

Humidity

Humidity transmitters

Regin humidity transmitters have a capacitive thin-film element that gives a signal that is proportional to the relative humidity (RH). The measuring element rapidly responds to changes in humidity and can be subjected to up to 100% RH without being damaged.

- High accuracy and rapid response
- Good long-term stability
- Resistant to contamination
- Supply voltage: 24 V AC or 15...35 V DC.
- Automatic adaption to the connected voltages.
- Room, wall or duct mounted
- Available as single humidity transmitters or as combined humidity and temperature transmitter.

Humidistats

Regin humidistat are used for controlling humidifying and/or dehumidifying in HVAC systems. The humidistats have human hair or a synthetic element as sensor medium. The sensor stretches as the humidity increases and shrinks as the humidity decreases. The changes are transmitted to a micro switch. The setpoint can be set at between 10 and 100% RH.

- Reliable construction with a high degree of accuracy (introduced the first time by Regin in 1947)
- Contacts of the changeover type: 2 step humidistat

HRTN – Room humidity transmitter, wall mounting



Output:	0...10 V DC or 4...20 mA
Working range Humidity	0...90% RH
Working range Temp.	0...50°C
Accuracy Humidity	+/-2% RH (40...60% RH) otherwise +/- 3% RH
Accuracy Temp.	+/-0.25 K and +/-0.4 K depending on type
Protection class	IP30

HMH – Duct/Wall humidistat



Output	10 A, 250 V AC, change-over
Setpoint	10...100% RH
Hysteresis	3% RH
Step differential (HMH2)	0...25% RH
Mounting	Duct or wall-mounting
Protection class	IP54

HRT – Wall humidity transmitter



Output:	0...10 V DC or 4...20 mA
Working range HRT 350 series	
Humidity:	20...95% RH
Temperature:	0...+50°C
Working range HRT 250 series	
Humidity:	0...100% RH,
Temperature:	-20...+80°C
Accuracy/humidity	
HRT 350 series	+/-3% RH (40...60% RH) otherwise +/-5% RH
HRT 250 series	+/-2% RH (40...60% RH)
Accuracy/temperature	
HRT 350 series	+/-0.5 K at 20°C
HRT 250 series	+/-0.2 K at 20°C
Protection class	IP65

HR-S – Room humidistat



Output	One (1), 230 V AC, 5 A, change-over
Setpoint	35...95% RH
Hysteresis	7% RH
Mounting	Wall-mounting
Protection class	IP30

HDT – Duct humidity transmitter



Output:	0...10 V DC or 4...20 mA
Working range HDT 2200 series	
Humidity:	0...100% RH
Temperature:	-20...+80°C
Working range HDT 3200 series	
Humidity:	20...95% RH,
Temperature:	0...+50°C
Accuracy/humidity	
HDT 2200 series	+/-2% RH (+/-2% RH 90...100% RH)
HDT 3200 series	+/-3% RH (+/-5% RH 40...60% RH)
Accuracy/temperature	
HDT 2200 series	+/-0.4 K at 20°C
HDT 3200 series	+/-0.7 K at 20°C
Protection class	IP65

Pressure and Air flow

Pressure transmitters

Regin pressure and differential pressure transmitters use a ceramic measuring beam. The differential pressure affects a membrane that works directly against the measuring beam with a film resistor. When the resistance changes it is converted to a proportional output control signal.

- *High degree of accuracy*
- *Few moving parts – rapid response*
- *Excellent long-term stability.*

Duct sensor for air velocity

The air velocity sensor operates with a specially designed thin-film element which is heated (the hot-film anemometer principle). The cooling rate of the element, which depends on the air velocity, is measured and transformed to an output signal proportional to the air speed.

- *Stable output signal compensated for varying temperature*
- *Extremely high frequency response*
- *Not sensitive to contamination by dust etc.*

Differential pressure switch

The differential pressure switch has a synthetic spring suspended membrane which is linked to a changeover contact. When the differential pressure exceeds the setpoint value the contact changes. The differential pressure switch is used to supervise and monitor fans, filters and air handling units, to control defrosting functions etc.

Flow switches

The flow switch operated by an electrical blade-type tripping device interrupts the electric control circuit of the boiler/chiller when there is insufficient water circulation in the boiler/chiller pipe owing to some abnormal condition.

DMD – Differential pressure transmitter for air



Output:	Selectable: 0...10 V DC or 4...20 mA,
Working range	4 selectable ranges 0...1000 Pa
Accuracy	Better than ±1% at 20°C
Electronic damping	0...20 s
Protection class	IP54

TTK - Pressure transmitter for liquids and gases



Output:	0-10 V DC or 4-20 mA
Accuracy	+/-0.3%
Media temperature range	-15...+80°C
Working range:	0...10 MPa (100 bar)
Protection class	IP 65

DTL - Differential pressure transmitter for air and non-corrosive gases



Output:	0...10 V DC or 4...20 mA
Accuracy	+/-1% fs
Ambient temperature	0...70°C
Working range	Covering from -50...+50 Pa to 0...5000 Pa
Protection class	IP54

AVDT25 – Air velocity sensor



Output:	0-10 V DC or 4-20 mA
Accuracy	+/- (0.3 m/s + 3% of value), at 0...10 m/s +/- (0.3 m/s + 3% of value), at 0...15 m/s +/- (0.3 m/s + 4% of value), at 0...20 m/s
Damping	0.2 or 2 s (optional)
Ambient temperature	-10...+50°C
Working range:	Selectable 0...10 m/s, 0...15 m/s, 0...20 m/s
Protection class	IP65

