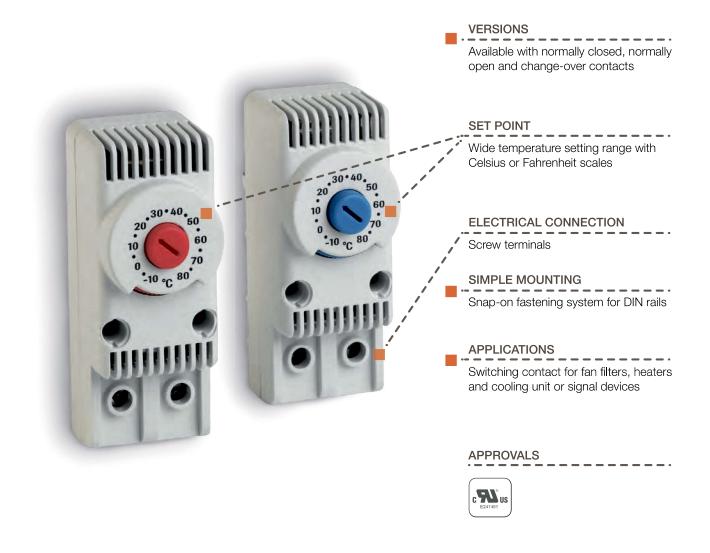# Thermal control solutions

The thermal control devices can regulate the temperature and humidity levels inside the cabinet to maintain optimal climatic conditions, with the possibility of electronic monitoring of thermal parameters by using the network infrastructure and Industrial Internet of Things (IIoT).

orangis
ambient control

Most of our products are available
in the industrial engineering software:

ePLAN
data portal   IGE-XAO GROUP   SPAC

■ SINGLE THERMOSTATS

The single thermostats meet the requirements for temperature control in the electrical cabinet. By adjusting the activation threshold, the thermostat can operate cooling or heating units while keeping the temperature above the dew point. They are available with closing, opening or change-over contact.

VERSIONS

Available with normally closed, normally open and change-over contacts

SET POINT

Wide temperature setting range with Celsius or Fahrenheit scales

ELECTRICAL CONNECTION

Screw terminals

SIMPLE MOUNTING

Snap-on fastening system for DIN rails

APPLICATIONS

Switching contact for fan filters, heaters and cooling unit or signal devices

APPROVALS

Details that make the difference

°C and °F scales   Disk setting   Patented clip-on
                        by hand or tool   system

■ TWIN THERMOSTATS

Twin thermostats are used where multiple drives are required. The unit integrates two independently operable devices into one compact assembly for simultaneously controlling heating, cooling or signalling devices via two knobs.

SET POINT
Wide temperature setting range with Celsius or Fahrenheit scales

VERSIONS
Available with normally closed/normally open, normally closed/normally closed and normally open/normally open contacts

SIMPLE MOUNTING
Snap-on fastening system for 35mm DIN rails

DUAL SYSTEM
Separate adjustment and operation

APPLICATIONS
Switching contact for fan filters, heaters and cooling unit or signal devices

ELECTRICAL CONNECTION
Screw terminals

c (UL) US
E247491

Model numbering system for SINGLE AND TWIN THERMOSTATS

description	TRT	10A	230V	-	NC	F	PA00	description
FAMILY TRT **TRT** = single thermostat **TRT2** = twin thermostat								**CUSTOM SERIES** **PA**** = custom version
RATED CURRENT								**SCALE** **( )** = °C (Celsius) **F** = °F (Fahrenheit)
RATED VOLTAGE								
VERSION **Single thermostat** **NC** = Normally Closed **NO** = Normally Open	**Twin thermostat** **NCNC** = Normally Closed / Normally Closed **NCNO** = Normally Closed / Normally Open **NONO** = Normally Open / Normally Open							

AMBIENT CONTROL SYSTEMS

■ HYGROSTATS

Hygrostats detect the level of humidity in the air inside the electrical cabinet and operate the cooling or heating units when a set relative humidity value is exceeded to avoid the formation of condensation on the electrical components.

ELECTRICAL CONNECTION
Screw terminals

SIMPLE MOUNTING
Snap-on fastening system for 35mm DIN rails

APPLICATIONS
Combined with heaters or fan filters for a precise control of humidity levels

E247491

Model numbering system for HYGROSTATS

description		IGR	35	F	-	PA00	description
FAMILY **IGR** **IGR** = Hygrostat							**CUSTOM SERIES** **PA**** = custom version
SUPPORT 35mm DIN rail							**VERSION** **F** = Fandis

■ SENSIS | ELECTRONIC DEVICE

Sensis is an IIoT device designed to detect temperatures in up to three critical zones and monitor the efficiency of ventilation and cooling systems for more efficient thermal management of the electrical cabinet. It can be used to display real-time climate data aboard the machine even remotely and track trends over time to plan predictive maintenance.

