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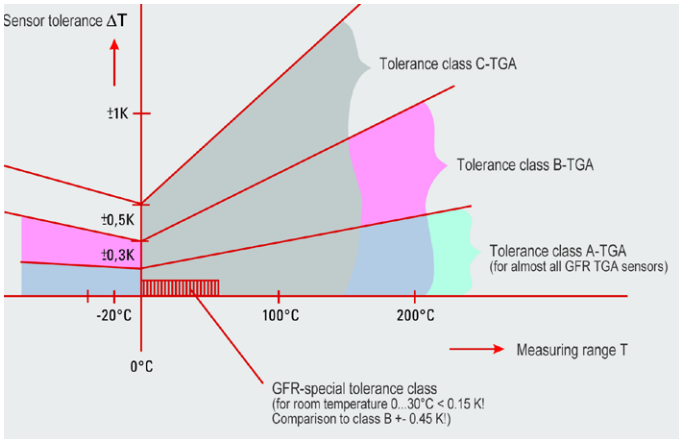
Sensors, actuators, fittings, valves

Whether sensors, regulators, heat volume counters, valves, actuator drives or explosion-proof components, the comprehensive and first-class DIGICONTROL field devices portfolio guarantee an optimum performance and system-compatible integration. Planners, builders and operators of buildings and properties appreciate the continuous availability of a well-chosen range of products that are in stock, the dependable service and the knowledgeable advice of an experienced team. Even uncommon components are quickly available.

Tolerances and stability of sensors

The range of temperature sensors has been developed and designed in parallel with and according to the new version of VDI guideline 3512. This guideline provides a basis for classifying the quality of temperature sensors for building automation, which is more precise than simply specifying tolerance classes (for sensor resistors). It helps to improve the energy balance of buildings and to optimise the installation of temperature sensors.

DIGICONTROL temperature sensors improve energy efficiency and thus increase savings. This is of particular interest in light of the European Union‘s „Green Building“ programme



A decent measuring element does not necessarily make a good sensor!

The goal of increasing energy savings and efficiency in building automation has led to higher stability and accuracy standards for temperature sensors. A market survey reveals a wealth of available temperature sensor types. However, these sensors are not always clearly structured or classified according to their stability and tolerance ratings. Nevertheless, these specifications are crucial for accurately estimating their energy efficiency and saving potential.

The publication of standard VDI/VDE 3512 has set the benchmark for higher requirements regarding energy-efficient building and room automation. Builders now have a basis for selecting the most suitable temperature measurement technology. VDI/VDE 3512 Part 4 distinguishes between TBA tolerance classes A/B/C. Temperature sensors complying with the corresponding test results may be labelled „A TBA“, „B TBA“ or „C TBA“ and the VDI/ VDE mark. The highest tolerance class is “A TBA”.

Outside temperature sensor with optional radiation protection plate

DIGICONTROL F-ATF121B

Data sheet number 81002

The outside temperature sensor F-ATF121B convectively measures the air temperature using primary sensors installed in a plastic casing. It is especially designed for use in damp rooms as well as outdoor areas or outer facades. It has an optional radiation protection plate and is also suitable in places with high heat radiation.

TECHNICAL DATA

Insulating resistance	> 100 MΩ bei 20 °C (500 V DC)
Accuracy class according to TGA	A
Tolerance class	A-TGA
Measuring range	-35...+60 °C
Measuring current	≤ 2 mA
Sensor	Pt1000
Electrical connection	By means of screw terminals
Switching	Two conductor connection
Housing	Plastic housing, light grey
Protection class	IP65

TYPE

F-ATF121B

ACCESSORY

TYPE	DESCRIPTION	
F-ATF-B	Radiation protection plate for outside temperature sensor F-ATF121B	

Outside humidity sensor

DIGICONTROL F-AFF-U

Data sheet number 81276

The outside humidity sensor measures the relative humidity outside and converts these measurements into standard signals. Measurement converters are designed for the exact measurement of humidity. The transmitters are designed for the exact measurement of humidity.. Humidity measurement is based on the capacitative measurement principle.

TECHNICAL DATA

Voltage	15...24 V AC
Outputs	0...10 V DC correspond 0...100 % rh
Aberration humidity	MB 40...60 % rh. ± 2 % rh. at 20 °C
Sensor	Condensation-proof humidity–temperature sensor transmitter SHT 75, Sensor protection sintered bronze filter
Mounting	Surface and wall mounting
Switching	Four lead connection
Housing	Plastic housing, light grey
Protection class	IP65
Operating temperature	-30...+60 °C
Other remarks	Mounting and installation have to be performed in compliance with the pertinent rules and standards being effective at the measurement location. Particular attention shall be paid to guideline VDE/ VDI 3521 part 3.

TYPE

F-AFF-U

Outdoor humidity and temperature sensor

DIGICONTROL F-AFTF-U

Data sheet number 81050

The outdoor humidity and temperature sensor measures the relative humidity and temperature outdoors and converts these measured values into standard signals.A digital humidity sensor is used for collecting the measured value. The humidity measurement is based on the capacitive measuring principle.

TECHNICAL DATA

Voltage	24 V AC/DC +/- 10 %
Outputs	■ Temperature: 0...10 V in measuring range from -20...+80°C ■ Humidity: 0...10 V corresponds to 0...100 % rh.
Aberration temperature	+/- 0,4 K
Aberration humidity	measuring range 30...70 % rh. +/- 3 % rh. over 20 °C
Sensor	Condensation-proof humidity–temperature sensor transmitter SHT 75, Sensor protection sintered bronze filter
Housing	Plastic housing, light grey
Dimensions	58 x 35 x 64 mm
Protection class	IP65
Operating temperature	-30...+80 °C

TYPE

F-AFTF-U

Mounted temperature sensor

DIGICONTROL F-ALTF221

Data sheet number 81011

This mounted temperature sensor can be attached to pipelines using straps for non-invasive measurement of liquid and gas temperatures. The temperature of the liquid or gases is indirectly detected via the surface temperature and is subject to ambient temperature influences. The mounting part can be installed for this parallel or diagonal to the PG/KV connection.

TECHNICAL DATA

Insulating resistance	> 100 MΩ bei 20 °C (500 V DC)
Accuracy class according to TGA	A
Tolerance class	A-TGA
Measuring range	-35...+110 °C
Measuring current	≤ 1,15 mA
	Aluminium with special thermal foil
Sensor	Pt1000
Mounting	Attachment to the pipe with mounting strap made of CrNi-Steel (diameter 13....92 mm)
Switching	Two conductor connection
Housing	Plastic housing, light grey
Protection class	IP65
Other remarks	Always observe any regulations and standards valid at measuring location when installing this device. Guideline VDE/VDI 3512 Part 3 should be noted in particular.

TYPE

F-ALTF221

Room temperature sensor

DIGICONTROL F-RTF121

Data sheet number 81031

Room temperature sensors convectively measure the air temperature by using their internal primary sensors through the housing vent slots or via an external protection tube (diameter 2 mm).

TECHNICAL DATA

Tolerance class	A
Measuring range	-35...+60 °C
Measuring current	≤ 1,15 mA
Sensor	Pt1000
Electrical connection	By means of screw terminals
Mounting	Wall mounting or flush-mounted box, diameter 55 mm
Housing	Plastic, pure white
Protection class	IP20
Option	Surcharge prices on request: - Other measurement ranges, e.g. -50...+50 °C or 0...+50 °C - Measurement converter with analogue output 0...10 V or 4...20 mA - Stainless steel housing
Other remarks	Restriction of areas: in the housing

TYPE

F-RTF121

ACCESSORY

TYPE	DESCRIPTION
F-ARA1E	Cover frame for ERC 1/2/3/4 for UP sockets
F-VS	Vandalism protection (ball protection grating)

Room temperature sensor setpoint-potentiometer

DIGICONTROL F-RTF321

Data sheet number 81041

Room temperature sensors convectively measure the air temperature by using their internal primary sensors through housing vent slots with built-in sensors. A built-in potentiometer serves as a set point generator for the room temperature.

TECHNICAL DATA

Tolerance class	A
Measuring range	-35...+60 °C
Measuring current	≤ 1,15 mA
Sensor	Pt1000
Electrical connection	By means of screw terminals
Mounting	Wall mounting or flush-mounted box, diameter 55 mm
Housing	Plastic, pure white
Protection class	IP20
Option	Surcharge prices on request: - Other measurement ranges, e.g. -50...+50 °C or 0...+50 °C - Measurement converter with analogue output 0...10 V or 4...20 mA
Other remarks	Restriction of areas: in the housing Potentiometer: 1 kΩ, 5 kΩ, 10 kΩ or other are possible, please always state the Ohm value

TYPE

F-RTF321

ACCESSORY

TYPE	DESCRIPTION
F-ARA1E	Cover frame for ERC 1/2/3/4 for UP sockets
F-VS	Vandalism protection (ball protection grating)

Mean value temperature sensor

DIGICONTROL F-MWTF121PE...

Data sheet number 81091

Mean value temperature sensors are used to measure the average temperature of the medium in pipes and ducts. The arrangement should generally be mounted diagonally and reticulated to the flow.

TECHNICAL DATA

Insulating resistance	> 100 MΩ bei 20 °C (500 V DC)
Accuracy class according to TGA	A
Tolerance class	A-TGA
Bending radius minimal	≥ 150 mm
Measuring current	≤ 2 mA
Sensor	Pt1000
Mounting	Cast aluminium mounting flange
Switching	Two conductor connection
Sensor	PE hose black
Housing	Plastic housing, light grey
Protection class	IP65

TYPE LIST

TYPE	NOMINAL LENGTH	CAPILLARY HOLDER
F-MWTF121PE1500	1500 mm	3 pieces
F-MWTF121PE3000	3000 mm	4 pieces
F-MWTF121PE6000	6000 mm	8 pieces

Rapid duct temperature sensor

DIGICONTROL F-FKATF121-...

Data sheet number 81025

The rapid duct temperature sensor is designed for quick temperature control in air ventilation ducts. Its tapered measurement point guarantees effective t90 (response) times, even in disadvantageous heat transitions (for instance, where the airflow is weak).

TECHNICAL DATA

Insulating resistance	> 100 MΩ bei 20 °C (500 V DC)
Accuracy class according to TGA	A
Tolerance class	A-TGA
Measuring range	-35...+150 °C
Response Time	t90: ≤ 8 s
Measuring current	≤ 1,15 mA
Sensor	Pt1000
Mounting	Cast aluminium mounting flange
Switching	Two conductor connection
Sensor	Diameter 6 mm at diameter 4.5 mm, material 1.4571
Housing	Plastic housing, light grey
Protection class	IP65
Other remarks	Always observe any regulations and standards valid at measuring location when installing this device. Guideline VDE/VDI 3512 Part 3 should be noted in particular.

TYPE LIST

TYPE	INSTALL. LENGTH
F-FKATF121-100	100 mm
F-FKATF121-150	150 mm
F-FKATF121-200	200 mm
F-FKATF121-250	250 mm
F-FKATF121-300	300 mm
F-FKATF121-400	400 mm
F-FKATF121-450	450 mm

Cable temperature sensor

DIGICONTROL F-KTF121

Data sheet number 81021

This temperature sensor, consisting of a connection cable and a small VA protective sleeve, is designed for any measurement of temperatures. Example: insertion in immersion sleeves

TECHNICAL DATA

Insulating resistance	> 100 MΩ bei 20 °C (500 V DC)
Accuracy class according to TGA	A
Tolerance class	A-TGA
Measuring range	-35...+150 °C
Measuring current	≤ 1,15 mA
Sensor	Pt1000
Mounting	Insertion in Immersion sleeves, clamping to pipes etc.
Switching	Two conductor connection
Sensor	1.5 m, silicon cable, free wires with end splices, Diameter 6x50 mm, material 1.4571
Protection class	IP54
Other remarks	Always observe any regulations and standards valid at measuring location when installing this device. Guideline VDE/VDI 3512 Part 3 should be noted in particular.

