

Thermoguard Basic Complete packages with Software and Controller

Thermoguard Basic packages contain the software, one sensorcontroller and one sensor. The functional scope of the *Thermoguard Basic* software is identical to the *Thermoguard Professional* software but it only allows you to use one single sensorcontroller.

Thermoguard Basic packages can be upgraded to *Thermoguard Professional* at any time.

Thermoguard Basic1: Software, Sensorcontroller SC1ePn, 1 sensor PT100 725 €



Delivery contains:
 1 x *Thermoguard* Software Basic
 1 x Sensorcontroller SC1ePn, Power Supply
 1 x Temperature sensor PT100 (-50..+180°C)

Thermoguard Basic2: Software, Sensorcontroller SC2ePn, 1 sensor PT100 855 €



Delivery contains:
 1 x *Thermoguard* Software Basic
 1 x Sensorcontroller SC2eP, Power Supply
 1 x Temperature sensor PT100 (-50..+180°C)

Thermoguard Basic8: Software, Sensorcontroller SC8eP 1 sensor PT100 995 €



Delivery contains:
 1 x *Thermoguard* Software Basic
 1 x Sensorcontroller SC8eP, Power Supply
 1 x Temperature sensor PT100 (-50..+180°C)
 1 x DIN rail for mounting, about 9 cm

Thermoguard HM Basic1: Software, HygroLAN-Controller HM1Pn 1.025 €

Thermoguard HF Basic1: Software, HygroLAN-Controller HF1Pn 985 €



Delivery contains:
 1 x *Thermoguard* Software Basic
 1 x Controller HM1Pn or HF1Pn
 Power Supply
 HM1Pn: 1 x Temper.-/Humidity-/Pressure sensor
 HF1Pn: 1 x Temper.-/Humidity sensor

Thermoguard Professional and Upgrade

Software

Thermoguard Professional: Software for central data recording of virtually any desired number of *Thermoguard* sensorcontrollers. Unlike *Thermoguard Basic*, *Thermoguard Professional* can centrally poll (interrogate) and monitor several sensorcontrollers.

A typical area of application is monitoring for large numbers of cooling/refrigeration appliances, climatic chambers or incubators distributed throughout several rooms, buildings or locations.

Thermoguard Professional: Software V2.9x

1.360 €



Thermoguard Professional is suited for all Microsoft® Windows™ Operating Systems currently supported by Microsoft

Thermoguard Professional Upgrade

Software

Upgrade for *Thermoguard Basic* Software to *Thermoguard Professional*. You can continue using your existing sensorcontrollers..

Thermoguard Professional: Software Upgrade

995 €



The *Thermoguard Professional Upgrade* is suited for all Microsoft® Windows™ Operating Systems currently supported by Microsoft

Thermoguard SC1ePn, SC2eP and SC8eP

Sensorcontroller

Several *Thermoguard* sensorcontrollers are available: The SC1ePn "single" controller for one temperature sensor, the SC2eP dual controller to connect one or two sensors, and the SC8eP providing ports for a maximum of eight sensors. The *HygroLAN* Controller HM1Pn allows you to monitor and record temperature, relative humidity and atmospheric pressure with its included combined digital sensor (w/o pressure available as model HF1Pn).

Thermoguard Sensorcontroller SC1ePn -200 °C to +650 °C

360 €



Technical Data:

Network:	10/100 BaseT autosensing
Supported Temper. sensors:	1x PT100 or PT1000 with 4-wire technology
Measuring range, resolution:	-200 °C...+650 °C, 1/10 °C
Measuring error:	±0,3 °C ± 0,2 %
Supply voltage:	PoE Class 1 or externally DC 12V .. 48V (±10%)
Power consumption:	typically 62mA @24VDC
Power supply:	via PoE respectively Plug-in Power Supply (not included, please order separately!)
Housing:	Plastic housing, 105 x 75 x 22 mm, for DIN rail mount

Thermoguard Sensorcontroller SC2eP -200 °C to +650 °C

490 €



Technical Data:

