JACKSON SYSTEMS
Controls Done Right™

DISTECH CONTROLS™
AUTHORIZED PARTNER

Submittal
23 09 13.23-1

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Project Data

Date: 10/04/2024
Project Number: 24184
Project Name: Danville High School
Owner: Danville Community School Corporation

Customer

A.A. Huber & Sons, Inc.
500 North Jackson Street
Greencastle, IN 46135
United States

Customer PO Number: Contract 21544

Contracting Team

Project Manager: Ryan Jackson
Project Engineer: Dave Moor

Engineer

Barton-Coe-Vilamaa
225 Airport North Office Park
Fort Wayne, IN 46825
United States

Architect

Barton-Coe-Vilamaa
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Fort Wayne, IN 46825
United States

We are pleased to provide the enclosed submittal for your review

JACKSON SYSTEMS
Controls Done Right™

Distech LCD Display Communicating Sensor

Allure EC-Smart-Vue
Product Data

Product Description

The Allure EC-Smart-Vue is specifically designed to interface with Distech Controls' ECL and ECB controllers. This communicating sensor with backlit display provides precision local temperature sensing, displays system status, and provides a variety of control functions that can be accessed by room occupants.

The innovative ECO-Vue™ leaf pattern, graphically indicates energy consumption in real time to promote an occupant's energy-conscious behavior. The more leaves appear in the LCD display, the more energy efficiency is being achieved, while less leaves encourages the occupant to take corrective action to optimize the system's environmental performance.

Through its user-friendly interface, occupants can view and adjust environmental settings to their liking, for example, view the space temperature, outside air temperature, occupancy status, adjust the setpoint and apply occupancy overrides.

The Allure EC-Smart-Vue can be customized using the EC-gfxProgram tool where you can fully adapt the display for the targeted application and setup.

A fully configurable password protected technician mode allows an installer to perform commissioning and troubleshooting. When connected to an ECB-VAV or ECL-VAV series controller with its pre-loaded application, commissioning can start immediately after installation. The Allure EC-Smart-Vue sensor can be used as a hand-held tool to select the appropriate controller application for the type of HVAC equipment to be controlled, to perform air balancing of the system without requiring an onsite controls engineer, and to troubleshoot the system.

Product Features

- "4-in-1" communicating sensors—one wire, one connection.
- Encourage occupants to have greener habits with the ECO-Vue icon while reducing energy costs.
- Optimize energy use according to the actual building's conditions:
- Commission VAV controllers immediately after installation by selecting the built-in controller application and performing system air balancing with the Allure EC-Smart-Vue sensor to get the HVAC system up and running right away.
- Occupants can override the HVAC mode and view and adjust the setpoint and fan speed for improved personal comfort.
- Slim, compact style, and clean lines are well received by architects and building owners.
- Clear and bright LCD display provides real-time access to temperature and other system information such as setpoint, occupancy status, HVAC mode, etc.
- Both power and communications pass through a single Cat 5e cable for reduced installation costs and for easier installation or system retrofit.

Product Applications

Zone control for Absolute comfort:

- Precise environmental control
- Occupancy override allows the system to adjust to individual needs

Related Products

- ECL Series LonWorks Controllers
- ECB Series BACnet Controllers

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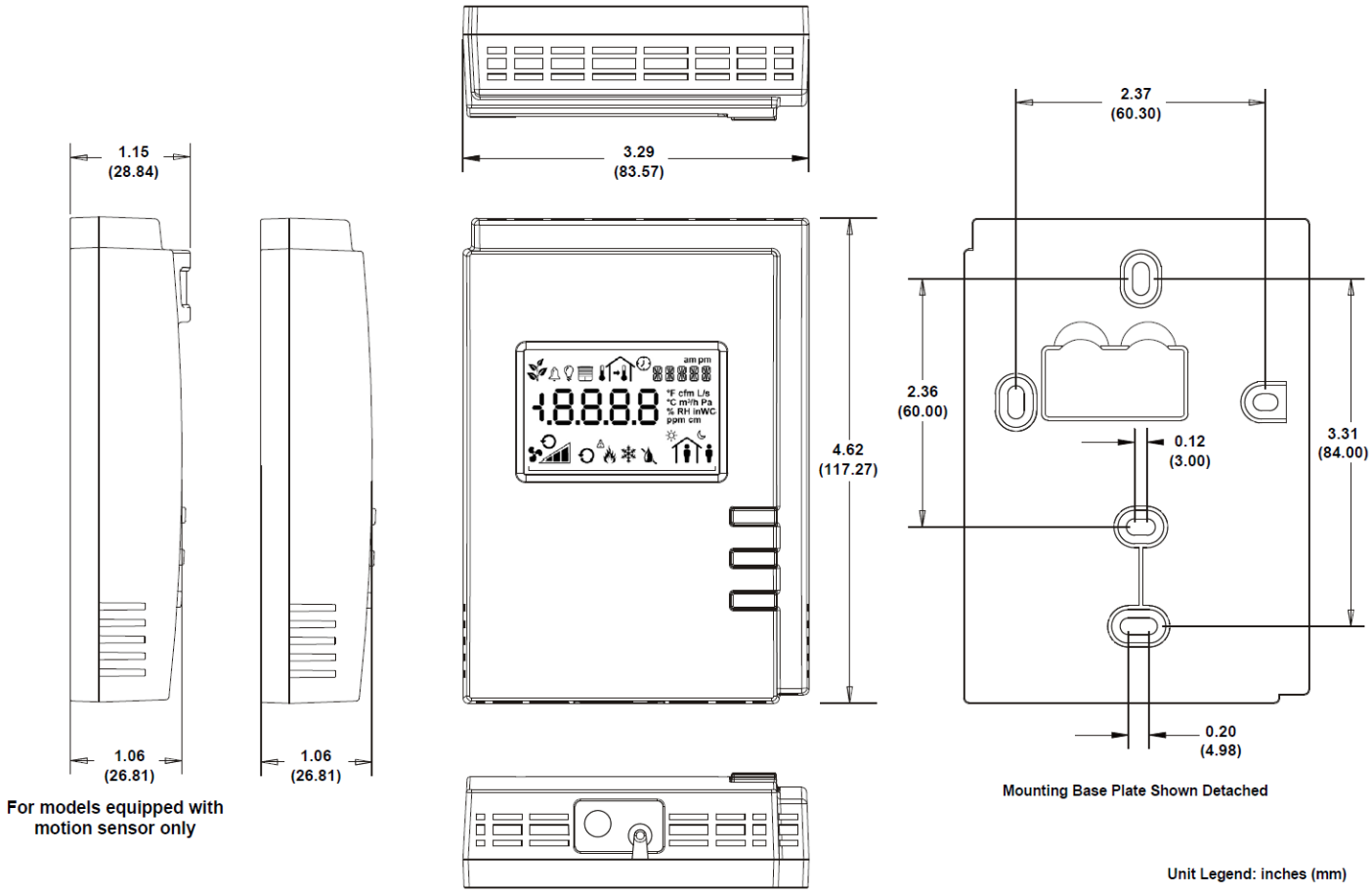
Allure EC-Smart-Vue
Distech LCD Display Communicating Sensor
Product Data

Product Dimensions



Product Specifications

General

Part Number:	PDITE-SMRTVUE-01
Voltage:	16Vdc maximum, Class 2
Power:	1.0 VA
LCD Display:	1.85” x 1.18” (47 mm x 30 mm) w/backlight
Operating Temp.:	41°F to 104°F (5°C to 40°C)
Storage Temp.:	-4°F to 122°F (-20°C to 50°C)
Relative Humidity:	0 to 95% Non-condensing
Material:	ABS
Color:	White
Dimensions:	3.29” x 4.62” x 1.06” (83.57mm x 117.27mm x 26.81mm)
Shipping Weight:	0.4 lb (0.18 kg)
Mounting:	Wall mounting through mounting holes (see figure above for hole positions)

Communications

Rate:	38400 bps
Type:	RS-485
Wiring:	Cable length: 600’ (180 m) maximum
Cable Type:	T568B Cat 5e network cable, 4 twisted pairs
Connectors:	IN: RJ-45, OUT: RJ-45 (pass-through for daisy chain connection Network Access Jack: 1/8” (3.5mm) stereo plug connector

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Product Specifications (continued)

Temperature Sensor

Type:	10KΩ NTC Thermistor
Range:	41°F to 104°F (5°C to 40°C)
Accuracy:	±0.9°F; ±0.5°C
Resolution:	0.18°F; 0.1°C

Agency Approvals

UL Listed:	UL916 Energy management equipment
Material:	UL94V-1

Electromagnetic Compatibility

CE:	EN 61000-6-3:2007 EN 61000-6-1:2007
FCC:	Part 15, subpart B, class B

1. All materials and manufacturing processes comply with the RoHS directive and are marked according to the Waste Electrical and Electronic Equipment (WEEE) directive.

Product Warranty & Total Quality Commitment

All Distech Controls product lines are built to meet rigorous quality standards and carry a two-year warranty. Distech Controls is an ISO 9001 registered company. Distech Controls' products provide both the contractor and the end user with the flexibility of using “best-of-breed” products in system design.

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JACKSON SYSTEMS
Controls Done Right™

Distech LCD Display Communicating Sensor

Allure EC-Smart-Vue-C
Product Data

Product Description

The Allure EC-Smart-Vue-C is specifically designed to interface with Distech Controls' ECL and ECB controllers. This communicating sensor with backlit display provides precision local temperature and CO2 sensing, displays system status, and provides a variety of control functions that can be accessed by room occupants.

The innovative ECO-Vue™ leaf pattern, graphically indicates energy consumption in real time to promote an occupant's energy-conscious behavior. The more leaves appear in the LCD display, the more energy efficiency is being achieved, while less leaves encourages the occupant to take corrective action to optimize the system's environmental performance.

Through its user-friendly interface, occupants can view and adjust environmental settings to their liking, for example, view the space temperature, outside air temperature, occupancy status, adjust the setpoint and apply occupancy overrides.

The Allure EC-Smart-Vue can be customized using the EC-gfxProgram tool where you can fully adapt the display for the targeted application and setup.

A fully configurable password protected technician mode allows an installer to perform commissioning and troubleshooting. When connected to an ECB-VAV or ECL-VAV series controller with its pre-loaded application, commissioning can start immediately after installation. The Allure EC-Smart-Vue sensor can be used as a hand-held tool to select the appropriate controller application for the type of HVAC equipment to be controlled, to perform air balancing of the system without requiring an onsite controls engineer, and to troubleshoot the system.

DISTECH CONTROLS™

CE FC RoHS

Product Features

- "4-in-1" communicating sensors—one wire, one connection, four (4) sensing capabilities (temperature and CO2).
- Encourage occupants to have greener habits with the ECO-Vue icon while reducing energy costs.
- Commission VAV controllers immediately after installation by selecting the built-in controller application and performing system air balancing with the Allure EC-Smart-Vue sensor to get the HVAC system up and running right away.
- Occupants can override the HVAC mode and view and adjust the setpoint and fan speed for improved personal comfort.
- Slim, compact style, and clean lines are well received by architects and building owners.
- Clear and bright LCD display provides real-time access to temperature and other system information such as setpoint, occupancy status, HVAC mode, etc.
- Both power and communications pass through a single Cat 5e cable for reduced installation costs and for easier installation or system retrofit.
- The patented ABC Logic self-calibration system eliminates the need for manual CO2 calibration in most applications.
- Lifetime CO2 calibration guaranteed when using ABC Logic.

Product Applications

Zone control for Absolute comfort:

- Precise environmental control
- Occupancy override allows the system to adjust to individual needs

Related Products

- ECL Series LonWorks Controllers
- ECB Series BACnet Controllers

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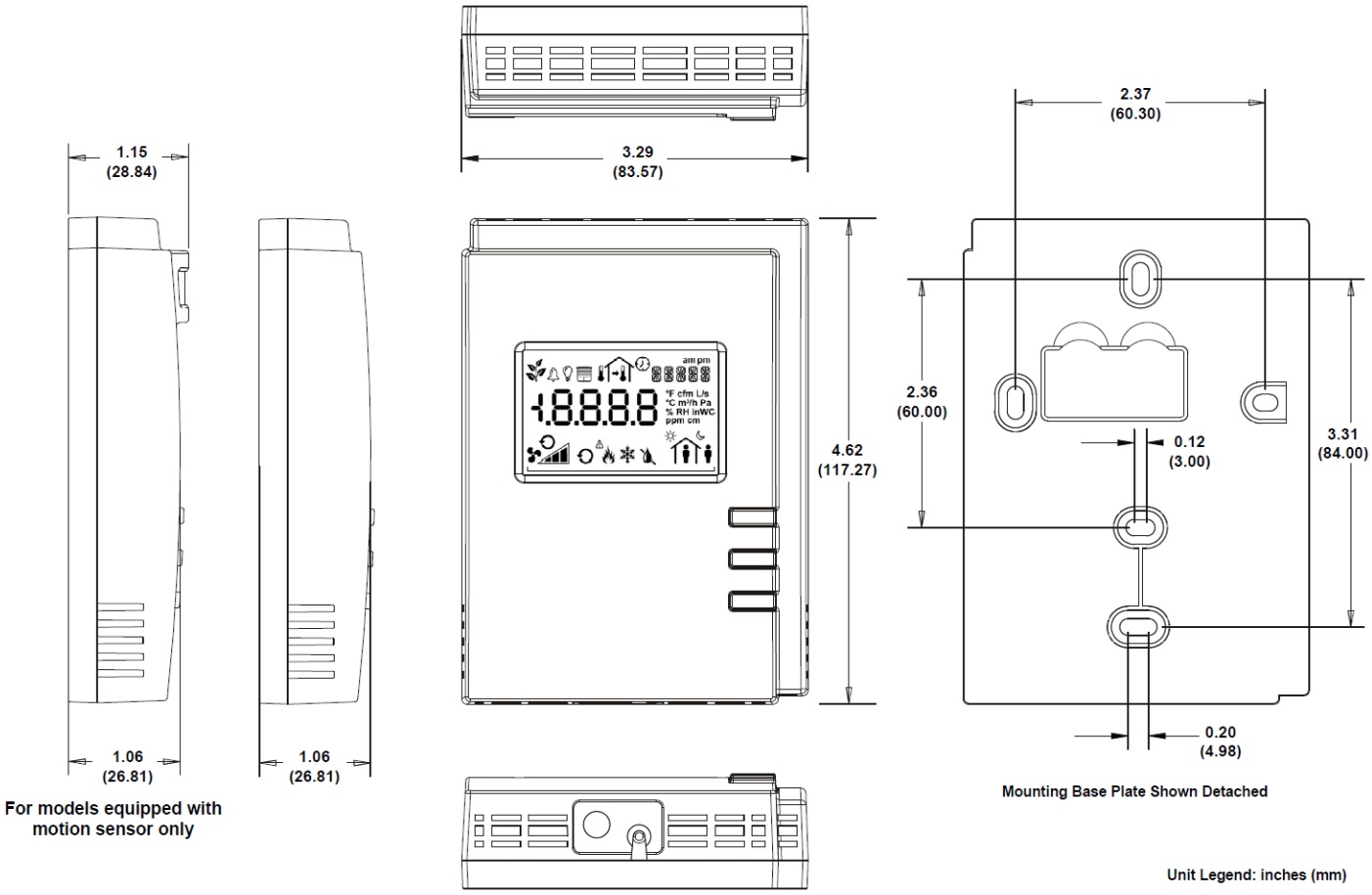
Allure EC-Smart-Vue-C
Distech LCD Display Communicating Sensor
Product Data

