# HYGROFLEX3





## THE FLEXIBLE TRANSMITTER.

INTRODUCING AIRCHIP DIGITAL TECHNOLOGY.

## INNOVATION IN HUMIDITY AND TEMPERATURE MEASUREMENT

- Relative humidity, temperature and dew point measurement
- Outstanding accuracy and repeatability
- Hygromer® IN-1 humidity sensor
- Auto-diagnostics and automatic correction
- Freely selectable and scalable analog outputs
- Also available as hygrostat and thermostat



The Right Source For Your Test & Measurement Need

2222 Verus Street Suite C San Diego CA 92154 USA
Toll Free: 866.363.6634 Tel: 619.429.4545 Fax: 619.374.7012
Email: sales@calright.com http://www.calright.com



rotronic
LEADING IN HI IMIDITY MEASUREMENT

### **HYGROFLEX3-SERIES**

# SPECIFY THE BEST: HYGROFLEX3 ADVANTAGES AT A GLANCE.

The new HygroFlex3-series is the latest development in HVAC transmitters for relative humidity, temperature and dew point. Based on AirChip3000 technology, the instruments achieve a degree of accuracy not seen before.

In combination with advances in sensor technology and integration, the HygroFlex3-series provides superb precision and state-of-the-art functionality, taking humidity, temperature and dew point measurements to a whole new level of performance and reliability (< 2 % rh / 0.3 %).

#### **High flexibility**

- Two freely selectable and scalable analog outputs
- Analog outputs assignable to relative humidity, temperature or dew point
- 2-wire or 3/4-wire systems available
- Two integrated relay contacts available as options to convert the transmitters to thermostats/hygrostats

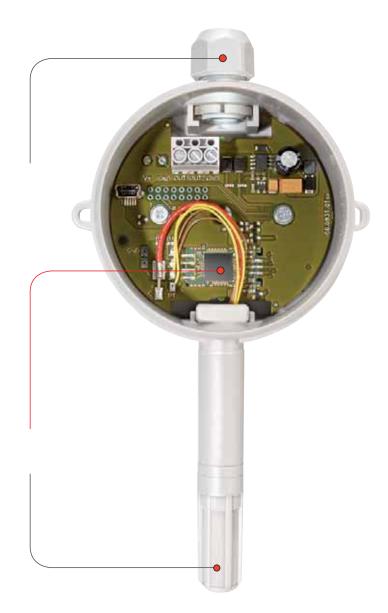


#### AirChip3000

- Compensates humidity and temperature over 30,000 reference points
- 2,000 data point memory
- Dew/frost point calculation
- Sensor auto-diagnostics and automatic correction
- Active alarming and information
- ASIC (Application Specific Integrated Circuit), micro-controller and EEPROM on one chip

#### Fast response and precision measurement

- By decoupling the Pt100 temperature sensor from the probe, thermal response is significantly improved
- Use of Pt100 1/3 Class B sensors for maximum accuracy





## APPLICATIONS.

The HygroFlex3-series is ideal for all applications where exact measurement of humidity and temperature is of decisive importance. The transmitters can be used in a variety of fields for heating, ventilation and air conditioning applications, greenhouses, museums, warehouses, libraries, railway stations and for climate control in office buildings.

Thanks to the high long-term stability of the sensors and auto-diagnostics, the transmitters are both service-friendly and reliables and will save you time and money.



#### HF3 duct version

For use in ventilation shafts



#### HF3 wall version

For use in technical equipment rooms



#### HF3 space version

For use in offices and rooms where good looks play a role

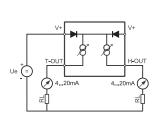
## **OUTPUTS OF THE HYGROFLEX3-SERIES.**

 $The \ high \ flexibility \ of the \ HygroFlex 3-series \ allows \ the \ user to \ select \ the \ analog \ outputs \ freely.$ 

All you need to do is enter the type of output signal (0...1V, 0...5V, 0...20V, 0...20 mA, 4...20mA) and the scale by software. For the option with relay outputs it is possible to set the switch actuation points for relative humidity and temperature easily using a potentiometer.

