Monitoring and Control Solutions

TT330 Series Brochure

DIN-Rail Mount

USB-Configured

Slim Design

Space-Saving 4-Wire Isolated Transmitters
Experience counts: especially when selecting an I/O partner. And with 50 years of I/O experience, Acromag can help you improve reliability, increase productivity and reduce your costs.

Acromag: The I/O Leader
Acromag is a customer-driven manufacturer focused on developing embedded I/O products that provide the best long term value in the industry. Compare and you’ll find that Acromag products offer an unmatched balance of price, performance, and features.

50 Years of I/O Experience
Acromag has more than 50 years of measurement and control experience. Since 1957, we have delivered nearly a million units to thousands of customers around the globe for manufacturing, power, environmental, transportation, and military applications.

Quality with a 2-Year Warranty
We take every measure to guarantee you dependable operation and products that perform at or beyond the specifications. State-of-the-art manufacturing and military-grade components add an extra degree of ruggedness. Acromag is also certified for ISO9000/AS9100 quality control management procedures.

Certification and Approvals
Many Acromag products carry globally recognized agency approvals and safety certifications.

Online Ordering
For your convenience, Acromag provides full product documentation and pricing information on our website. You can obtain quotes or even place your order directly on our website.

Fast Delivery from Stock
Most products can be shipped within 24 hours of receiving your order.

Special Services
We are happy to accommodate your special requirements and offer the following services:
• Custom product development
• Custom calibration
• Source inspections, quality audits
• Special shipping, documentation
• Protective humiseal coating
• Plastic and stainless steel tagging

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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: ±10V, ±5V, 0-10V, 0-5V, ±20mA, 0-20mA and 4-20mA
- 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 ±20mA or ±500mA DC
- 1500V AC isolation
- Normal/reverse acting output
- Wide operation temperature of -40 to 80°C
- Shock and vibration resistant
- CE Compliant. UL/cUL Class 1 Div 2 Zone 2 approvals. ATEX and IECEx Certified.
Transmitters: TT330 Series

Key Features

**Unipolar and bipolar input**
A single unit supports both unipolar and bipolar input ranges up to ±20mA or ±500mV 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.

**Input Options**
Unipolar and bipolar input

**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.
General Operation and Performance Specifications

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

### USB Interface

<table>
<thead>
<tr>
<th>Field</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB Connector</td>
<td>USB Mini-B type socket, 5-pin</td>
</tr>
<tr>
<td>USB Data Rate</td>
<td>12Mbps. USB v1.1 and 2.0 compatible</td>
</tr>
</tbody>
</table>

### Output

<table>
<thead>
<tr>
<th>Field</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Range</td>
<td>±10V, ±5V, 0-10V, 0-5V, ±20mA, 0-20mA, 4-20mA</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.05% of span typical</td>
</tr>
</tbody>
</table>

### Environmental

<table>
<thead>
<tr>
<th>Field</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-40 to 80°C (-40° to 176°F)</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40 to 85°C (-40 to 185°F)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>5 to 95% non-condensing</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>12-32V DC SELV (Safety Extra Low Voltage); 24mA max.</td>
</tr>
<tr>
<td>Isolation</td>
<td>1500V AC peak. 250V AC (354V DC) continuous isolation between input and output circuits.</td>
</tr>
<tr>
<td>Shock and Vibration Immunity</td>
<td>Vibration: 4g, per IEC 60068-2-6</td>
</tr>
<tr>
<td></td>
<td>Shock: 25g, per IEC 60068-2-27</td>
</tr>
<tr>
<td>Electromagnetic Compatibility (EMC) Compliance</td>
<td>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</td>
</tr>
<tr>
<td>Approvals</td>
<td>CE compliant. UL/cUL listing. ATEX and IECEx Certified. Designed for Class I; Division 2; Groups ABCD; Zone 2.</td>
</tr>
</tbody>
</table>

### Physical

<table>
<thead>
<tr>
<th>Field</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>General-purpose enclosure designed for mounting on 35mm “T-type” DIN rail.</td>
</tr>
<tr>
<td>Case Material</td>
<td>Self-extinguishing polyamide, UL94 V-0 rated, color light gray. General-purpose NEMA Type 1 enclosure.</td>
</tr>
<tr>
<td>I/O Connectors</td>
<td>Removable plug-in terminal blocks rated for 12A/250V, AWG #26-12, stranded or solid copper wire.</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>0.22 kg (0.5 pounds) packed</td>
</tr>
</tbody>
</table>

### Dimensions

<table>
<thead>
<tr>
<th>Field</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>*in millimeters (inches)</td>
</tr>
<tr>
<td>TOP VIEW</td>
<td></td>
</tr>
<tr>
<td>OUTPUT/POWER</td>
<td>17.5 (0.69)</td>
</tr>
<tr>
<td>BOTTOM VIEW</td>
<td></td>
</tr>
<tr>
<td>INPUT</td>
<td>99.0 (3.90)</td>
</tr>
</tbody>
</table>

### TT Series USB Transmitter Connections

![TT Series USB Transmitter Connections Diagram](image-url)

**Model USB-ISOLATOR (RECOMMENDED)**

CABLE Model 4001-113

CABLE Model 4001-112

MODEL TT3XX TRANSMITTER

**Configurations**

- Host PC running Acromag Configuration software
- Model TT3XX Transmitter
Transmitters: TT330 Series

Module Configuration

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 Google Play Store.

◆ 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.

◆ 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

◆ 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.

◆ Cables

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

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.

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)

PS5R-VB24
Power supply, 15W, 0.65A at 24V DC

PS5R-VD24
Power supply, 60W, 2.5A at 24V DC
Visit www.acromag.com for additional models and more information.

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

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