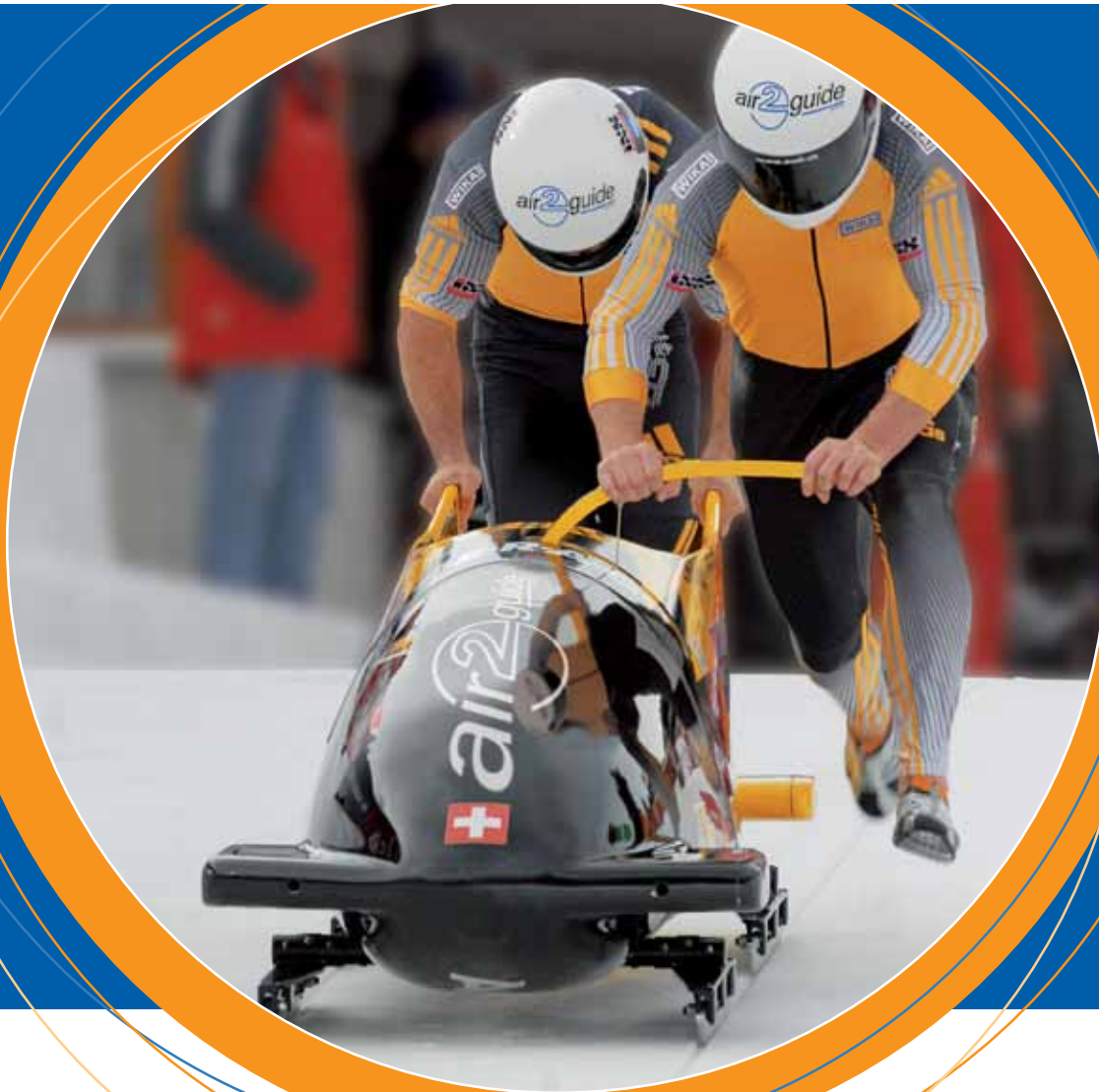


Pressure
Temperature
Humidity
Air

Measuring Instruments for Ventilation and Air Conditioning



Enjoy the difference



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New air2guide™ Product Family for Heating, Ventilation and Air Conditioning (HVAC)

