DT230 Dual-Channel Transmitters Series

- DIN-Rail Mount
- Easy Configuration
- Slim design

USB-Programmable Saves Space and Cost
Experience counts:
especially when
you are selecting
an I/O partner.
And with 60+ years
of I/O experience,
Acromag can help
you to improve
reliability, increase
productivity and
reduce your costs.

Acromag: The I/O Leader
Acromag is a customer-driven manufacturer focused on developing process automation 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.

60+ Years of I/O Experience
Acromag has more than 60 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.

Top Quality and a 2-Year Warranty
We take every measure to guarantee you dependable operation and products that perform at or beyond their specifications. Our state-of-the-art manufacturing and military-grade components add an extra degree of ruggedness. Most products qualify for an extended 2-year warranty. And with ISO 9001/AS9100 certified quality control, you get full confidence.

All trademarks are the property of their respective owners.

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

Certification and Approvals
Many Acromag products carry globally recognized agency approvals and safety certifications.
- CE
- UL, cUL
- ATEX
- CSA
- Ethernet conformance
- Modbus conformance
- Profibus certification
- IECEx

Acromag, Incorporated  ■  30765 South Wixom Road  ■  Wixom, Michigan 48393  ■  USA
Transmitters: DT Series

DT Series Programmable Dual-Channel Transmitters

Introduction
The new DT Series transmitters are designed to offer a cost-effective space-saving solution to interface a variety of process and sensor signals to your control systems. Each model supports several input ranges and can output proportional 0/4-20mA, 0-10V, or ±10V DC signals.

Input
Thermocouple/Millivolt, RTD/Resistance, Process Voltage, High Voltage, Current/Millivolt

Output
Proportional 0/4-20mA, 0-10V, or ±10V DC

Power
- DT230 Series: 7-32V DC loop/local power
- DT330 Series: 6-32V DC local/bus power

Key Features and Benefits
- USB-programmable (allows easy selection of options that is not possible with pots or jumpers
- Dual unit saves space and reduces costs
- Signal splitter capability
- Selectable filtering levels
- Configurable output clamp levels (NAMUR)
- Removable, front-facing terminal blocks (simplify your wiring tasks)
- Rail power bus and redundancy
- Supports sink/source wiring
- -40 to 80°C operation (DT230 Series)
- -40 to 70°C operation (DT330 Series)
- Hazloc approvals UL C1D2, ATEX/IECEx Zone2

DT233 Thermocouple, Millivolt Input
TC/V TC/V
IN 1 OUT 1 mA
IN 2 OUT 2 mA

Input
- Type J, K, T, R, S, E, B, N thermocouple
- ±100mV
- ±1V

See data sheet

DT235 RTD/Resistance Input
RTDΩ RTDΩ
IN 1 OUT 1 mA
IN 2 OUT 2 mA

Input
- RTD
  - Pt (100/200/500Ω)
  - Ni (120Ω)
  - Cu (10Ω)
- Resistance 0-4500Ω

See data sheet

DT236 Current/millivolt Input
mA/V mA/V
IN 1 OUT 1 mA
IN 2 OUT 2 mA

Input
- ±20mA
- ±500mV

See data sheet

DT237 Medium DC Voltage Input
V V
IN 1 OUT 1 mA
IN 2 OUT 2 mA

Input
- 0-10V
- ±10V

See data sheet

DT238 High Voltage Input
V V
IN 1 OUT 1 mA
IN 2 OUT 2 mA

Input
- ±150V

See data sheet

DT333 Thermocouple, Millivolt Input
TC/V TC/V
IN 1 OUT 1 V/mA
IN 2 OUT 2 V/mA

Input
- Type J, K, T, R, S, E, B, N thermocouple
- ±100mV

See data sheet

DT335 RTD/Resistance Input
RTDΩ RTDΩ
IN 1 OUT 1 V/mA
IN 2 OUT 2 V/mA

Input
- RTD
  - Pt (100/200/500Ω)
  - Ni (120Ω)
  - Cu (10Ω)
- Resistance 0-4500Ω

See data sheet

DT336 Current/millivolt Input
mA/V mA/V
IN 1 OUT 1 V/mA
IN 2 OUT 2 V/mA

Input
- ±20mA
- ±500mV

See data sheet

DT337 Medium DC Voltage Input
V V
IN 1 OUT 1 V/mA
IN 2 OUT 2 V/mA

Input
- 0-10V
- ±10V

See data sheet

DT338 High Voltage Input
V V
IN 1 OUT 1 V/mA
IN 2 OUT 2 V/mA

Input
- ±150V

See data sheet

877-214-6267  ■  sales@acromag.com  ■  www.acromag.com  ■  30765 S Wixom Rd, Wixom, MI 48393 USA
Key Features

Removable Terminal Blocks
Pluggable terminal blocks simplify wiring for easy installation and removal of modules.

Scalable Current or Voltage Output
DT230 Series: Supports sink or source 4-20mA output
DT330 Series: Supports scalable current or voltage output ranges: 0-20mA, 4-20mA, ±5V, ±10V, 0-5V, 0-10V DC

2-wire, Loop-powered
4-wire, External-powered
DT230 Series: 7-32V DC Power is received from the output loop (2-wire).
DT330 Series: 6-32V DC power connects (4-wire) on a terminal block, a rail bus, or both for redundancy.

Simple Configuration
A USB connection to a Windows® PC or Android™ device enables simple, precise configuration of I/O ranges and a variety of operational settings with free software.

Input Options

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

Rugged Design
Wide ambient temperature operation, shock and vibration-resistant, as well as CE Compliant, UL/cUL Class I Div 2, ATEX/IECEx Zone 2 approvals (pending).
Transmitters: DT Series

General Operation and Performance Specifications

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

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<td><strong>(0.69)</strong></td>
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<td><strong>BOTTOM VIEW (INPUT)</strong></td>
</tr>
<tr>
<td><strong>99.0</strong></td>
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<tr>
<td><strong>(3.90)</strong></td>
</tr>
<tr>
<td><strong>DT330</strong></td>
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<tr>
<td><strong>(Extra Terminal)</strong></td>
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<td><strong>114.5</strong></td>
</tr>
<tr>
<td><strong>(4.51)</strong></td>
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</tbody>
</table>

DT Series USB Transmitter Connections

Personal Computer Running Windows OS

HOST PC RUNNING ACROMAG CONFIGURATION SOFTWARE

USB-ISOLATOR (Recommended)

HOST PC RUNNING ACROMAG CONFIGURATION SOFTWARE

CABLE Model 4001-112

CABLE Model 4001-113
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.