DTK - Differential pressure transmitter for liquids and gases



Output:	0...10 V DC or 4...20 mA
Accuracy:	+/-1,38% fs for transmitter 0...10 kPa and 0...250 kPa +/-0,8% fs for transmitters 0...400 kPa +/-0,5% fs for transmitters 0...600 and 0...2500kPa
Ambient temperature	-15...+80°C
Working range:	0...2500 kPa
Protection class	IP65

DTV – Differential pressure switch, for air and non-corrosive gases



Max. overload pressure	5000 Pa
Relay contact data	5 A (0.8 A) 250 V AC
Ambient temperature	-20...+85°C
Protection class	IP54

Flow switch



Contact data	6(2) A, 250 V AC, change-over contact (SPDT)
Max. fluid pressure	10 bar tested to 15 bar
Max. fluid temperature	110°C
Storage temperature	-20...+80°C
Protection class	IP64

Temperature

Whenever you need to keep track of the temperature in- and outside a building Regin has all you need. The product range includes NTC, PT100 and PT1000 sensors and transmitters. They are well-known for high accuracy and long term stability.

Temperature transmitters

- For room mounting and immersion mounting
- Output signal 0...10 V DC or 4...20 mA.

NTC sensors

- Measures the temperature resistance in a ceramic element (NTC). When the temperature rises the resistance is reduced.

PT100/PT1000 sensors

- Based on platinum elements with standardized resistance.
PT100: 100 resistance ohms at 0°C.
PT1000: 1000 ohms resistance at 0°C.
- Available in a wide range of mounting versions

The PT100 and PT1000 sensors in the Tempero series are designed according to "Ready-Steady-Go".



Duct sensor with soft seal for perfect surface contact. The sensor length in the duct is easily adjustable.

The screw cap offers quick and easy installation.

Temperature transmitters



TRTN - Room mounting	
Output	0...10 V DC or 4...20 mA
Temp range	0...50°C
Accuracy	+/-0.3°C
Protection class	IP30
TRT - Wall-mounting	
Output	0...10 V DC or 4...20 mA
Temp range	0...50°C
Accuracy	+/-0.7°C
Protection class	IP65
TLT 130 - Immersion mounting	
Output	0...10 V DC or 4...20 mA
Temp range	0...100°C
Accuracy	+/-0.5°C
Protection class	IP65
TDT200 - Duct mounting	
Output	0...10 V DC or 4...20 mA
Temp range	0...50°C
Accuracy	+/-0.5°C
Protection class	IP65

NTC sensors



Without housing		
TG-A...	Clamp-on sensor	0...30°C
TG-B...	Bulb sensor	-20 ...+10°C up to 60...90°C
TG-G...	Floor sensor	0...40°C
TG-D...	Immersion sensor	0...30°C up to 60...90°C
TG-K3...	Duct sensor	-30...+30 up to 0...70°C
With housing		
TG-R4...	Room sensor with set point adjustment	0...30°C
TG-R5...	Room sensor	0...30°C up to 20...50°C
TG-R6...	Outdoor sensor	-30...+30°C up to 20...50°C

PT100/PT1000 sensors



TG-AH/PT1000	Clamp-on sensor w housing	-30...+120°C
TG-A1/PT100/1000	Clamp-on sensor w/o housing	30...+150°C
TG-B1/PT100/1000	Bulb sensor	-30...+100°C
TG-KH/PT100/1000	Duct sensor with housing	-30...+70°C
TG-KH/PT100/1000	Duct sensor w/o housing	-30...+70°C
TG-DH/PT100/1000	Immersion with housing	-20...+120°C
TG-DHWP/PT100/1000	Immersion with housing + well	-20...+120°C
TG-D1/PT100/1000	Immersion w/o housing	-30...+150°C
TG-R4/PT1000 TG-R5/PT100/1000	Room sensor set point adj	0...50°C
TG-UH/PT100/1000	Outdoor sensor	-30...+120°C

CO₂

The Regin CO₂-transmitters give direct information about the concentration of CO₂ in the room or building. Based on these values the ventilation system is constantly controlled to provide an optimum concentration of CO₂ in the air.

- *Very high accuracy due to patented auto-calibration function with infrared light measuring and reference measuring system*
- *Low risk for contamination*
- *Short response time*
- *High long-term stability*
- *Long calibration interval - more than 5 years and no calibration necessary at installation.*

Wide range

- *Standard version: CO₂ and temperature transmitter*

Optinal:

- *CO₂ and temperature transmitter with display*
- *CO₂, temperature and humidity transmitter with display*
- *CO₂ transmitter with relay*



The transmitter is available in versions with LCD display which gives you a good overview of all measured values.

CO2RT series - Wall mounted room transmitter



Outputs	
CO ₂	0...10 V DC referring to 0...2000 ppm
Temperature	0...10 V DC referring to 0...50°C, PT1000-sensor (class DIN B)
Humidity	0...10 V DC referring to 10...90% RH (working range 1...9 V)
Working range	
CO ₂	0...2000 ppm
Temperature	0...50°C
Humidity	0...90% RH
Accuracy	
CO ₂	± (50 ppm +2% of working range)
Temperature	±3°C
Humidity	3% (30...70% RA) ± 5% (10...90% RH)
Protection class	IP30

CO2DT - Duct transmitter



Output	0...10V DC
Working range CO ₂	0...2000 ppm
Accuracy CO ₂	± (50 ppm +2% of measured value)
Protection class	IP65