DataCollector*XP-RH8/16*

Humidity/Temperature Data Logger
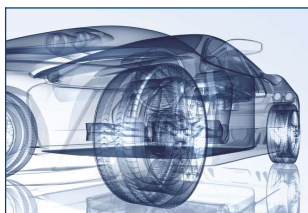
DCXP-RH16

Science	Research	Industries	Cleaning	HVAC

Driesen + Kern GmbH

DataCollectorXP-RH8/RH16
Humidity/Temperature Logger

Model DCXP-RH16

The DCXP-RH16 with special connectors is compatible with the Driesen + Kern data logger series ruggedPlus and ruggedVisual

DCXP-RH8 and DCXP-RH16 by Driesen + Kern are 8 / 16 channel data loggers for relative humidity and temperature. They stand out due to their high accuracy and robust design. In addition to both measured variables the data logger also provides calculated variables such as absolute humidity, dew point and wet-bulb temperature.

The low current consumption allows battery-powered long-term measurements for up to 2 years without having to replace the batteries.

Comprehensive Range of Probes

We offer a selection of combined humidity and temperature probes suitable for use with the DCXP-RH. Pick the right probe for your application: Standard probes RFT325 and DKF300, pressure-resistant probe DKRF374 or miniaturised probe RFT-XXS with extra small dimensions.

Applications

· Ecological Surveys

· Research & Development

· Prozessoptimierung

· Climate Cabinet Testing

· Quality Assurance

· Mould Prevention

· Analyse Ventilation
  Characteristics

Excellent Flexibility und Accuracy

All probes come with cable lengths of either 2m or 5m. Customer specific cables of up to or more than 100m are available upon request to ensure you can distribute probes efficiently on your measuring site.

Our miniaturised probes provide primely fast response times.

Also, they impress with high measuring accuracy and long-term stability. Operating range is 0...100%RH, while a ±1.8%RH accuarcy is reached between a wide range of 10...90%RH. Even under conditions of <10%RH or >90%RH the accuracy is still at ±3%RH.
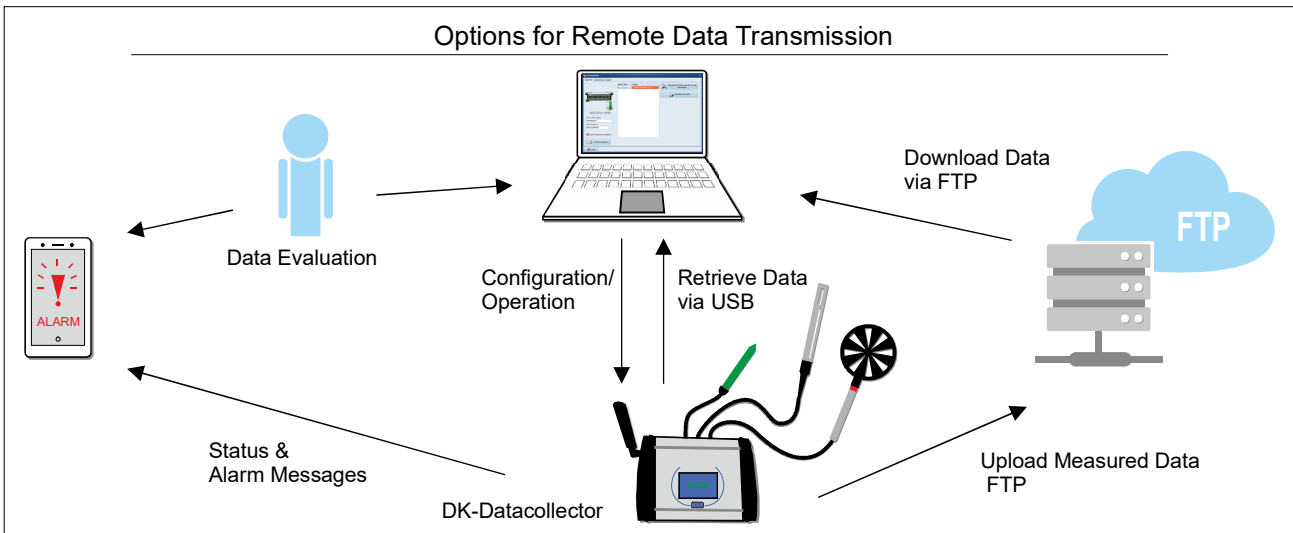
Extensive Data Logging
The DCXP-RH's SD card can hold up to 1 billion readings each including date and time. Its optional GPRS module further improves the capabilities.