Screen shots of the Agility App for Android, allowing for mobile configuration in the field.
## Accessories

### Configuration Software

**DT 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 too mobile app for free download at the [Google Play Store](https://play.google.com/store).

### Bus-Kit

**TT Bus-Kit**
DIN rail bus power connector and left/right terminal blocks. One kit supports multiple DT Series transmitters.

### 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
Universal Input (85-264V AC / 100-370V DC)
Output
10W, 15W, 30W, 60W, 90W, 120W, 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.

### USB Cables

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

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Transmitters: DT230 Series

**DT233** Thermocouple/millivolt input two-wire dual transmitter

**Description**

DT230 series signal conditioners provide two independent I/O channels in a single, space-saving unit. The DT233 model is a dual two-wire transmitter that isolates and converts millivolt or thermocouple sensor inputs to proportional 4-20mA control signals. Power is received from the output loop current. High-voltage isolation separates all input and output circuits from each other. Isolation protects from surges, reduces noise, and helps eliminate ground loop errors.

Setup and calibration are fast and easy with a convenient USB connection to your PC and Acromag's Windows configuration software. The Android app enables setup with mobile devices. Advanced signal processing capabilities, variable range input/output, and convenient USB programming make this instrument very versatile.

These transmitters can withstand harsh industrial environments and operate reliably across a wide temperature range with very low drift. They feature RFI, EMI, ESD, EFT, and surge protection plus low radiated emissions.

**Key Features & Benefits**

- Operate as a dual transmitter, a single transmitter, or a signal splitter
- Easy configuration via USB with Windows software or Agility™ app for Android
- Independently adjustable and scalable input and output ranges
- Selectable thermocouple/millivolt input types: (TC Type J, K, T, R, S, E, B, N, ±100mV, ±1V)
- 4-20mA current loop outputs support sinking or sourcing circuit configurations
- Supports reverse-acting (inverse) output
- User-configurable output range clamp levels support NAMUR-compliant operation
- Selectable up/downscale sensor break detection
- Very low 7V two-wire loop burden
- High accuracy, linearity, stability, and reliability
- User-selectable filtering (none, low, med, high)
- Space-saving 17.5mm (0.7 inch) unit with pluggable terminals for convenient wiring
- 1500V isolation, 4-way (inputs/outputs)
- Wide ambient operation (-40 to 80°C)
- CE compliant. UL/cUL Class I Div 2, ATEX / IECEx Zone 2 approvals pending.

Save configuration files for convenient copy/restore capability.

Windows configuration software (FREE) at www.acromag.com

Android Agility™ app (FREE) at Google Play Store

### Dual channels ◆ Universal thermocouple, mV input ◆ 4-20mA outputs (sink/source) ◆ 7-32V DC loop/local
Transmitters: DT230 Series

DT233 Thermocouple/millivolt input two-wire dual transmitter

Performance Specifications

**IMPORTANT:** To prevent ground loop error between a grounded PC and a grounded input signal, Acromag strongly recommends use of a USB isolator like Acromag’s USB-Isolator when configuring a DT230 Series transmitter.

**USB Interface**

USB Connection
Type: USB Mini-B type socket, 5-pin.
Data Rate: 12Mbps, USB v1.1 and 2.0 compatible.
Maximum cable length: 5.0 meters.
Transient voltage suppression on power and data lines.

USB Driver
Not required. Uses built-in Human Interface Device (HID) USB drivers of the Windows operating system.

**Input (two channels)**

Default Configuration/Calibration
Output: 4 to 20mA, upscale break detect.

A/D Converters (ADC)
Two 24-bit Sigma Delta ADCs (only 16-bits used).

Input Ranges

<table>
<thead>
<tr>
<th>Input</th>
<th>Range</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC J</td>
<td>-210 to 760°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>TC K</td>
<td>-200 to 1372°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>TC T</td>
<td>-260 to 400°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>TC R</td>
<td>-50 to 1768°C</td>
<td>±1.0°C</td>
</tr>
<tr>
<td>TC S</td>
<td>-50 to 1768°C</td>
<td>±1.0°C</td>
</tr>
<tr>
<td>TC E</td>
<td>-200 to 1000°C</td>
<td>±0.5°C</td>
</tr>
<tr>
<td>TC B</td>
<td>260 to 1820°C</td>
<td>±1.0°C</td>
</tr>
<tr>
<td>TC N</td>
<td>-230 to -170°C</td>
<td>±1.0°C</td>
</tr>
<tr>
<td>TC V</td>
<td>-100 to 100mV</td>
<td>±0.5%</td>
</tr>
</tbody>
</table>

Thermocouple Reference
(Cold Junction Compensation)
±0.2°C typical, ±0.5°C maximum at 25°C.

Ambient Temperature Effect
Better than ±80ppm/°C (±0.008%/°C).

Scaling Adjust
0 to 110% of nominal range.

Lead Break (Sensor Burnout) Detection
Upscale/downscale.

Input Impedance
15M ohms.

Input Over-Voltage Protection
Bipolar Transient Voltage Suppression (TVS) and diode clamping.

Input Filter
RC filter plus variable digital filter (none, low, medium, high).

Noise Rejection (@ 60Hz)
Common Mode: 100dB no filter (135dB high filter),
Normal Mode: 0.5dB no filter (>80dB high filter).

Output (two channels)

D/A Converters (DAC)
Two 16-bit D/A converters.

Output Ranges
4-20mA DC 3.5-24mA under/over-range capability.

Output Accuracy
±0.05%, typical. ±0.1%, maximum.

