

Product Datasheet - Technical Specifications



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Your contact

**Technical and commercial sales, price information,
quotations, demo/test equipment, consulting:**

Tel.: **+49 - 81 41 - 52 71-0**

FAX: **+49 - 81 41 - 52 71-129**

E-Mail: sales@meilhaus.com

Downloads:

www.meilhaus.com/en/infos/download.htm

Meilhaus Electronic GmbH | Tel. **+49 - 81 41 - 52 71-0**
Am Sonnenlicht 2 | Fax **+49 - 81 41 - 52 71-129**
82239 Alling/Germany | E-Mail sales@meilhaus.com

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Monitoring and Control Solutions

TT330 Series Brochure

DIN-Rail Mount

USB-Configured

Slim Design



Space-Saving 4-Wire Isolated Transmitters

Transmitters: TT330 Series



TT330 Series Thin 4-Wire Transmitters



Introduction

The TT330 series features space-saving thin transmitters and isolators that combine flexibility with rugged housing to withstand harsh industrial environments. Advanced signal processing capabilities, variable range input, and convenient USB programming make these instruments versatile for many applications.

Input

Various sensor signals (by model)

Output

- Universal current/voltage: $\pm 10V$, $\pm 5V$, $0-10V$, $0-5V$, $\pm 20mA$, $0-20mA$ and $4-20mA$

Power

- $12-32V$ DC local/bus power

Key Features and Benefits

- Space saving 17.5mm housing
- Easy setup via USB with Windows® configuration software
- Better than 0.1% accuracy
- Supports unipolar and bipolar input ranges up to $\pm 20mA$ or $\pm 500mV$ DC
- 1500V AC isolation
- Normal/reverse acting output
- Wide operation temperature of -40 to $80^{\circ}C$
- Shock and vibration resistant
- CE Compliant. UL/cUL Class 1 Div 2 Zone 2 approvals. ATEX and IECEx Certified.

TT333 Thermocouple, Millivolt Input

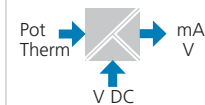


Input

- Type J,K,T,R,S,E,B,N thermocouple
- $\pm 100mV$

[See data sheet](#)

TT334 Potentiometer/ Thermistor Input

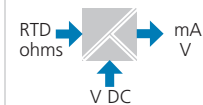


Input

- $100-100K$ ohms from potentiometer/slidewire
- $2K - 30K$ thermistor
- Custom $100 - 1M$ ohms

[See data sheet](#)

TT335 RTD Isolated Input

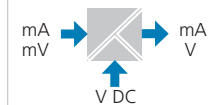


Input

- $100, 200, 500,$ or 1000 ohm Pt RTD; 120 ohm Ni RTD; 10 ohm Cu RTD
- $0-450$ ohms linear resistance

[See data sheet](#)

TT336 Current, Millivolt Input

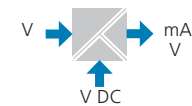


Input

- $0-20mA$, $4-20mA$ DC
- $\pm 1mA$, $\pm 20mA$ DC
- $0-500mV$ DC
- $\pm 500mV$ DC
- $0-11.17mA$

[See data sheet](#)

TT337 Low-Voltage Input

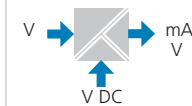


Input

- $\pm 1V$ DC
- $\pm 5V$ DC
- $\pm 10V$ DC

[See data sheet](#)

TT338 High-Voltage Input

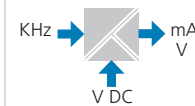


Input

- $\pm 15V$ DC
- $\pm 75V$ DC
- $\pm 150V$ DC

[See data sheet](#)

TT339 Frequency, Pulse Input



Input

- $0 - 100KHz$
- Up to $12V$ rms amplitude
- Unipolar or bipolar signals

[See data sheet](#)

Transmitters: TT330 Series

Key Features

Unipolar and bipolar input

A single unit supports both unipolar and bipolar input ranges up to $\pm 20\text{mA}$ or $\pm 500\text{mV DC}$.

Space Saving

A strikingly thin enclosure, at only 17.5mm wide, to easily achieve high-density DIN-rail mounting.

Simple Configuration

Digital setup and calibration with straightforward Windows (XP, Vista, 7, 8) software via USB.

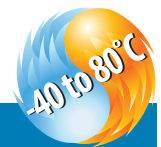


Bus or Local Power

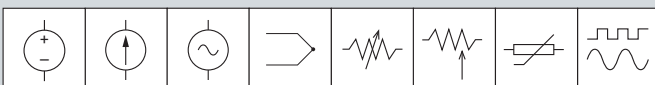
Can be powered through the unit terminals or via the DIN rail bus connector when mating to a plug-in terminal block.