TYPE

F-KTF121

Flexible submersible temperature sensor

DIGICONTROL F-ROF121-...

Data sheet number 81080

The flexible submersible sensor is used for temperature measurement in pipelines and containers when using additional thermowells. It has an elastic and changeable thermowell intermediate part in the form of a silicon rubber cable. Because of this, the installation length can be maintained without any significant limitation to the degree of protection. The elastic intermediate part also provides for flexible suspension, thus eliminating errors with regard to the installation position in the additional thermowell.

TECHNICAL DATA

Insulating resistance	> 100 MΩ bei 20 °C (500 V DC)
Accuracy class according to TGA	A
Tolerance class	A-TGA
Measuring range	-35...+150 °C
Measuring current	≤ 1,15 mA
Sensor	Pt1000
Mounting	Installable in the additional thermowell
Switching	Two conductor connection
Sensor	Diameter 6 mm, material VA
Housing	Plastic housing, light grey, partially contains the rolled up cable
Protection class	IP64
Other remarks	Always observe any regulations and standards valid at measuring location when installing this device. Guideline VDE/VDI 3512 Part 3 should be noted in particular.

TYPE LIST

TYPE	INSTALL. LENGTH
F-ROF121-250	50-250 mm
F-ROF121-450	300-450 mm

Immersion sleeves

DIGICONTROL T-THM... | T-THN...

Data sheet number 81100

Immersion sleeves with screw terminal for cable temperature sensor F-KTF1... and screw-in immersion sensor F-ROF1... for installation in hot and cold water networks.

TECHNICAL DATA

Mounting	Internal thread G 1/2”

TYPE LIST

TYPE	OPERATING PRESSURE	INSTALL. LENGTH	MATERIAL	AMBIENT TEMPERATURE
T-THM100	20 bar	100 mm	Nickel-plated brass	max. 150 °C
T-THM150	20 bar	150 mm	Nickel-plated brass	max. 150 °C
T-THM200	20 bar	200 mm	Nickel-plated brass	max. 150 °C
T-THM250	20 bar	250 mm	Nickel-plated brass	max. 150 °C
T-THM300	20 bar	300 mm	Nickel-plated brass	max. 150 °C
T-THM400	20 bar	400 mm	Nickel-plated brass	max. 150 °C
T-THM450	20 bar	450 mm	Nickel-plated brass	max. 150 °C
T-THN100	40 bar	100 mm	Stainless steel, 1.4571	max. 400 °C
T-THN150	40 bar	150 mm	Stainless steel, 1.4571	max. 400 °C
T-THN200	40 bar	200 mm	Stainless steel, 1.4571	max. 400 °C
T-THN250	40 bar	250 mm	Stainless steel, 1.4571	max. 400 °C
T-THN300	40 bar	300 mm	Stainless steel, 1.4571	max. 400 °C
T-THN400	40 bar	400 mm	Stainless steel, 1.4571	max. 400 °C
T-THN450	40 bar	450 mm	Stainless steel, 1.4571	max. 400 °C

Pipeline temperature sensor

DIGICONTROL F-ETF521

Data sheet number 81071

The type ETF pipeline sensor can be installed in pipeline networks, containers or exhaust ducts, depending on the installed sensor, in the range of -35 to +600 °C. It has an exchangeable measuring insert.

TECHNICAL DATA

Insulating resistance	> 100 MΩ bei 20 °C (500 V DC)
Accuracy class according to TGA	C
Tolerance class	A-TGA
Measuring range	-35...+600 °C
Measuring current	≤ 1,15 mA
Operating pressure	40 bar
Install. length	160, 250, 400 (max. 1000) mm 80 mm
Sensor	Pt1000
Mounting	Internal thread G 1/2”
Switching	Two conductor connection
Sensor	Diameter 9 mm, material 1.4571
Housing	Connection head Form B in accordance with DIN 43729, cast aluminium
Protection class	IP54
Ambient temperature	Max. head temperature +120 °C
Other remarks	The cable connection is made in the head. For this, the cable is to be led into the head via the M16x1.5 screw-on cable connection. Always observe any regulations and standards valid at measuring location when installing this device. Guideline VDE/VDI 3512 Part 3 should be noted in particular.

TYPE

F-ETF521

Outdoor brightness sensor

DIGICONTROL F-AHF

Data sheet number 81201

The device is used for the measuring the illumination. The measuring signal of the brightness sensor is converted into the standard signal 0...10 V and output. Delivery state 20 kLux.

TECHNICAL DATA

Voltage	15...36 V DC or 24 V AC (one-way rectification)
Outputs	Illuminance: 0...10 Volt
Measuring range	0...500 kLux, 0...1 kLux, 0...2 kLux, 0...5 kLux, 0...20 kLux (default), 0...60 kLux
Temperature drift	< ± 5 % EW/10 K
Measurement error of illumination level	< ± 10 % EW
Switch-on run-in time	1 min
Response Time	t90: < 3 s
Sensor	Transparent cap / glass
Current consumption	Max. 20 mA at 24 V DC
Electrical connection	By means of screw terminals
Housing	Plastic housing, pure white, similar to RAL 9010
Protection class	IP65
Ambient temperature	-20...+50 °C
Storage temperature	-20...+50 °C
Ambient humidity	10...95 % rh.

TYPE

F-AHF

Room air quality sensor

DIGICONTROL F-RLQ

Data sheet number 81210

The measurement converter is used to measure air quality. It converts the measurement signal to the standard signal of 0 to 10 volts. The recording range of the air quality is calibrated for uses, for example, for the monitoring of residential rooms and conference areas. Applications can be found, for example, in the monitoring of air quality in: Residential and working rooms, Laboratories and sales areas, Meeting and conference areas, In commercial areas, Production monitoring. The device is internally equipped to provide the option of automatic or manual characteristic curve correction.

TECHNICAL DATA

Voltage	15...36 V DC / 24 V AC
Outputs	0...10 V
Measuring range	Air quality: calibration for normal loads
Switch-on run-in time	2 min
Response Time	t90: < 60 s
Sensor	Sensor in the housing, chemical mixed gas sensor
Electrical connection	By means of screw terminals
Accuracy	Air quality: ± 25 % EW (based on calibration gas)
Mounting	For direct wall mounting, AP with vent slots
Housing	Plastic housing, pure white
Dimensions	75 x 75 x 25 mm
Protection class	IP30
Storage temperature	-20...+50 °C
Operating temperature	0...+50 °C
Ambient humidity	10...95 % rh.

TYPE

F-RLQ

Duct air quality sensor

DIGICONTROL F-KLQ1

Data sheet number 81223

This measurement converter is used to measure air quality. It converts the measurement signal to the standard signal of 0 to 10 volts. Applications can be found, for example, in the monitoring of air quality in: Residential and rooms, Laboratories and sales areas, Meeting and conference areas, in commercial areas, Production monitoring. The device is internally equipped to provide the option of automatic or manual characteristic curve correction. The mounting flange included with the delivery makes the mounting/installation of this device uncomplicated. As an option, the pipe length of this version of the device can be adapted to the customer's measuring specifications.

TECHNICAL DATA

Voltage	15...36 V DC or 24 V AC (one-way rectification)
Outputs	0...10 V (default)
Measuring range	Air quality: calibration for normal loads
Switch-on run-in time	2 min
Response Time	t90: < 60 s
Sensor	Sintered filter, sensor in the housing, chemical mixed gas sensor
Electrical connection	By means of screw terminals
Accuracy	Air quality: ± 25% EW (based on calibration gas)
Sensor	Aluminium, diameter 16 mm, length about 200 mm
Housing	Plastic housing, pure white, similar to RAL 9010
Protection class	IP65
Storage temperature	-20...+50 °C
Operating temperature	0...+50 °C
Ambient humidity	10...95 % rh.

TYPE

F-KLQ1

Room CO2 and temperature sensor

DIGICONTROL F-RCO2T2

Data sheet number 82216

By the combination of CO2 and temperature measurement in a modern, assembly friendly case the measurand transducer F-RCO2T1 sets new standards in HVAC technology. The CO2 measuring is based on the approved infrared method. A patented calibration procedure compensates ageing effects and provides an excellent long-term stability.

TECHNICAL DATA

Voltage	24 V AC +/- 20 % / 15...35 V DC
Outputs	0...10 V
Measuring range	CO2: 0...2000 ppm Temperature: 0...50 °C
Response Time	t63: < 110 s
Current consumption	Typ. 14 mA + output current, max. 0.3 A for 0.3 s
Sensor	2 beam infrared cell (non-dispersive infrared technology (NDIR))
Electrical connection	Screw terminals max. 1.5 mm²
Accuracy	CO2: at 25 °C and 1013 mbar
Temperature dependence	Typ. +/- (1+ CO2 concentration ppm / 1000) ppm/°C (-20...45 °C)
Housing	Plastic; lid RAL 9003 (signal white), floor RAL 7035 (light grey)
Dimensions	85 x 100 x 26 mm
Protection class	IP30
Storage temperature	-20...+60 °C
Operating temperature	-20...+60 °C
Ambient humidity	0...90 % rh. (without condensation)
Standards/rules/guidelines/ approvals	EN 61326-1, EN 61326-2-3

TYPE

F-RCO2T2

Room CO2, humidity and temperature sensor

DIGICONTROL F-RCO2TF1

Data sheet number 82215

By combining the measurement of CO2, relative humidity (rh) and temperature (T) and by having a modern and easy to install housing, the F-RC02TF1 sets a new standard in the field of HVAC (heating/ventilation/ air conditioning) technology. A patented auto-calibration procedure compensates for the aging of the infrared source and ensures outstanding long term stability.

TECHNICAL DATA

Voltage	24 V AC +/- 20 % / 15...35 V DC
Outputs	0...10 V (corresponds to 0...100 % rh.)
Measuring range	CO2: 0...2000 ppm Temperature: 0...50 °C Humidity: 10...90 % rh.
Response Time	t63: < 110 s
Current consumption	Typ. 14 mA + output current, max. 0.3 A for 0.3 s
Sensor	2 beam infrared cell (non-dispersive infrared technology (NDIR))
Electrical connection	Screw terminals max. 1.5 mm^2
Accuracy	CO2:
Temperature dependence	Typ. +/- (1+ CO2 concentration ppm / 1000) ppm/°C (-20...45 °C)
Housing	Plastic; lid RAL 9003 (signal white), floor RAL 7035 (light grey)
Dimensions	85 x 100 x 26 mm
Protection class	IP30
Storage temperature	-20...+60 °C
Ambient humidity	0...90 % rh. (without condensation)
Standards/rules/guidelines/ approvals	EN 61326-1, EN 61326-2-3

TYPE

F-RCO2TF1

CO2 and temperature measuring transmitter for duct mounting

DIGICONTROL F-KCO2T1

Data sheet number 81221

The measuring transmitter F-KC02T1 is designed for duct mounting and enables an accurate and long-term stable measurement of the CO2 concentration and temperature. The compact and stylish housing allows simple mounting by means of a mounting flange. The CO2 sensing element uses Non-Dispersive Infrared Technology (NDIR). A patented auto-calibration procedure compensates for drift caused by the aging of the sensing element and guarantees outstanding long term stability. The air to be monitored is led to the measuring cell by means of convection via the measuring head and a 12mm pipe. The gas exchange with the measuring cell is performed via a membrane by diffusion, i.e. the gas in the measuring cell circulates in a closed system which avoids pollution of the CO2 sensor.

