Humidity Sensors

**Indoor combination sensor for rel. humidity and temp.** ANDRFFT/R-X/S

**DESCRIPTION**
Apparatus for measuring the relative humidity and/or temperature in living and office spaces, reception halls, foyers etc. The measuring transducer records the temperature and humidity via an internal sensor and converts the value into a standardized analogue output signal in the range between 0-10V/4-20 mA.

**TECHNICAL DATA**
- Power supply: 12 ... 34 VAC/VDC
- Sensor element humidity: capacitive sensor
- Sensor element temp.: capacitive sensor
- Sensor element temp.: capacitive sensor
- Measuring range humidity: 0 ... 100% r.h.
- Output humidity: 0 ... 10 V or 4 ... 20 mA
- Tolerance humidity 35% ... 70% r.h.: ± 2%
- Measuring ranges temp.: request
- Active output signal temperature 0 ... 10 V or 4 ... 20 mA
- Tolerance temperature: ± 0,5 K
- Load at analogue output (0 ... 10 V): 100 kOhms
- Analogue output burden (4 ... 20 mA): 300 ... 1000 Ohms
- Operating temperature: -30°C ... +50°C
- Operating range: 0 ... 98% r.h.
- Response time (r.h.): 8 Sec. (at 63% condensation)
- Connection: Screwclamps max. 1.5 mm
- Housing: Material ABS, Colour RAL 9010
- Measurements housing: 87,5 x 87,5 x 30 mm
- Protection class: IP30

**Outdoor combination sensor for rel. humidity and temp.** ANDARFFT/R-X/S

**DESCRIPTION**
Device for measuring the relative humidity/temperature in outdoor areas or indoor areas subject to high requirements. The measuring transducer records the temperature and humidity via an internal sensor and converts the value into a standardized analogue output signal in the range between 0-10V/4-20 mA. Additionally, a passive temperature sensor can be connected. The sensor features long-term stability and no recalibration is required.

**TECHNICAL DATA**
- Power supply: 12 ... 34 VAC/VDC
- Sensor element humidity: capacitive sensor
- Sensor element temp.: capacitive sensor
- Sensor element temp.: capacitive sensor
- Measuring range humidity: 0 ... 100% r.h.
- Output humidity: 0 ... 10 V or 4 ... 20 mA
- Tolerance humidity 35% ... 70% r.h.: ± 2%
- Measuring range temp.: request
- Active output signal temperature 0 ... 10 V or 4 ... 20 mA
- Tolerance temperature: ± 0,5 K
- Load at analogue output (0 ... 10 V): 100 kOhms
- Analogue output burden (4 ... 20 mA): 300 ... 1000 Ohms
- Operating temperature: -30°C ... +70°C
- Operating range: 0 ... 98% r.h.
- Response time (r.h.): 8 Sec. (at 63% condensation)
- Connection: Screwclamps max. 1.5 mm
- Housing: Material ABS, Colour RAL 9010
- Measurements housing: 87,5 x 87,5 x 30 mm
- Protection class: IP30
- Sensor protection: Sintered filter, HD polyethylene

**Duct combination sensor for rel. humidity and temp.** ANDKFFT/R-X/S

**DESCRIPTION**
Device for measuring the relative humidity/temperature in ducts or indoor areas subject to high requirements. The measuring transducer records the temperature and humidity via an internal sensor and converts the value into a standardized analogue output signal in the range between 0-10V/4-20 mA.

**TECHNICAL DATA**
- Power supply: 12 ... 34 VAC/VDC
- Sensor element humidity: capacitive sensor
- Sensor element temp.: capacitive sensor
- Sensor element temp.: capacitive sensor
- Measuring range humidity: 0 ... 100% r.h.
- Output humidity: 0 ... 10 V or 4 ... 20 mA
- Tolerance humidity 35% ... 70% r.h.: ± 2%
- Measuring range temp.: request
- Active output signal temperature 0 ... 10 V or 4 ... 20 mA
- Tolerance temperature: ± 0,5 K
- Load at analogue output (0 ... 10 V): 100 kOhms
- Analogue output burden (4 ... 20 mA): 300 ... 1000 Ohms
- Operating temperature: -30°C ... +70°C
- Operating range: 0 ... 98% r.h.
- Response time (r.h.): 8 Sec. (at 63% condensation)
- Connection: Screwclamps max. 1.5 mm
- Housing: Material ABS, Colour RAL 9010
- Measurements housing: 87,5 x 87,5 x 30 mm
- Protection class: IP30
- Sensor protection: Sintered filter, HD polyethylene
Humidity Sensors

Leak sensor  ANDLGM

DESCRIPTION
Our ANDLGM reliably detects conductive liquids which makes it ideal for monitoring leakage and moisture content. The main applications are in the building and climate technology. Using integrated switching output can be used to activate or disable actuators. There is the option to connect an acoustic / optical signal transmitter. The sensitivity is adjusted via a potentiometer, while switching polarity and optional alarm output can be configured via a DIP switch.