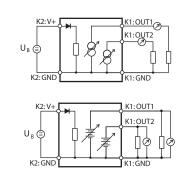
#### HF32-series

2-wire technology



#### HF33-series

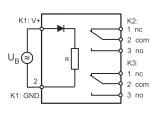
3/4-wire technology



#### HF34-series

2 relay outputs

(not possible for the room version)





### **HYGROFLEX3-SERIES**

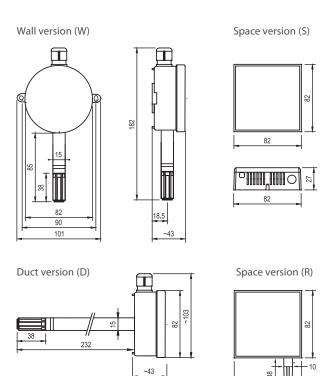
## TECHNICAL INFORMATION.

#### Sensor Diagnostics.

The intelligence of AirChip3000 technology enables advanced sensor diagnostics. Should the sensors deviate from factory defined parameters, measurement values can be compensated automatically and a digital alarm triggered.

#### Data Logging and Alarm Generation.

Up to 2,000 measurement values can be stored in the HygroClip2 probe; the user is able to configure the measurement interval, set alarm limits, scale the output signal and download data using optional ROTRONIC HW4 software. The HygroClip2 probe can be programmed with set limits to generate an alarm which is available when the probe is communicating with a PC or compatible ROTRONIC device. Thus, the HygroClip2 can be integrated in any application.