TECHNICAL DATA

Voltage	24 V AC +/- 20 % / 15...35 V DC
Outputs	0...10 V
Measuring range	CO2: 0...2000 ppm Temperature: 0...50 °C
Flow speed	Min. 1 m/s m/s
Response Time	t63: < 100 s at 3 m/s air speed in the duct
Current consumption	Typ. 15 mA + output current, max. 350 mA for 0.3 s
Sensor	■ Measuring rate approx. 15 s ■ 2 beam infrared cell (non-dispersive infrared technology (NDIR))
Electrical connection	■ 3 ■ Via screw terminals for wires up to 2.5 mm²
Accuracy	CO2:
Temperature dependence	Typ. +/- (1+ CO2 concentration ppm / 1000) ppm/°C (-20...45 °C)
Sensor	Length 200 mm
Housing	Polycarbonate; UL94V-0 approved
Dimensions	101 x 80.6 x 46 mm
Protection class	Housing: IP65 / NEMA 4 Sensor tube: IP20
Storage temperature	-20...+60 °C
Ambient humidity	0...95 % rh. (without condensation)
Standards/rules/guidelines/ approvals	EN 61326-1, EN 61326-2-3

TYPE

F-KCO2T1

Room motion sensor

DIGICONTROL F-BW360-1

Data sheet number 81241

The device is used to detect persons at a distance of up to 10 meters. If a movement is detected, the potential-free relay output will be closed. The holding time of the output (closed relay contact), measured from the time of the last detected movement, can be set via a potentiometer from 4 seconds to 16 minutes. The sensor is characterised by a large range combined with a compact design.

TECHNICAL DATA

Voltage	15...36 V DC / 24 V AC
Outputs	Potential-free changeover contact, max. 48 V, 1 A
Detection range	360°, opening angle max. 90°/110°, up to 10 m
Exposure time	Adjustable form four seconds to 16 minutes
Current consumption	Max. 25 mA at 24 V DC
Sensor	PIR motion sensor MTS 10/360, hermetically sealed sensor
Electrical connection	By means of screw terminals
Mounting	Wall mounting, AP
Housing	Plastic housing, pure white, similar to RAL 9010
Dimensions	75 x 75 x 25 mm
Protection class	IP30
Operating temperature	0...+50 °C
Ambient humidity	10...95 % rh.
Other remarks	Function controller “min time max” - setting of holding time

TYPE

F-BW360-1

Room brightness sensor

DIGICONTROL F-LS500-1

Data sheet number 81251

The device is used to measure the illuminance. The measuring signal of the brightness sensor is converted into the standard signal 0...10 V and put out. The instruments are calibrated using a cold light lamp (5700 K, similar to daylight). Application areas are e.g.: lighting control, illumination-dependent control of blinds, awnings and outdoor lights, monitoring of the lighting conditions at workplaces, greenhouses, living rooms, twilight sensors and brightness-dependet circuits. The sensor is characterised by ist compact design, low power consumption and high reliability.

TECHNICAL DATA

Voltage	15...36 V DC / 24 V AC
Outputs	0...10 V
Measuring range	500 Lux / 1 kLux / 20 kLux, factory setting 500 Lux
Sensor	Photodiode with filter, glass cover, hermetically sealed sensor
Current consumption	Max. 25 mA at 24 V DC
Electrical connection	By means of screw terminals
Mounting	Wall mounting, AP
Housing	Plastic housing, pure white, similar to RAL 9010
Dimensions	75 x 75 x 25 mm
Protection class	IP30
Operating temperature	0...+50 °C
Ambient humidity	10...95 % rh.
Other remarks	Function controller “offset/threshold” - “offset” illuminance +/- 5 %

TYPE

F-LS500-1

Combined room brightness and motion sensor

DIGICONTROL F-BW/LS360/500-1

Data sheet number 81231

The device is used to detect persons at a distance of up to 10 metres and to measure the illuminance. The device is supplied with a voltage output (10 V for movement, 0 V for no movement). The hold time of the output, measured from the time of the last detected movement, can be set by a potentiometer from 4 seconds to 16 minutes. The measuring signal of the room brightness sensor is converted into the standard signal 0...10V and output. The devices are calibrated using a cold light lamp (5700 K, similar to daylight). Fields of application are for example light control, light-dependent control of blinds, awnings and outdoor lights, monitoring of lighting conditions at workplaces, greenhouses, living rooms, twilight sensor and brightness-dependent circuits. The sensor is characterised by its large range, compact design, low power consumption and high reliability.

TECHNICAL DATA

Voltage	15...36 V DC / 24 V AC
Outputs	■ Illuminance: 0...10 V ■ Motion: potential-free changeover contact, max. 48 V, 1 A
Measuring range	500 Lux / 1 kLux / 20 kLux, factory setting 500 Lux
Temperature drift	< ± 5 % EW/10 K
Detection range	360° scope, opening angel max. 90°/110°, up to 10 m
Melting time t90	< 3 s
Exposure time	Adjustable form about 4 seconds to about 16 minutes
Switch-on run-in time	3 min
Sensor	PIR motion sensor MTS 10/360, photodiode with filter, glass cover, hermetically sealed sensors
Current consumption	Max. 25 mA at 24 V DC
Electrical connection	By means of screw terminals
Mounting	Wall mounting, AP
Housing	Plastic housing, pure white, similar to RAL 9010
Dimensions	75 x 75 x 25 mm
Protection class	IP30
Storage temperature	-20...+50 °C
Operating temperature	0...+50 °C
Ambient humidity	10...99 % rh.

TYPE

F-BW/ LS360/500-1

Room humidity and temperature sensor

DIGICONTROL F-RFTF-E

Data sheet number 81266

The room humidity and temperature measuring transmitter F-RFTF-E is the ideal solution for indoor applications in the field of HVAC (heating, ventilation and air-conditioning) technology. The stylish, functional housing enables easy installation and a fast exchange of the sensing unit for service purposes. The high quality humidity sensor and state-of-the art microprocessor controlled electronics are the guarantee for best accuracy and a wide range of options.

TECHNICAL DATA

Voltage	15...40 V DC or 24 V AC +/- 20 %
Outputs	0...10 V
Measuring range	Temperature: 0...50 °C Humidity: 0...95 % rh.
Current consumption	Typ. 4 mA in case of DC supply Typ. 15 mAeff in case of AC supply
Electrical connection	Screw terminals max. 1.5 mm²
Accuracy	Temperature: ± 0.25 K at 20 °C and 24 V DC Humidity: ± 2 % rh. (40...60 % rh.) / ± 3 % rh.(10...90 % rh.) at 20 °C and 24 V DC
Housing	Polycarbonate, front cover RAL 9003 (signal white), back cover RAL 7035 (light grey)
Protection class	IP30
Storage temperature	-25...+60 °C
Operating temperature	-5...+55 °C
Standards/rules/guidelines/ approvals	EN 61326-1, EN 61326-2-3

TYPE

F-RFTF-E

Room humidity/temperature sensor for extreme conditions

DIGICONTROL F-RFTF-20U

Data sheet number 81261

The humidity/temperature sensor measures the relative humidity and the temperature of the air and other non-aggressive gases and converts these measurements into standard signals. Measurement converters are tasked with measuring the humidity and temperature. A digital combination humidity – temperature sensor is used to collect these measurements. Humidity measurement is based on the capacitive measuring principle.

TECHNICAL DATA

Voltage	24 V AC/DC +/- 10 %
Outputs	■ Humidity: 0...10 V DC corresponds to 0...100 % rh. ■ Temperature: 0...10 V DC corresponds to 0...50 °C
Measuring range	Temperature: 0...50 °C Humidity: 0...100 % rh.
Aberration temperature	± 0,4 K
Aberration humidity	MB 30...70 % rh. ± 2 % rh. at 20 °C
Sensor	Sintered bronze filter
Mounting	Wall mounting, AP
Sensor	Length = 23 mm Diameter = 12 mm
Housing	Plastic housing, light grey
Dimensions	58 x 35 x 64 mm
Protection class	IP65
Ambient temperature	-30...+80 °C

TYPE

F-RFTF-20U

Duct humidity and temperature sensors

DIGICONTROL F-KFTF-S

Data sheet number 82168

Calibratable duct humidity- / temperature sensor measures the relative humidity and / or the temperature of the air and converts the measurands into a standard signal of 0-10 V. It has four switchable temeprature ranges and is applied in non-aggressive dust-free atmospheres in refrigeration, air conditioning, ventilation und clean room technology. Relative humidity is the quotient of water vapour partial pressure divided by the saturation vapour pressure at the respective gas temperature. These measuring transducers are designed for exact detection of humidity. A digital long-term stable sensor is used as measuring element for humiditiy measurement.

TECHNICAL DATA

Voltage	15...36 V DC / 24 V AC
Outputs	0...10 V
Measuring range	Temperature: -35...+35 °C, -35...+75 °C, 0...+50 °C, 0...+80 °C Humidity: 0...100 % rF
Aberration temperature	+/- 0,2 K +25 °C K
Long term stability	+/- 1 % / Year
Aberration humidity	typically +/- 2,0 % (20...80 % r.H.) at +25 °C, otherwise +/- 3,0 %
Current consumption	0.05 A / 24 V AC; 0.09 A / 24 V DC
Sensor	Digital humidity sensor with integrated temperature sensor, plastic sinter filter, diameter = 16 mm, length = 35 mm, exchangeable
Electrical connection	2-, 3- or 4-wire connection, 0.14 - 1.5 mm² via terminal screws, M16 x 1.5 including strain relief
Mounting	By mounting flange, plastic
Housing	Synthetic, material polyamide, 30 % glass-bead reinforced, with quick release screws (recess/cross slot combination), Colour traffic white (similar like RAL 9016)
Dimensions	72 x 64 x 37.8 mm
Protection class	III
Protection class	IP65
Storage temperature	-35...+85 °C
Operating temperature	-30...+75 °C
Ambient humidity	< 95 % rh., non-condensing air
Standards/rules/guidelines/ approvals	CE conformity according to EMC directive 2014/30/EU, according to EN 61326-1, according to EN 61326-2-3

TYPE

F-KFTF-S

Duct humidity/temperature for extreme conditions

DIGICONTROL F-KFTF-20U

Data sheet number 81271

The duct humidity sensor measures the relative humidity and the temperature of the air and other non-aggressive gases and converts these measurements into standard signals. The housing is suitable for direct duct mounting. The mounting flange makes it possible to steplessly change the immersion depth for the duct mounting. This is used in refrigeration, ventilation and air conditioning systems.