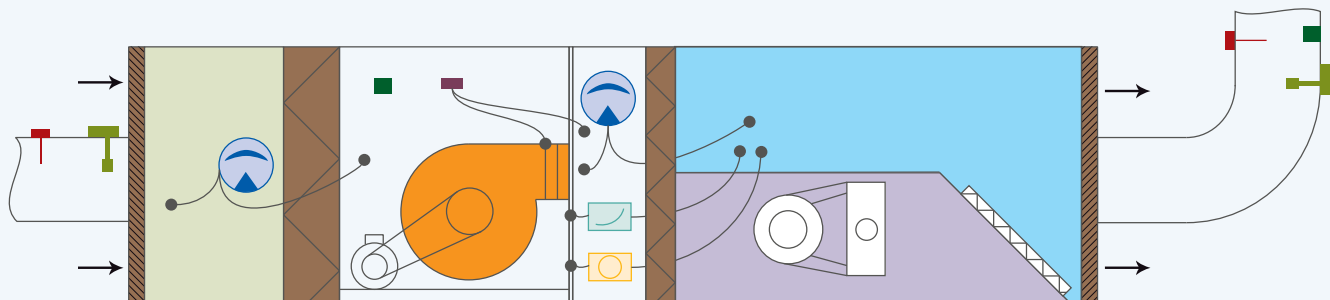
WIKA's air2guide™ series offers a comprehensive range of filter and ventilation monitoring systems, including differential pressure gauges (mechanical and electronic) for filter monitoring, incline tube manometers, differential pressure switches, differential pressure transmitters and air flow velocity transmitters for measuring the volume flow and air velocity in air ducts.

The product range is completed by a volatile organic compounds (VOC) air quality sensor and a CO₂ sensor, used to measure VOC and carbon dioxide (CO₂) content in the air.

The air2guide™ series is ideal for developers, manufacturers and end users of ventilation systems in industrial and administrative buildings or manufacturers of central HVAC systems. These products are available in industry-standard measuring ranges. The main products for filter monitoring come in ranges from 0...0.2 InWC up to 0...50 InWC.

In addition, we offer compound ranges from -0.1 InWC...+0.1 InWC up to -6 InWC...+6 InWC. The mechanical differential pressure gauges, with or without an electronic output signal, are identical in design and offer the following advantages over the competition:

- Easy to install and remove
- Up to 50% time savings during installation, compared with competitive conventional models
- Innovative two-part modular design, unique to the industry
- 3-year limited warranty



- | | | | |
|---------------------------------|----------------------------|----------------------------|------------------|
| ■ air2guide ^{P/P+E} | ■ air2guide ^E | ■ air2guide ^{VOC} | ■ Fan |
| ■ air2guide ^F | ■ air2guide ^T | ■ Mixing chamber | ■ Heat exchanger |
| ■ air2guide ^{P+I-tube} | ■ air2guide ^{T+H} | ■ Filter | ■ Bypass |
| ■ air2guide ^S | | | |

Mechanical Differential Pressure Gauges

Types A2G-10 / A2G-15

Applications

- For dry, clean, non-aggressive gases, mainly air
- Monitoring of blowers and ventilators
- Filter monitoring via differential pressure
- Positive overpressure in clean rooms
- Positive and negative pressure in isolating chambers

Product Features

- Easy to install
- Two-part modular design
- With integrated o-ring on mounting case for installation in air ducts
- 4-20 mA 2-wire or 0-10 V 3-wire output signal (A2G-15)
- Standard accessories



A2G-10
(panel mount)



A2G-15
(surface mount)

air2guide^P gauges are ideally suited for the measurement of low pressure and differential pressure from 1...50 InWC. A benefit of the modular design is a two-part assembly that separates the measuring system from case components. This allows the replacement of only the measuring system, which provides reduced repair costs. The panel mount version of the **air2guide^P** is extremely easy to install and requires no tools (over 50% time savings compared to conventional instruments).

In addition to the local display, the **air2guide^{P+E}** features an electronic output signal. The **air2guide^{P+E}** is available with a 2-wire (4...20 mA) or 3-wire (0...10 V) output signal. This gauge is ideal for applications where a remote monitoring or evaluation is needed. They are ideally suited for the measurement of positive and negative overpressure or differential pressures from 0.2 InWC up to 50 InWC.

Technical Data - air2guide ^P , air2guide ^{P+E}	
Nominal size	4-1/2"
Accuracy	± 3% of full span
Ranges	0 / 0.2 InWC up to 0 / 50 InWC Compound ranges starting from -0.1 / +0.1 InWC Other pressure units and dual scales are available
Maximum working pressure	80 InWC
Temperature	Ambient from -22 °F ... 176 °F Media from 3 °F ... 122 °F
Ingress protection	NEMA 3 (NEMA 4 optional)
Process connection	2 x G1/8 female (comes standard with 1/8" / 3/16" hose barb adaptors)
Sensing membrane	Silicone rubber
Movement	Frictionless magnetic transmission
Dial	Aluminum
Pointer	Plastic black
Set pointer	Plastic red
Window	Makrolon
Mounting case	Black thermoplastic, high impact resistant
Output signal (A2G-15 only)	4-20 mA, 2-wire or 0-10 V 3 wire system
Supply voltage (A2G-15 only)	15...35 VDC
Electronic connection (A2G-15 only)	PG gland M12
Standard accessories	3 case mounting screws, straight or angled hose barb adaptors 1/8" / 3/16" standard (1/4" optional)