Network:	10/100 BaseT autosensing
Supported Temper. sensors:	1 to 2x PT100 or PT1000 with 4-wire technology
Measuring range, resolution:	-200 °C...+650 °C, 1/10 °C
Measuring error:	±0,3 °C ± 0,2 %
Supply voltage:	PoE Class 1 or externally DC 12V .. 48V (±10%)
Power consumption:	typically 70A @24VDC
Power supply:	via PoE respectively Plug-in Power Supply (not included, please order separately!)
Housing:	Plastic housing, 105 x 75 x 22 mm, for DIN rail mount

Thermoguard Sensorcontroller SC8eP -200 °C to +650 °C

630 €



Technical Data:

Network:	10/100 BaseT autosensing
Supported Temper. sensors:	1 to 8x PT100 or PT1000 with 4-wire technology
Measuring range, resolution:	-200 °C...+650 °C, 1/10 °C
Measuring error:	±0,3 °C ± 0,2 %
Supply voltage:	PoE Class 1 or externally DC 12V .. 48V (±10%)
Power consumption:	typically 65mA @24VDC
Power supply:	via PoE respectively Plug-in Power Supply (not included, please order separately!)
Housing:	Plastic housing, 107 x 88 x 63 mm, for DIN rail mount

Thermoguard HM1Pn/HF1Pn

HygroLAN Controller

Thermoguard HygroLAN-Controller HM1Pn including combined Temperature-/Humidity-/Atmospheric Pressure sensor	520 €
Thermoguard HygroLAN-Controller HF1Pn including combined Temperature-/Humidity sensor	480 €



Technical Data:	for HM1Pn (for HF1Pn specifications for barometric pressure do not apply):
Network:	10/100 BaseT autosensing
Sensor included:	Combined digital sensor for temperature, relative humidity and barometric pressure, 2m cable
Measuring range, resolution:	-40°C..+85°C, 1/10°C; 0..100% rH, 0,1%; 10..1100hPa, 0,1hPa
Measuring error:	±0,3°C; ±2% rH (@23°C); ±0,8hPa (750..1100hPa, @25°C)
Supply voltage:	PoE Class 1 or externally DC 12V .. 48V (±10%)
Power consumption:	typically 62mA @24V DC
Power supply:	via PoE respectively Plug-in Power Supply (not included, please order separately!)
Housing:	Plastic housing, 105 x 75 x 22 mm, for DIN rail mount

Options for HM1Pn/HF1Pn

Splash water protection for HM1Pn/HF1Pn sensor	35 €
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Optionally HM1Pn/HF1Pn can be ordered with a splash water protected combined sensor (sintered bronze cap):

- Protection class IP X4
- Sealing according to DIN 40050: 1993 Part 9

Calibration of combined digital sensor of HM1Pn/HF1Pn	175 €
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Optionally *Thermoguard* offers a factory calibration for the combined sensor of HM1Pn or HF1Pn (Temperature and Humidity, atmospheric pressure excluded)

Thermoguard Temperature Sensors

Temperature sensors for *Thermoguard* sensorcontrollers are available in a variety of designs for specific areas of use. On request, all the sensors can be factory calibrated with a certificate. Please ask us about special sensors for your particular application!

Special cable length for designs with solid connection leads on request.

Temperature Sensor Standard, PT100, 3 m	-50 °C to +180 °C	35 €
Temperature Sensor Standard, PT100, 10 m	-50 °C to +180 °C	45 €



Temperature sensor PT100, Class A, four wire connection, Dimensions Ø6 x 50mm, 2-fold rolled, Temperature range -50...+180°C, available with 3 m or 10 m solid connection lead

Temperature Sensor Screw Mounting, PT100	-50 °C to +200 °C	65 €
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Temperature sensor for screw mounting to monitor temperatures, Type PT100. Temperature range -50 °C to +200 °C. Four wire connection, 10 m solid connection lead. Silicone cable with Teflon isolation of inner wire. Dimensions: 8 x 8 x 40 mm. Accuracy: DIN 60751 Class A

Low Temperature Sensor, PT100	-90 °C to +200 °C	110 €
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Stainless steel temperature sensor for screw mounting to monitor ultra low temperatures. Type PT100 with coiled sensor probe. Temperature range -90 °C to +200 °C. Four wire connection, 10 m solid connection lead TT 4 x AWG 22. Dimensions: 8 x 8 x 40 mm. Accuracy: DIN 60751 Class A