TECHNICAL DATA

Voltage	24 V AC/DC +/- 10 %
Outputs	■ Humidity: 0...10 V corresponds 0...100 % rh. ■ Temperature: 0...10 V corresponds 0...50 °C
Measuring range	Temperature: 0...50 °C Humidity: 0...100 % rh.
Aberration temperature	± 0,5 K
Aberration humidity	MB 40...60 % rh. ± 2 % rh. at 20 °C
Sensor	Condensation-proof humidity–temperature sensor transmitter SHT 75, Sensor protection sintered bronze filter
Mounting	In duct with mounting flange
Sensor	Length = 200 mm Diameter = 12 mm
Housing	Plastic housing, light grey
Dimensions	58 x 35 x 64 mm
Protection class	IP65
Ambient temperature	-30...+110 °C

TYPE

F-KFTF-20U

Optical smoke switch for room monitoring

DIGICONTROL R-RS142

Data sheet number 81280

The R-RS142 optical smoke switch reacts promptly to smouldering fires as well as to flaming fires that develop smoke. An additional temperature sensor is triggered at an ambient temperature of 70 °C. The R-RS142 operates on the light scatter principle. lnside the sensing chamber a light source and a light sensor are arranged so that the light normally does not fall on the sensor. It is only when airborne particles enter the chamber that light is scattered onto the sensor. The R-RS142 electronic circuitry also monitors the smoke detection system for slight contamination (dust and dirt build-up), heavy contamination and faults (sensing chamber failure). LEDs provide an optical indication of the operating status of the R-RS142. A long-term compensation function automatically maintains a constant difference between the quiescent signal and the alarm threshold, until a set limit indicating heavy contamination is reached. A relay contact opens in the alarm state or on power failure.

TECHNICAL DATA

Voltage	max. 30 V DC
Relay	Potential-free NC contact
Switching capacity	Max. 30 W
Nominal current	max. 1 A
Current consumption	At 28 V DC: max. 21 mA quiescent / max. 10 mA in Alarm / max. 25 mA in fault
Operating threshold	Smoke according to EN 54, Part 7
Function	The R-RS142 signals its functional status via pin 3 to an RS-ZA142 smoke switch status indicator, whose coloured LEDs give an additional remote optical indication of the instrument's condition.
Weight	120 g
Housing	White RAL 9010
Protection class	IP42
Operating temperature	-20...+60 °C
Standards/rules/guidelines/ approvals	DiBT approval for hold-open systems: Z-6.5-1571 and Z-6.5-1725

TYPE

R-RS142

ACCESSORY

TYPE	DESCRIPTION	
R-RS-11S143A	Universal base for surface-mounted and bracket installation in dry areas	
R-RS-11S143AF	Base for surface-mounted and bracket installation in damp areas	
R-RS-11S143UH	Base for installation in hollow ceilings, with masking ring.	
R-RS-ZA142-AP	The smoke switch status indicator RS-ZA142-AP displays the states of the connected smoke switches and transfers this information to a superordinate system. Design: surface mounting	

Smoke switch system for ventilation duct monitoring

DIGICONTROL R-LRS01

(incl. smoke switch R-ORS210)

Data sheet number 81286

By using the ventilation smoke switch system R-LRS01, smoke can be detected at an early stage. The propagation of smoke in the ventilation system is prevented due to the timely detection. The R-LRS01 can be used in ducts with rectangular and round cross-sections. It is designed for the field of application within buildings.

TECHNICAL DATA

Voltage	max. 30 V DC
Relay	Potential-free NC contact
Nominal current	max. 1 A
Current consumption	At 28 V DC: 22 mA quiescent / 11 mA in alarm / 16 mA in fault
Operating threshold	According to construction testing and principles for smoke triggers installations (12/76)
Mounting	On the ventilation duct 2 x Ø 28-30 mm / 150 mm distance to fxing in housing 2 x max. 6/206 mm distance
Function	The R-LRS01 is RS-Bus capable and compatible with the smoke switch status indicator RS-ZA142. The operating states pollution, fault and alarm of the smoke switch are transferred to the RS-ZA142 and displayed there via the communication interface (PIN 3 smoke switch). In addition to the optic display, a floating change-over contact is available for each operating state which can be used for the control and transfer of the operating states to superordinate systems like a building control system.
Air flow	1 m/s up to 20 m/s
Point of use	Ventilation ducts
Housing	White RAL 9010 PC/aluminium tube
Weight	(Without tube) approx. 350 g
Dimensions	250 x 100 x 135 mm
Protection class	IP40
Operating temperature	-20...+60 °C
Ambient humidity	0...95 % rh. (without condensation)
Standards/rules/guidelines/ approvals	VdS tested G 207083
Maintenance	Yearly

TYPE

R-LRS01

ACCESSORY

TYPE	DESCRIPTION	
R-ORS210	The optical smoke switch R-ORS210 is used in the R-LRS01 system. The relay in the optical smoke switch opens on alarm, heavy dirt, malfunction or power failure. The smoke switch R-ORS210 has an alarm storage and must be reset (briefly interrupting the power supply) to the operating condition. The relay contact can switch voltages up to 30 V AC / DC.	

CONTINUED ON PAGE 221 ▸

◀ CONTINUED FROM PAGE 220

ACCESSORY

TYPE	DESCRIPTION
R-RS-ZA142-AP	The smoke switch status indicator RS-ZA142-AP displays the states of the connected smoke switches and transfers this information to a superordinate system. Design: surface mounting
918-5H-Pruefgas	Test aerasol for smoke detectors and switches.

Smoke switch for air duct monitoring with VDC recognition

DIGICONTROL R-KRM-X...

Data sheet number 81290

The duct smoke detector R-KRM-X... was developed for smoke detection in ventilation ducts. It is a combination of a smoke detector and an adapter system, whose measuring tube and housing have been specially customised for an optimum air flow through the smoke detector.

TECHNICAL DATA

Outputs	■ Relay outputs: potential-free ■ Alarm relay locked: 1 changeover contact, 8 A, 250 V AC or 24 V DC / 1 normally closed contact, 8 A, 250 V AC or 24 V DC ■ Pollution relay: 1 NC contact, 6 A, 250 V AC or 24 VDC
Electrical connection	Connection type 3 x M16
Function	Scattered light RM 3.3-S (ALN-E)
Air flow	1 m/s to 20 m/s
LED display	LED display: Pollution degree % - flashing 99 %, flashes when trying to unclock if the detection chamber is not empty yet
Housing	Adapter housing: ASB Air measuring tube: Aluminium/plastic, minimum length 160 mm, standard length 600 mm, maximum length 3009 mm
Dimensions	Approx. 271 x 172 x 85 mm
Protection class	IP54
Operating temperature	-20...+50 °C
Ambient humidity	10...95 % rh. (non-condensing)
Standards/rules/guidelines/ approvals	VdS testet G 219046 / G 219053

TYPE LIST

TYPE	VOLTAGE	NOMINAL CURRENT	INTERFACES
R-KRM-X-1	230 V AC +/- 10 %, 50/60 Hz	0.03 A	-
R-KRM-X-1-MOD	230 V AC +/- 10 %, 50/60 Hz	0.03 A	RS485 / Modbus
R-KRM-X-1-BAC	230 V AC +/- 10 %, 50/60 Hz	0.03 A	RS485 / BACnet
R-KRM-X-2	24 V AC/DC 16-27.6 V AC / 21.6-27.6 V DC	0.120 A	-
R-KRM-X-2-MOD	24 V AC/DC 16-27.6 V AC / 21.6-27.6 V DC	0.120 A	RS485 / Modbus
R-KRM-X-2-BAC	24 V AC/DC 16-27.6 V AC / 21.6-27.6 V DC	0.120 A	RS485 / BACnet

ACCESSORY

TYPE	DESCRIPTION
R-KRM-KS-X	Mounting bracket for insulated / round ducts

CONTINUED ON PAGE 223 ▸

◀ CONTINUED FROM PAGE 222

ACCESSORY

TYPE	DESCRIPTION
R-KRM-KS-WDG-X	Mounting bracket for insulated / round ducts in connection with R-KRM-WDG-X
R-KRM-WDG-X	Protective and insulating housing with alarm display for outdoor mounting

Smoke switch for duct monitoring with DIBt certification

DIGICONTROL R-KRM-...-DZ

Data sheet number 81289

The duct smoke detector R-KRM-...-DZ was developed for smoke detection in ventilation ducts. It is a combination of a smoke detector and an adaptor system, its measuring tube and housing were especeally customized for an optimum air flow through the smoke detector. The device is certified in connection with fire and smoke protection dampers.

TECHNICAL DATA

Outputs	■ Relay outputs: potential-free ■ Alarm relay locked: 1 change-over contact 250 V, 8 A; 1 break contact 250 V, 6 A ■ Pollution relay: 1 break contact 250 V, 6 A ■ System fault relay: 1 break contact 250 V, 6 A ■ Airflow relay: 1 break contact 250 V, 6 A
Nominal current	0.140 A
Electrical connection	Connection type 3 x M16
Function	Scattered light (Tyndall-effect)
LED display	LED Display: Display degree of pollution in % / flashing > 70 % LED in housing: Green: operation Blue: missing air flow Yellow: fault electronics, smoke detector defective, under-voltage Red: smoke alarm, incl. pollution > 99 %, is flashing while attempting to unlock, when the detector chamber is not empty yet
Housing	Adapter housing: ASB Air measuring tube: Aluminium/plastic, minimum length 160 mm, standard length 600 mm, maximum length 3009 mm
Protection class	IP54
Operating temperature	-10...+50 °C
Ambient humidity	10...95 % rh. (non-condensing)
Standards/rules/guidelines/ approvals	DiBT approvals: Z-78.6-200 (at 24 V devices only in conjunction with power supply) Vds testest G 210148
Maintenance	Once yearly

TYPE LIST

TYPE	VOLTAGE	NOMINAL CURRENT
R-KRM-2-DZ	24 V AC/DC	0.140 A
R-KRM-1-DZ	230 V AC	0.140 A

ACCESSORY

TYPE	DESCRIPTION
R-NT02	Base power unit 24 V DC for duct smoke detector
R-KRM-WDG-X	Protective and insulating housing with alarm display for outdoor mounting

Water detector

DIGICONTROL R-SWM...

Data sheet number 81305

The electronic water detector serves to monitor containers and rooms. The tare weight of the water detector rests on its four plastic feet. The sensors are approx. 0.5 mm higher. Underground condensation is not recorded. If the sensor does not record any water, the relay contact is closed, the green LED indicates operation. The red LED displays water alarm. If water is recorded or in the event of power failure, contact terminal 3-4 opens. The device must not be used as safety-related equipment.

TECHNICAL DATA

Voltage	24 V AC/DC +/- 15 %
Outputs	Break contact, LED displays, relay contact max. 1 A, max. 60 V
Measuring current	max. 0,15 mA
Sensitivity	Input ~0,8–1 MΩ (1,25–1 µS)
Current consumption	Max. 20 mA
Sensor	2x2 Detector electrodes, water conductivity
Electrical connection	Connection cable LIYY 4x0,14 / Length 4 m, outer cable diameter 3,7 mm
Weight	130 g
Housing	Plastic, alkali-proof grouted
Dimensions	46 x 34 x 28 mm
Protection class	IP68
Storage temperature	-30...+80 °C
Operating temperature	0...+60 °C
Ambient humidity	0...95 % rh.
Standards/rules/guidelines/ approvals	DIN16945, DIN53505, DIN53482
Accessories	V2A mounting bracket/assembly bracket with 2 anchorage bores
Other remarks	In the event of alarm or power failure the contact terminal 3-4 opens. R-SWM3: In the event of alarm, the contact remains locked in. R-SWM3.2: In the event of alarm, the contact does not remain locked in.

TYPE LIST

TYPE
R-SWM3
R-SWM3.2

Dew-point / condensation monitor

DIGICONTROL R-KW1

Data sheet number 82006

The condensation monitor R-KW1 is used for monitoring the condensation on cooling ceilings, for preventing condensation at critical spots in heating-, ventilation- and air conditioning systems and as dew point monitor for plants that are operated near the dew point. Due to the temperature coupling between the condensation monitor and the environment, the relative humidity is a measure for the dew point. The condensation monitor measures the relative humiditiy near the dew point by means of its high-quality capacitive sensor. When reaching the switching point of 90 % rh., the output will provide an early warning signal for the initiation of counter measures (increasing the water flow temperature, reducing the cooling capacity, switching on the heating, etc...).An LED additionally indicates the danger of condensation.Thanks to the special protection coating, sensor and electronics are highly insensitive to dust and dirt. The device can be mounted on walls and pipes (up to 2”).