Easy & Convenient to Use
Use the DCXP-RH either with the touch screen or via USB from a PC. Starting and stopping the logger as well as retrieving data does not require special knowledge!

Features

- DCXP-RH8/16 for 8/16 combined probes
- High accuracy (±1.8%RH / ±0.3°C)
  (optional ±0.1°C calibration)
- Fast response time (approx. 4s)
- Optional GPRS module for upload to FTP server
- Optional ISO/DAkkS certificate of calibration
- Substantial battery capacity for up to 2 years
- Memory capacity for up to 1 billion readings
- Touch screen for convenient use
- Watch live readings in Windows
- Calculate several variables: dew point, absolute humidity, wet-bulb temperature, and more...
- Cable length up to >100m
- Low power consumption for operation up to 2 years, power input also available
- Plug & play connection
- Sampling rate 4Hz...24hrs

Options for Remote Data Transmission

Data Evaluation

Configuration/
Operation

Retrieve Data
via USB

Download Data
via FTP

FTP

ALARM

Status &
Alarm Messages

DK-Datacollector

Upload Measured Data
FTP

# Compatible Probes
for Humidity & Temperature

DKRF300 - Standard probe with removable protective cap and built-in dust filter
d=8mm, l=101mm
Operating range -40...+80°C

DKRF300 probes are suitable for most applications.
Ist slim design also allows operation in narrow environments such as ducts. Fitting perfectly into the TR351 radiation shield the probe can be used for measurements outside.
Easily connect or replace plug & play probes without having to run cables again.

RFT325 - Standard probe with removable protective cap and budust filter
d=8mm, l=35mm
Operating ranges
-40...+80/120°C

Low-cost yet universally deployable probe RFT325 benefits from its short design especially in confined spaces. Temperature limit is determined by the chosen cable: V cable for Tmax 80°C, G cable for Tmax 120°
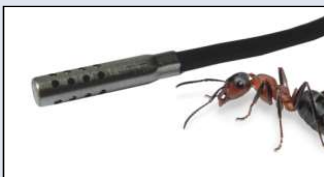
RFTXXS - Miniaturised probe
d=4mm, l=20mm
Operating ranges
-40...+80/120°C

Use RFTXXS humidity & temperature probes to get reliable results even in the tiniest of confined spaces. Despite its size it is sufficiently protected by the stainless steelt tubing and has an excellent response time.
Temperature limit is determined by the chosen cable: V cable for Tmax 80°C, G cable for Tmax 120°

RFTXS - Rod probe
d=4.6mm, l=200mm
Operating range:
-40...+80°C

RFTXS rod probe is suitable for measurements requiring a deeper insertion, e. g. in floor screed, insulating material or ducts. A Ø4,8mm drill hole suffices to fit the slim rod probe.
Sensor and cable are plug & play type.

DKRF317 - Pressure resistant probe (up to 30bar)
d=13mm, l=100mm
Sensing head (incl. thread): 30mm
Thread: M8 or G1/2"
Range: -40...+80°C

Applications in pressurised air environments up to 30bar are the strength of the well-priced DKRF317. Securely install it into compressed air lines using the M8x1 or G1/2" threads.
Probe and cable are plug & play type so you can easily remove or replace the probe for repairs or maintenance without having to run its cable again afterwards.

DKRF374 - Pressure resistant probe (up to 100 bar) d=13mm, l=120mm
Sensing head (incl. thread): 100mm
Thread: G3/8"
Range: -40...+80°C

Take measurements in compressed air or vacuum applications within a range of 0...100bar with the pressure-resistant probe DKRF374.