Product Dimensions



Product Specifications

General

Part Number:	PDITE-SMRTVUC-00
Voltage:	16Vdc maximum, Class 2
Power:	5.25 VA
LCD Display:	1.85” x 1.18” (47 mm x 30 mm) w/backlight
Operating Temp.:	41°F to 104°F (5°C to 40°C)
Storage Temp.:	-4°F to 122°F (-20°C to 50°C)
Relative Humidity:	0 to 95% Non-condensing
Material:	ABS
Color:	White
Dimensions:	3.29” x 4.62” x 1.06”/1.15” (83.57mm x 117.27mm x 26.81/28.80mm)
Shipping Weight:	0.44 lb (0.2 kg)
Mounting:	Wall mounting through mounting holes (see figure above for hole positions)

Communications

Rate:	38400 bps
Type:	RS-485
Wiring:	Cable length: 600’ (180 m) maximum
Cable Type:	T568B Cat 5e network cable, 4 twisted pairs
Connectors:	IN: RJ-45, OUT: RJ-45 (pass-through for daisy chain connection Network Access Jack: 1/8” (3.5mm) stereo plug connector

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Product Specifications (continued)

Temperature Sensor

Type:	10KΩ NTC Thermistor
Range:	41°F to 104°F (5°C to 40°C)
Accuracy:	±0.9°F; ±0.5°C
Resolution:	0.18°F; 0.1°C

Electromagnetic Compatibility

CE:	EN 61000-6-3:2007 EN 61000-6-1:2007
FCC:	Part 15, subpart B, class B

Agency Approvals

UL Listed:	UL916 Energy management equipment
Material:	UL94V-1

CO_2 Sensor

Measurement Range:	PDITE-SMRTVUCHM-00
Operating Elevation:	16Vdc maximum, Class 2
Warm-up Time:	<2 min. (operational), 10 min. (maximum)
CO2 Accuracy:	400-1250 ppm ±30 ppm or 3% of reading, whichever is greater[1] 1250-2000 ppm ±5% of reading +30 ppm[1]
Temperature Dependence:	0.11% of FS per °F (0.2% per °C)
Stability:	<2% of FS over life of sensor (15 years)
Pressure Dependence:	0.135% of reading per mm Hg; Software adjustable
Sensing Method:	Non-dispersive infrared (NDIR) absorption Gold-plated optics
Calibration Method:	Patented ABC Logic self calibration algorithm

1. Tolerance based on span gas of ±2% and ABC Logic enabled.
2. All materials and manufacturing processes comply with the RoHS directive and are marked according to the Waste Electrical and Electronic Equipment (WEEE) directive.

Product Warranty & Total Quality Commitment

All Distech Controls product lines are built to meet rigorous quality standards and carry a two-year warranty. Distech Controls is an ISO 9001 registered company. Distech Controls' products provide both the contractor and the end user with the flexibility of using “best-of-breed” products in system design.

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Allure EC-Smart-Vue-CH
Distech LCD Display Communicating Sensor
Product Data

Product Description

The Allure EC-Smart-Vue-CH is specifically designed to interface with Distech Controls' ECL and ECB controllers. This communicating sensor with backlit display provides precision local temperature, humidity, and CO2 sensing, displays system status, and provides a variety of control functions that can be accessed by room occupants.

The innovative ECO-Vue™ leaf pattern, graphically indicates energy consumption in real time to promote an occupant's energy-conscious behavior. The more leaves appear in the LCD display, the more energy efficiency is being achieved, while less leaves encourages the occupant to take corrective action to optimize the system's environmental performance.

Through its user-friendly interface, occupants can view and adjust environmental settings to their liking, for example, view the space temperature, outside air temperature, occupancy status, adjust the setpoint and apply occupancy overrides.

The Allure EC-Smart-Vue can be customized using the EC-gfxProgram tool where you can fully adapt the display for the targeted application and setup.

A fully configurable password protected technician mode allows an installer to perform commissioning and troubleshooting. When connected to an ECB-VAV or ECL-VAV series controller with its pre-loaded application, commissioning can start immediately after installation. The Allure EC-Smart-Vue sensor can be used as a hand-held tool to select the appropriate controller application for the type of HVAC equipment to be controlled, to perform air balancing of the system without requiring an onsite controls engineer, and to troubleshoot the system.

Product Features

- "4-in-1" communicating sensors—one wire, one connection, four (4) sensing capabilities (temperature, humidity, CO2, and motion).
- Encourage occupants to have greener habits with the ECO-Vue icon while reducing energy costs.
- Commission VAV controllers immediately after installation by selecting the built-in controller application and performing system air balancing with the Allure EC-Smart-Vue sensor to get the HVAC system up and running right away.
- Occupants can override the HVAC mode and view and adjust the setpoint and fan speed for improved personal comfort.
- Slim, compact style, and clean lines are well received by architects and building owners.
- Clear and bright LCD display provides real-time access to temperature and other system information such as setpoint, occupancy status, HVAC mode, etc.
- Both power and communications pass through a single Cat 5e cable for reduced installation costs and for easier installation or system retrofit.
- The patented ABC Logic self-calibration system eliminates the need for manual CO2 calibration in most applications.
- Lifetime CO2 calibration guaranteed when using ABC Logic.

Product Applications

Zone control for Absolute comfort:

- Precise environmental control
- Occupancy override allows the system to adjust to individual needs

Related Products

- ECL Series LonWorks Controllers
- ECB Series BACnet Controllers

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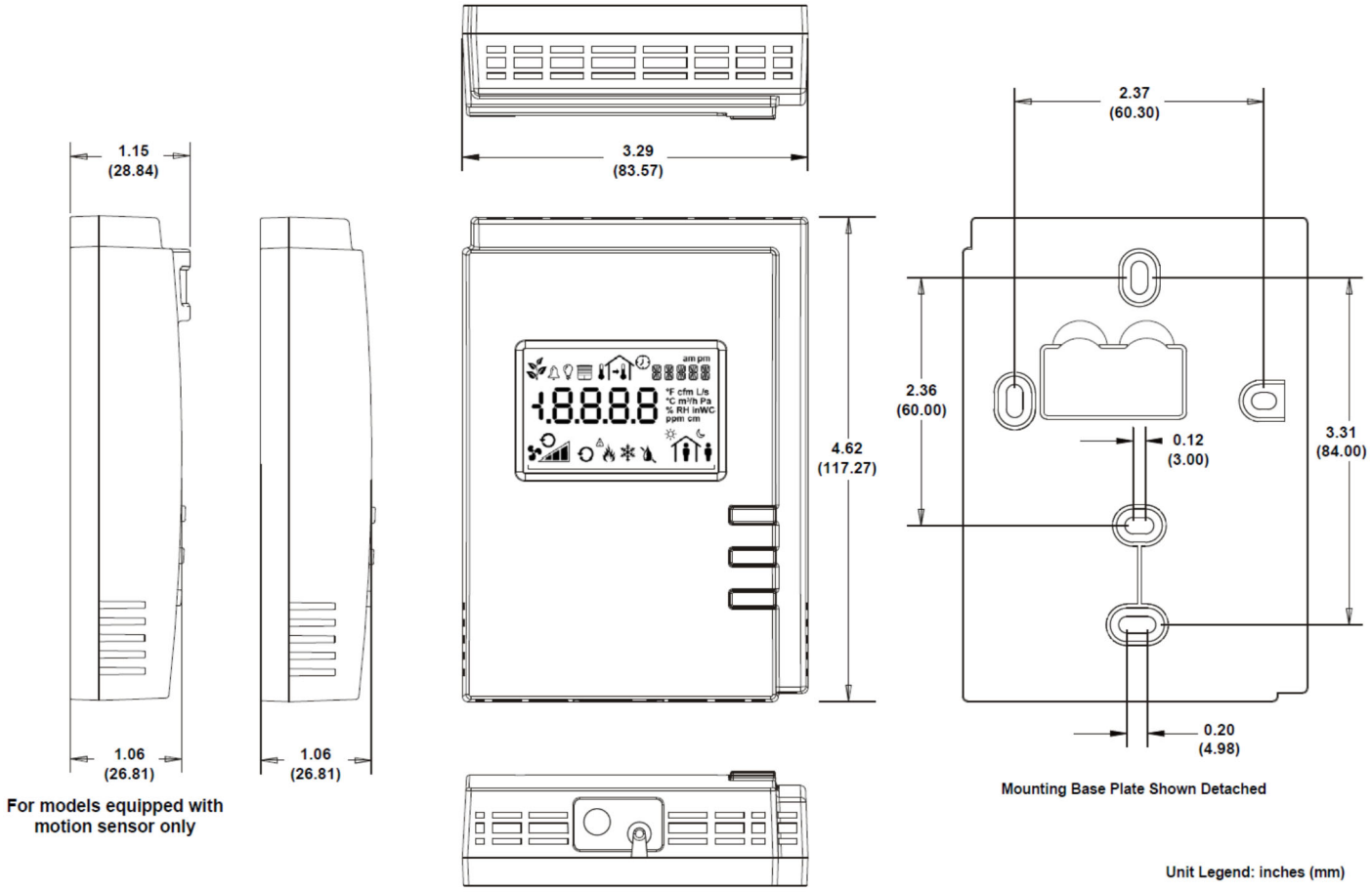
Allure EC-Smart-Vue-CH
Distech LCD Display Communicating Sensor — Product Data

Product Dimensions



Product Specifications

General

Part Number:	PDITE-SMRTVUCH-00
Voltage:	16Vdc maximum, Class 2
Power:	5.25 VA
LCD Display:	1.85” x 1.18” (47 mm x 30 mm) w/backlight
Operating Temp.:	41°F to 104°F (5°C to 40°C)
Storage Temp.:	-4°F to 122°F (-20°C to 50°C)
Relative Humidity:	0 to 95% Non-condensing
Material:	ABS
Color:	White
Dimensions:	3.29” x 4.62” x 1.06”/1.15” (83.57mm x 117.27mm x 26.81/28.80mm)
Shipping Weight:	0.44 lb (0.2 kg)
Mounting:	Wall mounting through mounting holes (see figure above for hole positions)

Communications

Rate:	38400 bps
Type:	RS-485
Wiring:	Cable length: 600’ (180 m) maximum
Cable Type:	T568B Cat 5e network cable, 4 twisted pairs or 4 conductor twisted shielded-pair cable
Connectors:	IN: RJ-45, OUT: RJ-45 (pass-through for daisy chain connection IN: Screw terminals (optional) Network Access Jack: 1/8” (3.5mm) stereo plug connector

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Product Specifications (continued)

Temperature Sensor

Type:	10KΩ NTC Thermistor
Range:	41°F to 104°F (5°C to 40°C)
Accuracy:	±0.9°F; ±0.5°C
Resolution:	0.18°F; 0.1°C

CO_2 Sensor

Measurement Range:	0-2000 ppm
Operating Elevation:	0-16000 ft (4877 m)
Warm-up Time:	<2 min. (operational), 10 min. (maximum accuracy)
CO2 Accuracy:	400-1250 ppm ±30 ppm or 3% of reading, whichever is greater[1] 1250-2000 ppm ±5% of reading +30 ppm[1]
Temperature Dependence:	0.11% of FS per °F (0.2% per °C)
Stability:	<2% of FS over life of sensor (15 years)
Pressure Dependence:	0.135% of reading per mm Hg; Software adjustable
Sensing Method:	Non-dispersive infrared (NDIR) absorption Gold-plated optics
Calibration Method:	Patented ABC Logic self calibration algorithm

Humidity Sensor

Accuracy:	±3%
Resolution:	1%

Agency Approvals

UL Listed:	UL916 Energy management equipment
Material:	UL94V-1

Electromagnetic Compatibility

CE:	EN 61000-6-3:2007 EN 61000-6-1:2007
FCC:	Part 15, subpart B, class B

1. Tolerance based on span gas of ±2% and ABC Logic enabled.
2. All materials and manufacturing processes comply with the RoHS directive and are marked according to the Waste Electrical and Electronic Equipment (WEEE) directive.

Product Warranty & Total Quality Commitment

All Distech Controls product lines are built to meet rigorous quality standards and carry a two-year warranty. Distech Controls is an ISO 9001 registered company. Distech Controls' products provide both the contractor and the end user with the flexibility of using “best-of-breed” products in system design.

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Allure™ EC-Smart-Air Series

Communicating sensors

Overview

The Allure EC-Smart-Air communicating sensors combine a precise environmental sensing in a discrete and alluring enclosure: temperature, humidity and CO_2.

Applications

The Allure EC-Smart-Air sensor series is compatible with the ECL series LonWorks® Controllers, ECB series BACnet® Controllers and ECLYPSE™ series BACnet/IP and Wi-Fi Controllers, including the Smart Room Control solution.

Features & Benefits

Installation and Servicing Cost Savings

Free up controller inputs

The Allure EC-Smart-Air sensor is wired to the dedicated subnet port of ECL series LonWorks Controllers, ECB series BACnet Controllers and ECLYPSE series BACnet/IP and Wi-Fi Controllers, freeing up controllers' inputs.

Reduce wiring lengths

Daisy-chain Allure EC-Smart-Air communicating sensors to one controller for increased range while using less wire thereby reducing material costs in large open space and in multi zone applications.

One cable for fast and reliable wiring

As a communicating sensor, both power and communications pass through a single Cat 5e cable, for reduced installation costs and for easier installation or system retrofit.

Quick-link connectors

The EC-Smart-Air features quick link connectors, accelerating installation time by up to 75% and reducing potential wiring errors.

Versatile mounting

The Allure EC-Smart-Air sensor supports various mounting scenarios, including on dry wall or on a North American, European, Swiss, or Asian style switch box.

Save commissioning time

The Allure EC-Smart-Air is simple to configure and to commission: simply drag and drop the sensor's block into your EC-*gfx*Program code, for a plug-and-play installation.

ABC Logic self-calibration system

The patented ABC Logic self-calibration system eliminates the need for manual CO_2 calibration in most applications.

ABC Logic guarantees lifetime CO_2 calibration.

Air Quality and Optimised Energy Efficiency.

Temperature sensing

All models come with an on-board temperature sensor for a precise feedback based temperature control.

Humidity sensing

Optimize the occupants' well-being by measuring the current relative humidity to maintain an ideal level for comfort.

CO_2 sensing

Achieve energy efficiency with a CO_2 sensor as a part of the demand-controlled ventilation strategy that adjusts the amount of outdoor air intake.