Integrated sensors         Yes           Humidity sensor         ROTRONIC Hygromer® IN-1           Temperature sensor         Pt100 1/3 Class B           Accuracy at 23 ± 5 °C         ±2.0 %rh / 0.3 K (±1.0 %rh / 0.2 K Type R)           Resolution AirChip3000         <0.02 %rh / 0.01 K           Long-term stability humidity sensor         <1 %rh / year           Response time τ 63         <10 s           Measurement range         -4060 °C / 0100 %rh (-1060 °C with LCD)           Electronics operating range         -4060 °C / 0100 %rh (-1060 °C with LCD)           Display (option room version) (HF32S: not illuminated)         Graphic LCD           Alarm functions (programmable)         Sensor interruption or short circuit           Output signals         Freely scalable by user o1 v, 05 v, 010 v, 0(4)20 mA           Change in signal type         HF33 only           Power supply         HF32: 1028 VDC: 10 V + (0.02 x load) HF33: 1540 VDC /1228 VAC           HF32: max 40 mA, other models < 100 mA         HF32: max 40 mA, other models < 100 mA           Circuit type         HF32: x x 2 wires, HF33: 3/4 wires           Min. / Max. load         V-signal:≥1 KC2/V / mA signal: ≤ 500 Ω           Firmware update         Possible by HW4 software           Sensor diagnostics (Drift, state)         Programmable. Default: off		HF32 2-wires	HF33 3/4-wires	HF34 Hygro-/Thermostat	
Temperature sensor  Accuracy at 23 ±5 °C  Resolution AirChip 3000  Co.02 %rh / 0.01 K  Long-term stability humidity sensor  Response time τ 63  Measurement range  Lectronics operating range  Display (option room version)  (HF32S: not illuminated)  Alarm functions (programmable)  Change in signal type  Power supply  HF32: 1028 VDC: 10 V + (0.02 x load)  HF33: 1540 VDC / 1228 VAC  HF34: 840 VDC / 628 VAC  HF32: x 2 wires, HF33: 3/4 wires  Min. / Max. load  Firmware update  Sensor protection  Polyethylene filter  Max. wind speed  Adjustments  Power online in signal type  Power online in signal type  Alarm functions (Drift, state)  Possible by HW4 software  Sensor protection  Polyethylene filter  Max. wind speed  Adjustments  Wia ROTRONIC accessories  Humidity: multi point; temperature: 2 points  Hygro- /Thermostat  Data logging  Internal, 2000 data point memory  Pewpoint /frostpoint calculation  Yes  Cable connections  Norms  CE- compliant, 2007/108/EG  Audit trail, Electronic Records  IP protection rating & fire  Polyethylene  IP Corresponds to UL94-HB	Integrated sensors	70 1			
Accuracy at 23 ±5 °C $\pm 2.0$ %rh / 0.3 K ( $\pm 1.0$ %rh / 0.2 K Type R)Resolution AirChip 3000 $0.02$ %rh / 0.01 KLong-term stability humidity sensor $1$ %rh / yearResponse time $\tau$ 63 $(10 \text{ s})$ Measurement range $-4060$ °C / 0100 %rhElectronics operating range $-4060$ °C / 0100 %rh ( $\cdot$ 1060 °C with LCD)Display (option room version) (HF32S: not illuminated)Graphic LCD Parameters freely configurableAlarm functions (programmable)Sensor interruption or short circuitOutput signalsFreely scalable by user 01 V, 05 V, 010 V, 0(4)20 mAChange in signal typeHF33: no28 VDC: 10 V + (0.02 x load) HF33: 1540 VDC / 1228 VACPower supplyHF32: 1028 VDC: 10 V + (0.02 x load) HF33: 1540 VDC / 1228 VACPower consumptionHF32: max 40 mA, other models < 100 mA	Humidity sensor	ROTRONIC Hygromer® IN-1			
Resolution AirChip3000  Long-term stability humidity sensor  Response time τ 63  Measurement range  -4060 °C / 0100 %rh  Electronics operating range  -4060 °C / 0100 %rh (-1060 °C with LCD)  Display (option room version)  (HF32S: not illuminated)  Alarm functions (programmable)  Output signals  Freely scalable by user  01 V, 05 V, 010 V, 0(4)20 mA  Change in signal type  HF32: 1028 VDC: 10 V + (0.02 x load)  HF33: 1540 VDC /1228 VAC  HF34: 840 VDC /228 VAC  Power consumption  HF32: max 40 mA, other models < 100 mA  Circuit type  HF32: 2 x 2 wires, HF33: 3/4 wires  Min. / Max. load  V-signal:≥1 kΩ/V / mA signal: ≤ 500 Ω  Firmware update  Possible by HW4 software  Sensor diagnostics (Drift, state)  Programmable. Default: off  Sensor protection  Max. wind speed  Adjustments  Via ROTRONIC accessories  Humidity: multi point; temperature: 2 points  Hygro-/Thermostat  2 Relays, HF34 only  Data logging  Internal, 2000 data point memory  Dewpoint /frostpoint calculation  Yes  PC interface  With ROTRONIC interface cable,  HW4 compatible  Housing material / weight  ABS / approx. 120g  Cable connections  1 x M16x1.5, on terminals  Norms  CE- compliant, 2007/108/EG  Audit trail, Electronic Records  IP Protection rating & fire  IP65 / Corresponds to UL94-HB	Temperature sensor	Pt100 1/3 Class B			