Air Velocity Transmitter

Type A2G-20

Applications

- Building automation and process control systems
- Supply and exhaust fan tracking
- Clean room control systems

Product Features

- Three air velocity ranges and one temperature range, selectable by jumpers
- Separate outputs for air velocity and temperature
- Two output signals (4...20 mA and 0...10 V) in one instrument
- Comes standard with duct mounting flange
- Simple installation

The **air2guide^v** air velocity transmitter is ideal for measuring air velocity and temperature in HVAC systems and control applications, especially in building automation and energy management systems. The **air2guide^v** offers three air velocity ranges-one temperature range and two output signals-within one instrument at one very low cost. The **air2guide^v** calculates the air velocity based on measuring the heat loss between the two sensing elements. Due to the design of the two measuring elements, the **air2guide^v** is basically immune from drifts, making this transmitter very accurate over the whole range (+/- 5% accuracy).



Technical Data - air2guide^v

Nominal size	3-3/4 x 3-1/2"
Ranges / Accuracy	Air Velocity: 0...390 FPM (2 m/s): < 19.6 FPM (0.1 m/s) ± 5% of measured value 0...1,970 FPM (10 m/s): < 98.1 FPM (0.5 m/s) ± 5% of measured value 0...3,940 FPM (20 m/s): < 196.2 FPM (1 m/s) ± 5% of measured value Temperature: 32...122 °F (0...50 °C): < 1.2 °F (< 0.5 °F)
Design standards	EMC directive 2004/108/EC RoHS directive 2002/95/EC Low voltage directive 2006/95/EC WEEE directive 2002/96/EC
Measuring elements	Pt1000 and NTC 10k
Ingress protection	NEMA 3 (IP 54)
Case material	ABS plastic
Output signal	Air Velocity: 0...10 V (linear to FPM), load min. 1 kOhm or 4...20 mA (linear to FPM), load max. 400 Ohm Temperature: 0...10 V (linear to °F), load min. 1 kOhm or 4...20 mA (linear to °F), load max. 400 Ohm
Supply voltage	24 V AC / DC ± 10%
Electrical connection	PG gland M16

Type A2G-25

Applications

- Measuring the volume flow in ventilation ducts for air and non-combustible gases
- Used for fans and ventilators of various manufacturers
- Monitoring of air volume flow or pressure directly on the air handling unit

Product Features

- Very user-friendly display
- Output signals for differential pressure and air volume flow
- Clearly legible LCD display
- Temperature compensated
- Easy installation
- Standard accessories included



The **air2guide F** air flow meter is used to show the flow output to determine the overall air consumption of a plant and/or the consumption of individual production units. The **air2guide F** is designed for centrifugal fans equipped with inlet rings. The air volume flow measurement is based on the differential pressure value measured at the fan. The **air2guide F** can be used to display the flow value at the site and to send the output value to a control system. The **air2guide F** can be used to measure volume flows of up to 880,000 GPM.

Technical Data - air2guide F	
Nominal size	3-3/4 x 3-1/2"
Ranges / Accuracy	0... 4 InWC (1,000 Pa): ± 0.02 InWC (5 Pa) & ± 1.5% of display 0... 8 InWC (2,000 Pa): ± 0.02 InWC (5 Pa) & ± 1.5% of display 0...20 InWC (5,000 Pa): ± 0.03 InWC (7 Pa) & ± 1.5% of display 0...28 InWC (7,000 Pa): ± 0.03 InWC (7 Pa) & ± 1.5% of display
Selectable units on display	GPM, LPM, m3/s, m3/h, CFM, SCFH, mbar, mmWC, InWC, kPa or Pa
Measuring elements	Piezo sensor
Ingress protection	NEMA 3 (IP 54)
Case material	ABS plastic
Output signal	Volume: 0...10 VDC, Load R minimum 1 kOhm, linear to adjusted output unit 0...10 VDC, Load R minimum 1 kOhm, linear to adjusted output unit Pressure: 0...10 VDC, Load R minimum 1 kOhm linear to adjusted output unit
Temperature limitations	Ambient -4...+160 °F Media +23...+122 °F
Supply voltage	24 V AC/DC ± 10%
Electrical connection	PG gland M16
Weight	5.2 ounces (150 grams)
Mounting type	Wall mounting
Standard accessories	2 mounting screws, 2 plastic duct connectors, 3 feet PVC tube (1/8" / 3/16" inner diameter)

Differential Pressure Incline Tube Manometer

Type A2G-30

Applications

- Monitoring differential pressure of air and other non-combustible non-aggressive gases
- Monitoring of ventilators, fans and filters in climatic chambers and clean rooms
- Filter monitoring in paint booths

Product Features

- Easy to install
- Leakage protection
- Scale easy to read
- Fast and easy zero point adjustment
- Standard accessories included



The **air2guide** ^{P i-tube} manometer is suitable for measuring overpressure, negative pressure and differential pressure, continually and accurately. A precise zero point adjustment is undertaken by changing the volume at the zero adjustment knob. The manometer is specially designed to prevent leakage of the indicator fluid in case of overpressure. The manometer should be mounted on a vertical surface.