Model Selection

	Temperature	Humidity	CO_2
Allure EC-Smart-Air	■		
Allure EC-Smart-Air-H	■	■	
Allure EC-Smart-Air-C	■		■
Allure EC-Smart-Air-CH	■	■	■

Product Specifications

Power Supply Input

Voltage	16 VDC maximum, Class 2
Power Consumption	At the connected controller, an additional 0.5 VA per CO_2 sensor model (peak consumption: 1.5 VA) and 0.25 VA per non-CO_2 sensor model

Communications

Rate	38 400 bps
Communications	RS-485
Wiring	Cable length: 180 m (600 ft) maximum
Cable Type	T568B Cat 5e network cable, 4 twisted pairs
Connectors	
▫ IN	RJ-45
▫ OUT	RJ-45 (pass-through for daisy chain connection to other room devices)

Sensors

Temperature Sensor

▫ Type	10 kΩ NTC Thermistor
▫ Range	5°C to 40°C; 41°F to 104°F
▫ Accuracy	± 0.5°C; ± 0.9°F
▫ Resolution	0.1°C; 0.18°F

Humidity Sensor

▫ Accuracy	± 3%
▫ Resolution	1%

CO_2 Sensor

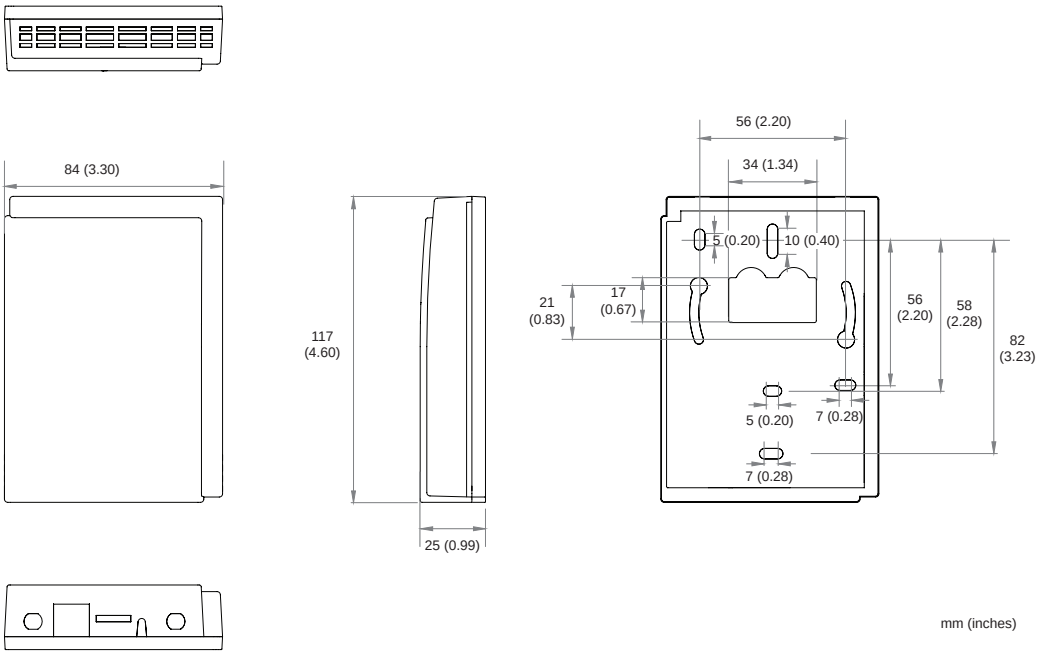
▫ Measurement Range	0 to 2000 ppm
▫ Operating Elevation	0 to 16000 ft (4877 m)
▫ Warm-up Time	< 2 minutes (operational), 10 minutes (maximum accuracy)
▫ CO_2 Accuracy	400-1250 ppm ± 30 ppm or 3% of reading, whichever is greater 1250-2000 ppm ± 5% of reading + 30 ppm[1]
▫ Temperature Dependence	0.2% FS per °C (± 0.11% per °F)
▫ Stability	< 2% of FS over life of sensor (15 years)
▫ Pressure Dependence	0.135% of reading per mm Hg; software adjustable
▫ Sensing Method	Non-dispersive infrared (NDIR) absorption, Gold-plated optics
▫ Calibration Method	Patented ABC Logic self-calibration algorithm

Environmental

Operating Temperature	5ºC to 40ºC (41ºF to 104°F)
Storage Temperature	-20ºC to 50ºC (-4ºF to 122ºF)
Relative Humidity	0 to 95% Non-condensing
Ingress Protection Rating	IP20
Nema Rating	1

Mechanical

Dimensions — 84 × 117 × 25 mm (3.30 W × 4.60 H × 0.99” D)



Mounting — Dry wall or switch box (North American / European / Asian / Swiss)
Enclosure Material[1] — ABS
Enclosure Rating — Plastic housing, UL94-V0 flammability rating

1. All materials and manufacturing processes comply with the RoHS directive and are marked according to the Waste Electrical and Electronic Equipment (WEEE) directive.

Standards and Regulations

CE:

- Emission — IEC61000-6-3: 2006 + A1: ed.2010 Generic standards for residential, commercial and light-industrial environments
- Immunity — IEC61000-6-1: 2005; Generic standards for residential, commercial and light-industrial environments

UL Listed (CDN & US): *(Pending)*

- UL 916 — Safety Requirements For Energy Management Equipment
- CSA C22.2 No. 205-12 — Safety Requirements For Signal Equipement
- File number — E228719

FCC — This device complies with FCC rules part 15, subpart B, class B

Product Description

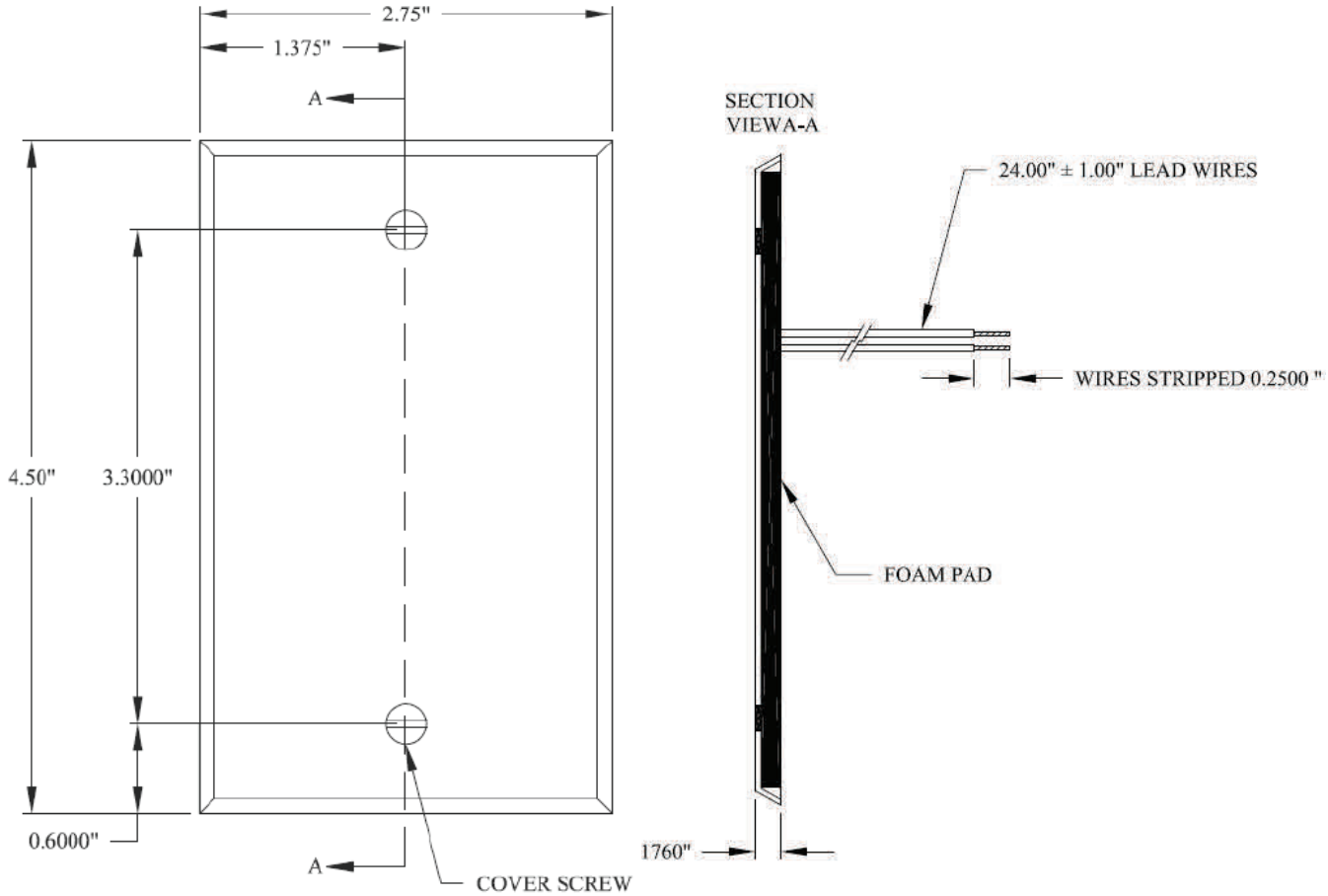
The A/CP-SP is a stainless steel flat plate thermistor type temperature sensor. Thermistors offer high accuracy and interchangeability over a wide temperature range. The thermistor's high resistance relative to Platinum RTD's creates a larger signal with the same measuring current, negating most lead wire resistance problems and eliminating the need for signal conditioners.

MADE IN USA

Product Specifications

Output:	10,000 Ohm @ 77°F (25°C), Type 2
Temperature Range:	-40 to 302°F (-40 to 150°C)
Interchangeability:	+/-0.2°C (0 to 70°C)
Dissipation Constant:	3 mW/°C
Accuracy:	+/-0.2°C (0 to 70°C)
Operating Humidity:	10 to 90% RH non-condensing

Product Dimensions



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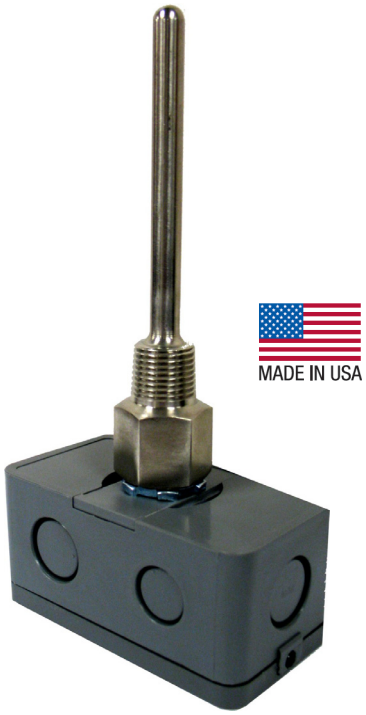
Product Description

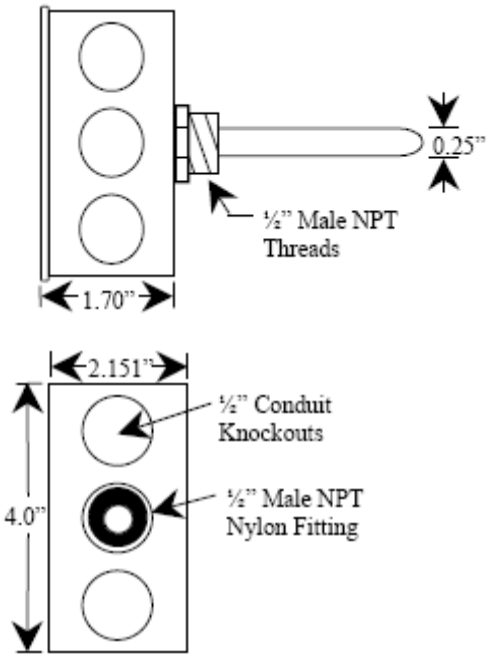
The A/CP-I-4-PB is an immersion thermistor type temperature sensor. Thermistors offer high accuracy and interchangeability over a wide temperature range. The thermistor's high resistance relative to Platinum RTD's creates a larger signal with the same measuring current, negating most lead wire resistance problems and eliminating the need for signal conditioners.

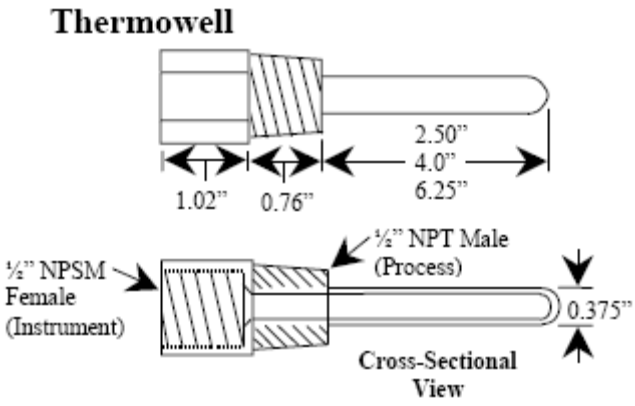


Product Specifications

Output:	10,000 Ohm @ 77°F (25°C), Type 2
Temperature Range:	-40 to 302°F (-40 to 150°C)
Interchangeability:	+/-0.2°C (0 to 70°C)
Dissipation Constant:	3 mW/°C
Accuracy:	+/-0.2°C (0 to 70°C)
Operating Humidity:	10 to 90% RH non-condensing

Product Dimensions





Specifications are subject to change without notice.

Website: www.jacksonsystems.com
E-mail: info@jacksonsystems.com
5418 Elmwood Avenue
Indianapolis, IN 46203-6025
Toll-Free: 888.652.9663
Fax: 317.227.1034

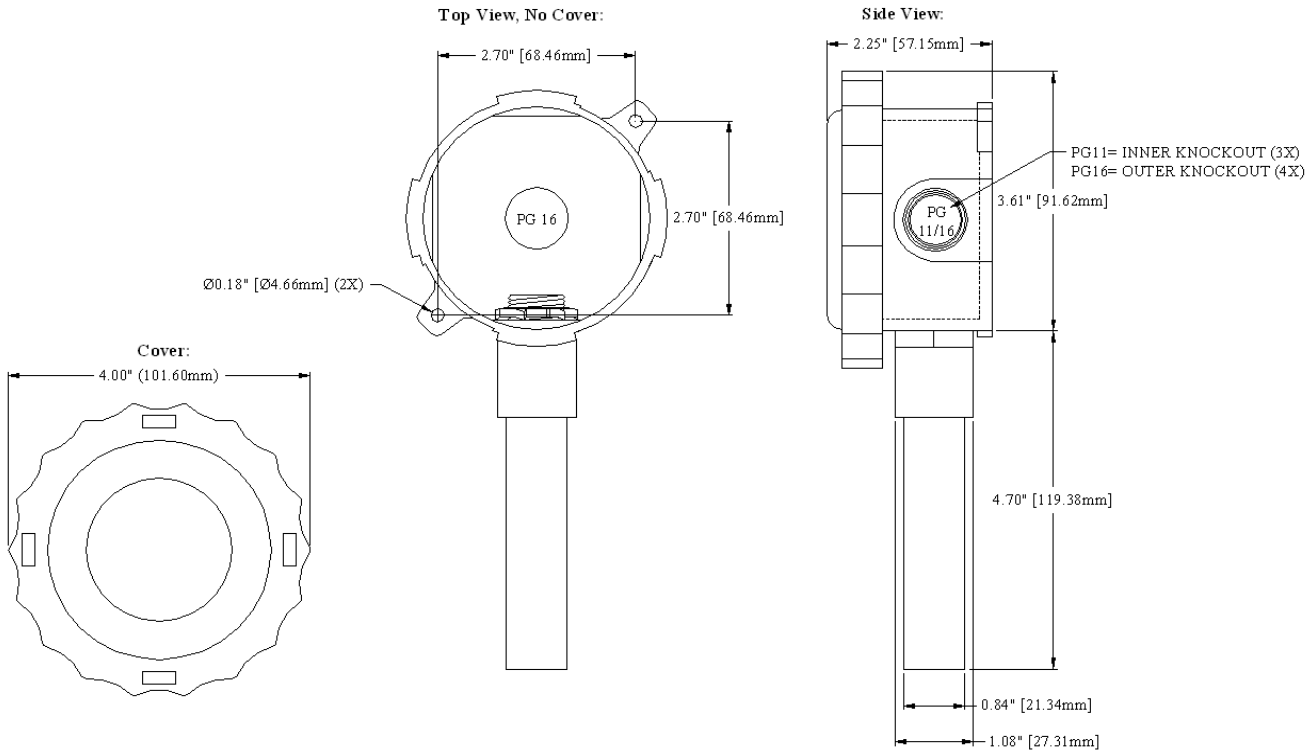
Product Description

The A/CP-O is an outdoor mounted thermistor type temperature sensor. Thermistors offer high accuracy and interchangeability over a wide temperature range. The thermistor's high resistance relative to Platinum RTD's creates a larger signal with the same measuring current, negating most lead wire resistance problems and eliminating the need for signal conditioners.