Very low temperature sensor "KW1", PT100	-190 °C to +180 °C	245 €
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Temperature sensor KW1, Type PT100, sealed, Temperature range -190 °C to +180 °C; Four wire connection, 10 m solid connection lead, cable type TT 4xAWG 26; stainless steel head; drummed twice; Dimensions: round shape, 5mm diameter, 100 mm length; Accuracy: DIN 60751 Class A

Temperature Sensor Indoor, PT100

-40 °C to +85 °C

55 €



For measuring and monitoring temperatures in indoor rooms, type PT100. Version with slotted plastic housing. Temperature range -40 °C to +85 °C. Four wire connection; connection lead not included. Dimensions: 70 x 70 x 27 mm. Accuracy: DIN 60751 Class A

Temperature Sensor Cold Storage, PT100

-40 °C to +90 °C

95 €



Temperature sensor, wall mounting, sealed plastic housing, type PT100. For measuring and monitoring temperatures in cooling chambers, climatic chambers, storage areas and machine halls; temperature range -40 °C to +90 °C. Four wire connection; connection lead not included. Dimensions, housing including sensors: 145 x 58 x 34 mm. Accuracy: DIN 60571 Class A

Factory Calibration of Temperature Sensors

Basic Charge (per Design):

125 €

Additional charge per sensor:

50 €



Thermoguard offers an optional factory based calibration for the Thermoguard PT100 sensors.

The sensors will be calibrated at two measuring points by comparative measurements in an external laboratory. Traceability of the measurements to national standards is guaranteed.

Thermoguard Sensorcontrollers for analog values

The Analog Controller series AC2 provides the possibility to record and monitor analog current values from 0-20 mA and voltage values from 0-10 Volt via the network. With the help of standardized transmitters practically all physical values can be recorded and controlled. Just some examples: Current, voltage, power, (air) pressure, light, frequency are just a few examples.

Thermoguard Sensorcontroller AC2aPn

360 €



Technical Data:

Network:	10/100 BaseT autosensing
Input:	2x Current: 0/4..20 mA, 100 Ohm
Resolution:	Current input: 2.5 μ A
Measuring error:	max. 0,5 % FSR (Full Scale Range 0..20 mA) $T_A = 0-60^\circ\text{C}$
Supply Voltage:	PoE Class 1 or externally DC 12V .. 48V ($\pm 10\%$)
Power consumption:	typically 100mA @24V DC
Power supply:	via PoE respectively Plug-in Power Supply (not included, please order separately!)
Housing:	Plastic housing, 105 x 75 x 22 mm, for DIN rail mount

Thermoguard Sensorcontroller AC2vPn

360 €



Technical Data:

Network:	10/100 BaseT autosensing
Input:	2x Voltage: 0..10 V, 1 MOhm
Resolution:	Voltage Input: 1,25 mV
Measuring error:	max. 0,5% FSR (Full Scale Range 0..10V) $T_A = 0-60^\circ\text{C}$
Supply Voltage:	PoE Class 1 or externally DC 12V .. 48V ($\pm 10\%$)
Power consumption:	typically 100mA @24V DC
Power supply:	via PoE respectively Plug-in Power Supply (not included, please order separately!)
Housing:	Plastic housing, 105 x 75 x 22 mm, for DIN rail mount

Thermoguard Water Detector

Thermoguard Water Detector TG-W, ready for connection

485 €



Included:

- Housing
- SC1ePn fixed with mounting bracket
- DIN rail switching power supply 24V DC
- Water Detector with sensor, 5m cable
(optionally one additional sensor connected in parallel, +25€)
- Adapter /w resistors wired for Alarm Relay Channel operation
- 4 end clamps
- RJ45 "Feedthrough" with rubber sealing
- Reset switch on housing
- 230V~ Connection cable, 5m, white with angled plug

GSM Modem

By default, Thermoguard sends "e-mail as SMS" to mobile phones. In addition or alternatively the Thermoguard Software supports sending alarm or "heartbeat" messages directly over a GSM modem independently of an e-mail Server.

The unit is supplied ready for connection in a mounting housing.

A SIM card is required for operation.