Technical Data - air2guide ^{P i-tube}

Nominal size	8-1/4 x 5-1/2 x 1-3/8" (210 x 140 x 35 mm)
Range / Accuracy	0...2.4 InWC / Accuracy 0.02/0.10 InWC
Fluid liquids	Red, s.g. 0.786 kg/dm (60 °F) Blue (0/6 InWC only), s.g. 1.87 kg/dm (60 °F)
Measuring elements	Pt1000 and NTC 10k
Temperature	-40...+140 °F
Materials	Case ABS Cover PMMA Screws polycarbonate Sealing rings NBR
Max. working pressure	30 PSI (800 InWC)
Weight	14 ounces (400 grams)
Standard accessories	2 mounting screws Red fill fluid 1 oz. bottle (30 ml) Red and green pressure limit label 9 feet PVC tube (1/8" / 3/16" inner diameter)

Type A2G-40

Applications

- Ideal for use with air and other non-combustible gases
- Monitoring of air filters, fans, industrial cold air circuits, air flow in air ducts and the control of air and fire shutters
- Overpressure monitoring of clean rooms and laboratories

Product Features

- Compact size
- Easy mounting and installation
- Robust housing and functional design
- Field adjustable switch point
- Very reliable, with over 1,000,000 switching cycles
- Standard accessories included



air2guide^s

The **air2guide^s** is an adjustable differential pressure switch (SPDT) used for measuring overpressure, negative pressure or differential pressure of air or other non-combustible, non-aggressive gases. The blue adjustment dial allows for easy setting of the switch point on site. The switch can be set up as a N/O or N/C contact. The compact size, adjustment dial and low cost make the **air2guide^s** the ideal choice for HVAC applications.

Technical Data - air2guide ^s	
Nominal size	3-7/8 x 4-1/8 x 2-1/2" (73 x 105 x 63 mm)
Ranges / Dead band	See table below
Maximum working pressure	200 InWC
Switch type	SPDT (single pole double throw)
Ingress protection	NEMA 3 (IP 54)
Material	Diaphragm: Silicone Case: ABS Window cover: Clear polycarbonate Duct connectors: ABS Tubing PVC: Soft
Switch rating	2A / 250 VAC
Resistive load	3A / 250 VAC except for: Range 0.08 to 0.8 InWC: 0.1A / 250 VAC Range 2.00 to 18.0 InWC: 5A / 250 VAC
Temperature limitations	Ambient -40...+185 °F Media -4...+160 °F
Electrical connection	PG gland M16
Weight	5.2 ounces (150 grams)
Mounting type	Wall mounting
Standard accessories	2 mounting screws, 2 plastic duct connectors, 6 feet PVC tube (1/8" / 3/16" inner diameter)

Set Point Range InWC (Pa)	Switching Increments InWC (Pa)	Approx. Dead Band at min. Set Point InWC (Pa)	Approx. Dead Band at max. Set Point InWC (Pa)
0.08 to 0.80 (20...200)	0.04 (10)	± 0.02 (5)	± 0.08 (20)
0.12 to 1.20 (30...300)	0.08 (20)	± 0.02 (5)	± 0.12 (30)
0.12 to 2.00 (30...500)	0.08 (20)	± 0.02 (5)	± 0.12 (30)
0.16 to 2.40 (40...600)	0.12 (30)	± 0.02 (5)	± 0.12 (30)
0.40 to 6.00 (100...1500)	0.30 (80)	± 0.04 (10)	± 0.20 (50)
2.00 to 18.0 (500...4500)	0.70 (180)	± 0.20 (50)	± 0.80 (200)

Differential Pressure Transmitter

Type A2G-50

Applications

- Measuring the differential pressure ducts of air and other non-combustible and non-aggressive gases
- Monitoring of air filters, fans, industrial cold air circuits, flows in ventilation ducts and to control the fire prevention flaps in fire shutters
- Monitoring of overpressure in clean rooms and laboratories
- Monitoring of overpressure in containment systems

Product Features

- Eight selectable pressure ranges
- Two output signals in one instrument
- Zero reset button
- Adjustable response time
- Standard accessories included



The **air2guide** ^E differential pressure transmitter is equipped with a piezo pressure sensor. This compact differential pressure transmitter combines excellent performance and high quality at a competitive price. The **air2guide** ^E comes standard with eight selectable pressure ranges and the user can choose between two output signals. A digital display for local pressure indication is available in a kit and can be installed at the site by the user. No removal of the transmitter is needed for this easy modification.