Product Specifications

Output:	10,000 Ohm @ 77°F (25°C), Type 2
Temperature Range:	-40 to 302°F (-40 to 150°C)
Interchangeability:	+/-0.2°C (0 to 70°C)
Dissipation Constant:	3 mW/°C
Accuracy:	+/-0.2°C (0 to 70°C)
Operating Humidity:	0 to 90% RH non-condensing

Product Dimensions



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Humidity/Temperature Combination Sensors

A/RH3-CP-O
Product Data

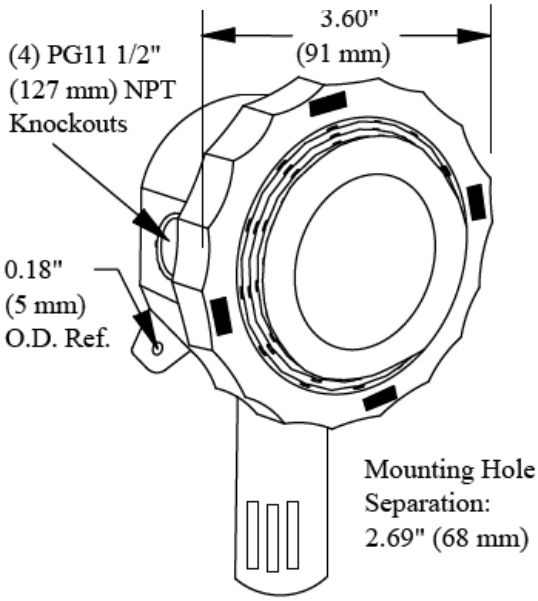
Product Description

The A/RH3-CP-O is an outdoor relative humidity transmitter with a 10,000 Ohm type 2 thermistor. It converts a resistance to a linear 4 to 20 mA, 0 to 5 VDC, or 0 to 10 VDC output. The current signal may be transmitted over long distances on unshielded twisted-pair wire and will not be affected by the lead wire resistance or electrical noise. The Advanced Ceramic Technology design overcomes the limitations of other resistance-based humidity sensors that utilize water soluble polymer coatings. The Advanced Ceramic Technology enables these sensors to recover fully from condensation. This allows the sensor to maintain its accuracy over a longer period of time. Despite its accuracy, the Advanced Ceramic Technology sensor and related circuitry is economical. Accuracy is maintained over the entire operating range, using a thermistor for temperature compensation.

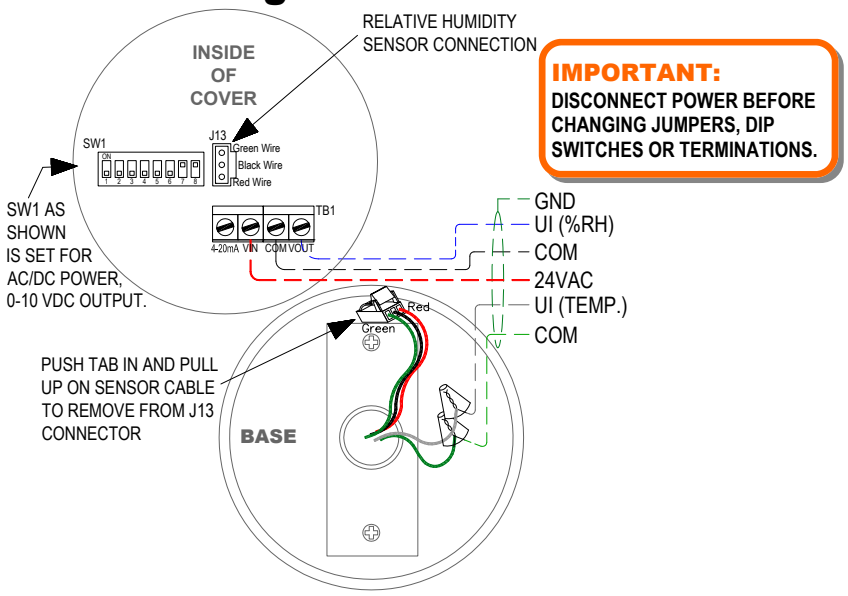
Product Specifications

Supply Voltage:	250 Ohm Load: +15 to 36 Vdc / 24 Vac 500 Ohm Load: +18 to 36 Vdc / 24 Vac
Power Consumption:	1 VA max.
RH Measurement Range:	0 to 100% RH
RH Output Signal:	2-wire; 4 to 20mA, 3-wire; 0 to 5 or 0 to 10 Vdc
Temperature Sensor Output:	2-wire, 10,000 Ohm Type 2 thermistor
Accuracy @ 77°F (25°C):	+/- 1% over 20% Span between 20 to 95% RH
Repeatability:	0.5% RH
Hysteresis:	Less than 0.4% RH
Long Term Stability:	Less than 2% RH Drift / 5 Years
Response Time:	110 seconds for 63% Step
Saturated Response Time:	10 minutes for 63% Step
Operating Temperature Range:	-10 to 122°F (-23.3 to 50°C)
Operating RH Range:	0 to 100% RH

Product Dimensions



Product Wiring



IMPORTANT:
DISCONNECT POWER BEFORE CHANGING JUMPERS, DIP SWITCHES OR TERMINATIONS.

Specifications subject to change without notice

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A/CP-A-24'-PB
Product Data

Product Description

The A/CP-A-24'-PB is a 24' duct averaging thermistor type temperature sensor. Thermistors offer high accuracy and interchangeability over a wide temperature range. The thermistor's high resistance relative to Platinum RTD's creates a larger signal with the same measuring current, negating most lead wire resistance problems and eliminating the need for signal conditioners.

Product Specifications

Output: 10,000 Ohm @ 77°F (25°C), Type 2
Temperature Range: -40 to 302°F (-40 to 150°C)
Interchangeability: +/-0.2°C (0 to 70°C)
Dissipation Constant: 3 mW/°C
Accuracy: +/-0.2°C (0 to 70°C)
Operating Humidity: 10 to 90% RH non-condensing

Product Dimensions

End View:

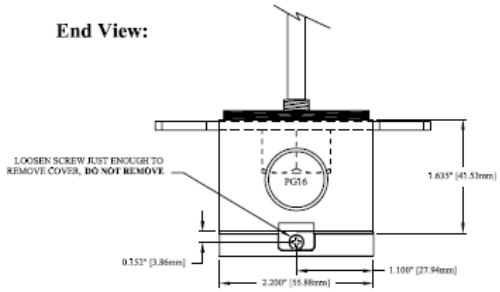
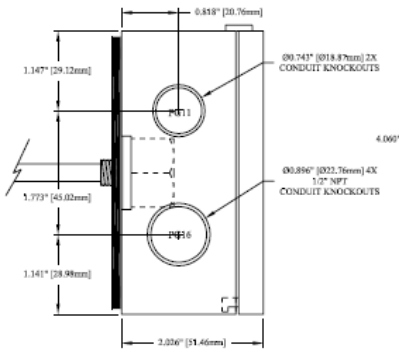


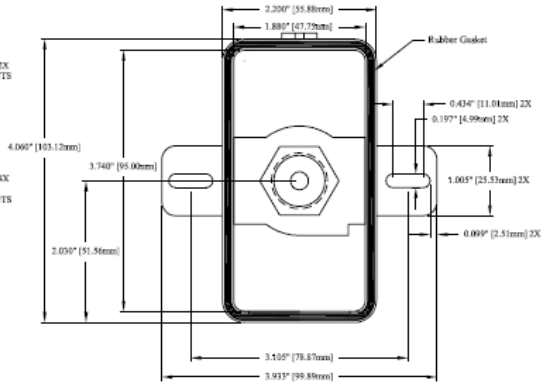
TABLE A

Standard Copper Averaging Lengths	Ref A (Insertion Length)
8'	8.0' ± 5.0"
12'	12.0' ± 5.0"
24'	24.0' ± 5.0"

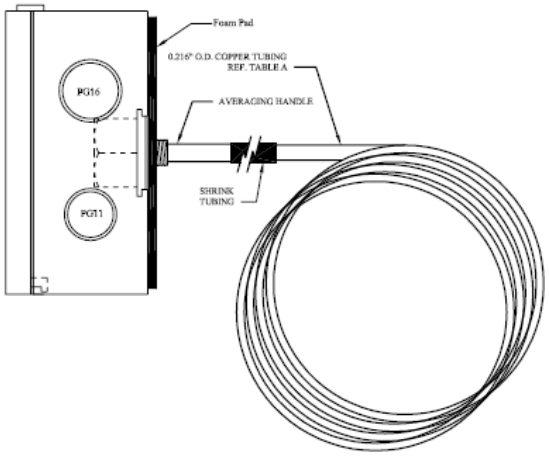
Left Side View:



Top View, No Cover:



Right Side View:



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A/CP-BP-6'-CLL2
Product Data

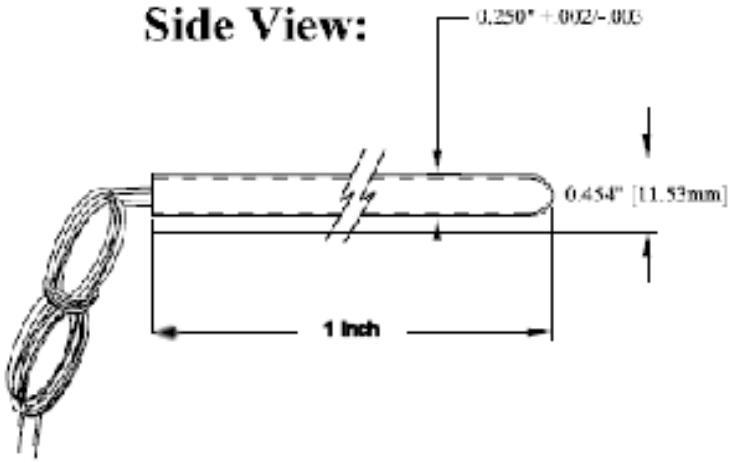
Product Description

The A/CP-BP-6'-CLL2 is a 1" bullet thermistor type temperature sensor with a 6' cable. Thermistors offer high accuracy and interchangeability over a wide temperature range. The thermistor's high resistance relative to Platinum RTD's creates a larger signal with the same measuring current, negating most lead wire resistance problems and eliminating the need for signal conditioners.

Product Specifications

Output:	10,000 Ohm @ 77°F (25°C), Type 2
Temperature Range:	-40 to 302°F (-40 to 150°C)
Interchangeability:	+/-0.2°C (0 to 70°C)
Dissipation Constant:	3 mW/°C
Accuracy:	+/-0.2°C (0 to 70°C)
Operating Humidity:	10 to 90% RH non-condensing

Product Dimensions



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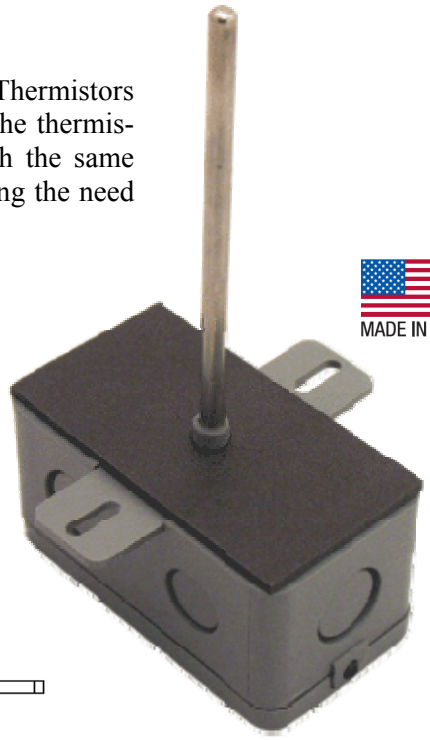
A/CP-D-8-PB
Product Data

Product Description

The A/CP-D-8-PB is an 8" duct probe thermistor type temperature sensor. Thermistors offer high accuracy and interchangeability over a wide temperature range. The thermistor's high resistance relative to Platinum RTD's creates a larger signal with the same measuring current, negating most lead wire resistance problems and eliminating the need for signal conditioners.