Rugged Design

Wide ambient temperature operation, shock and vibration-resistant, as well as CE and UL/cUL Class 1, Division 2, Zone 2 approved and ATEX and IECEx certified.



Input Options



Transmitters: TT330 Series



General Operation and Performance Specifications

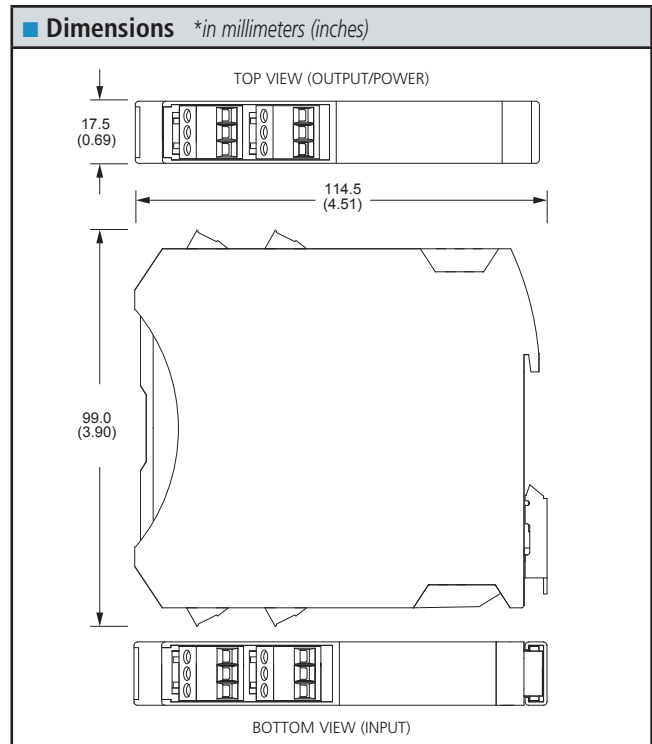
The following specifications are common to all TT330 Series transmitter modules.

| ■ USB Interface | |
|-----------------|-------------------------------------|
| USB Connector | USB Mini-B type socket, 5-pin |
| USB Data Rate | 12Mbps. USB v1.1 and 2.0 compatible |

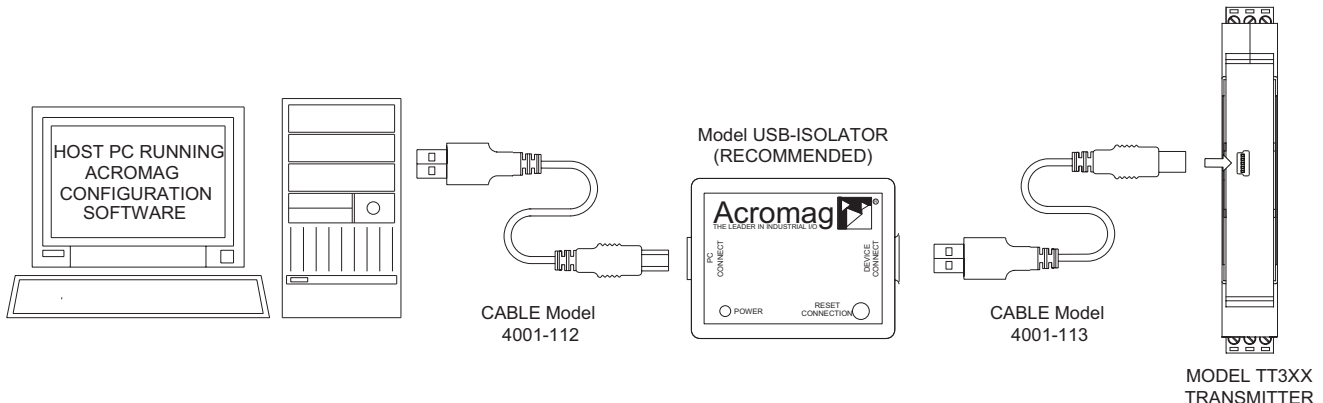
| ■ Output | |
|--------------|---|
| Output Range | ±10V, ±5V, 0-10V, 0-5V, ±20mA, 0-20mA, 4-20mA |
| Accuracy | ±0.05% of span typical |