WIRING

Simple and user-friendly via clamps arranged in the upper part

DESIGN

Compact device for managing various complex functions

DISPLAY

Backlit for setting up and displaying climate data locally

INTEROPERABILITY

With the main fieldbuses or network

ACCURATE MEASUREMENTS

Using integrated sensors and additional ventilation and temperature probes

PREDICTIVE MAINTENANCE

Data logging for diagnostic purposes

APPROVALS

c UL us
LISTED
E504624

■ Details that make the difference

Display for set-up and climate data

Dashboard

DIN rail mounting

NO-NC Thermostats

- Versions available: NC (red disc) with normally closed contact to control heating systems and NO (blue disc) with normally open contact to control cooling systems
- Patented snap-on fastening system on DIN rails TS35/15/32
- Wide temperature setting range with Celsius (°C) or Fahrenheit (°F) scales
- Disc setting by hand or tool
- Standard colour RAL 7035

Model	Rated Voltage	Rated Current	Max Contact Current	Setting Range	Approvals
		A	A		
TRT-10A230V-NC	110-250 V a.c.; 60 V d.c.	10	15	-10÷80 °C	cURus
TRT-10A230V-NCF	110-250 V a.c.; 60 V d.c.	10	15	14÷176 °F	cURus
TRT-10A230V-NO	110-250 V a.c.; 60 V d.c.	10	15	-10÷80 °C	cURus
TRT-10A230V-NOF	110-250 V a.c.; 60 V d.c.	10	15	14÷176 °F	cURus

Twin thermostats

- Available with Normally Closed/Normally Open (NC/NO), Normally Closed/Normally Closed (NC/NC) and Normally Open/Normally Open (NO/NO)
- Separate adjustment and operation of the devices
- Snap-on fastening system on DIN rail TS35
- Wide temperature range with Celsius (°C) or Fahrenheit (°F) scales
- Disc setting by hand or tool
- Standard colour RAL 7035

Model	Rated Voltage	Rated Current	Max Contact Current	Setting Range	Approvals
		A	A		
TRT2-10A230V-NCNC	110-250 V a.c.; 60 V d.c.	10	15/15	-10÷80 °C	cURus
TRT2-10A230V-NCNCF	110-250 V a.c.; 60 V d.c.	10	15/15	14÷176 °F	cURus
TRT2-10A230V-NCNO	110-250 V a.c.; 60 V d.c.	10	15/15	-10÷80 °C	cURus
TRT2-10A230V-NCNOF	110-250 V a.c.; 60 V d.c.	10	15/15	14÷176 °F	cURus
TRT2-10A230V-NONO	110-250 V a.c.; 60 V d.c.	10	15/15	-10÷80 °C	cURus
TRT2-10A230V-NONOF	110-250 V a.c.; 60 V d.c.	10	15/15	14÷176 °F	cURus

Change-over thermostat

- Change over contact
- Snap-on fastening system DIN rail TS35
- Standard colour RAL 7035

Model	Rated Voltage	Rated Current	Max Contact Current	Setting Range
		A	A	°C
TRT-230V-S01	230 V a.c.	Heating a.c. 10(4) -Cooling a.c. 5(2)	10	5÷60

Hygrostats

- Snap-on fastening system on DIN rail TS35
- Disc setting by hand or tool
- Standard colour RAL 7035
- UL approved till max 80% RH

Model	Rated Voltage	Rated Current	Setting Range	Approvals
		A	% RH	
IGR35F	120-240 V a.c.	10-5	10-90	cURus

Sensis - Electronic device for thermal management

- Regulates, monitors, manages, communicates
- Acquisition and management of temperature parameters in three different points (probes included), relative humidity, ventilation efficiency, door limit switch status
- Supervision in interoperability with the main industrial field buses and MQTT / OPCUA versions
- Historical and basic statistical data that can be used remotely
- Snap fastening system for DIN rail
- Standard colour RAL 7035
- Compact dimensions: 98x35x120 mm
- Rated voltage: 24 Vd.c.

Model	Version	Approvals
SNS00U00	Sensis stand alone (no interface)	cULus
SNS01U00	Sensis Modbus RTU	cULus
SNS02U00	Sensis Profinet	cULus
SNS02UM00	Sensis Profinet MQTT	cULus
SNS03U00	Sensis ASI	cULus
SNS04U00	Sensis CAN-OPEN	cULus
SNS05U00	Sensis CC link	cULus
SNS06U00	Sensis Ethercat	cULus
SNS07U00	Sensis Modbus/TCP	cULus
SNS08U00	Sensis Profibus	cULus
SNS09U00	Sensis SERCOS III	cULus
SNS10U00	Sensis IO LINK	cULus
SNS11U00	Sensis EtherNet/IP	cULus
SNS11UM00	Sensis EtherNet/IP MQTT	cULus
SNS12U00	Sensis VARAN	cULus
SNS13U00	Sensis POWERLINK	cULus

Accessories - Sensis

- SNSTU00: Probe for detecting temperature in the most critical points of the cabinet
  Type of sensor: ntc, magnetic fixing, cable 1500mm
- SNSWU00: Probe for detecting air speed in the cooling flow
  Type of sensor: electronic, clip fixing, cable 1500mm

Model	Version
SNSTU00	Temperature probe
SNSWU00	Airflow probe