TECHNICAL DATA
- Power supply: 24 VDC / VAC + 10%
- Power consumption: 20 mA, heating ca. 80-90 mA
- Measuring principle: Electrolytic AC voltage measurement
- Switching point: Adjustable via potentiometer
- Operating current: 50 mA
- Relay contact: Potential free (changeover) 60 V / DC 1 A
- Relay contact: NO & NC adjustable via DIP switch
- Housing: PA6 15% GK, Colour RAL 9010
- Measurements housing: 75 x 69 x 44 mm
- Protection class: IP65

Stevenson screen  ANDWHT

DESCRIPTION
There exist various fields of application of our weather shelter in home and building automation. They’re used to regulate actuators depend on the temperature and the measured moisture. The standardized output signals of 0-10V or 4-20mA make it easy to connect it with an existing control unit. The sensor provides an analog output signal, which is linear to moisture and temperature.

TECHNICAL DATA
- Power supply (0...10 V): 12 ... 34 VAC/VDC
- Power supply (4 ... 20 mA): 12 ... 34 VAC/VDC
- Sensor element humidity: capacitive
- Sensor element temp.: capacitive
- Measuring range humidity: 0 ... 100% r.h.
- Output humidity: 0 ... 10 V or 4 ... 20 mA
- Tolerance humidity 35% ... 70% r.h.: ± 2% (25 ... 90% r.h.)
- Measuring range temp.: -30°C ... +70°C
- Output temperature: 0 ... 10 V or 4 ... 20 mA
- Tolerance temperature: ± 0.5 K
- Load at analogue output (0...10 V): 10 ... 100 kOhms
- Analogue output burden (4 ... 20 mA): 300 ... 1000 Ohms
- Operating temperature: -30°C ... +70°C
- Operating range: 0 ... 98% r.h.
- Response time (r. h.): 8 Sec. (at 63% condensation)
- Connection: Screwclamps max. 1.5 mm
- Housing: grey
- Measurements housing: 265 x 155 mm
- Protection class: IP65

Rain sensor  ANDRGM

DESCRIPTION
The measuring procedure via electrolytic AC voltage allows the Rain-Sensor ANDRGM to detect various kinds of precipitation e.g. rain or snow. Thanks to the installed passive potentiometer the circuit sensitivity can be adjusted optimally to the required field of application. The integrated heating accelerates the drying phase of the device and avoids the freezing of contact surfaces.

TECHNICAL DATA
- Power supply: 12 ... 34 VAC/VDC
- Measuring principle: Electrolytic AC voltage measurement
- Switching point: Adjustable via potentiometer
- Operating current: 50 mA
- Relay contact: Potential free (changeover) 60 V / DC 1 A
- Relay contact: NO & NC adjustable via DIP switch
- Housing: PA6 15% GK, Colour RAL 9010
- Measurements housing: 75 x 69 x 44 mm
- Protection class: IP65
Humidity Sensors

Dew Point Monitor
ANDTPW / ANDTPWext

DESCRIPTION
The Dew Point Monitor measures the relative humidity on pipes, cooling ceilings or other surfaces and transfers the value as a linear analogue 4…20 mA output signal. The device also features a changeover contact for which the limiting value can be adjusted between 75 and 100 % r.h. with the help of a potentiometer. This way the respective value can be transferred to the control/DDC when condensation is forming in order to activate the respective actuators.

TECHNICAL DATA
- Power supply: 20 … 34 VAC/VDC
- Power input (0…10V): 20 mA
- Power input (4…20 mA): 24 … 44 mA
- Electrical connection: Screw clamps 1.5 mm²
- Sensor: digital combination sensor for humidity and temperature
- Measuring range for continuous output 0 … 100 % r.h.
- Measuring range for switching output (adjustable): 85 … 95 % r.h.
- Load at analogue output (0…10V): 10 … 100 kOhms
- Active output burden (4…20 mA): 300 … 1000 kOhms
- Switching output: Potential free (changeover) 60 V / DC 1A
- Housing: PA6 15% GK, Colour RAL 9010
- Connection: Screwclamps max. 1.5 mm²
- Measurment housing: 75 x 69 x 44 mm
- Cable inlet: M16x1.5
- Protection class: IP65
- Admissible ambient T.: -30°C … +120 °C
- Measuring range humid.: 0 … 98% r.h.
- Operating range: 0 … 98% r.h.
- Response time (condensate-free): ca 60 sec
- Sensor system: capacitive

High temp. / humidity sensor
ANDARFT/R-X/HT

DESCRIPTION
Device for measuring the relative humidity/temp. in outdoor areas or indoor areas subject to high requirements. The measuring transducer measures the temperature and humidity via an internal sensor and converts the value into a standardized analogue output signal in the range between 0-10V/4-20 mA. Additionally, a passive temperature sensor can be connected. Various measuring ranges are available depending on the model. The sensor features longer term stability and no recalibration is required.