The plug-in stainless steel probe comes with a sinter filter which makes it possible to also measure in dust-laden environments.

RFTO - Surface probe
d=30mm, h=10mm
Range: -20...+80°C

Our RFTO probe is designed for surface measurements of humidity and temperature. Adequately protected against perturbation from outside influences the probe lets you measure humidity in porose materials without damaging the surface.

The probe can either be bonded with or screwed to the surface.

RFTW - Special probe
l=45mm, w=20mm
Range: -20...+80/120°C

Just like the RFTO the RFTW probe is for surface measurements. Unlike its counterpart the RFTW is not sealed up so as to be able to measure the microclimate near the surface. The sensor can be bonded with the surface or otherwise attached using a force fit.

Connecting Cables for Temperature/Humidity Probes

Standard probes are fitted with Type V PVC cables and can be used under conditions from -20...+80°C. Special PFA (Type G) cables allow operation up until 120°C..
Order code paradigm: RFT-325-V-2000-4 identifies a standard probe with 2m PVC cable and **RFT325-G-5000-4** were to indicate the same probe with the 5m PFA cable.

Specifications

General

Operating range:	-20...+70°C
Power supply (internal):	4x AA alkaline batteries
Power supply (external):	PSU included in delivery
Battey life:	2 years @ 1 minute
	1/2 year @ 10 seconds
	50 days @ 1 second
Interval:	4 Hz...24 hrs
Memory capacity:	1000 million readings (SD card)

Inputs

Number of Inputs:	
DCXP-RH8	8x humidity & temperature
DCXP-RH16	16x humidity & temperature
Dimensions:	245 x 194 x 63mm
Enclosure material:	Aluminium

Sensor Specifications

Relative Humidity

Comp. humdity sensors	Range	Resolution	Accuracy
	0..100%	0.04%RH	Graph A

Calculated Variables:

In addition to relative humidity you may also retrieve calculated values such as absolute humidity, dewpoint, wet bulb temperature, aW-Value, mixing-ratio, norm humidity, enthalpy, TH70/80-value.

Humidity sensors can be used in a range of 0...100%RH. They may not be wetted excessively and are not to be used in an environment of extremely high humidity and high temperature at the same time. The graph shows the limitations of use. If used ouside the normal conditions the humidity reading may temporarily offset by up to 3%. After returning to normal conditions it will slowly return to calibration state by itself. Operation outside the maximum conditions is not recommended.

Temperature	Range**	Resolution	Accuracy
Temperature sensor in combined humidity & temperature probe	-40...+120°C	0.01°C	Graph B

Accuracy (Relativ Humidity) Graph A

Operating Range

Accuracy (Temperature) Graph B
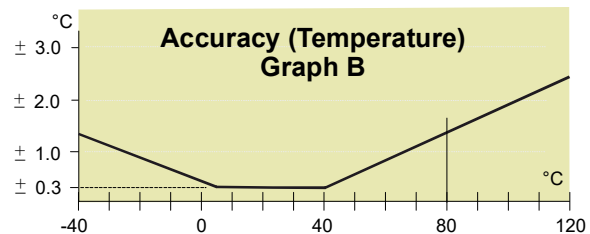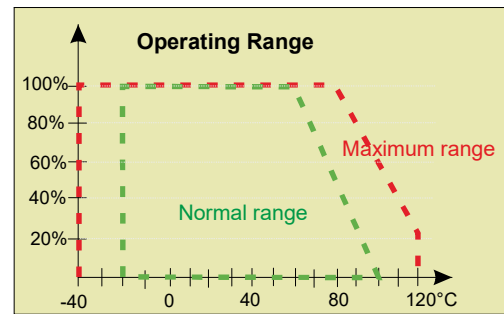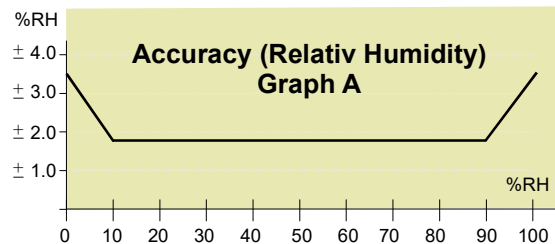
Probe Kits

Freely select various models from our wide choice of probes to meet your needs - or get our probe kits already including 8 or 16 RFT325 combined humidity and temperature probes, either with PVC cable for measuring range up to 80°C or PFA cable with extended range up to 120°C. Cable length is 5m.