Output Compliance

<table>
<thead>
<tr>
<th>Rload</th>
<th>Rload (Vsupply - 7V) / 0.020A</th>
<th>Rload = 0 to 850 ohms @ 24V DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>No filtering</td>
<td>14 milliseconds</td>
<td>4-20mA DC 3.5-24mA under/over-range capability.</td>
</tr>
<tr>
<td>Low filter</td>
<td>156 milliseconds</td>
<td>4-20mA DC 3.5-24mA under/over-range capability.</td>
</tr>
<tr>
<td>Medium filter</td>
<td>1154 milliseconds</td>
<td>4-20mA DC 3.5-24mA under/over-range capability.</td>
</tr>
</tbody>
</table>

Output Overload Protection
Loop-powered, 7-32V DC SELV, 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.

Approvals (pending)
CE compliant. Designed for UL/cUL Class I Division 2 Groups ABCD, ATEX / IECEx Zone 2.

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.

Physical

General
General-purpose enclosure designed for mounting on 35mm "T-type" DIN rail.

Case Material
Self-extinguishing polyamide, UL94 V-0 rated.

I/O Connectors
Removable plug-in terminal blocks rated for 12A/250V;
AWG #26-12, stranded or solid copper wire.

Dimensions
17.5 x 114.5 x 99.0 mm (0.7 x 4.51 x 3.90 inches).
Unw: 0.16 kg (0.35 pounds).
Shipping Weight: 0.22 kg (0.5 pounds) packed.

Ordering Information

Models
DT233-0600
Two-wire dual transmitter, thermocouple/millivolt inputs, isolated current or voltage outputs.

Services
DT230-Config/Cal
Factory custom configuration/calibration service.
Specify input type, input/output zero and full-scale values, filtering, and sensor fault settings on order.

Software

TTC-SIP (recommend one kit per customer)
Windows Software Interface Package for Acromag DT Series transmitters. Includes configuration software CD-ROM (5040-944), isolator (USB-ISOLATOR) and two USB cables (4001-112, 4001-113).

Agility Mobile Application

Accessories

USB-ISOLATOR
USB-to-USB isolator, includes USB cable (4001-112).

4001-112
USB cable, 1 meter, with Type A to Type B plugs.

4001-113
USB cable, 1 meter, with Type A to Mini-B plugs.

4001-252
DIN rail end stop for hazloc approvals.

5026-565
USB-TO 6 inch cable.

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Transmitters: DT230 Series

DT235 RTD/resistance input two-wire dual transmitter

Description
DT230 series signal conditioners provide two independent I/O channels in a single, space-saving unit. The DT235 model is a two-wire dual transmitter that isolates and converts RTD or linear resistance sensor inputs to a proportional 4-20mA control signal. Power is received from the output loop current or a DC supply when using a three-wire connection.

High-voltage isolation separates all input and output circuits from each other. Isolation protects from surges, reduces noise, and eliminates ground loop errors.

Setup and calibration are fast and easy with a convenient USB connection to your PC and Acromag’s Windows configuration software. The Android app enables setup with mobile devices. Advanced signal processing capabilities, variable range input/output, and convenient USB programming make this instrument very versatile. These transmitters can withstand harsh industrial environments and operate reliably across a wide temperature range with very low drift. They feature RFI, EMI, ESD, EFT, and surge protection plus low radiated emissions.

Dual channels ◆ RTD (Pt, Ni, Cu), 0-4500 ohm inputs ◆ 4-20mA output (sink/source) ◆ 7-32V DC loop power

Key Features & Benefits
- Operate as a dual transmitter, a single transmitter, or a signal splitter
- Easy configuration via USB with Windows software or Agility™ app for Android
- Independently adjustable and scalable input and output ranges
- Selectable RTD and linear resistance input types: Pt 100/200/500Ω, Ni 120Ω, Cu 10Ω, 0-4500Ω
- 4-20mA current loop outputs support sinking or sourcing circuit configurations
- Supports reverse-acting (inverse) output
- User-configurable output range clamp levels support NAMUR-compliant operation
- Selectable up/downscale sensor break detection
- Very low 7V two-wire loop burden
- High accuracy, linearity, stability, and reliability
- User-selectable filtering (none, low, med., high)
- Space-saving 17.5mm (0.7 inch) unit with pluggable terminals for convenient wiring
- 1500V isolation, 4-way (inputs/outputs)
- Wide ambient operation (-40 to 80°C)
- CE compliant. UL/cUL Class I Div 2, ATEX/IECEx Zone 2 approvals pending.

Save configuration files for convenient copy/restore capability.
DT235  RTD/resistance input two-wire dual transmitter

**Performance Specifications**

**IMPORTANT:** To prevent damage or errors from grounded PCs and surges, Acromag strongly recommends use of their USB-ISOLATOR when configuring a DT230 Series transmitter.

**USB Interface**

USB Connection
Type: USB Mini-B type socket, 5-pin.
Data Rate: 12Mbps. USB v1.1 and 2.0 compatible.

**Input (two channels)**

Default Configuration
Input: 100Ω Pt RTD, 3-wire, =0.00385, -200 to 850°C, medium filter.
Output: 4 to 20mA, upscale break detect.

**Output (two channels)**

D/A Converters (DAC)
Two 16-bit D/A converters.

**Output Ranges**

4-20mA DC. 3.5-24mA under/over-range capability.

**Output Accuracy**

±0.05%, typical. ±0.1%, maximum.

**Output Compliance**

\[ \text{Read} = \left( \text{Vsupply} - 7V \right) / 0.020A. \]

**Output Response Time (for step input change)**

Time to reach 98% of final output value (typical)

| No filter | 34 milliseconds |
| Low filter | 80 milliseconds |
| Medium filter | 214 milliseconds |
| High filter | 1238 milliseconds |

**Output Ripple**

Less than ±0.1% of output span.

**Environmental**

**Operating temperature**

Operation: -40 to 80°C (-40° to 176°F).
Storage: -40 to 85°C (-40° to 185°F).

**Relative humidity**

5 to 95% non-condensing.

