 1500°C
T280-2026-EC	0 to 600°C
T280-2027-EC	0 to 500°C
T280-2028-JC	-100 to 300°C
T280-2029-TF	0 to 300°F

### mV Models

T280-3000	0 to 20mV
T280-3001	0 to 50mV
T280-3002	0 to 100mV

### RTD Models

T280-1000-C	0 to 100°C
T280-1001-C	0 to 150°C
T280-1002-C	0 to 200°C
T280-1003-C	0 to 300°C
T280-1004-C	0 to 500°C
T280-1005-F	0 to 200°F
T280-1006-F	0 to 300°F
T280-1007-F	0 to 400°F
T280-1008-F	0 to 500°F
T280-1009-F	0 to 900°F
T280-1010-F	0 to 100°F
T280-1011-F	0 to 250°F
T280-1012-C	0 to 50°C
T280-1013-F	-328 to 100°F
T280-1014-F	-200 to 100°F
T280-1015-F	32 to 390°F

Note that detailed installation instructions are available on our website.

## Ordering Information

### Models & Accessories

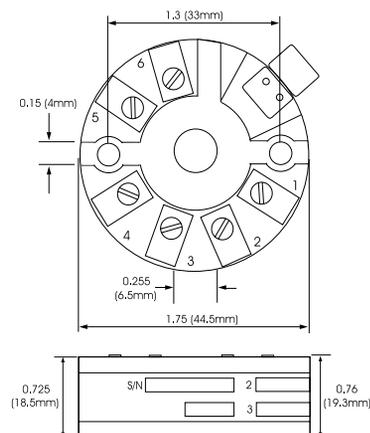
#### Specify:

**T280-1xxx-C** (F) for RTD Input, or  
**T280-2xxx-[tc type] C** (F) for thermocouple, or  
**T280-3xxx** for mV input

### Accessories

**AP9046** Action Pak 24/40VDC, 65mA Loop Power Supply  
**V560/565** 3-1/2 digit remote loop powered indicator with wide ranging display.  
**T25H-0000** Head Mount Enclosure - 1/2 NPT for Thermowell and Conduit.

## Dimensions



Printed on recycled paper

## Factory Assistance

For additional information on calibration, operation and installation contact our Technical Services Group:

**703-669-1318**

[actionsupport@eurotherm.com](mailto:actionsupport@eurotherm.com)

721-0774-00-F 02/09 Copyright© Eurotherm, Inc 2009

## Eurotherm, Inc

741-F Miller Drive  
 Leesburg, VA 20175-8993  
 703-443-0000

[info@eurotherm.com](mailto:info@eurotherm.com) or [www.eurotherm.com/actionio](http://www.eurotherm.com/actionio)