Long-term stability humidity sensor       x1 %rh / year         Response time τ 63       x10 s         Measurement range       -4060 °C / 0100 %rh         Electronics operating range       -4060 °C / 0100 %rh (-1060 °C with LCD)         Display (option room version) (H732S: not illuminated)       Graphic LCD         Parameters freely configurable       Alarm functions (programmable)         Output signals       Sensor interruption or short circuit         Output signals       Freely scalable by user 01 v, 05 v, 010 v, 0(4)20 mA         Change in signal type       HF33 only         Power supply       HF32: 1028 VDC: 10 V + (0.02 x load) HF33: 1540 VDC / 628 VAC         Power consumption       HF32: max 40 mA, other models < 100 mA	Accuracy at 23 ±5 °C	±2.0 %rh / 0.3 K (±1.0 %rh / 0.2 K Type R)			
Response time τ 63  Measurement range  Electronics operating range  Jisplay (option room version) (H7325: not illuminated)  Alarm functions (programmable)  Output signals  Change in signal type  Power supply  Power consumption  Graphic LCD  Power consumption  HF32: 1028 VDC: 10 V + (0.02 x load) H733: 1540 VDC / 628 VAC  HF34: 840 VDC / 628 VAC  HF32: 2 x 2 wires, HF33: 3/4 wires  Min. / Max. load  Frimware update  Sensor diagnostics (Drift, state)  Possible by HW4 software  Sensor protection  Polyethylene filter  Max. wind speed  Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  Hygro- /Thermostat  Data logging  Internal, 2000 data point memory  Dewpoint /frostpoint calculation  PC interface  With ROTRONIC interface cable, HW4 compatible  Housing material / weight  ABS / approx. 120g  Cable connections  Norms  CE- compliant, 2007/108/EG  Audit trail, Electronic Records  IP Protection rating & fire  IP65 / Corresponds to UL94-HB	Resolution AirChip3000	<0.02 %rh / 0.01 K			
Measurement range       -4060 °C / 0100 %rh         Electronics operating range       -4060 °C / 0100 %rh (-1060 °C with LCD)         Display (option room version) (HF32S: not illuminated)       Graphic LCD Parameters freely configurable         Alarm functions (programmable)       Sensor interruption or short circuit         Output signals       Freely scalable by user 01 V, 05 V, 010 V, 0(4)20 mA         Change in signal type       HF33 only         Power supply       HF32: 1028 VDC: 10 V + (0.02 x load) HF33: 1540 VDC /628 VAC         Power consumption       HF32: 1340 VDC /628 VAC         Power consumption       HF32: max 40 mA, other models < 100 mA	Long-term stability humidity sensor	<1 %rh / year			
Electronics operating range       -4060 °C / 0100 %rh (·1060 °C with LCD)         Display (option room version) (HF32S: not illuminated)       Graphic LCD         Alarm functions (programmable)       Sensor interruption or short circuit         Output signals       Freely scalable by user 01 V, 05 V, 010 V, 0(4)20 mA         Change in signal type       HF33 only         Power supply       HF32: 1028 VDC: 10 V + (0.02 x load) HF33: 1540 VDC /1228 VAC         HF34: 840 VDC /628 VAC         Power consumption       HF32: max 40 mA, other models < 100 mA	Response time $\tau$ 63	<10 s			
Display (option room version) (HF32S: not illuminated)       Graphic LCD Parameters freely configurable         Alarm functions (programmable)       Sensor interruption or short circuit         Output signals       Freely scalable by user 01 V, 05 V, 010 V, 0(4)20 mA         Change in signal type       HF33 only         Power supply       HF32: 1028 VDC: 10 V + (0.02 x load) HF33: 1540 VDC /628 VAC         Power consumption       HF32: max 40 mA, other models < 100 mA	Measurement range	-4060 °C / 0100 %rh			
(HF32Ś: not illuminated)       Parameters freely configurable         Alarm functions (programmable)       Sensor interruption or short circuit         Output signals       Freely scalable by user 01 V, 05 V, 010 V, 0(4)20 mA         Change in signal type       HF33 only         Power supply       HF32: 1028 VDC: 10 V + (0.02 x load) HF33: 1540 VDC /1228 VAC         Power consumption       HF32: max 40 mA, other models < 100 mA	Electronics operating range	-4060 °C / 0100 %rh (-1060 °C with LCD)			
Output signals       Freely scalable by user 01 V, 05 V, 010 V, 0(4)20 mA         Change in signal type       HF33 only         Power supply       HF32: 1028 VDC: 10 V + (0.02 x load) HF33: 1540 VDC /1228 VAC HF34: 840 VDC /628 VAC         Power consumption       HF32: max 40 mA, other models < 100 mA         Circuit type       HF32: 2 x 2 wires, HF33: 3/4 wires         Min. / Max. load       V-signal:≥1 kΩ/V / mA signal: ≤ 500 Ω         Firmware update       Possible by HW4 software         Sensor diagnostics (Drift, state)       Programmable. Default: off         Sensor protection       Polyethylene filter         Max. wind speed       20 m/s at probe         Adjustments       Via ROTRONIC accessories Humidity: multi point; temperature: 2 points         Hygro- /Thermostat       2 Relays, HF34 only         Data logging       Internal, 2000 data point memory         Dewpoint /frostpoint calculation       Yes         PC interface       With ROTRONIC interface cable, HW4 compatible         Housing material / weight       ABS / approx. 120g         Cable connections       1 x M16x1.5, on terminals         Norms       CE- compliant, 2007/108/EG         Audit trail, Electronic Records       FDA CFR21 Part 11 and GAMP compliant         IP protection rating & fire       IP65 / Corresponds to UL94-H					