KIT8RFT80	8x RFT-325-V-5000 Probes (Tmax. 80°C)	KIT16RFT80	16x RFT-325-V-5000 Probes (Tmax. 80°C)
KIT8RFT120	8x RFT-325-G-5000 Probes (Tmax.120°C)	KIT16RFT120	16x RFT-325-G-5000 Probes (Tmax.120°C)

Accessories for the DataCollectorXP-RH

Included in delivery are:
Power supply unit, USB cable, InfraLog for Windows software (Basic).

A hard protective case to fit one logger plus several sensors and accessories is optionally available.

Upon request, we provide a certificate of calibration for the logger and the sensors.

TR351 Radiation Shield suitable for DKRF300 probes.
Minimizes the impact of sunlight and rain/snow on your measurements.
Dimensions: (d=77mm, h=108mm)

Software *InfraLog* for Windows V5
for DataCollectorXP Data Loggers

InfraLog V5
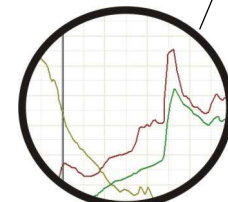
Basic-Version
Light-Version
Enhanced-Version

The software InfraLog for Windows provides EASY, SECURE & CONVENIENT control for all Driesen+Kern products. After establishing a connection between your logger and PC, InfraLog automatically detects the device and shows its status (Logger mode/alarm/battery life). InfraLog V5 offers a multitude of features for the RDG Series of loggers.
Three versions of InfraLog for Windows are available: basic (included in delivery), light and enhanced (optionally available) with different features and functions, as shown below.

Functions of INFRALOG	Basic	Light	Enhanced (Professional)
Automatic device detection	•	•	•
Conversion from base units of measurement into customizable physical values	•	•	•
Load/save device settings	•	•	•
Upgrade device firmware via USB	•	•	•
Load or save readings to/from your PC's hard drive or network storage	•	•	•
Customiz InfraLog's appearance	•	•	•
Symbols and icons indicate logger status (logger mode/alarm/battery)	•	•	•
Total control (settings, start logger, stop logger, download etc.)	•	•	•
Measurement input configuration	•	•	•
Download data without stopping the logger	•	•	•
Online readings	•	•	•
Export to Excel (fast conversion)	•	•	•
Calculate absolute humidity, dewpoint etc.	•	•	•
Supports USB 2.0 for download rates of 1 Mbit (100.000 readings in 20 s)	•	•	•
Menu languages (German, English, Spanish, French)	•	•	•
Compatible with Windows 7, 8 & 10	•	•	•
Formula compiler calculates any measurand		•	•
y/t charts (readings over time)		•	•
Three scaleable axes		•	•
Zooming function		•	•
Meter readings at the cursor		•	•
Display as spreadsheets		•	•
Combine a series of measurements to be displayed in one chart		•	•
Definition of thresholds		•	•
Statistics (min, max and average values)		•	•
y/x charts (values over values)			•
Generate daily, weekly, monthly and annual reports			•
Specify beginning and end of analyzed period			•
Specify analysis interval			•
Print settings			•
Graphic representation of A0 value		•	•
Graphic representation of mean kinetic temperature (MKT)		•	•

Well-arranged charts with overview and up to three Y-axes
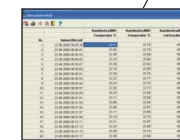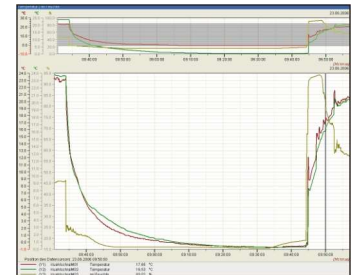
Meter-reading at the cursor

Zooming function