Technical Data - air2guide ^E

Nominal size	3-3/4 x 3-1/2"
Ranges	Option 1: 0/10 InWC (factory set) 7 additional ranges to select from via jumper: -0.4...+0.4 InWC, 0...0.4 InWC, 0...1 InWC, 0...2 InWC, 0...4 InWC, 0...6 InWC and 0...8 InWC Option 2: 0/28 InWC (factory set) 7 additional ranges to select from via jumper: 0...4 InWC, 0...6 InWC, 0...8 InWC, 0...10 InWC, 0...12 InWC, 0...16 InWC and 0...20 InWC Option 3: -0.2...+0.2 InWC (factory set) Additional range to select from via jumper: -0.4...+0.4 InWC
Maximum working pressure	100 InWC
Accuracy	± 1.5% of full span
Measuring element	Piezo sensor
Ingress protection	NEMA 3 (IP 54)
Case material	ABS plastic
Output signal	Selectable at unit from 0...10 VDC 3-wire or 4...20 mA 2-wire
Temperature limitations	Ambient: -4...+160 °F Media: +14...+122 °F
Supply voltage	24 V AC/DC V 10%
Electrical connection	PG gland M16
Weight	5.2 ounces (150 grams)
Mounting type	Wall mounting
Standard accessories	2 mounting screws, 2 plastic duct connectors, 3 feet PVC tube (1/8" / 3/16" inner diameter)

Type A2G-55

Applications

- Measuring the differential pressure ducts of air and other non-combustible and non-aggressive gases
- Ideal for the building automation to monitor air ventilation ducts and air filters
- Monitoring of overpressure in clean rooms and laboratories
- Monitoring of overpressure in containment systems

Product Features

- Easy installation
- Maintenance free
- Compact and robust construction
- Comes without accessories



The **air2guide** [®] ECO differential pressure transmitter is equipped with a piezo resistive pressure sensor. This compact differential pressure transmitter is a cost-efficient version of the standard transmitter. This transmitter features a limited number of basic functions. It can be ordered in ranges from 0...1 InWC up to 0...25 InWC. The **air2guide** [®] ECO is available with 0...10 VDC, 3-wire or 4...20 mA 2-wire output signal.

Technical Data - air2guide [®] ECO

Nominal size	2-1/2 x 2 x 1-3/8" (65 x 50 x 35.5 mm)
Ranges	0...1 InWC (250 Pa), 0...2 InWC (500 Pa), 0...3 InWC (750 Pa) 0...4 InWC (1,000 Pa), 0...5 InWC (1,250 Pa), 0...10 InWC (2,500 Pa), 0...15 InWC (3,750 Pa), 0...20 InWC (5,000 Pa) and 0...25 InWC (6,250 Pa)
Max. working pressure	Ranges 0...1 InWC up to 0...3 InWC: 20 InWC Ranges 0...4 InWC up to 0...25 InWC: 5 times of full scale
Accuracy	Linearity error $\pm 1.0\%$ of full span Measuring accuracy at +32...122 °F: $\pm 3.0\%$ of full span Measuring accuracy at +14...122 °F: $\pm 5.0\%$ of full span
Measuring element	Piezo resistive sensor
Ingress protection	NEMA 3 (IP 54)
Material	Case: ABS plastic Hose barb connectors: Stainless steel
Output signal	0...10 VDC 3-wire or 4...20 mA 2-wire
Temperature limitations	Ambient -4...+160 °F Media +14...+122 °F
Supply voltage	13...32 VDC
Electrical connection	PG gland M16
Weight	8.7 ounces (250 grams)
Mounting type	Wall mounting

Duct / Immersion Temperature Sensor

Type A2G-60

Applications

- For temperature measurement of gaseous media in HVAC systems
- Designed to be used with PLCs and other control and display panels
- Can be used with liquid media if installed inside a thermowell

Product Features

- Easy installation
- Six selectable temperature ranges
- Can be mounted directly into the process (gaseous media only)
- Compact and robust design
- Comes standard with mounting flange



The **air2guide**[™] duct / immersion temperature sensor is fitted with two Pt1000/Ni1000 RTD sensors. The **air2guide**[™] is mainly used in ventilation, cooling and climate control systems. This temperature sensor is available with 0...10 V (TRV) or 4...20 mA (TRA) output signal options and offers six different range settings. The temperature sensor is made of high-quality material and manufactured using state-of-the-art production methods. To protect the sensors inside the stem against moisture and mechanical stress, the stem is available with an epoxy powder coating option.