01 V, 05 V, 010 V, 0(4)20 mA         Change in signal type         HF33 only         Power supply       HF32: 1028 VDC: 10 V + (0.02 x load) HF33: 1540 VDC /628 VAC         Power consumption       HF32: max 40 mA, other models < 100 mA	<td>Alarm functions (programmable)</td> <td colspan="3">Sensor interruption or short circuit</td>	Alarm functions (programmable)	Sensor interruption or short circuit		
Power supply  HF32: 1028 VDC: 10 V + (0.02 x load) HF33: 1540 VDC / 1228 VAC HF34: 840 VDC / 628 VAC  Power consumption  HF32: max 40 mA, other models < 100 mA  Circuit type  HF32: 2 x 2 wires, HF33: 3/4 wires  Min. / Max. load  V-signal:≥1 kΩ/V / mA signal: ≤ 500 Ω  Firmware update  Possible by HW4 software  Sensor diagnostics (Drift, state)  Programmable. Default: off  Sensor protection  Polyethylene filter  Max. wind speed  Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  Hygro- /Thermostat  2 Relays, HF34 only  Data logging  Internal, 2000 data point memory  PC interface  With ROTRONIC interface cable, HW4 compatible  Housing material / weight  ABS / approx. 120g  Cable connections  1 x M16x1.5, on terminals  Norms  CE- compliant, 2007/108/EG  Audit trail, Electronic Records  FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire	Output signals				
HF33: 1540 VDC/1228 VACPower consumptionHF32: max 40 mA, other models < 100 mA	Change in signal type	HF33 only			
Circuit type       HF32: 2 x 2 wires, HF33: $3/4$ wires         Min. / Max. load       V-signal:≥1 kΩ/V / mA signal: ≤ 500 Ω         Firmware update       Possible by HW4 software         Sensor diagnostics (Drift, state)       Programmable. Default: off         Sensor protection       Polyethylene filter         Max. wind speed       20 m/s at probe         Adjustments       Via ROTRONIC accessories Humidity: multi point; temperature: 2 points         Hygro- /Thermostat       2 Relays, HF34 only         Data logging       Internal, 2000 data point memory         Dewpoint /frostpoint calculation       Yes         PC interface       With ROTRONIC interface cable, HW4 compatible         Housing material / weight       ABS / approx. 120g         Cable connections       1 x M16x1.5, on terminals         Norms       CE- compliant, 2007/108/EG         Audit trail, Electronic Records       FDA CFR21 Part 11 and GAMP compliant         IP protection rating & fire       IP65 / Corresponds to UL94-HB	Power supply	HF33: 1540 VDC/1228 VAC			
Min. / Max. loadV-signal:≥1 kΩ/V / mA signal: ≤ 500 ΩFirmware updatePossible by HW4 softwareSensor diagnostics (Drift, state)Programmable. Default: offSensor protectionPolyethylene filterMax. wind speed20 m/s at probeAdjustmentsVia ROTRONIC accessories Humidity: multi point; temperature: 2 pointsHygro- /Thermostat2 Relays, HF34 onlyData loggingInternal, 2000 data point memoryDewpoint /frostpoint calculationYesPC interfaceWith ROTRONIC interface cable, HW4 compatibleHousing material / weightABS / approx. 120gCable connections1 x M16x1.5, on terminalsNormsCE- compliant, 2007/108/EGAudit trail, Electronic RecordsFDA CFR21 Part 11 and GAMP compliantIP protection rating & fireIP65 / Corresponds to UL94-HB	Power consumption	HF32: max 40 mA, other models < 100 mA			
Firmware update  Sensor diagnostics (Drift, state)  Sensor protection  Polyethylene filter  Max. wind speed  Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  Hygro- /Thermostat  Data logging  Internal, 2000 data point memory  Dewpoint /frostpoint calculation  PC interface  With ROTRONIC interface cable, HW4 compatible  Housing material / weight  ABS / approx. 120g  Cable connections  1 x M16x1.5, on terminals  Norms  CE- compliant, 2007/108/EG  Audit trail, Electronic Records  IP protection rating & fire  Polyethylene filter Polyethylene filter  Relative filter  Polyethylene filter  Relative filter  Polyethylene filter  Relative filter  Polyethylene filter  Relative filter  Points  Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  Hygro- /Thermostat  Pesonomic filter  Relative filter  Augustion filter  Possible by HW4 software  Programmable. Default: off  Relative filter  Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  Hygro- /Thermostat  Pesonomic filter  Adjustments  Cesonomic filter  Programmable. Default: off  Polyethylene filter  Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  Pesonomic filter  Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  Pesonomic filter  Adjustments  Cesonomic filter  Adjustments  Polyethylene filter  Adjustments  Adjustments  Filter  Adjustments  Programmable. Default: off  Adjustments  Adjustments	Circuit type	HF32: 2 x 2 wires, HF33: 3/4 wires			