TECHNISCHE DATEN

Voltage	24 V AC/DC +/- 20 %
Switching capacity	Max. 24 V AC/DC, 1 A
Outputs	Potential-free relay with changeover contact
Measuring range	10...100 % rH.
Switching point	90 +/- 3 % rh. at 20 °C
Response Time	At change of pipe/wall temperature: t90 < 3 min At change of relative humidity: t90 < 25 sek
Current consumption	< 6 mA DC / < 10 mA AC
Sensor	Humidity HC105 Protection by special coating (permeable to water vapour)
Electrical connection	5-pole push-in terminal, max. 1.5 mm²
Hysteresis	5 % rh. V
LED display	LED, red
Housing	Polycarbonate, fire resistant according UL94-V0
Weight	60 g
Protection class	IP40
Storage temperature	-20...+70 °C
Operating temperature	0...+50 °C
Standards/rules/guidelines/ approvals	Electromagnetic compatibility: EN 61326-1, EN 61326-2-3 Industrial environment CE-Conformity

TYPE

R-KW1

Room hygrostat

DIGICONTROL R-RH-...

Data sheet number 82005

Suitable for closed- loop control and monitoring of the relative humidity in offices and living areas, bathrooms, laboratories, control cabinets, computer rooms, etc.. Not suitable for aggressive gases.

TECHNICAL DATA

Voltage	24 V AC/DC
Outputs	Switching, 1-level floating change-over contact
Aberration humidity	max. 3 % rh.
Switching capacity	■ Dehumidify: 5 (0.2) A, min. 100 mA ■ Humidify: 3 (0.2) A, min. 100 mA
Sensor	Plastic fibres
Electrical connection	0.14 - 2.5 mm², via screw terminals on printed circuit board
Switching differential	Approx. 4 % rh.
Setting range	25...95 % rh.
Mounting	Wall mounting or on in-wall flush box (diameter 55 mm), base with 4-hole for mounting on vertically or horizontally installed in-wall flush boxes for cable entry from the back, with predetermined breaking point for on-wall cable entry from top/bottom in case of plain on-wall installation
Function	Humidifying: wire terminals 1 and 3 Dehumidifying: wire terminals 1 and 2
Housing	Plastic, material ABS, colour pure white
Dimensions	98 x 98 x 39 mm
Protection class	IP30
Protection class	III
Operating temperature	0...+40 °C
Standards/rules/guidelines/ approvals	CE conformity, EMC directive 2014/30/EU, Low-voltage directive 2014/35/EU

TYPE LIST

TYPE	SWITCHING DIFFERENTIAL	SETTING RANGE	SCALE
R-RH-2	Approx. 4 % rh.	25...95 % rh.	Scale outside
R-RH-2U	Approx. 4 % rh.	25...95 % rh.	Scale inside

Duct-hygrostat

DIGICONTROL R-KH10

Data sheet number 82001

Suitable for closed- loop control and monitoring of the relative humidity in ventilation and air conditioning ducts, climatic chambers, swimming pools, greenhouses, etc. and for the open-loop Control of humidifcation and dehu-midifcation plants. It is not suitable for aggressive gases.

TECHNICAL DATA

Outputs	Switching, 1-level
Medium	Air, pressureless, non-aggressive
Switching capacity	15 (2) A; 24...250 V AC, min. 100 mA
Electrical connection	0.14 - 1.5 mm², via screw terminals, cable gland M20 x 1.5; including strain relief
Contacts	Dust-sealed microswitch as single-pole, potential-free change-over switch (change over contact)
Switching differential	Approx. 3...6 % rh.
Setting range	35...100 % rh.
Accuracy	+/- 4 % rh.
Mounting	Via mounting flange
Function	Humidify: Contacts 1 – 4 have to be wired. The switching points ON/OFF are approx. 2.5 rel.hum. above or below the chosen value. Dehumidify: Contacts 1 - 2 have to be wired. The switching points ON/OFF are approx. 2.5 rel.hum. above or below the chosen value.
Sensor	Brass nickel-plated, installation length 223 mm, diameter 20 mm
Air flow	Max. 8 m/s
Housing	Plastic, polyamide, 30 % glass bead fortified, with quick-release screws, colour pure white
Dimensions	108 x 73.5 x 70 mm
Protection class	IP65
Protection class	I
Ambient temperature	0...60 °C
Standards/rules/guidelines/ approvals	CE conformity, EMC directive 2014/30/EU, Low-voltage directive 2014/35/EU

TYPE

R-KH10

Frost protection thermostat, mechanical, single-stage, with switching output

DIGICONTROL R-FW...

Data sheet number 81500

Mechanical frost protection thermostat with switching output, fully-active sensor rod, with automatic reset, in various capillary tube lengths. The frost protection thermostat is used for air-side temperature monitoring of heating registers against freezing up and to avoid frost damages, e. g. in ventilation and air conditioning ducts. All devices are intrinsically safe and furnished with sensor break protection. In case of damage to the capillary-membrane system the frost sensing thermostat automatically switches to the heating function.

TECHNICAL DATA

Outputs	Switching capacity: 10 (2) A, AC 250 V; signal voltages < 24V can also be switched due to the gold-plated contacts
Electrical connection	0.14 - 2.5 mm², via screw terminals
Contacts	Dust-sealed microswitch as single-pole, potential-free change-over switch (change over contact)
Switching differential	2 +/- 1 K
Setting range	-10...+15 °C, factory setting to +5 °C
Mounting	With mounting brackets Installation position arbitrary
Housing	Synthetic, material polyamide, 30 % glass-bead reinforced, with quick release screws (recess/cross slot combination), Colour traffic white (similar like RAL 9016)
Dimensions	126 x 90 x 50 mm
Protection class	IP65
Protection class	I
Storage temperature	-30...+70 °C
Operating temperature	Min: setting range +2 °C, max: +70 °C
Standards/rules/guidelines/ approvals	CE conformity, EMC Directive 2014/30/EU Low voltage directive 2014/35/EU

TYPE LIST

TYPE	CAPILLARY TUBE	SWITCHING DIFFERENTIAL	SETTING RANGE
R-FW3-1	3000 mm	2 +/- 1 K	-10...+15 °C, factory setting to +5 °C
R-FW6-1	6000 mm	2 +/- 1 K	-10...+15 °C, factory setting to +5 °C
R-FW12-1	12000 mm	2 +/- 1 K	-10...+15 °C, factory setting to +5 °C

2-phase frost protection thermostat with continuous and switching output

DIGICONTROL R-FWS...-1

Data sheet number 82058

Electronic forst protection thermostat with switching relay output, continuous temperature, and valve output (summation output 0-10 V) as well as control and cascading input (0-10 V), in impact-resistant plastic housing wiht quick-locking screws, with display as standard, with fully active sensor rod made of copper.
The frost guard serves for monitoring of air conditioning systems, heat exchangers, heating coils and similar plants and prevents frost damage and freezing.
The limit value shortfall is detected at the coldest measuring point of the capillary, the sensor rod is active over the complete length. By means of self-diagnostics, capillary breakage, operating voltage fault or electrical damage to the sensor are detected as faults and the relay automatically switches to frost.
The innovative 2-phase frost protection thermostat enables the simple linking of several devices (cascading) for demand-oriented, area-wide frost monitoring. Delivery includes mounting brackets.

TECHNICAL DATA

Voltage	24 V AC/DC
Outputs	■ 1x 0-10 V temperature (corresponds to 0...+15 °C) ■ 1x 0-10 V valve (frost signal with control voltage and cascading) ■ 1x potentail free changeover contact (24 V), setting range 0...+15 °C
Measuring range	0...+15 °C
Switch-on run-in time	1 min
Response Time	t90: < 5 s
Current consumption	Max. 10 mA at 24 V DC
Electrical connection	0.14 - 1.5 mm², via screw terminals, cable gland M16 x 1.5; including strain relief
Switching differential	2 K
Accuracy	+/- 1 K (at +10 °C)
Input	1x 0-10 V control input AS 1x 0-10 V cascading input
Mounting	With mounting brackets
Housing	Plastic, UV stabilized, material polyamide, 30 % glass bead reinforced, with quick release screws, colour traffic white (similar like RAL 9016), tranparent lid for display
Dimensions	126 x 90 x 50 mm
Protection class	IP65
Protection class	III
Ambient temperature	-15...+50 °C
Storage temperature	-30...+70 °C
Operating temperature	Min: setting range +2 °C, max: +70 °C
Ambient humidity	< 95 % rh., non-condensing air
Standards/rules/guidelines/ approvals	CE conformity, electromagnetic compatibility according to EN 61326, EMC Directive 2014/30/EU

CONTINUED ON PAGE 230 ▸

◂ CONTINUED FROM PAGE 230

TYPE LIST

TYPE	CAPILLARY TUBE	SWITCHING DIFFERENTIAL
R-FWS3-1	3000 mm	2 K
R-FWS6-1	6000 mm	2 K

Differential power switch for gaseous media

DIGICONTROL R-LDS...

Data sheet number 82070

As flow indicators in differential pressure function, the pressure switches of type R-LDS, being installed in air ducts, monitor filters, fans and air dampers in primary / secondary closed-loop controls. Additionally, the pressure switches of type R-LDS are ideally suited for the thermal protection of air heaters or for monitoring industrial cooling air circuits. Medium: air and non-aggressive gases.

TECHNICAL DATA

Switching capacity	Ohmic: 5 A at 250 V AC, 4 A at 30 V DC
Medium	Air and neutral gases
Overpressure (one sided)	■ 50 mbar at -30...+85 °C ■ 75 mbar at -30...+75 °C
Media temperature	-30...+85 °C
Electrical connection	By means of screw terminals
Contacts	Change-over switch
Mounting	Pneumat. Connection - Hose sleeves d = 6.2 mm
Weight	Without bracket: approx. 93 g With bracket: approx. 143 g
Protection class	IP00 (with hood IP54/65)
Storage temperature	-40...+85 °C
Operating temperature	-30...+85 °C
Standards/rules/guidelines/ approvals	DVGW in accordance with DIN1854 Low-voltage directive 2014/35/EU Gas appliances directive 2009/142/EC

TYPE LIST

TYPE	SWITCHING DIFFERENTIAL	SETTING RANGE
R-LDS300	+/- 5 Pa	20...300 Pa
R-LDS500	+/- 5 Pa	50...500 Pa
R-LDS1000	+/- 2.5 Pa	100...1000 Pa

V-Belt monitor

DIGICONTROL R-DRIW-E16

Data sheet number 82090

The V-belt monitor R-DRIW-E16 is used to monitor rotary movements (under-speeding) of V-belt driven drive shafts. Inductive proximity switches are used to detect rotary speed. The inductive proximity switch R-SN-DRIW (see Accessories) is used for logging the rotational speed.