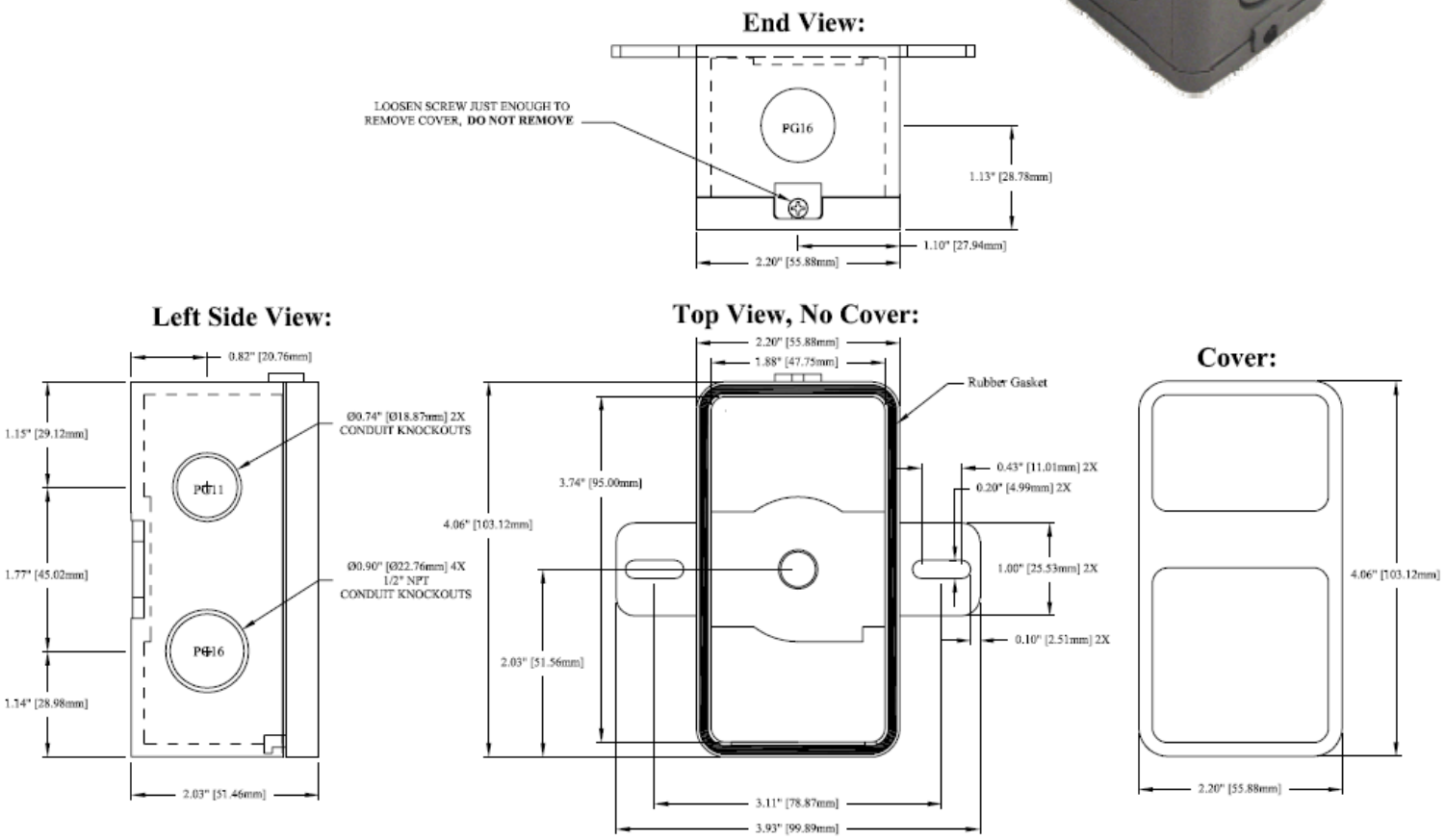


MADE IN USA

Product Specifications

Output:	10,000 Ohm @ 77°F (25°C), Type 2
Temperature Range:	-40 to 302°F (-40 to 150°C)
Interchangeability:	+/-0.2°C (0 to 70°C)
Dissipation Constant:	3 mW/°C
Accuracy:	+/-0.2°C (0 to 70°C)
Operating Humidity:	10 to 90% RH non-condensing

Product Dimensions



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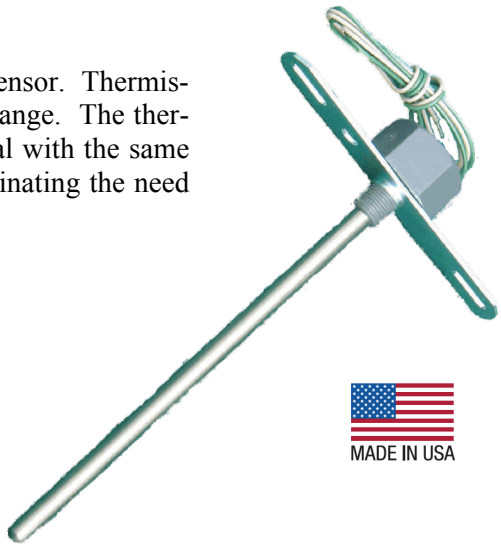
A/CP-DO-4-6 CL2P
Product Data

Product Description

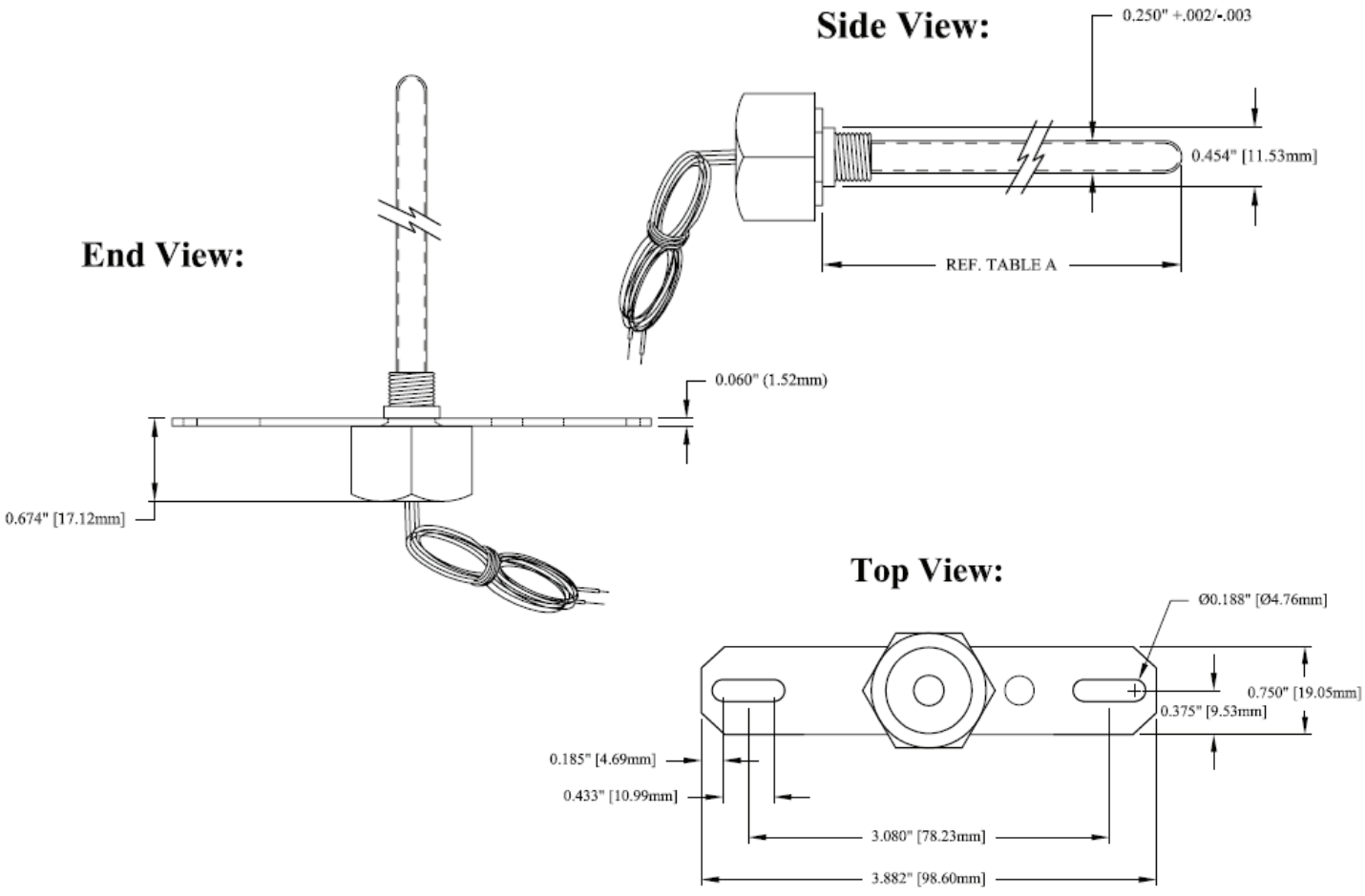
The A/CP-DO-4-6 CL2P is a 4” duct probe thermistor type temperature sensor. Thermistors offer high accuracy and interchangeability over a wide temperature range. The thermistor’s high resistance relative to Platinum RTD’s creates a larger signal with the same measuring current, negating most lead wire resistance problems and eliminating the need for signal conditioners.



Product Specifications

Output: 10,000 Ohm @ 77°F (25°C), Type 2
Temperature Range: -40 to 302°F (-40 to 150°C)
Interchangeability: +/-0.2°C (0 to 70°C)
Dissipation Constant: 3 mW/°C
Accuracy: +/-0.2°C (0 to 70°C)
Operating Humidity: 10 to 90% RH non-condensing

Product Dimensions



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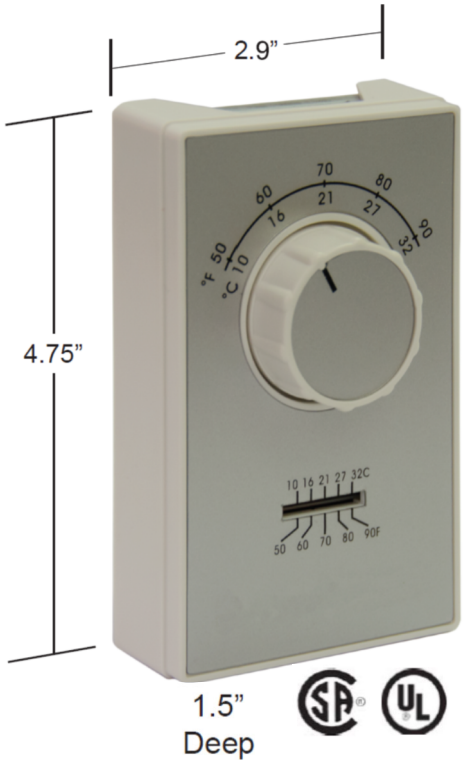
Product Description

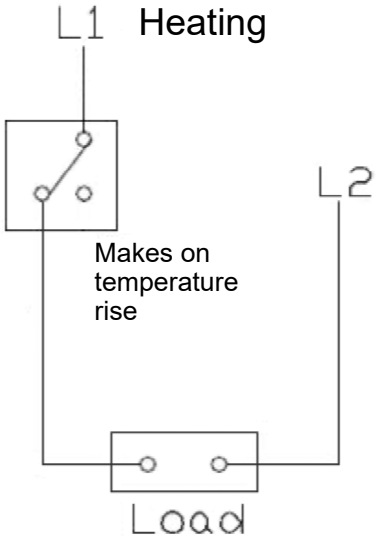
The ETD9STS is a heating/cooling line voltage thermostat for controlling ventilation equipment.

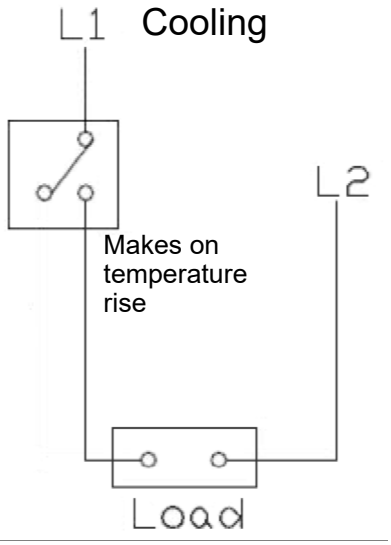


Product Specifications

Output:	SPDT contact
Contact Rating (Voltage):	120-277 Vac
Contact Rating (Current):	22 Amps, Resistive Max.
Motor HP Rating:	3/4HP @ 125 Vac; 1-1/2HP @ 250/277 Vac
Connections:	Screw terminals
Set-point Range:	50 to 90°F (10 to 32°C)
Rated Differential:	2 to 4°F
Housing Size:	4.75"H x 2.9"W x 1.5"D
Housing Materials:	Molded plastic
Color:	Off white
Agency Approvals:	CSA and UL Listed

Product Wiring





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A19 Series

Remote Bulb Control

Description

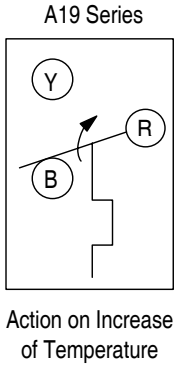
The A19 Series are single-stage temperature controls that incorporate environmentally friendly liquid-filled sensing elements.

Features

- wide temperature ranges available
- constant differential throughout the entire range
- compact enclosure
- fixed or adjustable differential available
- variety of sensing element styles
- unaffected by cross-ambient conditions

Applications

The A19 is suitable for temperature control in heating, ventilating, air conditioning, and refrigeration.



A19 Series
Terminal Arrangement for SPDT

A19ABC-24

Selection Charts

A19 Series Remote Bulb Control[1]

Code Number	Switch Action	Range °F (°C)	Diff F° (C°)	Bulb and Capillary	Bulb Well No. (order separately)	Range Adjuster	Max. Bulb Temp. °F (°C)
Adjustable Differential (Wide Range)							
A19ABA-40C [2]	SPST Open Low	-30 to 100 (-34 to 38)	3 to 12 (1.7 to 6.7)	3/8 in. x 4 in., 6 ft. Cap.	WEL14A-602R	Screwdriver Slot	140 (60)
A19ABC-4C	SPDT	50 to 130 (10 to 55)	3 1/2 to 14 (1.9 to 8)	3/8 in. x 5 in., 8 ft. Cap.	WEL14A-603R	Knob	170 (77)
A19ABC-24C [3]	SPDT	-30 to 100 (-34 to 38)	3 to 12 (1.7 to 6.7)	3/8 in. x 4 in., 8 ft. Cap.	WEL14A-602R	Convertible	140 (60)
A19ABC-36C	SPDT	-30 to 100 (-34 to 38)	3 to 12 (1.7 to 6.7)	3/8 in. x 4 in., 20 ft. Cap.	WEL14A-602R	Convertible	140 (60)
A19ABC-37C	SPDT	-30 to 100 (-34 to 38)	3 to 12 (1.7 to 6.7)	3/8 in. x 4 in., 10 ft. Cap.	WEL14A-602R	Screwdriver slot	140 (60)
A19ABC-74C	SPDT	-30 to 100 (-34 to 38)	3 to 12 (1.7 to 6.7)	3/8 in. x 4 in., 6 ft. Cap.	WEL14A-602R	Screwdriver slot	140 (60)
Fixed Differential							
A19AAF-12C	SPDT	25 to 225 (-4 to 107)	3 1/2 (1.9)	3/8 in. x 3 in., 10 ft. Cap.	WEL14A-602R	Screwdriver slot	275 (135)
Fixed Differential (Case Compensated)							
A19AAC-4C	SPDT	0 to 80 (-18 to 27)	5 (2.8)	3/8 in. x 4 in., 6 ft. Cap.	WEL14A-602R	Screwdriver slot	140 (60)
A19AAD-12C	SPST Open Low	-30 to 50 (-34 to 10)	2 1/2 (1.4)	3/8 in. x 4 in., 7 ft. Cap.	WEL14A-602R	Screwdriver slot	140 (60)
Fixed Differential (Close)							
A19AAD-5C [4]	SPST Open Low	30 to 50 (-1 to 10) (**Bulk Milk Cooler**)	2 1/2 (1.4)	3/8 in. x 2 5/8 in., 6 ft. Cap.	WEL16A-601R	Screwdriver slot	190 (88)
A19AAF-20C	SPDT	-30 to 100 (-34 to 38)	2 1/2 (1.4)	3/8 in. x 4 in., 6 ft. Cap.	WEL14A-602R	Screwdriver slot	140 (60)
A19AAF-21C	SPDT	40 to 90 (4 to 32)	1 1/2 (0.8)	3/8 in. x 5 3/4 in., 6 ft. Cap.	WEL14A-603R	Screwdriver slot	140 (60)
Manual Reset							
A19ACA-14C	SPST Open Low	-30 to 100 (-34 to 38)	Manual Reset	3/8 in. x 4 in. 6 ft .Cap.	WEL14A-602R	Screwdriver slot	140 (60)
A19ACA-15C	SPST Open Low	-30 to 100 (-34 to 38)	Manual Reset	3/8 in. x 4 in. 10 ft. Cap.	WEL14A-602R	Screwdriver slot	140 (60)
A19ADB-1C	SPST Open High	100 to 240 (38 to 116)	Manual Reset	3/8 in. x 3 1/2 in. 6 ft. Cap.	WEL14A-602R	Knob	290 (143)
A19ADN-1C	SPST Open High	100 to 240 (38 to 116)	Manual Reset	3/8 in. x 4 in. 6 ft. Cap.	WEL14A-602R	Screwdriver slot	290 (143)

1. Specify the control model code number, packing nut code number (if required), and bulb well code number (if required).
2. Replaces White-Rodgers 1609-101
3. Replaces White-Rodgers 1609-12, -13; Ranco 010-1408, -1409, - 1410, -1490, 060-110; Honeywell L6018C-1006, L6021A-1005, T675A-1011, -1508, -1516, -1821, T4301A-1008, T6031A-1011, T6031A-1029
4. Case-Compensated

 www.johnsoncontrols.com

Remote Bulb Control (Continued)

Selection Charts (Continued)

Replacement Parts

Code Number	Description
CVR28A-617R	Concealed adjustment cover
CVR28A-618R	Visible scale cover
KNB20A-602R	Replacement Knob Kit

Accessories

A packing nut is available for closed tank application.
Specify the part number **FTG13A-600R**.