Sensor diagnostics (Drift, state)  Sensor protection  Polyethylene filter  Max. wind speed  Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  Hygro- /Thermostat  2 Relays, HF34 only  Data logging  Internal, 2000 data point memory  Pewpoint /frostpoint calculation  PC interface  With ROTRONIC interface cable, HW4 compatible  Housing material / weight  ABS / approx. 120g  Cable connections  1 x M16x1.5, on terminals  Norms  CE- compliant, 2007/108/EG  Audit trail, Electronic Records  FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire  IP65 / Corresponds to UL94-HB	Min. / Max. load	V-signal:≥1 k $\Omega$ /V / mA signal: ≤ 500 $\Omega$			
Sensor protection  Max. wind speed  Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  Hygro- /Thermostat  2 Relays, HF34 only  Data logging  Internal, 2000 data point memory  Dewpoint /frostpoint calculation  PC interface  With ROTRONIC interface cable, HW4 compatible  Housing material / weight  ABS / approx. 120g  Cable connections  1 x M16x1.5, on terminals  Norms  CE- compliant, 2007/108/EG  Audit trail, Electronic Records  FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire  IP65 / Corresponds to UL94-HB	Firmware update	Possible by HW4 software			
Max. wind speed  Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  Hygro- /Thermostat  2 Relays, HF34 only  Data logging  Internal, 2000 data point memory  Pewpoint /frostpoint calculation  PC interface  With ROTRONIC interface cable, HW4 compatible  Housing material / weight  ABS / approx. 120g  Cable connections  1 x M16x1.5, on terminals  Norms  CE- compliant, 2007/108/EG  Audit trail, Electronic Records  FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire  IP65 / Corresponds to UL94-HB	Sensor diagnostics (Drift, state)	Programmable. Default: off			
Adjustments  Via ROTRONIC accessories Humidity: multi point; temperature: 2 points  1 Relays, HF34 only 1 Data logging 1 Internal, 2000 data point memory  Dewpoint /frostpoint calculation  PC interface With ROTRONIC interface cable, HW4 compatible  Housing material / weight ABS / approx. 120g  Cable connections 1 x M16x1.5, on terminals  Norms CE- compliant, 2007/108/EG  Audit trail, Electronic Records PDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire  IP65 / Corresponds to UL94-HB	Sensor protection	Polyethylene filter			
Humidity: multi point; temperature: 2 points  Hygro- /Thermostat 2 Relays, HF34 only  Data logging Internal, 2000 data point memory  Pewpoint /frostpoint calculation Yes  PC interface With ROTRONIC interface cable, HW4 compatible  Housing material / weight ABS / approx. 120g  Cable connections 1 x M16x1.5, on terminals  Norms CE- compliant, 2007/108/EG  Audit trail, Electronic Records FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire IP65 / Corresponds to UL94-HB	Max. wind speed	· · ·			
Data logging Internal, 2000 data point memory  Dewpoint /frostpoint calculation Yes  PC interface With ROTRONIC interface cable, HW4 compatible  Housing material / weight ABS / approx. 120g  Cable connections 1 x M16x1.5, on terminals  Norms CE- compliant, 2007/108/EG  Audit trail, Electronic Records FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire IP65 / Corresponds to UL94-HB	Adjustments				
Dewpoint /frostpoint calculation PC interface With ROTRONIC interface cable, HW4 compatible Housing material / weight ABS / approx. 120g Cable connections 1 x M16x1.5, on terminals Norms CE- compliant, 2007/108/EG Audit trail, Electronic Records FDA CFR21 Part 11 and GAMP compliant IP protection rating & fire IP65 / Corresponds to UL94-HB	Hygro- /Thermostat	2 Relays,	2 Relays, HF34 only		
PC interface  With ROTRONIC interface cable, HW4 compatible  Housing material / weight  ABS / approx. 120g  Cable connections  1 x M16x1.5, on terminals  Norms  CE- compliant, 2007/108/EG  Audit trail, Electronic Records  FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire  IP65 / Corresponds to UL94-HB	Data logging	Internal, 2000 data point memory			
HW4 compatible  Housing material / weight ABS / approx. 120g  Cable connections 1 x M16x1.5, on terminals  Norms CE- compliant, 2007/108/EG  Audit trail, Electronic Records FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire IP65 / Corresponds to UL94-HB	Dewpoint /frostpoint calculation	Yes			
Cable connections 1 x M16x1.5, on terminals  Norms CE- compliant, 2007/108/EG  Audit trail, Electronic Records FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire IP65 / Corresponds to UL94-HB	PC interface				
Norms CE- compliant, 2007/108/EG Audit trail, Electronic Records FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire IP65 / Corresponds to UL94-HB	Housing material / weight	ABS / approx. 120g			
Audit trail, Electronic Records FDA CFR21 Part 11 and GAMP compliant  IP protection rating & fire IP65 / Corresponds to UL94-HB	Cable connections	1 x M16x1.5, on terminals			
IP protection rating & fire IP65 / Corresponds to UL94-HB	Norms	CE- compliant, 2007/108/EG			
	Audit trail, Electronic Records	FDA CFR21 Part 11 and GAMP compliant			
		IP65 / Co	rresponds to L	JL94-HB	

UE22 UE22

LIE2 /