**Power Requirement**

Loop-powered, 7-32V DC SELV, 24mA max.

**Isolation**

1500V AC peak. 250V AC (354V DC) continuous isolation between input and output circuits.

**Shock and Vibration Immunity**

Bipolar Transient Voltage Suppression (TVS) and Input Over-Voltage Protection

**Input Bandwidth**

-3dB @ 16Hz (no filtering).

**Noise Rejection (@ 60Hz, no filter)**

Common Mode: 101dB no filter.
Normal Mode: 11dB no filter.

**Input Filter**

RC filter plus variable digital filter (none, low, medium, high).

**Input Ranges**

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Input Range</th>
<th>Accuracy ±</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTD, Pt 100Ω</td>
<td>-200 to 850°C</td>
<td>±0.25°C</td>
</tr>
<tr>
<td>RTD, Pt 200Ω</td>
<td>-200 to 850°C</td>
<td>±0.30°C</td>
</tr>
<tr>
<td>RTD, Pt 250Ω</td>
<td>-200 to 850°C</td>
<td>±0.50°C</td>
</tr>
<tr>
<td>RTD, Pt 500Ω</td>
<td>-200 to 850°C</td>
<td>±1.0°C</td>
</tr>
<tr>
<td>Ni 120Ω (Minco 7-120)</td>
<td>-80 to 320°C</td>
<td>±0.08°C</td>
</tr>
<tr>
<td>Cu 10Ω (Minco 16-9)</td>
<td>-200 to 270°C</td>
<td>±1.0°C</td>
</tr>
<tr>
<td>Resistance (linear)</td>
<td>0 to 25Ω</td>
<td>±0.05Ω</td>
</tr>
<tr>
<td>Resistance (linear)</td>
<td>0 to 45Ω</td>
<td>±0.1Ω</td>
</tr>
<tr>
<td>Resistance (linear)</td>
<td>0 to 90Ω</td>
<td>±0.5Ω</td>
</tr>
<tr>
<td>Resistance (linear)</td>
<td>0 to 225Ω</td>
<td>±2.5Ω</td>
</tr>
<tr>
<td>Resistance (linear)</td>
<td>0 to 450Ω</td>
<td>±4.5Ω</td>
</tr>
</tbody>
</table>

**Environmental**

Better than ±0.008%/°C).

**Safety**

CE compliant. UL/CUL listed Class I Division 2 Groups ABCD. ATEX, IECEx certified Zone 2.

**Electromagnetic Compatibility (EMC) Compliance**

Radiated Emissions: BS EN 61000-6-4, CISPR 16. RF: BS EN 61000-6-2, IEC 61000-4-3.
Conducted RF: BS EN 61000-6-2, IEC 61000-4-3.
ESD: BS EN 61000-6-2, IEC 61000-4-2.
EMC: BS EN 61000-6-2, IEC 61000-4-4.
Surge Immunity: BS EN 61000-6-2, IEC 61000-4-5.

**Ordering Information**

**Models**

DT235-0600
Two-wire dual transmitter, RTD/resistance inputs, isolated current or voltage outputs.

**Services**

DT230-Config/Cal
Factory custom configuration/calibration service. Specify input type, input/output zero and full-scale values, filtering, and sensor fault settings on order.

**Software**

**TTC-SIP** (recommend one kit per customer)
Windows Software Interface Package for Acromag SP Series transmitters. Includes configuration software CD-ROM (5040-944), isolator (USB-ISOLATOR) and two USB cables (4001-112, 4001-113).

**Agility Mobile Application**
Software configuration software for an Android smart device. Download for free from the Google Play Store. Requires 5028-565 and 4001-113 cables

**Accessories**

**USB-ISOLATOR**
USB-to-USB isolator, includes USB cable (4001-112).
4001-112
USB cable, 1 meter, with Type A to Type B plugs.
4001-113
USB cable, 1 meter, with Type A to Mini-B plugs.
4001-252
DIN rail end stop for hazloc approvals.
35mm “T-type” DIN rail.

**ISO9001**

AS9100

**Contact Information**

Tel 877-214-6267  • sales@acromag.com  • www.acromag.com  • 30765 Wixom Rd, Wixom, MI 48393  USA

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**Transmitters: DT230 Series**

**DT236**  
Current/millivolt input two-wire dual transmitters

- **USB** Configured

**Description**

DT230 series signal conditioners provide two independent I/O channels in a single, space-saving unit. The DT236 model is a dual two-wire transmitter that isolates and converts DC current or low voltage inputs to proportional 4-20mA control signals. Power is received from the output loop current or a DC supply when using a three-wire connection.

High-voltage isolation separates all input and output circuits from each other. Isolation protects from surges, reduces noise, and helps eliminate ground loop errors.

Setup and calibration are fast and easy with a convenient USB connection to your PC and Acromag's Windows configuration software. The Android app enables setup with mobile devices. Advanced signal processing capabilities, variable range input/output, and convenient USB programming make this instrument very versatile. These transmitters can withstand harsh industrial environments and operate reliably across a wide temperature range with very low drift. They feature RFI, EMI, ESD, EFT, and surge protection plus low radiated emissions.

**Key Features & Benefits**

- Operate as a dual transmitter, a single transmitter, or a signal splitter
- Easy configuration via USB with Windows software or Agility™ app for Android
- Independently adjustable and scalable input and output ranges
- Selectable current and voltage input ranges: 0/4-20mA, ±1mA, ±20mA, ±0.5V, 0-500mV DC
- Compatible with Acromag 0-20A AC sensor input
- 4-20mA current loop outputs support sinking or sourcing circuit configurations
- User-configurable output range clamp levels support NAMUR-compliant operation
- Very low 7V two-wire loop burden
- High accuracy, linearity, stability, and reliability
- User-selectable filtering (none, low, med, high)
- Space-saving 17.5mm (0.7 inch) unit with pluggable terminals for convenient wiring
- 1500V isolation, 4-way (inputs/outputs)
- Wide ambient operation (-40 to 80°C)
- CE compliant. UL/cUL Class I Div 2, ATEX/IECEx Zone 2 approvals pending.