Bulb wells (WEL14A Series) are available for liquid immersion applications.
Refer to the selection chart or to *Bulb Wells Catalog Page, LIT-1922135*.

Technical Specifications

Electrical Ratings

Motor Ratings VAC	120	208	240
Wide Range – Adjustable Differential			
AC Full Load A	16.0	9.2	8.0
AC Locked Rotor A	96.0	55.2	48.0
Non-Inductive A [1]	22 A, 120 to 277 VAC		
Pilot Duty – 125 VA, 24 to 600 VAC			
Fixed Differential and Close Differential			
AC Full Load A	6.0	3.4	3.0
AC Locked Rotor A	36.0	20.4	18.0
Non-Inductive A	10 A, 24 to 277 VAC		
Pilot Duty – 125 VA, 24 to 277 VAC			
Case Compensated – Fixed Differential A19AAC-4			
AC Full Load A	16.0	9.2	8.0
AC Locked Rotor A	96.0	55.2	48.0
Non-Inductive A [1]	22 A, 120 to 277 VAC		
Pilot Duty – 125 VA, 24 to 600 VAC			
A19AAD-12			
AC Full Load A	6.0	3.4	3.0
AC Locked Rotor A	36.0	20.4	18.0
Non-Inductive A	10 A, 24 to 277 VAC		
Pilot Duty – 125 VA, 24 to 277 VAC			
Manual Reset			
AC Full Load A	16.0	9.2	8.0
AC Locked Rotor A	96.0	55.2	48.0
Non-Inductive A	16.0	9.2	8.0
Pilot Duty – 125 VA, 24 to 600 VAC			

1. SPST and N.O. contact of SPDT control;
SPDT N.C. contact- 16 amps 120 to 277 VAC

Product Description

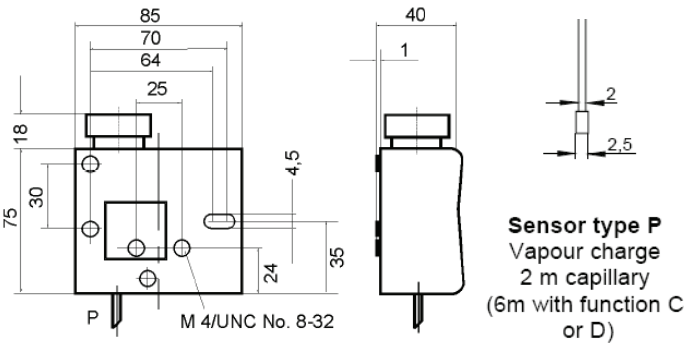
The TS1-C0P is an automatic reset low limit controller. This device is designed for use on HVAC equipment requiring low-temperature cutout protection.

The TS1-C0P is responsive to the lowest temperature sensed along any 1 foot section of 20' capillary element. Set-point is visible through the front cover and is adjustable from the top of the controller case. The sensing element is a tin-plated, vapor-filled, copper capillary tube measuring 5/64 in. in diameter (2mm) with an overall length of 20' (6096mm). A test lever is used for manual operation during checkout.

Product Specifications

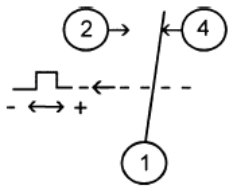
Sensing Element:	20 foot, Vapor filled, tin-plated, copper capillary tube
Output:	SPDT automatic reset
Contact Rating (Inductive):	24 A @ 120 Vac F.L.A., 144 A @ 120 Vac L.R.A.
Contact Rating (HP):	2 HP @ 120 Vac, 3 HP @ 240 Vac
Contact Rating (Pilot Duty):	720 VA max. @ 120 - 600 Vac, 144 VA max. @ 24 Vac
Contact Material:	$CuAg^3$
Set-point Range:	35 to 68°F (2 to 20°C) field adjustable
Set-point Differential:	4.5°F (2.5°C), fixed
Operating Temp. Range:	-60 to 160°F (-51 to 71°C)
Sensing Element Max. Temp.:	300 °F (149 °C)
Housing Materials:	Polycarbonate cover / steel, yellow chromated frame
Protection EN 60529/IEC 529:	IP44 (w/o off-switch), IP30 (with off-switch)
Agency Approvals:	UL/CUL file number E85974, VDE 0631/0660, TÜV,

Product Dimensions (mm)



Sensor type P
Vapour charge
2 m capillary
(6m with function C or D)

Product Wiring



TS1-DOP/COP
SWITCH ACTION ON DECREASE IN TEMPERATURE
(Contact 1 to 4 Opens;
Contact 1 to 2 Closes)

BELIMO

Technical data sheet 01DTS-5..

Low Temperature Detection Sensor

For monitoring the temperatures of water/air heaters in ventilation and air-conditioning systems to prevent frost damage to the cooling registers. Manual or automatic reset versions and adjustable setpoints. The frost alarm is provided with a single-pole double-throw (SPDT) changeover switch.

5-year warranty

Type Overview

Type	Output signal frost protection switch	Additional features	Capillary
01DTS-504	Changeover	Auto reset	10 ft [3 m]
01DTS-504X	Changeover	Manual reset	10 ft [3 m]
01DTS-505	Changeover	Auto reset	20 ft [6 m]
01DTS-505X	Changeover	Manual reset	20 ft [6 m]

Technical data

Electrical Data	Cable entry	Cable gland with strain relief M16x1.5 mm, for cable ø4...10 mm
Functional Data	Application	air
	Output signal frost protection switch note	1 x SPDT (4 A @ AC/DC 24 V)
Measuring Data	Measured values	Temperature Frost
	Measuring range temperature	14...59°F [-10...15°C]
	Accuracy temperature active	±0.9°F [±0.5°C]
Materials	Cable gland	Bottom: PA, grey
	Housing	Bottom: PA, grey Seal: NBR70, black cover ABS, transparent
	Probe material	Copper/vapor filled R507
Safety Data	Protection class IEC/EN	III, Protective Extra-Low Voltage (PELV)
	Degree of protection IEC/EN	IP65
	Degree of protection NEMA/UL	NEMA 4
	EU Conformity	CE Marking
	Certification IEC/EN	IEC/EN 60730-1
	Quality Standard	ISO 9001
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-30...160°F [-35...70°C]
	Fluid temperature	-30...160°F [-35...70°C]

Safety Notes

This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application. Unauthorized modifications are prohibited. The product must not be used in relation with any equipment that in case of a failure may threaten humans, animals or assets.

Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Only authorized specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.

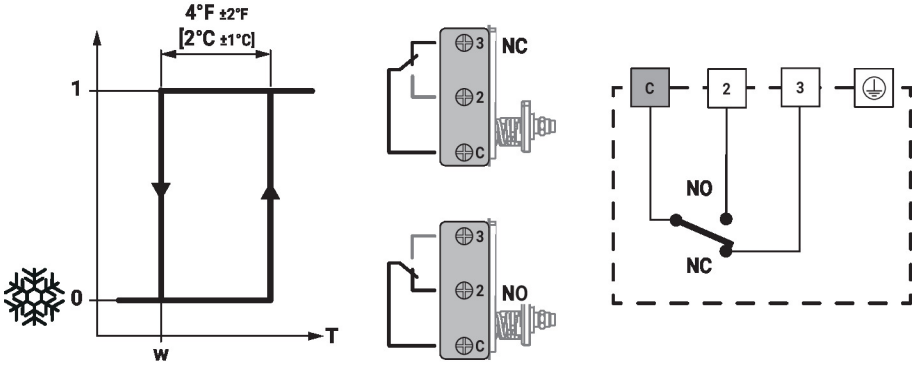
The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

Parts included

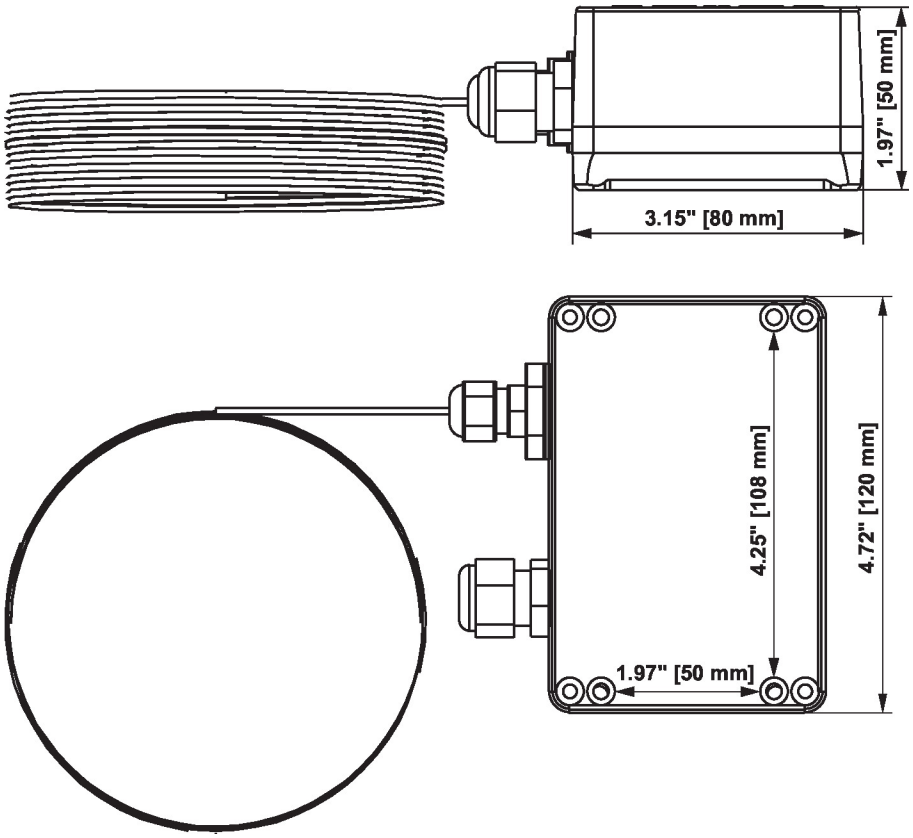
Parts included	Description	Type
	Mounting kit, with 6 mounting brackets	A-22D-A08

Wiring Diagram



set point range (factory setting 41°F [5°C])
If the capillary leaks, the switch changes to the frost position.

Dimensions



Type	Weight
01DTS-504	0.89 lb [0.41 kg]
01DTS-504X	0.89 lb [0.41 kg]
01DTS-505	1.01 lb [0.46 kg]
01DTS-505X	1.01 lb [0.46 kg]

Further documentation

• Installation instructions

MK7-B-CR-0/10
Product Data

Product Description

The MK7-B-CR-0/10 Outdoor Celestial Self-Contained Ambient Light Sensor develops a variable output voltage that corresponds to the amount of present ambient light. This precise ambient light level measurement unit detects and transmits, via an analog (0-10 Vdc) signal, the amount of light present at its location to the remote analog input point of most building automation controllers. The sensor contain a precision photo-diode type cell that provides an exact, proportional output over a wide range of light levels, allowing for accurate lighting control.

Product Application

Sensors allow most building automation controllers to become sophisticated lighting control computers to control any type of lighting at any light level based on the amount of ambient light available. There are three basic types of sensors:

Designed to mount horizontally in a 1/2" conduit fitting to monitor the outside ambient light levels for parking garages, security lighting, sign lighting, etc., the sensor generally is mounted on the rooftop, facing the northern sky. It features an adjustable maximum range from 50-750 fc at the sensor face and is completely weather tight and temperature stable. At very low ambient temperatures (below 13°F), the sensor will still function but will lose some accuracy and light level sensitivity.

Product Features

- Factory calibrated
- 0-10 Vdc
- Wide range of light level monitoring
- Compatible with most BAS controllers
- Extremely accurate and reliable

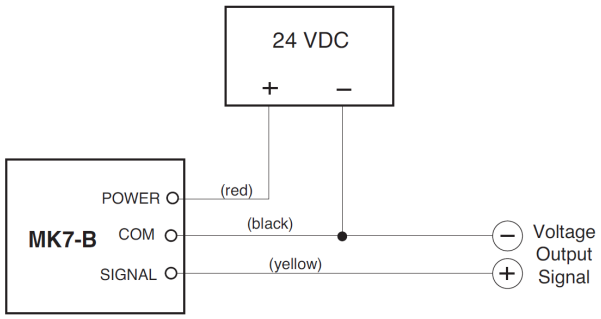
Product Operation

The sensor head contains patented solid-state circuitry designed to be extremely accurate, adjustable, and flexible. The standard three-wire sensors operate from any input volt-age between 12-24 VDC and give a return output signal of 0-10 Vdc. The sensor comes factory calibrated. The sensor is equipped with a variable range potentiometer, but calibration equipment, such as a foot-candle meter, would be required to change the range of the unit. Note: There is a charge for recalibration of the unit by the manufacturer.

Product Specifications

Output:	0-10 Vdc
Factory Calibration:	0-250 fc
Adjustable Range:	0 fc min, 50-750 fc max
Accuracy:	±1% @ room temp., ±2.5% @ 100°F
Sensor Type:	Blue-enhanced photo-diode
Power Supply:	12-24 Vdc
Power Consumption:	20 mA max.
Wiring:	Three-wire, 18 AWG, stranded
Operating Temp.:	13° to 140°F (-10° to 60°C)

Product Wiring



CAUTION: To prevent electrical shock and possible equipment damage, disconnect power coming from the controller prior to hookup. Wiring from the sensor to the controller should be with 18- or 22-gauge stranded wire. Do not run the low-voltage wire with or near power wiring. For long wire runs or where there is excessive electrical noise, shielded cable or cable in conduit is required. Cable length should not exceed 500' (152m). Wire the sensor to the appropriate analog port of the controller according to the controller manufacturer's instructions and the specific details of the particular sensor listed on this page.

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A/MLP2-D10-W-B-A-C-0P

Differential Pressure Transducer — Product Data

Product Description

The A/MLP2-D10-W-B-A-C-0P is a din rail mountable, extremely versatile and highly accurate transmitter for monitoring differential pressure. This high quality compact sensor is ideal for panel mounting.