TECHNICAL DATA

Voltage	24 V AC/DC +/- 10 %
Power consumption	0.6 W
Weight	70 g
Dimensions	22.5 x 60 x 60 mm
Protection class	IP20
Storage temperature	-25...+70 °C
Operating temperature	0...+55 °C
Standards/rules/guidelines/ approvals	EMC test Emission: per EN 50 081 T1 Interference immunity: per EN 50 082 T2
Other remarks	Input side: - Monitoring range: max. 4200 pulses/min - Turn-off range: 120 pulses/min - Start control: 60 s Output side: - Output contact: 2 change-over contacts - Continuous current max: 6 A, total current max. 8 A for both relays

TYPE

R-DRIW-E16

ACCESSORY

TYPE	DESCRIPTION
R-SN-DRIW	Two-wire sensor with integrated LED for R-DRIW..., cable length 2 m, incl. holding bracket

Paddle vane relais

DIGICONTROL R-WFS-1EPL

Data sheet number 82100

The R-WFS-1EPL ist applicable for flow monitoring of gaseous media in ventilation and air conditioning ducts, in air intake and exhaust devices of ventilators or electric heating registers (also for contaminated, oily air), o ras flow controller and airflow monitor.

TECHNICAL DATA

Switching capacity	15 (8) A; 24...250 V AC, at 24 V AC minimum 150 mA
Electrical connection	0.14 - 1.5 mm², via screw terminals, cable gland M20 x 1.5; including strain relief
Contacts	Dust-sealed microswitch as single-pole, potential-free change-over switch (change over contact)
Switching differential	Differential speed ≥ 1 m/s
Function	Contact 1-3 breaks when flow rate drops to the preconfigured value. Simultaneously, contact 1-2 closes and can be used as signal contact. Device is factory-set to the minimum switch-off value, which can be increased by turning the range adjusting screw clockwise.
Mounting	Vertical Installation in horizontal air ducts. Minimum smoothing distance = 5x duct diameter upstream and downstream of vane. For airspeeds > 5 m/s, vane has to be trimmed at the marked spots. Thereby the minimum switch-off value increases to about 2.5 m/s and the minimum switch-on value to ca. 4 m/s.
Housing	Plastic, material polyamide, 30 % glass bead fortified, pure white
Dimensions	108 x 73.5 x 70 mm
Protection class	IP65
Protection class	I
Ambient temperature	-40...+85 °C
Standards/rules/guidelines/ approvals	CE conformity, EMC directive 2014/30/EU, Low-voltage directive 2014/35/EU
Other remarks	Base body: galvanised steel Moving arm: brass Vane: stainless steel, V2A

TYPE

R-WFS-1EPL

Air-flow sensor

DIGICONTROL R-KLSW4

Data sheet number 82112

The air-flow sensor is suitable for monitoring and controlling air- flows in ducts, fans, butterfly valves, for flow-dependent monitoring of humidifiers and electrical heat registers in accordance with DIN 57100 part 420 or for the application in connection with DDC systems. The device has temperature compensation.

TECHNICAL DATA

Voltage	24 V AC/DC +/- 10 %
Medium	Pollutant-free, non-condensing air
Media temperature	-10...+80 °C
Immersion depth	130 mm
Response Time	1...10 s
Operating pressure	10 bar
Power consumption	Approx. 2 VA
Electrical connection	0.14 - 1.5 mm², via screw terminals on printed circuit board
Connection	One change-over contact (floating)
Contact load	250 V AC; 6 A; 1.5 kVA
Mounting	PG7, mounting flange
Sensor	Metal (brass, nickel-plated), diameter 10 mm, length 140 mm
Air flow	0.1 - 30 m/s
LED display	Voltage: Green LED Flow: Yellow LED - Relay picks Start-up delay: Yellow LED - 60 s (Jumper can be activated)
Temperature gradient	15 K/min
Housing	Plastic, material polyamide, 30 % glass bead fortified, pure white
Dimensions	108 x 73.5 x 70 mm
Protection class	Housing IP65 / Sensor IP67
Protection class	III
Over-voltage category	II
Ambient temperature	-20...+60 °C
Standards/rules/guidelines/ approvals	CE conformity, EMC directive 2014/30/EU Low-voltage directive 2014/35/EU

TYPE

R-KLSW4

Air-flow sensor

DIGICONTROL R-KLSW10

Data sheet number 82111

The air-flow sensor is suitable for monitoring and controlling air- flows in ducts, fans, butterfly valves, for flow-dependent monitoring of humidifiers and electrical heat registers in accordance with DIN 57100 part 420 or for the application in connection with DDC systems. The device has temperature compensation.

TECHNICAL DATA

Voltage	24 V AC/DC +5 % / -13 %
Medium	Pollutant-free, non-condensing air
Outputs	0-10 V (relative)
Media temperature	0...+80 °C
Current consumption	Approx. 3 VA
Electrical connection	0.14-1.5 mm², via pluggable screw terminal on printed circuit board, cable gland M16 x 1.5 including strain relief, exchangeable, max. inner diameter 10.4 mm
Air flow	0.1-30 m/s
Sensor	Diameter 10 mm, immersion depth approx. 140 mm, metal
Housing	Plastic, material polyamide, 30 % glass bead fortified, pure white
Dimensions	72 x 64 x 37.8 mm
Protection class	IP65
Protection class	III
Operating temperature	0...+60 °C
Standards/rules/guidelines/ approvals	CE conformity, EMC directive 2014/30/EU, Low-voltage directive 2014/35/EU

TYPE

R-KLSW10

Flow indicator for piping installation

DIGICONTROL R-SW...

Data sheet number 82120

The R-SW-... is a mechanical flow indicator with paddle for piping installation, suitable for flow monitoring of liquid and gaseous media in pipelines, hydraulic systems from 1/2” up to 8” diameter, as flow monitor or water-failure safety device, e.g. for pumps in heating and cooling circuits, refrigeration machines, vaporisators, compressors and heat exchangers.

TECHNICAL DATA

Media temperature	Max. +120 °C
Switching capacity	15 (8) A; 24...250 V AC, at 24 V AC min. 150 mA
Electrical connection	0.14 - 1.5 mm² via screw terminals
Contacts	Dust-sealed microswitch as single-pole, potential-free change-over switch (change over contact)
Function	Contact COM-NO/3 (red-yellow) opens when flow rate drops to the preset value. Simultaneously, contact COM-NC/2 (red-blue) closes and can be used as signal contact. Device is factory-set to the minimum switch-off value, which can be increased by turning the range adjusting screw clockwise.
Housing	Plastic, material polyamide, 30 % glass bead fortified, pure White Screw-in unit is brass or stainless steel
Dimensions	108 x 73.5 x 70 mm
Protection class	I
Protection class	IP65
Operating temperature	-40...+85 °C
Standards/rules/guidelines/ approvals	CE conformity, EMC guideline 2014/30/EU, Low-voltage guideline 2014/35/EU
Other remarks	Base body: galvanised steel Cable gland: M 20x1.5 with strain relief Paddle: stainless steel, 1.4401, VA

TYPE LIST

TYPE	MEDIUM	DIAMETER NOMINAL	OPERATING PRESSURE	MATERIAL	WEIGHT
R-SW-1EPL	Normal	1-8”	11 bar	Brass	350 g
R-SW-2EPL	Aggressive	1-8”	30 bar	Stainless steel	400 g
R-SW-3EPL	Normal	1/2”	11 bar	Brass	350 g
R-SW-4EPL	Normal	3/4”	11 bar	Brass	350 g

Universal thermostat TW (-10..50°C)

DIGICONTROL R-TUC...

Data sheet number 82212

It is applied for controlling and onitoring temperatures of liquids in bath-rooms, containers, pipelines and ducts.Due to its modular structure, it can be used as contact thermostat, rod thermostat, double thermostat and as thermostat with remote sensor.Variants as temperature monitors (TW), safety temperature monitors (STW), temperature limiters (TB) or safety tempera-ture limiters (STB).The scope of delivery includes a brass immersion sleeve of 100 mm length.

TECHNICAL DATA

Contact load	Terminal 1-2: 230 V~, 10 (2.5) A (at break contact); Terminal 1-4: 230 V~, 2 (0.4) A
Time constant	In water with thermowell LW 7
Sensor cartridge	6.5 mm
Weight	0.2 kg
Degree of protection	IP54
Protection class	I
Ambient temperature	0...70 °C
Storage temperature	-25...+80 °C

TYPE LIST

TYPE	CAPILLARY TUBE	SWITCHING DIFFERENTIAL	SETTING RANGE	FUNCTION	TEMPERA-TURE
R-TUC101F003	1600 mm	Approx. 4.2 K	-10...+15 °C	TW	Max. 140 °C
R-TUC102F001	700 mm	Approx. 5.6 K	5...30 °C	TW	Max. 200 °C
R-TUC105F001	700 mm	Approx. 5.6 K	15...95 °C	TW	Max. 200 °C
R-TUC106F001	700 mm	Approx. 5.6 K	40...120 °C	TW	Max. 200 °C
R-TUC107F001	700 mm	Approx. 5.6 K	50...130 °C	TW	Max. 200 °C
R-TUC108F001	700 mm	Approx. 5.6 K	80...160 °C	TW	Max. 200 °C
R-TUC207F003	1600 mm	Approx. 10 K	70...130 °C	STW	Max. 160 °C
R-TUC303F001	700 mm	</- 20 K	15...60 °C	TB	Max. 200 °C
R-TUC307F001	700 mm	</- 20 K	50...130 °C	TB	Max. 200 °C
R-TUC407F001	700 mm	</- 20 K	95...130 °C	STB	Max. 160 °C

ACCESSORY

TYPE	DESCRIPTION
0300360008	Strain relief
0300360009	Holder for sensor cartridge
0300360010	Tightening strap for pipe mounting
0300360011	Mounting plate for double thermostats
0300360012	Sensor support spiral for air duct Installation
0300360013	Mounting bracket for duct or wall mounting

Thermowell for R-TUC...

DIGICONTROL T-THN...-TUC | T-THM...-TUC

Protective tube: for one univeral thermostat, for a minimum of two thermostats with a Ø 6 mm

Specifications:

- For installation on pipelines and containers, for integration of sensor cartridges, immersion stems, temperature sensors, temperature controllers of thermostats
- Made of brass (Ms) or stainless steel (V4A)
- Types with cylindrical (G½" A ISO 228/1 flat-sealing) or conial (R½" ISO 7/1 thread-sealing)1 pipe threads
- With compression spring

1 for welding flanges with flat sealing

TECHNICAL DATA

Mounting	Internal thread G 1/2"

TYPE LIST

TYPE	OPERATING PRESSURE	INSTALL. LENGTH	MATERIAL	AMBIENT TEMPERATURE
T-THN100-TUC	25 bar	100 mm	stainlees steel	Max. +450 °C
T-THN300-TUC	25 bar	300 mm	stainlees steel	Max. +450 °C
T-THND100-TUC	40 bar	100 mm	stainlees steel	Max. +450 °C
T-THND200-TUC	40 bar	200 mm	stainlees steel	Max. +450 °C
T-THND450-TUC	40 bar	450 mm	stainlees steel	Max. +450 °C
T-THMD100-TUC	16 bar	100 mm	brass	Max. +160 °C
T-THMD200-TUC	16 bar	200 mm	brass	Max. +160 °C

Room temperature controller

DIGICONTROL R-RTS-T

Data sheet number 82150

One-step mechanical single room controller in bimetal technology with thermal feedback for monitoring or controlling temperatures in dry rooms, or for activating any kind of heating system as room thermostat. For currentless open radiator valves the cooling output from the changeover contact (normally open contact) must be connected. At breaker contacts a maximum of ten valve actuators can be connected and at normally open contacts a maximum of five valve actuators.