Windows configuration software (FREE) at www.acromag.com

Android Agility™ app (FREE) at Google Play Store

Save configuration files for convenient copy/restore capability.

**Dual channels**  
- ±20mA, ±500mV inputs  
- 4-20mA outputs (sink/source)  
- 7-32V DC loop power

**DT236**  
Current/millivolt input two-wire dual transmitters

**Input side (bottom)**

- Current Input (+20mA)
- Voltage Input (+0.5V)

**Output side (top view)**

- 4-20mA DC SUPPLY (7-32V)
- EARTH GROUND
- LOAD

**Output “C” terminals are used for optional “sourcing” loop wiring termination (see user manual)**

**Input side**

- IN 1
- IN 2

**Output side**

- OUT 1
- OUT 2

**.setStyleSheet{background-color:rgb(255,255,255);border:none;}**

**Windows configuration software (FREE) at www.acromag.com**

**Android Agility™ app (FREE) at Google Play Store**
Transmitters: DT230 Series

DT236  Current/millivolt input two-wire dual transmitters

Performance Specifications

IMPORTANT: To prevent ground loop error between a grounded PC and a grounded input signal, Acromag strongly recommends use of a USB isolator like Acromag’s USB-Isolator when configuring a DT230 Series transmitter.

USB Interface
USB Connection
Type: USB Mini-B type socket, 5-pin.
Data Rate: 12Mbps. USB v1.1 and 2.0 compatible.
Maximum cable length: 5.0 meters.
Transient voltage suppression on power and data lines.

Input (two channels)
Default Configuration/Calibration
Input: 4 to 20mA, medium filter.
Output: 4 to 20mA.
A/D Converters (ADC)
Two 24-bit Sigma Delta ADCs (only 16-bits used).

Input Ranges
Path A: ±1mA, ±20mA, 0 to 11.17mA, 0-20mA, 4-20mA DC.
Path B: ±0.5V, 0-500mV DC.

Ambient Temperature Effect
Better than ±80ppm/°C (±0.008%/°C).
Scaling Adjust
Full range.

Input Impedance
Current input: 24.9 ohms.
Voltage input: 15M ohms.

Input Over-Voltage Protection
Bipolar Transient Voltage Suppression (TVS) and diode clamping.

Input Filter
RC filter plus variable digital filter (none, low, medium, high).

Input Bandwidth
-3dB @ 16Hz (no filtering).

Noise Rejection (@ 60Hz, no filter)
Common Mode: 93dB no filter (139dB high filter).
Normal Mode: 6dB no filter (>80dB high filter).

Output (two channels)
D/A Converters (DAC)
Two 16-bit D/A converters.

Output Ranges
4-20mA DC. 3.5-24mA under/over-range capability.

Output Accuracy
±0.05%, typical. ±0.1%, maximum.

Output Compliance
\[ \text{R}_{\text{load}} = \frac{(V_{\text{supply}} - 7V)}{0.020A}. \]
\[ \text{R}_{\text{load}} = 0 \text{ to } 850 \text{ ohms} @ 24V \text{ DC}. \]

Output Response Time (for step input change)

<table>
<thead>
<tr>
<th>Time to reach 98% of output value (typical)</th>
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<td>Medium filter</td>
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<td>High filter</td>
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</tbody>
</table>

Output Ripple
Less than ±0.1% of output span.

Environmental
Operating temperature
Operation: -40 to 80°C (-40° to 176°F).
Storage: -40 to 85°C (-40° to 185°F).
Relative humidity
5 to 95% non-condensing.

Power Requirement
Loop-powered, 7-32V DC SELV, 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.

Approvals (pending)
CE compliant. UL/cUL listed Class I Division 2 Groups A/B/C/D. ATEx, IECEx certified Zone 2. IEC Ex eN A IIC T4 Gc -40°C ≤ Ta ≤ +80°C

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.
Eff: BS EN 61000-6-2, IEC 61000-4-4.
Surge Immunity: BS EN 61000-6-2, IEC 61000-4-5.

Physical
General
General-purpose enclosure designed for mounting on 35mm “T-type” DIN rail.

Case Material
Self-extinguishing polyamide, UL 94 V-0 rated.

I/O Connectors
Removable plug-in terminal blocks rated for 12A/250V; AWG #26-12, stranded or solid copper wire.

Dimensions
17.5 x 114.5 x 99.0 mm (0.7 x 4.51 x 3.90 inches).
Unit weight: 0.16 kg (0.35 pounds).
Shipping Weight: 0.22 kg (0.5 pounds) packed.

Ordering Information

Models
DT236-0600
Two-wire dual transmitter, current/millivolt inputs, isolated current or voltage outputs.

Services
DT230-Config/Cal
Factory custom configuration/calibration service. Specify input type, input/output zero and full-scale values, filtering, and sensor fault settings on order.

Software
TTC-SIP (recommend one kit per customer)
Windows Software Interface Package for Acromag DT Series transmitters. Includes configuration software CD-ROM, isolator (USB-ISOLATOR) and two USB cables (4001-112, 4001-113).

Agility Mobile Application

Accessories
USB-ISOLATOR
USB-to-USB isolator, includes USB cable (4001-112).

4001-112
USB cable, 1 meter, with Type A to Type B plugs.

4001-113
USB cable, 1 meter, with Type A to Mini-B plugs.

4001-252
DIN rail end stop for hazloc approvals.

5020-350
AC current sensor (toroidal transformer); converts 0-20A AC to 0-11.17mA DC.

5028-565
USB-OTG 6 inch cable.
Transmitters: DT230 Series

DT237 Medium DC voltage input two-wire dual transmitter

Description
DT230 series signal conditioners provide two independent I/O channels in a single, space-saving unit. The DT237 model is a two-wire dual transmitter that isolates and converts high-level DC voltage inputs to a proportional 4-20mA control signal. Power is received from the output loop current or a DC supply when using a three-wire connection.

High-voltage isolation separates all input and output circuits from each other. Isolation protects from surges, reduces noise, and eliminates ground loop errors.