| ■ Environmental | |
|--|---|
| Operating Temperature | -40 to 80°C (-40° to 176°F) |
| Storage Temperature | -40 to 85°C (-40 to 185°F) |
| Relative Humidity | 5 to 95% non-condensing |
| Power Requirement | 12-32V DC DC SELV (Safety Extra Low Voltage); 24mA max. |
| Isolation | 1500V AC peak. 250V AC (354V DC) continuous isolation between input and output circuits. |
| Shock and Vibration Immunity | Vibration: 4g, per IEC 60068-2-6 Shock: 25g, per IEC 60068-2-27 |
| Electromagnetic Compatibility (EMC) Compliance | Radiated Emissions: BS EN 61000-6-4, CISPR 16 RFI: BS EN 61000-6-2, IEC 61000-4-3 Conducted RFI: BS EN 61000-6-2, IEC 61000-4-6 ESD: BS EN 61000-6-2, IEC 61000-4-2 EFT: BS EN 61000-6-2, IEC 61000-4-4 Surge Immunity: BS EN 61000-6-2, IEC 61000-4-5 |
| Approvals | CE compliant. UL/cUL listing. ATEX and IECEx Certified. Designed for Class I; Division 2; Groups ABCD; Zone 2. Ⓢ II 3 G Ex nA IIC T4 Gc -40°C ≤ Ta ≤ +80°C |

| ■ Physical | |
|-----------------|--|
| General | General-purpose enclosure designed for mounting on 35mm "T-type" DIN rail. |
| Case Material | Self-extinguishing polyamide, UL94 V-0 rated, color light gray. General-purpose NEMA Type 1 enclosure. |
| I/O Connectors | Removable plug-in terminal blocks rated for 12A/250V; AWG #26-12, stranded or solid copper wire. |
| Shipping Weight | 0.22 kg (0.5 pounds) packed |