TECHNICAL DATA

Voltage	230 V AC
Electrical connection	0.14 - 2.5 mm², via screw terminals on printed circuit board
Contacts	Change-over switch
Contact load	Heating: 10 mA...10 (4) A, DC 30 W; Cooling: 10 mA...5 (2) A
Switching differential	Approx. 0.5 K
Setting range	5...30 °C
Mounting	Wall mounting or flush-mounted box, diameter 55 mm
Housing	Plastic, material ABS, colour pure white
Dimensions	75 x 75 x 25 mm
Protection class	IP30
Protection class	II
Standards/rules/guidelines/ approvals	CE conformity, EMC directive 2014/30/EU, Low-voltage directive 2014/35/EU
Other remarks	Sensor element: bimetal

TYPE

R-RTS-T

Pressure switch

DIGICONTROL R-BCP

Data sheet number 82004

The BCP type is a series of dedicated pressure switches for safety and pressure monitoring of steam and hot water boilers.The BCP incorporates a single-pole changeover microswitch where the contact position depends on the pressure in the connection port and the range set value.For installations, in which operation is particularly critical for safety reason, the use of fail-safe control is recommended.

TECHNICAL DATA

Medium	Steam, water, air
Media temperature	Up to 120 °C (above 230 °C a water-filled loop must be installed) °C
Electrical connection	Plug, DIN 43650, PG 11
Contact load	Minimum: 4 mA, 5 V; Maximum: AC-1: 6 A, AC-15: 1 A, DC-13: 10 W, 250 V
Connection	G 1/2”
Housing	Contact coating silver/gold (gold-plated silver)
Protection class	IP65
Operating temperature	-20...+70 °C
Standards/rules/guidelines/ approvals	CE-marked in accordance with EN 60947-4/-5 CE marked in accordance with PED 97/23/EC, category IV, safety equipment, testing basis pr EN12952-11 and EN12953-9.
Other remarks	Reset function: automatic If used with current higher than 400 mA the gold will disappear and the unit can’t be used at a lower current again.

TYPE LIST

TYPE	TEST PRESSURE	OPERATING PRESSURE	SWITCHING DIFFERENTIAL	SETTING RANGE
R-BCP1	7 bar	6 bar	0.15...0.6 bar	0.1...1.1 bar
R-BCP2	11 bar	10 bar	0.4...1 bar	0...2.5 bar
R-BCP3	18 bar	16 bar	0.7...1.4 bar	0...6 bar
R-BCP4	28 bar	25 bar	1.0...2.5 bar	1...10 bar
R-BCP5	35 bar	32 bar	2.0...3.2 bar	2...16 bar
R-BCP6	45 bar	40 bar	2.5...4 bar	5...25 bar
R-BCP7	70 bar	63 bar	3.0...6.0 bar	10...40 bar

ACCESSORY

TYPE	DESCRIPTION
R-BCP-HB	Holding bracket for R-BCP
R-BCP-MW	Mounting bracket for R-BCP

Pressure relief valve for falling pressure

DIGICONTROL R-BCP

The BCP type is a series of dedicated pressure switches for safety and pressure monitoring of steam and hot water boilers.The BCP incorporates a single-pole changeover microswitch where the contact position depends on the pressure in the connection port and the range set value.For installations, in which operation is particularly critical for safety reason, the use of fail-safe control is recommended.

TECHNICAL DATA

Medium	Steam, water, air
Media temperature	Up to 120 °C (above 230 °C a water-filled loop must be installed) °C
Electrical connection	Plug, DIN 43650, PG 11
Contact load	Minimum: 4 mA, 5 V; Maximum: AC-1: 6 A, AC-15: 1 A, DC-13: 10 W, 250 V
Connection	G 1/2”
Housing	Contact coating silver/gold (gold-plated silver)
Protection class	IP65
Operating temperature	-20...+70 °C
Standards/rules/guidelines/ approvals	CE marked in accordance with EN 60947-4/-5 CE marked in accordance with PED 97/23/EC, category IV, safety equipment, testing basis pr EN12952-11 and EN12953-9.
Other remarks	Reset function: manuel If used with current higher than 400 mA the gold will disappear and the unit can’t be used at a lower current again.

TYPE LIST

TYPE	TEST PRESSURE	OPERATING PRESSURE	SWITCHING DIFFERENTIAL	SETTING RANGE
R-BCP2L	11 bar	10 bar	9 bar	0...2.5 bar
R-BCP3L	18 bar	16 bar	0.4 bar	0...6 bar
R-BCP5L	35 bar	32 bar	1.2 bar	2...16 bar

ACCESSORY

TYPE	DESCRIPTION
R-BCP-MW	Mounting bracket for R-BCP
R-BCP-HB	Holding bracket for R-BCP

Pressure relief valve for rising pressure

DIGICONTROL R-BCP

The BCP type is a series of dedicated pressure switches for safety and pressure monitoring of steam and hot water boilers.The BCP incorporates a single-pole changeover microswitch where the contact position depends on the pressure in the connection port and the range set value.For installations, in which operation is particularly critical for safety reason, the use of fail-safe control is recommended.

TECHNICAL DATA

Medium	Steam, water, air
Media temperature	Up to 120 °C (above 230 °C a water-filled loop must be installed) °C
Electrical connection	Plug, DIN 43650, PG 11
Contact load	Minimum: 4 mA, 5 V; Maximum: AC-1: 6 A, AC-15: 1 A, DC-13: 10 W, 250 V
Connection	G 1/2”
Housing	Contact coating silver/gold (gold-plated silver)
Protection class	IP65
Operating temperature	-20...+70 °C
Standards/rules/guidelines/ approvals	CE-marked in accordance with EN 60947-4/-5 CE marked in accordance with PED 97/23/EC, category IV, safety equipment, testing basis pr EN12952-11 and EN12953-9.
Other remarks	Reset function: manuel If used with current higher than 400 mA the gold will disappear and the unit can’t be used at a lower current again.

TYPE LIST

TYPE	TEST PRESSURE	OPERATING PRESSURE	SWITCHING DIFFERENTIAL	SETTING RANGE
R-BCP3H	18 bar	16 bar	0.4 bar	0...6 bar
R-BCP4H	28 bar	25 bar	0.45 bar	1...10 bar
R-BCP5H	35 bar	32 bar	1.2 bar	2...16 bar
R-BCP6H	70 bar	63 bar	1.5 bar	10...40 bar
R-BCP7H	45 bar	40 bar	2.3 bar	5...25 bar

ACCESSORY

TYPE	DESCRIPTION
R-BCP-MW	Mounting bracket for R-BCP
R-BCP-HB	Holding bracket for R-BCP

Differential pressure transmitter

DIGICONTROL F-DDM...

The calibrateable compact pressure sensors of the F-DDM... series are equipped with 8 switchable measuring ranges, 2 switchable output signals and with or without optional display and are used for measuring above-atmospheric, below-atmospheric, or differential pressures in air. The piezo-resistive measuring element is temperature-compensated and guarantees a high degree of reliability and accuracy. These pressure transmitters have a pushbutton for manual zero point calibration and an adjustable offset. Applications of these pressure sensors are in clean room, medical and filter technology, in ventilation and air conditioning ducts, in spray booths, in large-scale catering facilities, for monitoring filters, for level measurement or for triggering frequency converters. Media measured with these pressure transducers are air, or other gaseous non-aggressive, non-combustible media. The differential pressure sensor is supplied including connection set.

TECHNICAL DATA

Voltage	24 V AC/DC +/- 10 %
Outputs	0...10 V / 4...20 mA
Long term stability	+/- 1 % / Year
Linearity error	+/- 1 % EW
Temperature drift	+/- 0.1 % of final value / °C
Media temperature	-20...+50 °C
Current consumption	< 45 mA
Electrical connection	3-wire connection, 0,14 - 1,5 mm² via screw terminals, cable gland M16 x 1.5 including strain relief, exchangeable, max. inner diameter 10.4 mm
Hysteresis	0.3 % EW V V
Housing	Plastic, UV-stabilised, material Polyamide, 30 % glass-globe reinforced, colour traffic White (similar to RAL 9016)
Dimensions	■ 72 x 64 x 43.4 (with display) mm ■ 72 x 64 x 37.8 (without display) mm
Protection class	IP65
Protection class	III
Ambient humidity	< 95 % rh., non-condensing air
Standards/rules/guidelines/ approvals	Electromagnetic compatibility according to EN 61326, EMC directive 2014/30/EU

TYPE LIST

TYPE	DATA SHEET	MEASURING RANGE	DISPLAY	ACCURACY
F-DDM-1000	82254	100/300/500/1000 Pa	Without display	Typ. +/- 10 Pa at +25 °C
F-DDM-1000-D	82254	100/300/500/1000 Pa	With display	Typ. +/- 10 Pa at +25 °C
F-DDM-5000	82255	1000/2000/3000/5000 Pa	Without display	Typ. +/- 35 Pa at +25 °C
F-DDM-5000-D	82255	1000/2000/3000/5000 Pa	With display	Typ. +/- 35 Pa at +25 °C

Differential pressure transmitter for gaseous or liquid media

DIGICONTROL F-DDPTM...

Data sheet number 82253

The F-DDPTM... is used to measure differential pressures in air, liquids and oils. The unit is entirely digital and allows switching between measuring ranges. It is also possible to set the zero point after installation, thereby enabling compensation of offset errors. Switching the measuring range affects only the output voltage. It can be set to double or half the differential pressure range. Jumper 2 is used to switch the polarity of the inputs.

TECHNICAL DATA

Voltage	14...30 V DC
Outputs	0...10 V
Linearity error	± 1.0 % FS (line pressure = measuring ranges)
Media temperature	-25...+120 °C
Total error	< ± 1.5 % FS at 25 °C
Nominal pressure	1.2 x Pnenn
Sensor	Stainless steel, no oil reservoir, maintenance-free
Electrical connection	By means of screw terminals
Mounting	1/4” E external threading
Dimensions	100 x 66 x 40 mm
Protection class	IP65
Storage temperature	-20...+80 °C
Operating temperature	-10...+80 °C
Standards/rules/guidelines/ approvals	EN/IEC 61000-4, EN/IEC 50090-2
Other remarks	Line pressure to 1:10

TYPE LIST

TYPE	MEASURING RANGE	DISPLAY
F-DDPTM0,5	0...0.5 bar	Without display
F-DDPTM0,5-D	0...0.5 bar	With 4-character LCD display
F-DDPTM1,0	0...1.0 bar	Without display
F-DDPTM1,0-D	0...1.0 bar	With 4-character LCD display
F-DDPTM2,5	0...2.5 bar	Without display
F-DDPTM2,5-D	0...2.5 bar	With 4-character LCD display
F-DDPTM6,0	0...6.0 bar	Without display
F-DDPTM6,0-D	0...6.0 bar	With 4-character LCD display

Pressure measurement transducer for gaseous or liquid media

DIGICONTROL F-SPT-U...

Data sheet number 82252

The F-SPT-U... pressure measurement transducer is used to measure pressure (relative pressure to the external atmosphere or closed reference) in gaseous or liquid media. The stainless steel membrane is completely vacuum-sealed, extremely burst proof and is suitable for all standard media. Its wide range of possible applications are guaranteed by the high level of precision and the robust, compact design. The F-SPT-U... is supplied with a G 1/4" A Form E process connection.