Setup and calibration are fast and easy with a convenient USB connection to your PC and Acromag’s Windows configuration software. The Android app enables setup with mobile devices. Advanced signal processing capabilities, variable range input/output, and convenient USB programming make this instrument very versatile.

These transmitters can withstand harsh industrial environments and operate reliably across a wide temperature range with very low drift. They feature RFI, EMI, ESD, EFT, and surge protection plus low radiated emissions.

Key Features & Benefits
- Operate as a dual transmitter, a single transmitter, or a signal splitter
- Easy configuration via USB with Windows software or Agility™ app for Android
- Independently adjustable and scalable input and output ranges
- Selectable voltage input ranges: ±1V, ±5V, ±10V, 0-1V, 0-5V, 0-10V DC
- 4-20mA current loop outputs support sinking or sourcing circuit configurations
- Supports reverse-acting (inverse) output
- User-configurable output range clamp levels support NAMUR-compliant operation
- Very low 7V two-wire loop burden
- High accuracy, linearity, stability, and reliability
- User-selectable filtering (none, low, med, high)
- Space-saving 17.5mm (0.7 inch) unit with pluggable terminals for convenient wiring
- 1500V isolation, 4-way (inputs/outputs)
- Wide ambient operation (-40 to 80°C)
- CE compliant. UL/cUL Class I Div 2, ATEX/IECEx Zone 2 approvals pending.
Transmitters: DT230 Series

DT237  Medium DC voltage input two-wire dual transmitter

Performance Specifications

**IMPORTANT:** To prevent ground loop error between a grounded PC and a grounded input signal, Acromag strongly recommends use of a USB isolator like Acromag's USB-Isolator when configuring a DT230 Series transmitter.

**USB Interface**

**USB Connection**
Type: USB Mini-B type socket, 5-pin.
Data Rate: 12Mbps. USB v1.1 and 2.0 compatible.
Maximum cable length: 5.0 meters.
Transient voltage suppression on power and data lines.

**USB Driver**
Not required. Uses built-in Human Interface Device (HID) USB drivers of the Windows operating system.

**Input (two channels)**

**Default Configuration/Calibration**
Input: ±10V, medium filter.
Output: 4 to 20mA.

**A/D Converters (ADC)**
Two 24-bit Sigma Delta ADCs (only 16-bits used).

**Input Ranges**
Path A: ±1V, 0-1V.
Path B: ±5V, ±10V, 0-5V, 0-10V DC.

**Ambient Temperature Effect**
Better than ±80ppm/°C (±0.008%/°C).

**Scaling Adjust**
Full range.

**Input Impedance**
Path A: 15MΩ
Path B: 1MΩ.

**Input Over-Voltage Protection**
Bipolar Transient Voltage Suppression (TVS) and diode clamping.

**Input Filter**
RC filter plus variable digital filter (none, low, medium, high).

**Input Bandwidth**
-3dB @ 16Hz (no filtering).

**Noise Rejection (@ 60Hz, no filter)**
Common Mode: 71dB no filter (119dB high filter).
Normal Mode: Path A 7dB, Path B 28dB no filter (>80dB high filter).

**Output (two channels)**

**D/A Converters (DAC)**
Two 16-bit D/A converters.

**Output Ranges**
4-20mA DC. 3.5-24mA under/over-range capability.

**Output Accuracy**
±0.05%, typical. ±0.1%, maximum.

**Output Compliance**

| R LOAD = (V SUPPLY - 7V) / 0.020A. |
| R LOAD = 0 to 850 ohms @ 24V DC. |

**Output Response Time (for step input change)**

| Time to reach 98% of output value (typical) |
|-----------------|-----------------|
| No filter       | 136 milliseconds |
| Low filter      | 147 milliseconds |
| Medium filter   | 317 milliseconds |
| High filter     | 1109 milliseconds |

**Output Ripple**
Less than ±0.1% of output span.

**Environmental**

**Operating temperature**
Operation: -40 to 80°C (-40° to 176°F).
Storage: -40 to 85°C (-40° to 185°F).

**Relative Humidity**
5 to 95% non-condensing.

**Power Requirement**
Loop-powered, 7-32V DC SELV, 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.

**Approvals**
CE compliant. UL/cUL listed Class I Division 2 Groups ABCD. ATEX, IECEx certified Zone 2.

**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.

**Physical**

**General**
General-purpose enclosure designed for mounting on 35mm “T-type” DIN rail.

**Case Material**
Self-extinguishing polyamide, UL94 V-0 rated.

**I/O Connectors**
Removable plug-in terminal blocks rated for 12A/250V; AWG #26-12, stranded or solid copper wire.

**Dimensions**
17.5 x 114.5 x 99.0 mm (0.7 x 4.51 x 3.90 inches).
Unit weight: 0.16 kg (0.35 pounds).
Shipping Weight: 0.22 kg (0.5 pounds) packed.

Ordering Information

**Models**

- DT237-0600 Two-wire dual transmitter, medium DC voltage inputs, isolated current or voltage outputs.

**Services**

- DT230-Config/Cal Factory custom configuration/calibration service. Specify input type, input/output zero and full-scale values, filtering, and sensor fault settings on order.

**Software**

- TTC-SIP (recommend one kit per customer) Windows Software Interface Package for Acromag DT Series transmitters. Includes configuration software CD-ROM (5040-944), isolator (USB-ISOLATOR) and two USB cables (4001-112, 4001-113).
- Agility Mobile Application Software configuration software for an Android smart device. Download for free from the Google Play Store. Requires 5028-565 and 4001-113 cables

**Accessories**

- USB-ISOLATOR USB-to-USB isolator, includes USB cable (4001-112).
- 4001-112 USB cable, 1 meter, with Type A to Type B plugs.
- 4001-113 USB cable, 1 meter, with Type A to Mini-B plugs.
- 4001-252 DIN rail end stop for hazloc approvals.
- 5028-565 USB-OTG 6 inch cable.
Transmitters: DT230 Series

DT238 High DC voltage input two-wire dual transmitter

**Description**

DT230 series signal conditioners provide two independent I/O channels in a single, space-saving unit. The DT238 model is a two-wire dual transmitter that isolates and converts high-level DC voltage inputs to proportional 4-20mA control signals. Power is received from the output loop current or a DC supply when using a three-wire connection.