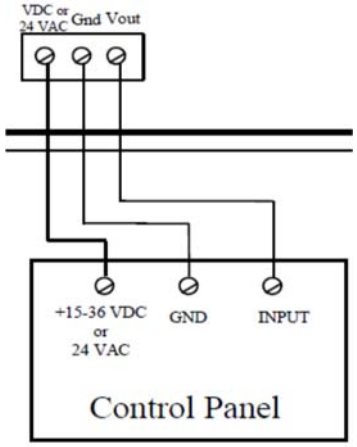
MADE IN USA

Product Specifications

Media Types:	Dry air or inert non-conductive gases
Accuracy[1]:	±0.5% of FSO
Thermal Effects[2]:	±0.056% FSO per °F
Operating Temperature:	32 to 185°F (0 to 85°C)
Operating Humidity:	10-95% RH, non-condensing
Compensated Temperature Range:	32 to 122°F (0 to 50°C)
Pressure Ranges:	±0.1" WC
Proof Pressure:	270"WC (67.2 kPa)
Burst Pressure:	415"WC (103.3 kPa)
Supply Voltage:	24 Vac (±10%) 50/60 Hz, +16 to 36 Vdc
Supply Current (Power):	5 mA maximum (0.18 VA)
Output Signal:	0-10 Vdc, 3-wire (Output limited to 10.25 Vdc)
Warm Up Time:	15 Minutes
Response Time (T95):	8 seconds
Output Update Rate:	1 second
Zero Function:	Pushbutton Zero Function (Recommended after 15 minutes warm up)
Electrical Connections:	3 Position de-pluggable screw terminal block | accepts 14-24 AWG wires
Terminal Block Torque Rating:	4.43 to 5.31 in-lb. (0.5 to 0.6 Nm)
Weight:	0.17 lbs (0.078 kg)
Pressure Fitting Material:	Brass
Tubing Size Accepted:	0.250" (6.35mm) O.D. x 0.170" (4.318mm) I.D. Push-On Flexible Poly Tubing
Dimensions:	4.210" (106.94mm) x 2.085" (52.96mm) x 1.340" (34.04mm)
Enclosure Rating:	Polycarbonate; UL94V-0 flammability rating
Agency Approvals:	CE, Reach, RoHS2, WEEE

Note[1]: Accuracy includes Hysteresis, Linearity, and Repeatability at 71°F (21.5°C) Typical | Note[2]: Shift is relative to 77°F (25°C)

Product Wiring



ZERO FUNCTION

The DLP unit should be "ZEROED" before pressure is applied to the unit. The zero button is used to cancel out any offsets caused by installation and sensor drift.

The Zero adjustment must be performed with NO pressure applied to either side of the sensor.

- Remove the tubing connected to the H(High) and/or L(Low) pressure fittings.
- Push "Zero" button for more than three seconds before installation or whenever necessary.

Specifications are subject to change without notice.

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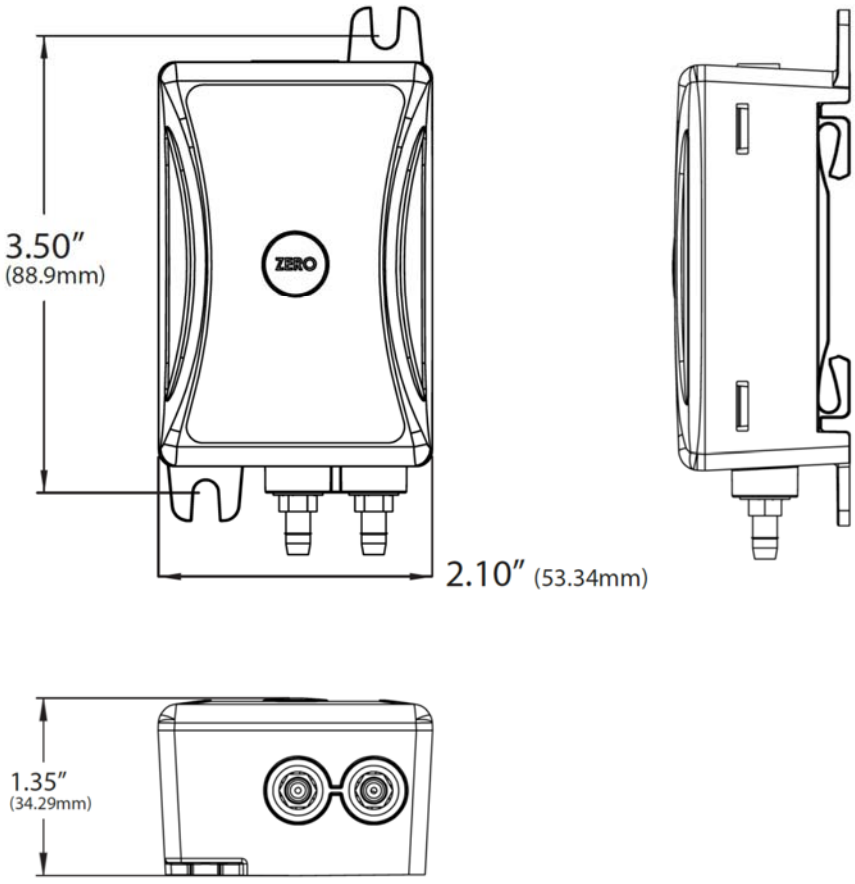
Product Dimensions



SPECIFIED CONTROLS

Differential Pressure Transducer

A/DLP-010-W-U-N-A-3
Product Data

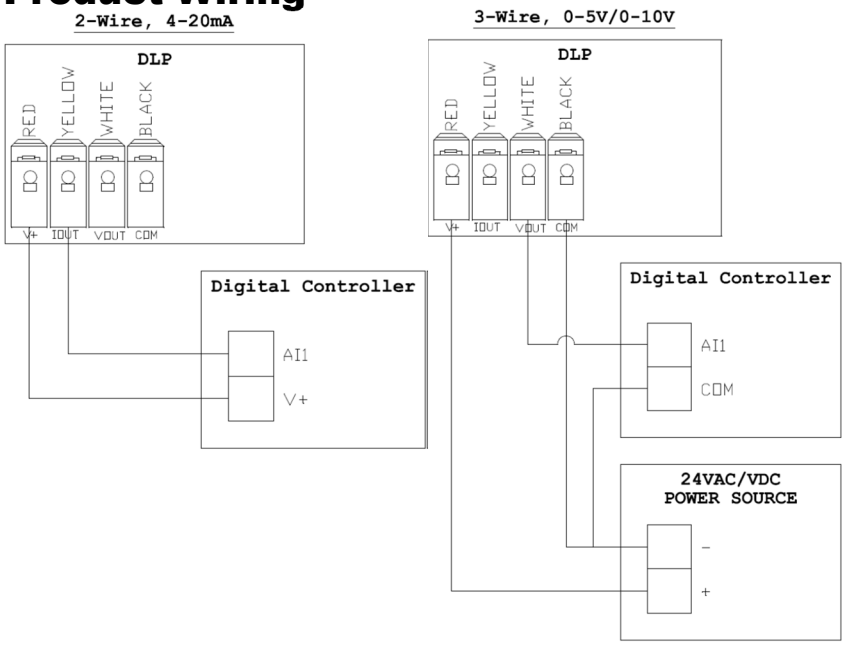
Product Description

The A/DLP-010-W-U-N-A-3 is an extremely versatile and highly accurate transmitter for monitoring duct static pressure. This high quality sensor is loaded with features such as: field selectable pressure ranges, field selectable output ranges, and field selectable power. Product is shown here with the optional display.

Product Specifications

Service:	Dry air or inert non-conductive gases
Accuracy:	±0.5% of FSO
Thermal Effects:	±0.067% FSO per °F
Operating Temperature:	-4 to 185°F (-20 to 85°C)
Operating Humidity:	10-95% RH, non-condensing
Compensated Temperature Range:	32 to 122°F (0 to 50°C)
Pressure Ranges:	±1", ±2", ±5", ±10" WC
Proof Pressure:	350"WC (87.12 kPa)
Burst Pressure:	550"WC (136.9 kPa) for 10"WC (2490.8 Pa)
Supply Voltage:	4-20 mA Output: 16-36 Vdc (250Ω Load max.) / 22-36 Vdc (500Ω Load max.) 0-5 Vdc / 0-10 Vdc Outputs: 16 to 36 Vdc / 24 Vac (±10%)
Supply Current:	4-20 mA Output: 24 mA minimum 0-5 Vdc / 0-10 Vdc Output: 6 mA maximum
Output Signals (field selectable):	Current Output: 4-20 mA, 2-wire loop powered (Standard); (Limited to 21.4 mA max) Voltage Signals: 0-5 Vdc / 0-10 Vdc, 3-wire; Output limited @ 5.25 & 10.5 Vdc)
Response Time (0-100% FSO):	8 seconds
Output Update Rate:	1 second
Electrical Connections:	Finger Pushbutton (spring) terminal blocks; accepts 16-24 AWG wires
Conduit Knockouts:	Watertight Cordgrip Installed (1/2" NPT conduit fittings accepted when Cordgrip removed)
Sensing Probe:	8 1/8" probe
Weight:	0.80 lbs (0.363 kg)
Dimensions:	6.125" H x 4.25" W x 2.25" D
Enclosure Rating:	Flame retardant polycarbonate; UL94-5VA flammability rating
Agency Approvals:	CE, Reach, RoHS2, WEEE

Product Wiring



ZERO FUNCTION

The DLP unit should be "ZEROED" before pressure is applied to the unit. The zero button is used to cancel out any offsets caused by installation and sensor drift.
The Zero adjustment must be performed with NO pressure applied to either side of the sensor.

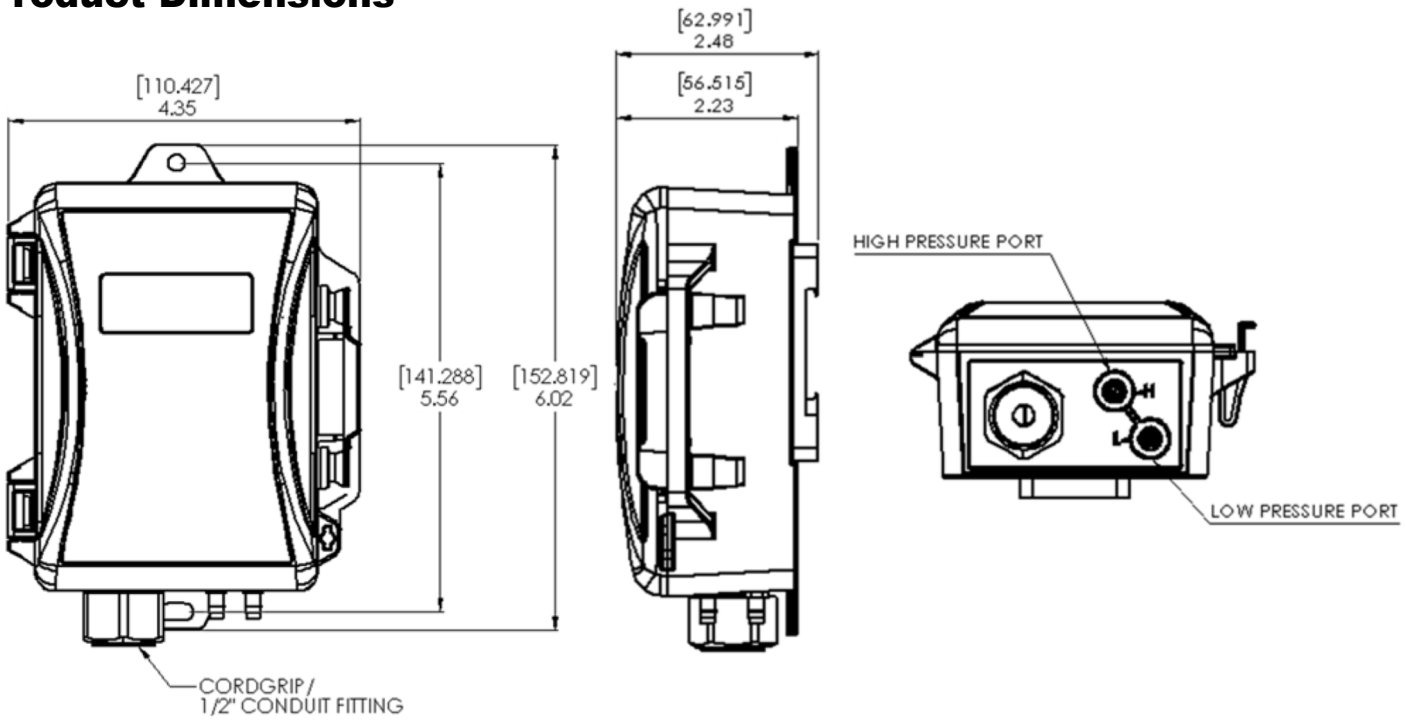
- Remove the tubing connected to the H (High) and/or L(Low) pressure fittings.
- Push "Zero" button for more than three seconds before installation or whenever necessary.

IMPORTANT!
DO NOT SWITCH PRESSURE RANGE OR OUTPUT MODE WHEN POWER IS ON. MAKE SURE POWER TO THE UNIT IS OFF. FAILURE TO DO SO WILL NOT ALLOW ANY NEW SWITCH SETTINGS TO TAKE PLACE.

Specifications are subject to change without notice.

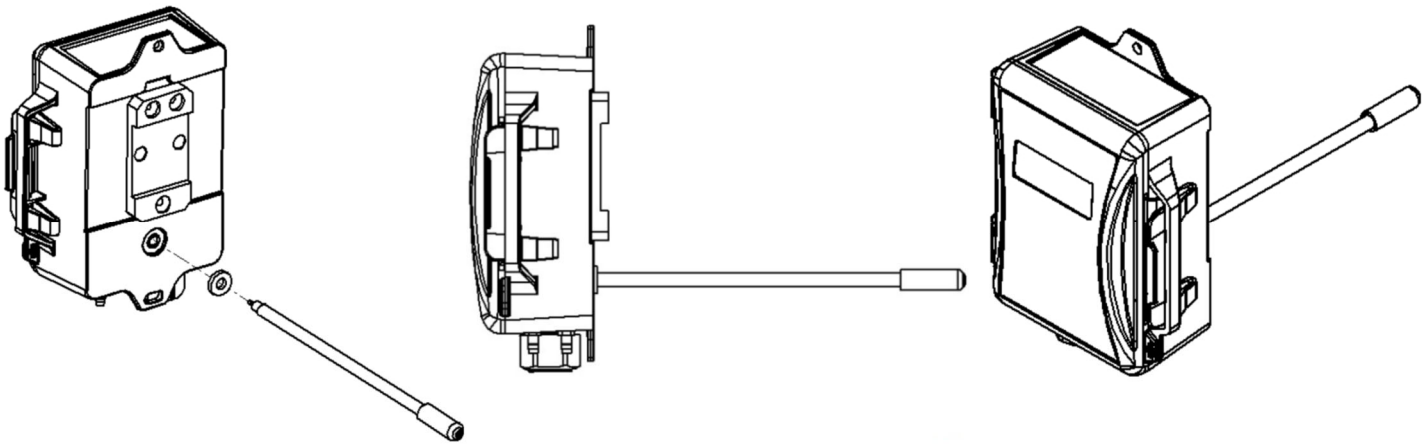
Website: www.specifiedcontrols.com 5351 East Thompson Road, Suite 128 Indianapolis, IN 46237 Tech Support: 888.359.0365 Main: 317.361.0830

Product Dimensions



Pitot Tube Installation

Slip the rubber washer over the threaded end of the pitot tube, keeping the washer as closed to the threaded end as possible. Fasten the pitot into the threaded insert on the back of the enclosure. Press the rubber washer against the enclosure.