Technical Data - air2guide[™]

Nominal size	2-1/8 x 3/4" (= 55 x 20 mm)
Ranges	Factory set at +32 °F...+122 °F (0...50 °C) Additional ranges to select via jumper: -58 °F...+122 °F (-50 °C...+50 °C) +5 °F...+95 °F (-15 °C...+35 °C) +14 °F...+248 °F (-10 °C...+120 °C) +32 °F...+320 °F (0 °C...+160 °C) +32 °F...+482 °F (0 °C...+250 °C)
Accuracy @ 70 °F	± 1.0% of full span
Measuring sensors	Pt1000 and Ni1000 RTDs
Output signal	Version TRV: 0...10 V 3-wire, min. load 5 kOhm Version TRA: 4...20 mA 2-wire
Ingress protection	NEMA 4 (IP 65)
Power consumption	Typically 0.35 W / 0.82 VA
Stem material	316 SS
Stem dimensions	7.55 x 0.275" (192 x 7 mm) Other lengths available upon request
Temperature limitations	Head temperature: -31 °F...+194 °F passive (Pt 1000 and Ni 1000) -31 °F...+160 °F active (TRV and TRA) At stem: Standard: -58 °F...+320 °F High temperature version: -58 °F...+500 °F
Electrical connection	PG gland M16
Weight	5.2 ounces (150 grams)

Type A2G-65

Applications

- For temperature control and prevention of frost damage to water heating coils in ventilation and air conditioning systems
- The SPDT switch can be used to initiate the following frost-protection measures:
 - Ventilator OFF
 - External air damper CLOSED
 - Heating coil valve 100% OPEN
 - START of heating coil pump
 - Turn off chiller (condenser) and air humidifier
 - Activation of visible or audible frost warning alarms

Product Features

- Automatic resetting feature
- Small dead band
- High switching repeatability
- Easy mounting
- Comes standard with mounting accessories



The **air2guide^{AFT}** frost protection thermostat features an antifreeze function and is an essential product for systems in which the temperature is not allowed to drop below a certain fixed temperature. Typical applications include air heaters in air conditioning systems and heat exchangers in cooling systems.

Technical Data - air2guide ^{AFT}	
Nominal size	4-3/4 x 3-1/8 x 2" (120 x 80 x 50.4 mm)
Adjustable set point range	Factory set at 41 °F (5 °C) Adjustable set point from +14 °F...59 °F (-10 °C...+15 °C)
Reset feature	Automatic (manual reset optional available)
Design standards	CE conformity: 2004 /108 / EG electromagnetic compatibility (EMC) Product Safety: 2001 / 95 / EC product safety EMC: per EN 60730-1: 2002 Product safety: per EN 60730-1: 2002
Switch type	SPDT switch
Switch capacity	Max. 250 V AC, max. 10 A
Dead band	</= 4 °F, ± 2 °F (</= 2 °C, ± 1 °C)
Repeatability	± 1 °F (± 0.5 °C)
Ingress protection	NEMA 4 (IP 65)
Capillary material	Copper alloy
Capillary length	Standard: 9' (3 m) Optional: 5.5'(1.8 m) or 18' (6 m)
Capillary tube filling	R507 refrigerant
Material	Lower body: PA GK30 Cover: clear ABS
Electrical connection	PG gland M16

Duct Sensor for Relative Humidity and Temperature

Type A2G-70

Applications

- For measuring the relative humidity and temperature of gaseous media in heating, ventilation and air conditioning systems
- Designed for PLCs and other control and display panels

Product Features

- Easy installation
- Direct assembly into the process
- Compact and robust design
- Comes standard with mounting flange



The measurement of relative humidity and media temperature is becoming increasingly important in control systems. Humidity and temperature controlled ventilation systems are also being used more frequently in air conditioning and ventilation technology. The **air2guide^{T+H}** determines the relative humidity and temperature of the ambient air or the air in a duct system using a capacitive sensor with integrated temperature measurement. The sensor signals are converted into standard output signals and made available for further processing. The sensor element is protected by a sinter filter.