High-voltage isolation separates all input and output circuits from each other. Isolation protects from surges, reduces noise, and eliminates ground loop errors.

Setup and calibration are fast and easy with a convenient USB connection to your PC and Acromag’s Windows configuration software. The Android app enables setup with mobile devices. Advanced signal processing capabilities, variable range input/output, and convenient USB programming make this instrument very versatile. These transmitters can withstand harsh industrial environments and operate reliably across a wide temperature range with very low drift. They feature RFI, EMI, ESD, EFT, and surge protection plus low radiated emissions.

**Key Features & Benefits**

- Operate as a dual transmitter, a single transmitter, or a signal splitter
- Easy configuration via USB with Windows software or Agility™ app for Android
- Independently adjustable and scalable input and output ranges
- Selectable voltage input ranges: ±15V, ±75V, ±150V, 0-15V, 0-75V, 0-150V DC
- 4-20mA current loop outputs support sinking or sourcing circuit configurations
- Supports reverse-acting (inverse) output
- User-configurable output range clamp levels support NAMUR-compliant operation
- Very low 7V two-wire loop burden
- High accuracy, linearity, stability, and reliability
- User-selectable filtering (none, low, med, high)
- Space-saving 17.5mm (0.7 inch) unit with pluggable terminals for convenient wiring
- 1500V isolation, 4-way (inputs/outputs)
- Wide ambient operation (-40 to 80°C)
- CE compliant. UL/cUL Class I Div 2, ATEX/IECEx Zone 2 approvals pending.

**Dual inputs**

- 0±150V input
- 4-20mA outputs (sink/source)
- 7-32V DC loop/local power

**Windows configuration software (FREE) at www.acromag.com**

**Android Agility™ app (FREE) at Google Play Store**

Save configuration files for convenient copy/restore capability.
Transmitters: DT230 Series

DT238 High voltage input two-wire dual transmitter

Performance Specifications

USB Interface
USB Connection
Type: USB Mini-B type socket, 5-pin.
Data Rate: 12Mbps. USB v1.1 and 2.0 compatible.

Input (two channels)
Default Configuration/Calibration
Input: ±150V, medium filter.
Output: 4 to 20mA.

Input Impedance
Path A: 15MΩ
Path B: 1MΩ.

Input Over-Voltage Protection
Bipolar Transient Voltage Suppression (TVS) and diode clamping.

Input Filter
RC filter plus variable digital filter (none, low, medium, high).

Input Bandwidth
-3dB @ 16Hz (no filtering).

Noise Rejection (@ 60Hz, no filter)
Common Mode: 70dB no filter (113dB high filter).
Normal Mode: Path A 32dB, Path B 51dB no filter (>80dB high filter).

Output (two channels)
D/A Converters (DAC)
Two 16-bit D/A converters.

Output Ranges
4-20mA DC. 3.5-24mA under/over-range capability.

Output Accuracy
±0.05%, typical. ±0.1%, maximum.

Output Compliance
\[ \text{Rload} = (\text{Vsupply} - 7V) / 0.020A. \]
\[ \text{Rload} = 0 \text{ to } 850 \text{ ohms at } 24V DC. \]

Output Response Time (for step input change)

<table>
<thead>
<tr>
<th>Time to reach 98% of output value (typical)</th>
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<tr>
<td>Low filter</td>
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<tr>
<td>Medium filter</td>
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<tr>
<td>High filter</td>
</tr>
</tbody>
</table>

Output Ripple
Less than ±0.1% of output span.

Environmental
Operating temperature
Operation: -40 to 80°C (-40° to 176°F).
Storage: -40 to 85°C (-40 to 185°F).

Relative humidity
5 to 95% non-condensing.

Power Requirement
Loop-powered, 7-32V DC SELV, 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.

Approvals (pending)
CE compliant. UL/CUL listed Class I Division 2 Groups A/B/C/D. ATEX, IECEx certified Zone 2.

Electromagnetic Compatibility (EMC) Compliance
Radiated Emissions: BS EN 61000-6-4, CISPR 16.
RFI: BS EN 61000-4-3, Conducted RFI: BS EN 61000-4-2, ESD: BS EN 61000-4-2, EFT: BS EN 61000-4-4.
Surge Immunity: BS EN 61000-4-2, IEC 61000-4-5.

Ordering Information
Models
DT238-0600
Two-wire dual transmitter, high DC voltage inputs, isolated current or voltage outputs.

Services
DT230-Config/Cal
Factory custom configuration/calibration service.
Specify input type, input/output zero and full-scale values, filtering, and sensor fault settings on order.

Software
TTC-SIP (recommend one kit per customer)
Windows Software Interface Package for Acromag DT Series transmitters. Includes configuration software CD-ROM (5040-944), isolator (USB-ISOLATOR) and two USB cables (4001-112, 4001-113).

Agility Mobile Application

Accessories
USB-ISOLATOR
USB-to-USB isolator, includes USB cable (4001-112).

4001-112
USB cable, 1 meter, with Type A to Type B plugs.

4001-113
USB cable, 1 meter, with Type A to Mini-B plugs.

4001-252
DIN rail end stop for hazloc approvals.

5028-565
USB-OTG 6 inch cable.
**Description**

This compact, industrial-grade isolator provides a high-voltage isolation barrier between a computer and a connected USB device. The isolation protects equipment from electrical surges and transient voltage spikes. It also eliminates ground loop currents flowing between the PC and peripherals which can cause damage and inaccurate measurements. Additionally, isolation minimizes conducted noise from static discharge, magnetic fields, and radio frequency interference.

Acromag's USB isolator is very easy to use. The isolator inserts in-line with the USB connection and operates transparently. No special software drivers are required. The unit receives power from the PC’s USB port and isolates that power to the connected device. High noise immunity and low radiated emissions ensure reliable data transfer in sensitive applications.