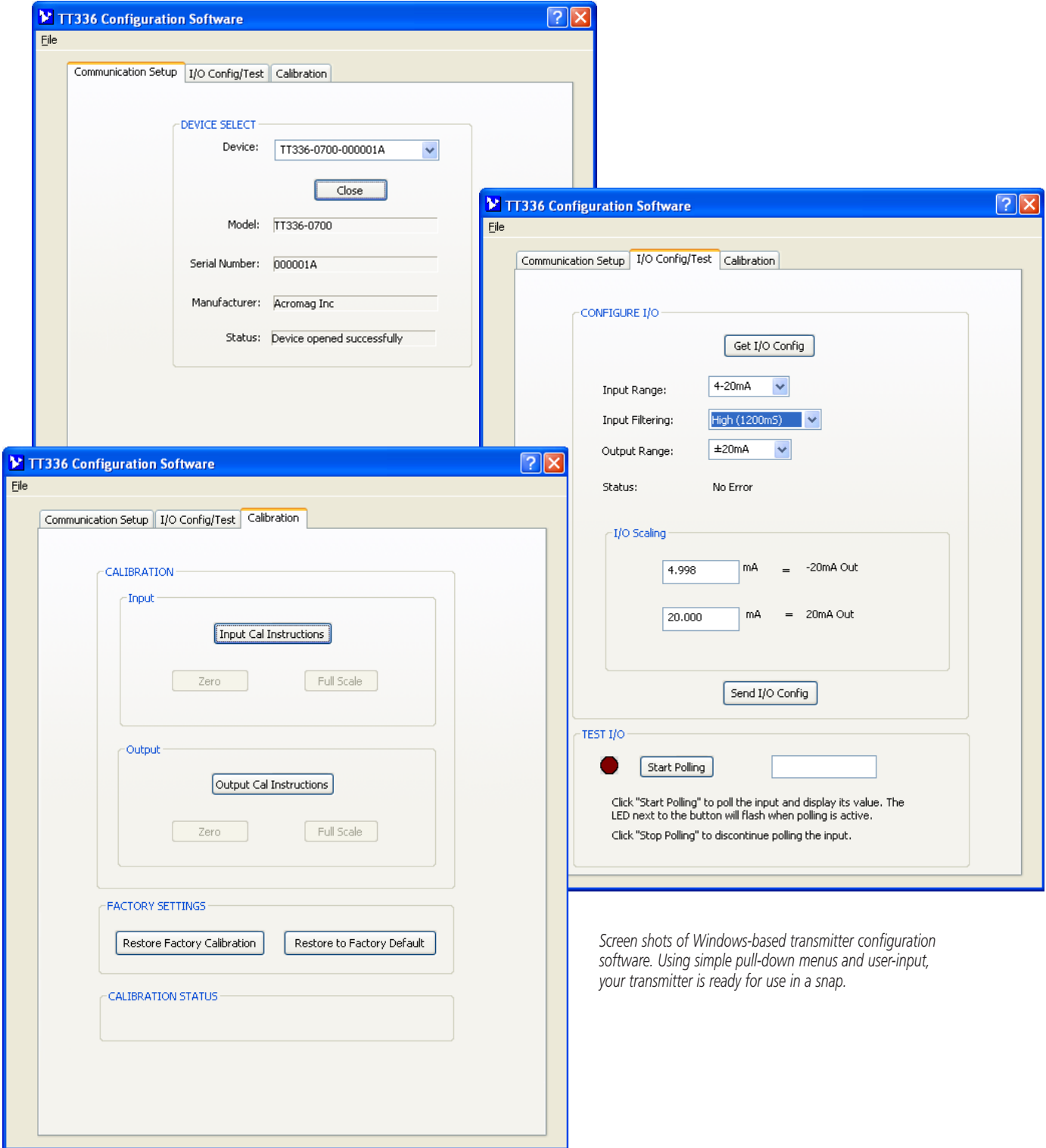


TT Series USB Transmitter Connections



Transmitters: TT330 Series

Module Configuration



TT336 Configuration Software

File

Communication Setup I/O Config/Test Calibration

DEVICE SELECT

Device: TT336-0700-000001A

Close

Model: TT336-0700

Serial Number: 000001A

Manufacturer: Acromag Inc

Status: Device opened successfully

TT336 Configuration Software

File

Communication Setup I/O Config/Test Calibration

CONFIGURE I/O

Get I/O Config

Input Range: 4-20mA

Input Filtering: High (1200mS)

Output Range: ±20mA

Status: No Error

I/O Scaling

4.998 mA = -20mA Out

20.000 mA = 20mA Out

Send I/O Config

TEST I/O

Start Polling

Click "Start Polling" to poll the input and display its value. The LED next to the button will flash when polling is active.

Click "Stop Polling" to discontinue polling the input.

TT336 Configuration Software

File

Communication Setup I/O Config/Test Calibration

CALIBRATION

Input

Input Cal Instructions

Zero Full Scale

Output

Output Cal Instructions

Zero Full Scale

FACTORY SETTINGS

Restore Factory Calibration Restore to Factory Default

CALIBRATION STATUS

Screen shots of Windows-based transmitter configuration software. Using simple pull-down menus and user-input, your transmitter is ready for use in a snap.

Transmitters: TT330 Series



Accessories

◆ Configuration Software



TT330 Series Configuration

Simple to use, whether you need the full software interface package (includes USB isolator and cables) or just the configuration software itself. Acromag makes it easy to get started.

Acromag Agility™ Config Tool

Easy to download, configuration tool mobile app for free download at the [Google Play Store](#).

Ordering Information

[TTC-SIP](#)

Software Interface Package, includes: configuration software CD-ROM, USB-Isolator, and two USB cables (4001-112, 4001-113).

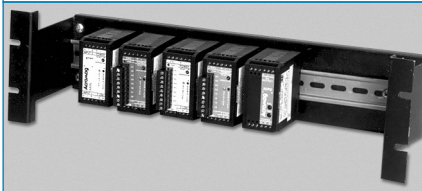
[TT330-Config/Cal](#)

Factory custom configuration/calibration service for all TT330 models.

[TT330-CONFIG](#)

Free download of TT330 Transmitter Configuration Software.

◆ Mounting Hardware



Din-Rail Mounting

For your convenience, Acromag offers several mounting accessories to simplify your system installation. Our 19" rack-mount kit provides a clean solution for mounting your I/O modules and a power supply. Or you can buy precut DIN rail strips for mounting on any flat surface.

Ordering Information

[20RM-16-DIN](#)

19" rack-mount kit with DIN rail.

[DIN RAIL 3.0](#)

[DIN RAIL 16.7](#)

DIN rail strip, Type T, 3 inches (75mm) or 16.7 inches (425mm)

◆ Power Supplies



Universal Slimline Power Supplies

Input Power Requirement
85 to 264V AC or 105 to 370V DC

Output
5V DC, 12V DC, or 24V DC
10W to 240W

Ordering Information

[PSSR-VB24](#)

Power supply, 15W, 0.65A at 24V DC

[PSSR-VD24](#)

Power supply, 60W, 2.5A at 24V DC

Visit www.acromag.com for additional models and more information.

◆ USB Isolator



USB-to-USB Isolator

This compact, industrial-grade isolator provides a high-voltage isolation barrier between a computer and a connected USB device; protecting equipment from electrical surges, transient voltage spikes, and ground loop currents.

Ordering Information

[USB-Isolator](#)

USB isolator, includes USB cable (Part # 4001-112) for isolator-to-PC connection

◆ Cables



Cables for PC-to-USB isolator, USB isolator-to-transmitter connections, and mobile device-to-USB isolator-to-transmitter connections.

Ordering Information

[4001-112](#)

USB Cable, Type A to Type B, 1 meter

[4001-113](#)

USB Cable, Type A to Mini-B, 1 meter

[5028-565](#)

USB Cable, USB OTG Cable, 6 inches