Technical Data - air2guide ^{T+H}	
Nominal size	2-1/2 x 1-3/4 x 2" (65 x 45.5 x 50 mm)
Ranges	Humidity: 5...95% rH (operating range 0...100%) Temperature: -4 °F...176 °F (-20 °C...+70 °C)
Output signal	Humidity: 0...10 VDC, min. load 5 kOhm, 4...20 mA optional Temperature: 0...10 VDC, min. load 5 kOhm, 4...20 mA optional
Accuracy	Humidity: ± 3% between 20...80% rh Temperature: ± 1% of measuring range
Temperature limitations	Ambient temperature: -4 °F...+176 °F passive (-20 °C...+70 °C) Media: Max. +140 °F (+60 °C)
Ingress protection	NEMA 4 (IP 65) on connection head
Power consumption	0.5 W / 1.7 VA
Stem material	PVC black
Filter element	Stainless steel, mesh size 80 µm
Stem dimensions	5-1/8 x 3/4"(130 x 19 mm) Other lengths available upon request
Connection head material	PA6, white
Electrical connection	PG gland M16

Type A2G-80

Applications

- For measuring the indoor air quality. The greater the output signal of the sensor (0...10 V), the worse the air quality
- The air quality sensor detects oxidizing (combustible) gases such as body odor, tobacco smoke and evaporations from materials (furniture, carpets, coats of paints, glues, etc.)
- In applications where the air quality is essential (i.e., buildings, offices, class rooms, kitchens, etc).

Product Features

- The set point for the desired air quality can be specified during the installation
- Low consumption reduces energy costs



The **air2guide^{VOC}** measures volatile organic compounds (VOC) in the air. VOCs include scent and taste particles, tobacco smoke, building chemicals, solvents, disintegrating gases and products of oxidation. VOCs therefore come from a variety of sources. The **air2guide^{VOC}** is a sensitive and cost-effective sensor for measuring air quality. This air quality sensor uses micro metallic oxide semiconductor (MOS) technology for the detection of a variety of VOCs in direct proportion to the amount of CO₂ in the air.

Technical Data - air2guide^{VOC}

Nominal size	3 x 1-3/4 x 2-1/4" (78 x 45.5 x 58 mm)
Power consumption	1.2 W / 2.2VA
Output signal	0...10 V, min. load 10 kΩ
Warm-up time	30 minutes
Temperature	Ambient -4 °F...+122 °F (-20 °C...+50 °C)
Humidity range	Max. 85% rH, not condensating
Ingress protection	IP 42
Weight	5.2 oz (150 g)

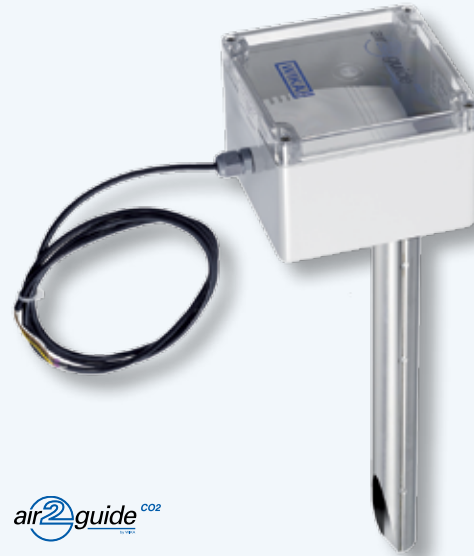
Type A2G-85

Applications

- A CO₂ sensing system uses real time CO₂ measurements to determine actual occupancy during the day. A system using the CO₂ sensor adjusts outside air delivery to provide only the amount of ventilation needed, thus virtually eliminating 100% of excessive amount of outside air used in a building
- The CO₂ sensor measures and records carbon dioxide in PPM in occupied building spaces

Product Features

- Easy installation
- Maintenance free due to automatic self calibration technology
- Compact and robust design



The **air2guide** CO₂ duct-mountable carbon dioxide transmitter is designed for HVAC applications. The CO₂ sensing element is based on the Non-Dispersive Infrared Technology (NDIR). An auto-calibration procedure compensates for any drifts and guarantees maintenance free service and longevity. Once installed into a duct, a small flow of air will be established by convection through the probe into the transmitter housing and back into the duct. Inside the transmitter housing the air will diffuse through a membrane into the CO₂ sensing element. The complete process inside a closed air loop avoids pollution of the CO₂ sensor. The **air2guide** CO₂ is available with an optional 3 LED display for the CO₂ content.

Technical Data - -air2guide CO₂

Nominal size	2-1/2 x 1-3/4 x 2" (120 x 120 x 85 mm)
Range	0...2,000 ppm (parts per million)
Output signal	0...10 V, analogue output max. 10 mA
Supply voltage	15...24 VDC (± 10%)
Accuracy	Typically ± 40 ppm + 4% of measured value
Temperature	Ambient temperature: +32 °F...+122 °F (0 °C...+50 °C) Operation: +32 °F...+122 °F (0 °C...+50 °C), max. 85% rH, non-condensing
Ingress protection	IP 20 per EN 60529 / IEC 529
Power consumption	Max. 3 W / max. 6 VA
Stem material	Galvanized steel
Stem dimensions	11.8 x 1.2" (300 x 30 mm)
Connection head material	Polycarbonate
Electrical connection	PG gland M16
Weight	2.9 lbs.