A number of high-performance features help provide convenient and dependable operation. The green LED indicates that power is being received and blinks if the connected device draws too much current. An internal jumper lets you switch from Full Speed (12 Mbps) to Low Speed (1.5 Mbps) communication. The reset button offers a simple way to reinitialize a connected device without breaking the cable connection. High-retention USB sockets keep cables securely attached under shock and vibration.

**Key Features & Benefits**

- Isolates and protects a USB peripheral from a USB host
- Electrical isolation up to 1500V AC / 2100V DC
- Common mode filtering on all data lines
- Built-in surge/transient suppression up to 8kV on all ports
- Self-powered through the USB port
- Supports USB 2.0 full speed (12 Mbps) and USB 1.1 low speed (1.5 Mbps) data rates with jumper-selection
- LED for power indication and diagnostics
- Reset button to reinitialize and re-enumerate peripheral devices
- Output short circuit protection with auto-retry
- No software or configuration required (transparent operation)
- Uses standard high-retention USB Type A/B cable connections (includes 1m cable)
- Compact size and rugged design for harsh environments
- Wide ambient temperature operation -40 to 70°C (-40 to 158°F)
- CE, FCC, UL/cUL approvals

**Ordering Information**

**Models**

- **USB-ISOLATOR**
  - USB isolator, includes USB cable (Part # 4001-112) for isolator-to-PC connection
- **TTC-SIP**
  - CD-ROM (Part #5040-944), USB isolator and two USB cables (Part # 4001-112, 4001-113) for configuration of Acromag DT, TT and ST Series Transmitters, and SP and uBSP Series Signal Splitters.
- **XT-SIP**
  - CD-ROM (Part #5041-094), USB isolator, two USB cables (Part # 4001-112, 4001-113), and one Ethernet cable (Part # 5035-360) for configuration of Acromag BusWorks XT Series Ethernet modules.

**Accessories**

- **4001-112**
  - USB cable, 1 meter, with Type A to Type B plugs
- **4001-113**
  - USB cable, 1 meter, with Type A to Mini-B plugs
USB-ISOLATOR USB-to-USB Isolator

Performance Specifications

USB Port Interface

Standards
USB 1.1 and 2.0 compatible, full speed (12Mbps, default) and low speed (1.5Mbps) data rates supported. For low speed data rates, an internal jumper is provided for user setting. Connection is transparent, no software or configuration is required. Isolator will not be enumerated in the device manager.

Physical

Dimensions
2.40” Length x 1.85” Wide x 0.925” High (60.96mm x 46.99mm x 23.495mm).

Connectors
Standard high retention USB A/B connectors with minimum withdrawal force of 15 Newtons. 1 meter A/B cable included.

PC Connector
USB Type B receptacle

Device Connector
USB Type A receptacle

LED Indicator
Green LED indicates isolator receiving 5V power from the USB computer bus. Flashing indicates short circuit/retries on peripheral side.

Reset Button
Resets the connection to the USB peripheral device for reinitialization and re-enumeration.

Enclosure Material
ABS Resin, UL94 rated, IP30 plastic case.

Environmental

Operating temperature
-40 to 70°C (-40° to 158°F).

Storage temperature
-40 to 85°C (-40° to 185°F).

Relative humidity
5 to 95% non-condensing.

Power
PC Connect Side: Standard USB bus power (5V DC).
Device Connect Side: 5V DC / 120mA with full power connection from PC. Includes over-current protection with auto-retry.

Isolation
1500V AC / 2100V DC peak isolation.
250V AC continuous safety isolation.

Agency Approvals:
CE and FCC compliant. UL/cUL Class 1 Div. 2 Zone 2.

Radiated Field Immunity (RFI)
Designed to comply with IEC1000-4-3 Level 3 and EN50082-1.

Electromagnetic Compatibility (EMC)
Minimum immunity per EN61000-6-2:2001

Electrostatic Discharge (ESD) Immunity
Per IEC61000-4-2.

Radiated Field Immunity (RFI)
Per IEC61000-4-3.

Electrical Fast Transient Immunity (EFT)
Per IEC61000-4-4. Complies with IEC1000-4-4 Level 3 and EN50082-1.

Surge Immunity
Complies with IEC1000-4-5 Level 3 and EN50082-1.

Conducted RF Immunity (CRFI)
Per IEC61000-4-6. Complies with IEC1000-4-6 and EN50082-1.

Emissions
Per EN50082-1.0-4:2001.

Radiated Frequency Emissions
Per CISPR11 Class A. Meets or exceeds EN50081-1 for Class B equipment.

Example USB Connections (TT Series, SP Series, uBSP Series, XT Series, or ST Series)

Personal Computer
Running Windows OS

HOST USB

HOST PC RUNNING
ACROMAG CONFIGURATION SOFTWARE

HOST USB

USB-A

4001-112 Cable
1 Meter

USB-ISOLATOR

4001-111 Cable
1 Meter

USB-Mini B

4001-113 Cable
1 Meter

Acromag
THE LEADER IN INDUSTRIAL I/O

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AS9100

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**Transmitters: DTx30 Series**

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**Acromag Agility™ Config Tool Mobile Application**

The Agility™ Config Tool is a mobile application that allows easy setup and configuration of Acromag SP Series signal splitters via a tethered mobile device.

This free app is available for Android devices at the Google Play store at [Acromag Agility™ Config Tool](Acromag Agility™ Config Tool).

Demo the software, no need for a module. To enter demo mode simply tap the icon in the upper left corner 8 times.

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**Key Features & Benefits**

- Connects to Acromag DT230 and DT330 Series signal splitters
- Requires the use of USB OTG Cable (Acromag part #: 5028-565) and USB A to Mini B Cable (Acromag part #: 4001-113)
- Configures and calibrates DT230 and DT330 Series products via phone or tablet running Android 4.3 ICS (Ice Cream Sandwich) or later.
- View wiring diagrams, even without an internet connection
- Perform quick and easy field diagnostics and troubleshooting
- Ideal for field technicians

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**Acromag Agility™ Config Tool**

Quick and easy access to the wiring diagram, even offline without internet access.

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