TECHNICAL DATA
- Power supply: 12 … 34 VAC/VDC
- Sensor element humidity: capacitive
- Sensor element temp: capacitive
- Sensor element temperature passive (opt.): at customer’s option
- Measuring range humid.: 0 … 100 % r.h.
- Output humidity: 0 … 10 V or 4 … 20 mA
- Tolerance humidity 35% … 75% r.h.: ± 2 %
- Measuring range T.: -30°C … +120°C
- Active output sign. T.: 0…10Vor 4…20 mA
- Tolerance temperature: ± 0,5 K
- Load at analogue output (0…10V): 10 … 100 kOhms
- Analogue output burden (4…20 mA): 300 … 1000 kOhms
- Switching hysteresis: ca 5% r. h.
- Switching point: Adjustable between 80 and 100 %
- Operating range: 0 … 100 % r.h.
- Operating temperature: -30°C … +70°C
- Condensation: briefly admissible
- Medium: Ambient air without atmospheric pollution
- Response time: 120 sec at switching point from 75 % to condensation
- Power supply cord (KD:ext): 2000 mm
- Silicone up to 180 °C
- Power supply: 20 … 34 VAC/VDC
- Operating current (24 VDC): max. 30 mA with energized relay
- Relay: max. 15 mA with deenergized relay
- Function control: LED
- LED: red when relay is energized
- Switching characteristics: Isolated relay with switching contact, closed at normal operation (condensate-free). Open at missing operating voltage or forming of condensation
- Contact load: max. 60 V/1A
- Switching current: Max. 1 A AC / DC
- Display: LED green (Relay deenergized)
- LED red (Relay energized)
- Switching capacity Relay: 60 V/1A

Condensation monitor
ANDKDW2 and ANDKDW2ext

DESCRIPTION
Our ANDKDW2 and ANDKDW2EXT condensation monitors are typically mounted to cooling and cold water pipes, cooling ceilings or other cooled surfaces. Both models offer reliable detection of condensation and protect the objects against the former. The ANDKDW2Ext has an external measuring point and can easily be mounted in confined spaces. Our ANDKDWs can be used as monitors on cooling ceilings and pipes and the additional internal switching output is capable of activating heating systems or other actuators.
Humidity Sensors

Duct hygrostat with int. and ext. controls
ANDKHY

DESCRIPTION
The ANDKHY HG80 Hygrostat is a two-level controller for controlling the relative humidity in air ducts of air-conditioning system, conditioning cabinets. The device is also applied in food storages, cooling chambers for fruits and vegetables, greenhouses of gardening companies, textile industry, paper and printing industry, movie industry, and hospitals - basically in all places where humidity monitoring and control is required.

TECHNICAL DATA
- Scale: 30...100 % r.h.
- Accuracy: ±3,5% r.h. > 50% r.h.
- ±4% r.h. <50% r.h.
- Operating range: 35...95% r.h.
- Medium: Air (nonaggressiv), depressurized
- Differential gap: at 50% r.h. ca. 4% r.h.
- Max voltage: 250 VAC
- Switching capacity: changeover contact Ohmic load (cos phi=1) 15A AC 230 V
- Inductive load (cos phi=0,7) 2A AC 230 V
- Voltage 0,25A DC 230 V
- Switching capacity, minimum load: 100 mA, 125 VAC
- Weight: 700 g
- Protection class KHY-A: IP54
- Protection class KHY-I: IP65
- Protection rating: III
- Admissible air velocity 8 m/sec
- Medium temperature:
- Operating temperature: 0 °C ... +60 °C
- Storage temperature: -30 °C ... +60 °C

Indoor hygrostat with int. and ext. controls
ANDRHY

DESCRIPTION
The Indoor Hygrostat is a two-level controller for controlling the relative humidity. The device is typically used for controlling air moistening and demoistening in office spaces and IT rooms. The device is also applied in food storages, cooling chambers for fruits and vegetables, greenhouses of gardening companies, textile industry, paper and printing industry, movie industry and hospitals. The Hygroswitch features an internal adjustment wheel with scale instead of an external control knob. The wheel must be aligned according to the red indication marks.

TECHNICAL DATA
- Scale: 30...100 % r.h.
- Accuracy: ±3,0% r.h. > 40% r.h.
- ±4,0% r.h. < 40% r.h.
- Operating range: 35...95% r.h.
- Medium: Air (nonaggressiv), depressurized
- Differential gap: at 50% r.h. ca. 4% r.h.
- Switching capacity: max. 250 VAC and 0,1...5A at ohmic load for demoistening
- 0,1...2A at ohmic load for moistening
- 0,1...1A at inductive load with cos phi=0,7
- Life span: around 100.000 operation cycles
- Weight: 58 g
- Protection class: IP30D
- Operating temperature: 0 °C ... +60 °C
- Storage temperature: -40 °C ... +60 °C
- Sinterfilter, brass