	Description	WIKA Model	Specification	WIKA P/N
1	Panel Mounting Case	air2guide ^P	Black thermoplastic	40195554
		air2guide ^{P+E}	Black thermoplastic	40195562
2	Surface Mounting Case	air2guide ^P	Black thermoplastic	40195571
		air2guide ^{P+E}	Black thermoplastic	40195597
3	Threaded Bezel	air2guide ^{P/P+E}	Black thermoplastic	40217477
4	Adapter Ring	air2guide ^{P/P+E}	To adapt gauge to larger panel openings	40229424
5	Duct Connector	air2guide ^{P+tube}	For 1/8", 3/16" tube inner diameter	40217507
		air2guide ^{P+tube/S/E}		
		air2guide ^{P/P+E}		
6	Hose Barb Adapters	air2guide ^{P+tube/S/E}	For 1/4" tube ID	40217537
		air2guide ^{P/P+E}	Straight for 1/8", 3/16" tube inner diameter	40179958
		air2guide ^{P+tube/S/E}	Straight for 1/4" tube inner diameter	40179966
		air2guide ^{P/P+E}	Angled for 1/8", 3/16" tube inner diameter	40179974
		air2guide ^{P+tube/S/E}	Angled for 1/4" tube inner diameter	40179982
		air2guide ^{P/P+E}	Set of 2x angled and 2x straight for 1/8", 3/16" hose inner diameter	40217728
		air2guide ^{P+tube/S/E}	Set of 2x angled and 2x straight for 1/4" hose inner diameter	40217736
		air2guide ^{P/P+E}	Set of 2x angled 1/8", 3/16" hose inner diameter and 2x angled 1/4" hose inner diameter	40217744
		air2guide ^{P+tube/S/E}	Set of 2x straight 1/8", 3/16" hose inner diameter and 2x straight 1/4" hose inner diameter	40217752
		air2guide ^{P/P+E}	Straight for 1/8", 3/16" tube inner diameter, with restrictor	40241491
		air2guide ^{P+tube/S/E}	Straight for 1/4" tube inner diameter, with restrictor	40241513
		air2guide ^{P/P+E}	Angled for 1/8", 3/16" tube inner diameter, with restrictor	40211483
		air2guide ^{P+tube/S/E}	Angled for 1/4" tube inner diameter, with restrictor	40241505
7	PG Gland M12	air2guide ^{P+E}		40141241
8	Compression Fitting	air2guide ^{P/P+E}	Brass, G1/8B x 1/4" pipe inner diameter	40232867
9	Brass Hose Barb Adapter	air2guide ^{P/P+E}	Brass, G1/8B x hose inner diameter 1/8" up to 5/16"	40232484
10	Tubing	air2guide ^{P/P+E}	PVC tube 1/8", 3/16" inner diameter, 75 foot roll	40217841
		air2guide ^{P+tube/S/E}	PVC tube 1/4" inner diameter, 75 foot roll	40217850
		air2guide ^{P/P+E}	PVC tube 1/8", 3/16" inner diameter, 75 foot roll	40208940
		air2guide ^F		
		air2guide ^{P+tube/S/E}	Silicone tube 1/4" inner diameter, 75 foot roll	40208958
11	Case Mounting Screws	air2guide ^{P+E}	Flat head M4.2 x 16 mm	40180018
		air2guide ^{P+tube/}	Slotted pan head screw M4.8 x 50 mm steel zinc plated	40213081
		air2guide ^{S/E}	Slotted pan head screw M3.9 x 19 mm steel zinc plated	40213072
12	Mounting Flange	air2guide ^T	Black plastic	40212360
		air2guide ^{T+H}	Black plastic	40212351
13	Static Pressure Tips	air2guide ^{P/P+E}	1/4" hose barb, extension length 4"	40232956
		air2guide ^{P/P+E}	1/4" hose barb, extension length 6"	40232964
		air2guide ^{P/P+E}	1/4" hose barb, extension length 8"	40232972
		air2guide ^{P/P+E}	1/8" to 1/4" hose barb, extension length 4"	40232981
		air2guide ^{P/P+E}	1/8" to 1/4" hose barb, extension length 6"	40232999
air2guide ^{P/P+E}	1/8" to 1/4" hose barb, extension length 8"	40233006		
14	Filling liquid	air2guide ^{P+tube}	Display fluid, red, 0.786 kg/dm ³ specific weight	40213714
15	Limitation Labels - Red/Green	air2guide ^{P+tube}	40213731	
16	Weather Protection Hood	air2guide ^{P/P+E}	For panel mount version only	40241564



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**WIKI Instrument Corporation
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1000 Wiegand Boulevard
Lawrenceville, GA 30043
Toll Free 1-888-WIKA-USA (945-2872)
Tel (770) 513-8200 Fax (770) 338-5118
www.wika.com/a2g

