

# MULTIFUNCTIONAL HYGROTHERMOSTAT WITH THREE CONTROL PORTS AND EXTERNAL SENSOR SMART-0903

The multifunctional hygrothermostat with three control ports is intended to control temperature and humidity in electrical cabinets for various purposes.

The hygrothermostat is controlled by turning on/off the heater, air fan or conditioner connected to the device according to the information obtained from the built-in or optionally connected external temperature sensor. The device can operate in one of two modes:

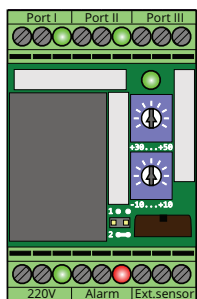
**COMFORT START** : The device supplies power to the equipment when the temperature and humidity have reached the values specified in the settings.

**ENERGY EFFICIENCY** : The device provides energy efficiency by turning on the fan for cooling down, and in case of insufficient efficiency it turns off the fan and turns on a more powerful cooling device (for example, air conditioner).

In order to prevent corrosion processes and to protect against excessive humidity, the device provides a dew point increase in case of critical excess of relative air humidity (higher than 65%), and thereby prevents the condensate dropout.



## MAXIMUM FUNCTIONALITY IN ONE DEVICE



- ✓ 3 control ports
- ✓ 2 modes of operation
- ✓ Internal digital humidity and temperature sensor
- ✓ External digital temperature sensor
- ✓ Alarm signaling
- ✓ Sensor monitoring function (malfunction, interference)
- ✓ Port indication
- ✓ Simple adjustment of operating mode and temperature ranges
- ✓ Built-in diagnostic program
- ✓ Completely ready to use
- ✓ Small dimensions (75 x 47,5 x 50 mm)
- ✓ Installation on a DIN rail

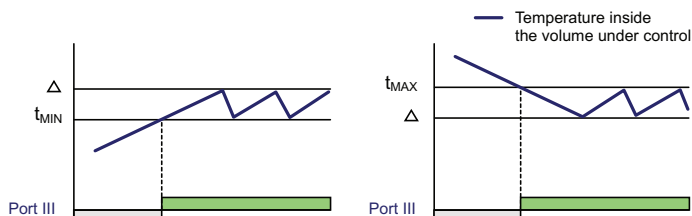
## SCOPE OF APPLICATION

Climate control in:

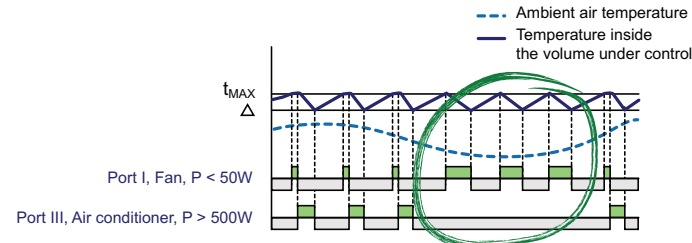
- ✓ Automation cabinets of industrial enterprises
- ✓ Electrical cabinets
- ✓ Telecommunication cabinets
- ✓ Mobile communication systems (base stations)
- ✓ Automatic teller machines
- ✓ Toll systems
- ✓ Parking systems
- ✓ Road traffic management systems
- ✓ Vending machines

## TWO MODE OF OPERATIONS

THE first mode of operation: **COMFORT START**



THE second mode of operation: **ENERGY EFFICIENCY**



## CLIMATE UNDER RELIABLE CONTROL



Keeps away  
from overheating



Keeps away  
from freezing



Emits an  
alarm signal



COMFORT START oder  
ENERGY EFFICIENCY MODE



Prevents  
the condensate dropout



Protects  
against corrosion

## TECHNICAL DATA

Power supply voltage	115...277 VAC (optional 24 VDC)
Control temperature range	-10°C ... +50°C
Hysteresis, temperature	2°C
Hysteresis, humidity	4%
Power consumption	max 2 W
Rated current of control relay contact	6 A
Type of control contact of control ports (relay)	normally open
Type of control contact of alarm signaling	dry contact
Setup adjustment	using regulators on the device board
Electrical wear resistance of switching cycles, not less than	100 000
Mechanical wear resistance of switching cycles, not less than	2 x 10 <sup>4</sup>
Average service life	5 years
Operating temperature range	-40°C ... +65°C
Relative air humidity	≤85%
Degree of protection	IP20
Degree of remote sensor protection	IP55
Device installation method	on a DIN rail (EN 60 715)

# SURGE PROTECTION DEVICES

## TYPE 3, FOR 1-PHASE POWER SUPPLY CIRCUITS

### SMART-SP220

#### DESCRIPTION



- ✓ Varistor-based protection device
- ✓ No fuse
- ✓ LED indication of failures
- ✓ Connection terminals on both sides
- ✓ Installation on a DIN rail

#### TECHNICAL DATA

Nominal voltage $U_N$	230 VAC
Highest continuous operating voltage $U_c$	250 VAC
Rated load current $I_L$	20 A
Nominal discharge current $I_n$ (8/20) $\mu$ s	2,5 kA
Max. discharge current $I_{max}$ (8/20) $\mu$ s	10 kA
Combined surge $U_{oc}$	6 kV
Protection level L-N/L-PE;N-PE	$\leq 1,1$ kV / $\leq 1,5$ kV
Back-up fuse max.	20 A
Operating temperature range	-40°C ... +65°C
Degree of protection	IP20
Device installation method	on a DIN rail (EN 60 715)

## CLASS D, FOR ETHERNET NETWORKS AND Power over Ethernet OF 5e CAT. (Mode A and Mode B) WITH A PASSIVE PoE INJECTOR FUNCTION

### SMART-SPE

#### DESCRIPTION



- ✓ Data transfer rate up to 100 Mb/s
- ✓ Passive PoE Injector
- ✓ No fuse
- ✓ LED indication of power supply
- ✓ Two devices in one
- ✓ Installation on a DIN rail

#### TECHNICAL DATA

Maximum continuous operating voltage $U_c$	60 VDC
Nominal current $I_N$	2,5 A
Nominal discharge current $I_n$ (8/20) $\mu$ s Line-Line	100 A
Nominal discharge current $I_n$ (8/20) $\mu$ s Line-PE	2 kA
Protection level Line-Line / Line-PE	$\leq 9$ V / $\leq 900$ V
PoE voltage range	18 VDC ... 57 VDC
Transmission speed	10 / 100 MBit/s
Connection (IN / OUT)	RJ45
Ambient temperature (operation)	-40°C ... +65°C
Degree of protection	IP20
Device installation method	on a DIN rail (EN 60 715)

## CLASS D, FOR ETHERNET NETWORKS AND Power over Ethernet OF 6e CAT. (Mode A and Mode B) WITH A PASSIVE PoE INJECTOR FUNCTION

### SMART-SPGE

#### DESCRIPTION



- ✓ Data transfer rate up to 1 Gb/s
- ✓ Passive PoE Injector
- ✓ Input and output galvanic isolation
- ✓ Protects 8 signal line
- ✓ LED indication of power supply
- ✓ Two devices in one
- ✓ Installation on a DIN rail

#### TECHNICAL DATA

Maximum continuous operating voltage $U_c$	60 VDC
Nominal current $I_N$	2,5 A
Nominal discharge current $I_n$ (8/20) $\mu$ s Line-Line	100 A
Nominal discharge current $I_n$ (8/20) $\mu$ s Line-PE	2 kA
Protection level Line-Line / Line-PE	$\leq 9$ V / $\leq 900$ V
PoE voltage range	18 VDC ... 57 VDC
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