TECHNICAL DATA

Voltage	12...32 V DC, opt. 12...24 V AC
Outputs	0...10 V
Linearity error	± 0.5 % FS
Media temperature	-40...+125 °C
Total error	< ± 1.5 % FS at 25 °C
Nominal pressure	1.5 x Pnenn
Insulating resistance	< 5 kΩ
Sensor	Stainless steel membrane, CrNiCuNb 17-4 PH stainless steel, no O-ring, no oil
Electrical connection	Angled plug socket DIN 175301-803 A (MVS/A)
Mounting	Process Connection G 1/4" Form E or G 1/2" as standard
Weight	90 g
Housing	X5CrNi18-10
Protection class	IP65
Protection class	I
Storage temperature	-40...+125 °C
Operating temperature	-40...+105 °C
Standards/rules/guidelines/ approvals	EN/IEC 61000-4, EN/IEC 50090-2
Accessories	G 1/4" to G 1/2" adapter
Other remarks	Burst pressure: 3 x Pnom Reducibility % of range: < 0.1 Stability per year % of range: < 0.2 (under reference conditions)

TYPE LIST

TYPE	MEASURING RANGE
F-SPT-U1,0	0...1.0 bar
F-SPT-U2,5	0...2.5 bar
F-SPT-U6,0	0...6.0 bar
F-SPT-U10,0	0...10.0 bar
F-SPT-U16,0	0...16.0 bar
F-SPT-U25,0	0...25.0 bar

CONTINUED ON PAGE 247 ▸

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ACCESSORY

TYPE	DESCRIPTION
Adapter G1/4”	for F-SPT-U

Climate sensor

DIGICONTROL F-ClimaSens-D

Data sheet number 81006

The climate sensor F-ClimaSens-... measures the parameters of wind speed, rainfall (yes/no) brightness (East/South/West), temperature, air humidity and twilight. The voltage outputs can be used to control external devices and/or to log analogue measurement data. The sensor combines the most important parameters which are necessary for the control and monitoring in the building automation, home automation, awnings and blinds control and greenhouse control in an ideal way. The compact design allows a simple and inconspicuous installation. All external parts are corrosion-proof made of high-quality plastic. The F-ClimaSens-... also has a serial interface (RS 422/485), a DCF77 receiver for time/date as well as a condensation protection (heating).

TECHNICAL DATA

Voltage	16...24 V AC / 16...28 V DC
Current consumption	Approx. 250 mA with dewfall protection
Electrical connection	Connection cable 10 m; LiYCY 16x0.14 mm²; UV-resistant
Cable length	Max. 100 m at supply of nominal 24 V and min. 0.5 mm² wire cross-section
Electr. output precipitation	0/10 V (precipitation yes “active”/precipitation no “passive”); load resistance ≥ 100 kΩ
Electr. output brightness	3 x 0...10 V (3 x 0...150 kLux), east-/ south-/west direction; load resistance ≥ 10 kΩ
Electr. output twilight	0...10 V (0...250 Lux); load resistance ≥ 10 kΩ
Measuring range precipitation	Precipitation yes/no
Sensitivity precipitation	0.25 mm/h
Switch-off delay precipitation	Approx. 2 min
Measuring range brightness	0...150 kLux
Spectral range brightness	700...1050 nm
Accuracy brightness	± 3 % of measuring range
Measuring range twilight	0...250 Lux
Spectral range twilight	700...1050 nm
Accuracy twilight	± 5 % of measuring range
Mounting	With stainless steel clip (included in scope of delivery) on mast or wall.
Weight	Max. 1.5 kg
Dimensions	Diameter 130 x 215 mm
Operating temperature	-40...+60 °C
Standards/rules/guidelines/ approvals	EN 61326-1 with EN 61000-4-3 according to EMC-directive or directive 2004/108/EC

TYPE

F-ClimaSens-D

Climate sensor

DIGICONTROL F-ClimaSens-DW

Data sheet number 81006

The climate sensor F-ClimaSens-... measures the parameters of wind speed, rainfall (yes/no) brightness (East/South/West), temperature, air humidity and twilight. The voltage outputs can be used to control external devices and/or to log analogue measurement data. The sensor combines the most important parameters which are necessary for the control and monitoring in the building automation, home automation, awnings and blinds control and greenhouse control in an ideal way. The compact design allows a simple and inconspicuous installation. All external parts are corrosion-proof made of high-quality plastic. The F-ClimaSens-... also has a serial interface (RS 422/485), a DCF77 receiver for time/date as well as a condensation protection (heating).

TECHNICAL DATA

Voltage	16...24 V AC / 16...28 V DC
Current consumption	Approx. 250 mA with dewfall protection
Electrical connection	Connection cable 10 m; LiYCY 16x0.14 mm²; UV-resistant
Cable length	Max. 100 m at supply of nominal 24 V and min. 0.5 mm² wire cross-section
Electr. output precipitation	0/10 V (precipitation yes “active”/precipitation no “passive”); load resistance ≥ 100 kΩ
Electr. output brightness	3 x 0...10 V (3 x 0...150 kLux), east-/ south-/west direction; load resistance ≥ 10 kΩ
Electr. output twilight	0...10 V (0...250 Lux); load resistance ≥ 10 kΩ
Electr. output wind speed	0...10 V (0...40 m/s); load resistance ≥ 10 kΩ
Measuring range precipitation	Precipitation yes/no
Sensitivity precipitation	0.25 mm/h
Switch-off delay precipitation	Approx. 2 min
Measuring range brightness	0...150 kLux
Spectral range brightness	700...1050 nm
Accuracy brightness	± 3 % of measuring range
Measuring range twilight	0...250 Lux
Spectral range twilight	700...1050 nm
Accuracy twilight	± 5 % of measuring range
Measuring range wind speedbrightness	1...40 m/s
Accuracy wind speed	± 0.5 m/s resp. ± 5 % of measuring range
Mounting	With stainless steel clip (included in scope of delivery) on mast or wall.
Weight	Max. 1.5 kg
Dimensions	Diameter 130 x 335 mm
Operating temperature	-40...+60 °C
Standards/rules/guidelines/ approvals	EN 61326-1 with EN 61000-4-3 according to EMC-directive or directive 2004/108/EC

TYPE

F-ClimaSens-DW

Climate sensor

DIGICONTROL F-ClimaSens-DTF

Data sheet number 81006

The climate sensor F-ClimaSens-... measures the parameters of wind speed, rainfall (yes/no) brightness (East/South/West), temperature, air humidity and twilight. The voltage outputs can be used to control external devices and/or to log analogue measurement data. The sensor combines the most important parameters which are necessary for the control and monitoring in the building automation, home automation, awnings and blinds control and greenhouse control in an ideal way. The compact design allows a simple and inconspicuous installation. All external parts are corrosion-proof made of high-quality plastic. The F-ClimaSens-... also has a serial interface (RS 422/485), a DCF77 receiver for time/date as well as a condensation protection (heating).

TECHNICAL DATA

Voltage	16...24 V AC / 16...28 V DC
Current consumption	Approx. 250 mA with dewfall protection
Electrical connection	Connection cable 10 m; LiYCY 16x0.14 mm²; UV-resistant
Cable length	Max. 100 m at supply of nominal 24 V and min. 0.5 mm² wire cross-section
Electr. output precipitation	0/10 V (precipitation yes “active”/precipitation no “passive”); load resistance ≥ 100 kΩ
Electr. output brightness	3 x 0...10 V (3 x 0...150 kLux), east-/ south-/west direction; load resistance ≥ 10 kΩ
Electr. output twilight	0...10 V (0...250 Lux); load resistance ≥ 10 kΩ
Electr. output temperature	0...10 V (-20...+60 °C); load resistance ≥ 10 kΩ
Electr. output humidity	0...10 V (0...100 % r.h.); load resistance ≥ 10 kΩ
Measuring range precipitation	Precipitation yes/no
Sensitivity precipitation	0.25 mm/h
Switch-off delay precipitation	Approx. 2 min
Measuring range brightness	0...150 kLux
Spectral range brightness	700...1050 nm
Accuracy brightness	± 3 % of measuring range
Measuring range twilight	0...250 Lux
Spectral range twilight	700...1050 nm
Accuracy twilight	± 5 % of measuring range
Measuring range temperature	-20...+60 °C
Measuring element temperature	Pt100 1/3 DIN
Accuracy temperature	± 0.5 K @ wind speed > 2.5 m/s
Measuring range humidity	0...100 % rh.
Accuracy humidity	± 3 % in the range of 10...90 % r.h. @ wind speed > 2.5 m/s
Mounting	With stainless steel clip (included in scope of delivery) on mast or wall.
Weight	Max. 1.5 kg
Dimensions	Diameter 130 x 310 mm
Operating temperature	-40...+60 °C
Standards/rules/guidelines/ approvals	EN 61326-1 with EN 61000-4-3 according to EMC-directive or directive 2004/108/EC

TYPE

F-ClimaSens-DTF

Climate sensor

DIGICONTROL F-ClimaSens-DWTF

Data sheet number 81006

The climate sensor F-ClimaSens-... measures the parameters of wind speed, rainfall (yes/no) brightness (East/South/West), temperature, air humidity and twilight. The voltage outputs can be used to control external devices and/or to log analogue measurement data. The sensor combines the most important parameters which are necessary for the control and monitoring in the building automation, home automation, awnings and blinds control and greenhouse control in an ideal way. The compact design allows a simple and inconspicuous installation. All external parts are corrosion-proof made of high-quality plastic. The F-ClimaSens-... also has a serial interface (RS 422/485), a DCF77 receiver for time/date as well as a condensation protection (heating).

TECHNICAL DATA

Voltage	16...24 V AC / 16...28 V DC
Current consumption	Approx. 250 mA with dewfall protection
Electrical connection	Connection cable 10 m; LiYCY 16x0.14 mm²; UV-resistant
Cable length	Max. 100 m at supply of nominal 24 V and min. 0.5 mm² wire cross-section
Electr. output precipitation	0/10 V (precipitation yes “active”/precipitation no “passive”); load resistance ≥ 100 kΩ
Electr. output brightness	3 x 0...10 V (3 x 0...150 kLux), east-/ south-/west direction; load resistance ≥ 10 kΩ
Electr. output twilight	0...10 V (0...250 Lux); load resistance ≥ 10 kΩ
Electr. output wind speed	0...10 V (0...40 m/s); load resistance ≥ 10 kΩ
Electr. output temperature	0...10 V (-20...+60 °C); load resistance ≥ 10 kΩ
Electr. output humidity	0...10 V (0...100 % r.h.); load resistance ≥ 10 kΩ
Measuring range precipitation	Precipitation yes/no
Sensitivity precipitation	0.25 mm/h
Switch-off delay precipitation	Approx. 2 min
Measuring range brightness	0...150 kLux
Spectral range brightness	700...1050 nm
Accuracy brightness	± 3 % of measuring range
Measuring range twilight	0...250 Lux
Spectral range twilight	700...1050 nm
Measuring range wind speedbrightness	1...40 m/s
Accuracy twilight	± 5 % of measuring range
Accuracy wind speed	± 0.5 m/s resp. ± 5 % of measuring range
Measuring range temperature	-20...+60 °C
Measuring element temperature	Pt100 1/3 DIN
Accuracy temperature	± 0.5 K @ wind speed > 2.5 m/s
Measuring range humidity	0...100 % rh.
Accuracy humidity	± 3 % in the range of 10...90 % r.h. @ wind speed > 2.5 m/s
Mounting	With stainless steel clip (included in scope of delivery) on mast or wall.
Weight	Max. 1.5 kg
Dimensions	Diameter 130 x 430 mm
Operating temperature	-40...+60 °C
Standards/rules/guidelines/ approvals	EN 61326-1 with EN 61000-4-3 according to EMC-directive or directive 2004/108/EC

TYPE

F-ClimaSens-DWTF