Liquid Gauge Pressure Transducers

A/GP-050-20-N4
Product Data

Product Description

The A/GP-050-20-N4 gage pressure transducer is designed with a single sensor that converts a pressure range of 0-50 psig to a 4-20 mA signal and is factory mounted in a NEMA 4 rated enclosure. This unit provides excellent accuracy and reliability in commercial, industrial, and process control applications. The enclosed pressure transducer has been manufactured in accordance with QS-9000 Compliant manufacturing system and procedures.

The stainless steel construction with no O-rings makes this pressure transducer compatible with a wide range of gasses and liquids. The A/GP pressure transmitter offers a combined repeatability, hysteresis, and non-linear factor that is typically below +/- 0.15% of full scale. It is also EMC compliant and reverse polarity protected.

Product Applications

- **Pump Monitoring**
- **Chiller Monitoring**
- **Variable Volume Chilled/Hot Water Systems**
- **HVAC Systems**

Product Features

- **Excellent long-term stability**
- **high accuracy**
- **All stainless steel sensor construction**
- **NEMA 4 enclosure**
- **EMC compliant**
- **Reverse polarity protected**
- **10X full scale or 15,000psi burst pressure**

Product Specifications

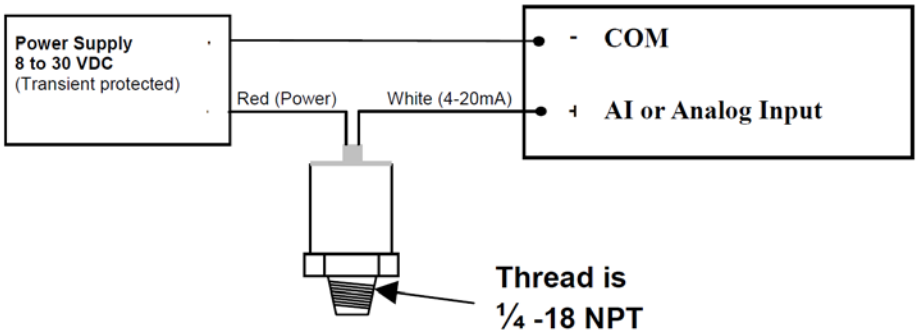
Supply Voltage:	8 to 30 Vdc
Output:	4-20 mA (2-wire)
Pressure Ranges:	0-50 psig
Accuracy: (Non-linearity, Hysteresis, Repeatability)	+/-1% FSO for 15 to 50 psi
Thermal Error (-40 to 105°C):	+/-1% FSO for 15 to 50 psi
Stability:	+/-1% FS
Operating Temp. Range:	-40 to 221°F (-40 to 105°C)
Response Time:	< 1 ms
Burst Pressure:	10X full scale or 15,000 psi
Proof Pressure:	3X full scale
Process Fitting:	1/4-18 NPT male 304L Stainless Steel
Sensor Case:	304L Stainless Steel
Enclosure:	NEMA 4
EMC Compliance:	10 V/M (EN61000-4-3)
Dimensions:	2.56”L x 0.875”W x 0.875”H

Product Wiring Details

2 foot cable assembly - 2 wire:

Red = Power

White = 4-20mA Signal



Specifications are subject to change without notice.

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Toll-Free: 888.652.9663
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JACKSON SYSTEMS
Controls Done Right™

Liquid Differential Pressure Transducer

A/WPR2-100-10’
Product Data

Product Description

The A/WPR2-100-10’ Wet-Wet pressure transmitter is designed with dual sensors that enable it to accept high differential pressures in the range of 0 PSI to 100 PSI. All models can handle proof pressure 3X the maximum full scale range and burst pressure of 1500 psi.

Features include field selectable pressure ranges and output signal types for the most flexible applications. Typical HVAC applications include monitoring of water differential pressure. The output signal is factory calibrated and temperature compensated for the highest start-up accuracy.

The A/WPR2 Series Remote Wet to Wet Differential Pressure Sensor is designed to reduce installation time and to provide mounting flexibility, often eliminating the need for additional plumbing.

Product Applications

- **Pump Monitoring**
- **Filter Monitoring**
- **Chiller Monitoring**
- **Variable Volume Chilled/Hot Water Systems**
- **HVAC Systems**

Product Features

- **Excellent long-term stability and high accuracy**
- **Four field selectable ranges:**
  ⇒ 0-15 psi, 0-25 psi, 0-50 psi, 0-100 psi
- **Field selectable outputs:**
  ⇒ 4-20 mA, 0-5 Vdc, 0-10 Vdc
- **All stainless steel sensor construction**
- **Uni-directional or bi-directional pressure range selection**
- **IP66 hinged enclosure**
- **Pushbutton and remote zeroing terminal**

Product Specifications

Supply Voltage (4-20mA):	16 to 36 Vdc 2-wire 4-20mA
Supply Current (4-20mA):	25mA max. (current output)
Supply Voltage (V out):	16 to 36 Vdc, 24 Vac (±20%)
Supply Current (V out):	6mA max. (voltage output)
Output:	3-wire: 0-5 Vdc, 0-10 Vdc 2-wire: 4-20 mA
Pressure Ranges:	0-15/25/50/100 psi
Proof Pressure:	Max. 300 psi (3X F.S.)
Burst Pressure:	Max. 1500 psi
Temp. Comp. Range:	32 to 140°F (0 to 85°C)
Sensor Operating Range:	-22 to 248°F (-30 to 120°C)
Enclosure Temp. Range:	32 to 167°F (0 to 75°C)
Operating RH Range:	10 to 90% RH non-condensing
Accuracy: (linearity, Hysteresis, Repeatability)	±1.0% FSO
Thermal Effects:	±2.0% FSO from 32-140°F (0-60°C)
Zero Adjust:	Push-button, auto. & digital input
Fittings:	1/4”-18” NPT male (304 SS)
Enclosure:	NEMA 4X/IP66 Rated
Dimensions:	5.1”Wx3.93”Hx3.0”D (145x100x64mm)

Specifications are subject to change without notice.

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E-mail: info@jacksonsystems.com
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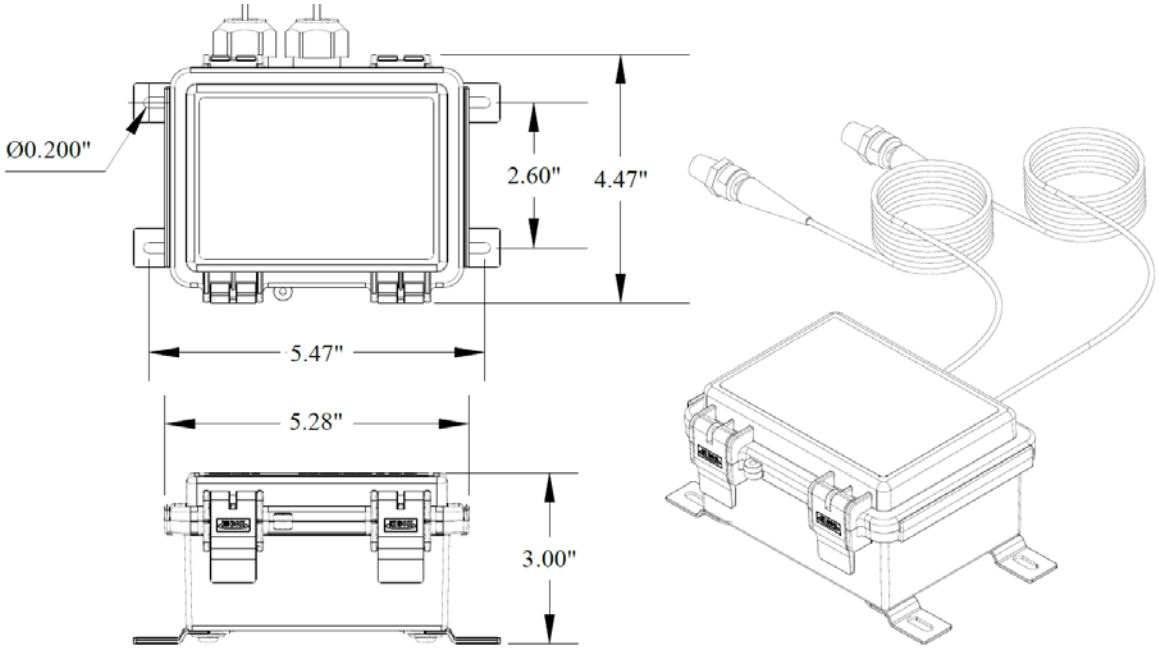
Toll-Free: 888.652.9663
Fax: 317.227.1034

Product Dimensions

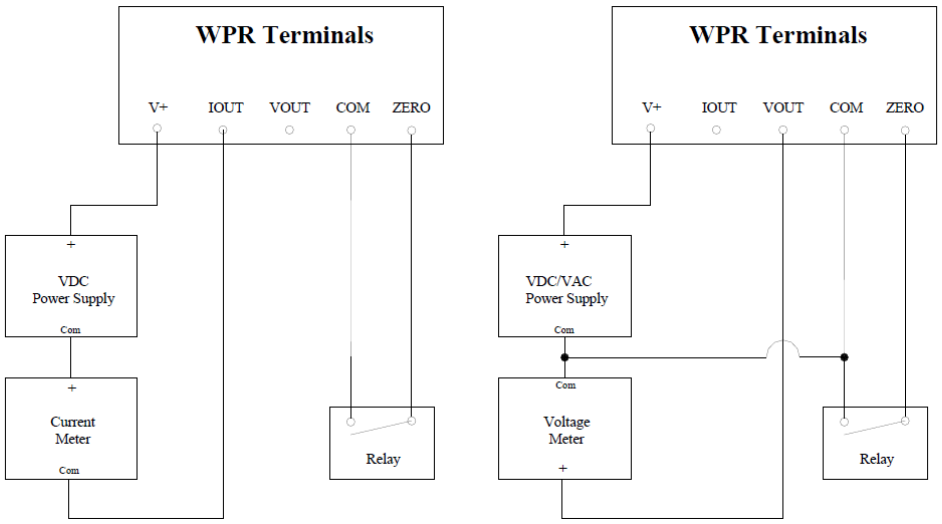


Product Wiring Details

Shielded cable with 16 to 22AWG conductors is recommended. Use the Wiring Connections table below to determine the proper wiring for your application.

Output Signal	Supply Voltage	Wire Connections		
VDC	VAC/VDC	V+	COM	VOUT
mA	VDC	V+		IOUT

Table 1: Wiring Connections



Specifications are subject to change without notice.

Q5-CO-250P-0-X
Product Data

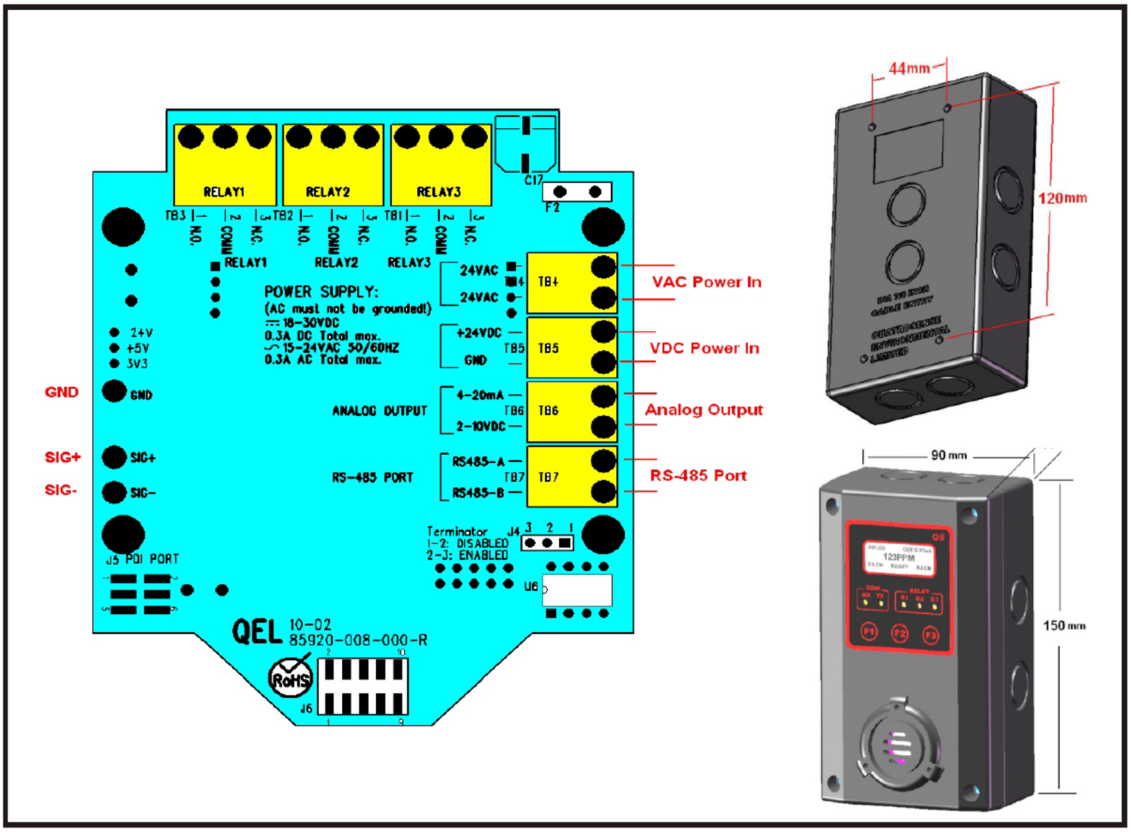
Product Description

The Q5-CO-250P-0-X is a microprocessor based "smart" carbon monoxide gas sensor/ transmitter. Pre-calibrated sensor cartridges can be purchased and installed by the user, thereby reducing calibration costs and minimizing downtime. The user can select from numerous display options, including relay status, time, TWA, STEL, concentration, or nothing at all. All programming and calibration is nonproprietary and is accessed through a user selectable password which protects system integrity.

The Q5 series is covered by ACI's Two (2) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, www.workaci.com

Product Specifications

Supply Voltage AC:	15 to 24 Vac, 0.3A ac max. (AC must not be grounded)
Supply Voltage DC:	18 to 30 Vdc, 0.3A dc max.
Sensor Type:	CO, Electromechanical, 0-250 PPM
Sensor Life Span:	2 to 3 years typical (toxic gas), >5 years in clean environment
Operating Temp. Range:	-4 to 122°F (-20 to 50°C)
Operating Humidity:	5 to 95%, non-condensing
Operating Environment:	Commercial, indoor, extreme temperature environments
Outputs:	Analog: 4-20 mA, 1-5 Vdc, 2-10 Vdc, Digital RS-485, Modbus 3 SPDT relays;1A @ 30Vdc
Sampling Method:	Diffusion or flow through
Visual Indicators:	Backlit LCD graphic display, (5) LED's for Relay and RS-485 status
Audible Alarm:	>80 dB at 10 cm, 2700 Hz with 3 programmable tones
Sensor Coverage Area:	7500 ft^2
Enclosure:	IP66 and NEMA 4, 4X, 12 and 13
Dimensions:	5.9" (H) x 3.4" (W) x 2.55" (D)
Weight:	Less than 0.5 lbs



Specifications are subject to change without notice.