Two versions are available:

GSM Modem, Serial Version

345 €



For direct connection to a free COM port* of the *Thermoguard* PC

Included:

- Mounting housing with four wall mounting lugs
- DIN rail switching power supply, 24V DC
- GSM modem
- Antenna with magnetic base
- Serial connection cable (5m)
- 230V~ connection cable (5m)

*or via USB-to-serial adapter

GSM Modem, COM Server Version

425 €



For connection anywhere in the network*

Included:

- Mounting housing with four wall mounting lugs
- DIN rail switching power supply, 5V DC
- GSM modem
- Antenna with magnetic base
- COM server with driver software for "virtual COM port"
- 230V~ connection cable (5m)

*RJ45 connection cable *not* included

Thermoguard Mounting Cases

Mounting Case for PoE operation

95 €



For all current sensorcontrollers except SC8eP (see below)

- Very stable polycarbonate housing, protection class IP66/IP67
 - Dimensions LxWxH = 180 x 130 x 75 mm
 - Special top hat rail mounting bracket
 - Two end clamps
 - One RJ45 Feedthrough with rubber sealing
 - One internal patch cable
 - One cable gland for sensor cable
 - When ordering with SC1ePn: Adapter for screw connection of the sensor cable
 - Four wall mounting lugs
- (without Controller)*

Mounting Case for operation without PoE

115 €



As above, but different:

- One DIN rail switching power supply 24V=, secondary wired with Controller (instead of 2x end clamps)
 - One additional cable gland for 230V~ connection
 - **The connection to the 230V~ mains must be made by a certified electrician.**
- (without Controller)*

Mounting Case for SC8eP for PoE operation

85 €



Delivery without the shown power supply

- ISO machine housing, 1 row, 10 module, protection class IP55
 - Dimensions LxWxH = 230 x 180 x 110 mm
 - DIN rail with two end clamps
 - One RJ45 Feedthrough with rubber sealing
 - One internal patch cable
 - Some double membrane nozzles
- (without Controller)*

Mounting Case for SC8eP for operation without PoE

105 €



View without lid, accessories on the right side

- *As above, but different:*
 - 1 DIN rail switching power supply 24V=, secondary wired with Controller
 - **The connection to the 230V~ mains must be made by a certified electrician.**
- (without Controller)*

Thermoguard Power Supplies and other Accessories

Plug-In Switching Power Supply

20 €

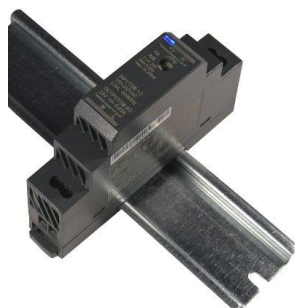


- Plug-in Switching Power Supply 24V DC / max. 0,5A / max. 12Watt
- Suitable for all current sensorcontroller models
- Dimensions 69 x 29 x 78 mm (L x W x H)
- Universal input voltage 90 ... 264V AC
- With 2-pole special plug for sensorcontrollers
- Cable length 1,8m

Plug-In Power Supplies with US-, UK-Adapter (exchangeable adapter system) available on request!

DIN Rail Switching Power Supply

25 €



- DIN Rail Switching Power Supply 24V DC / 0,63A / 15,2Watt
- Suitable for all current sensorcontroller models
- Ultraslim design, only 17.5mm wide
- Dimensions 17,5 x 90 x 54,5mm (W x D x H)
- Universal input voltage 85 .. 264V AC
- Power On LED

The connection to the 230V~ mains must be made by a certified electrician.

Relay Interface, serial connection

265 €



Relay Interface Module with serial connection for switching of up to 8 external devices via potential-free relay contacts

Mounted in ISO case including 12V DC DIN rail switching power supply and connection cable.

Without primary power cable. Power supply has to be wired by an authorized electrician.

Calibration Set

795 €



Thermoguard temperature calibration set with transport box. Contains a calibrated sensor controller SC1ePn and temperature sensor, calibrated together as one unit. Including factory certificate.

For comparative On-Site Calibration of already mounted temperature sensors

Mounting Case including Power Supply for SC1ePn/SC2eP/AC2nPn/Hn1Pn

75 €