

nVent RAYCHEM Raystat V5

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Raystat V5

Intuitive pipe freeze protection & temperature maintenance controller

with integrated energy saving programming (PASC) and remote alarm capability

for single zone heat tracing solutions.



Intuitive Pipe Freeze Protection or Temperature Maintenance Controller	Flexibility in Design and Installation (PASC or Line sensing)	New Enclosure Architecture
New improved user interface with LED & Touch button display	Optimal sensing mode based on energy saving requirements or on-site installation constraints.	New DIN mountable enclosure. Easy wiring and quick connections with clamp terminals.

What's in it for you?



Design Engineers

Flexibility in design

The Raystat V5 offers both **Line sensing, or Ambient sensing with Proportional Ambient Sensing Control (PASC),** selectable to meet application needs.



Distribution Partners

SKU/Inventory reduction

The Raystat V5 combines the functionality from both the legacy Raystat Control10 and Raystat ECO 10 controllers.

Stockist only need to order 1 item to supply both sensing options to their customers, hence reducing overall stock value and inventory space required



Electrical Installer

Ease of use/Ease of Installation

Installation

- On Wall (Indoor/outdoor)
- Easy wiring through clamp terminals
- Line or ambient sensing options available based on application needs

Set up & Operation

- LED touch button interface
- USB port for Off-line programming through USB power bank

Raystat V5 in the nVent RAYCHEM Control Portfolio







Entry level	Base business	Advanced control
AT-TS 13/14 Standard PFP electronic thermostat	**Raystat V5** Intuitive PFP/TM controller with energy saving features and remote alarm capability	**SBS-Panel line-up** for advanced PFP/TM control with Elexant 450c controller
GOOD	BETTER	BEST

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NEW Raystat V5: The best of our legacy controls combined

RAYSTAT CONTROL 10



+

RAYSTAT ECO 10



=

RAYSTAT V5



Technical Data

FEATURES	RAYSTAT V5	RAYSTAT ECO 10	RAYSTAT CONTROL 10
			
Display	LED + touch buttons	LED + touch buttons	LED + touch buttons
Operation modes	**PASC or Line**	PASC	Line
Exposed Temperature	**-40°C to +40°C**	–20°C to +40°C	–20°C to +40°C
IP rating	IP 65	IP 65	IP 65
Max switching current	25 A; 250 VAC	25 A; 250 VAC	25 A; 250 VAC
Sensor type	**NTC** **(2 wires)**	PT100 (3 wires)	PT100 (3 wires)
Sensor length	**5 m** max 150 m with 2 x1,5 mm^2	Standard length max. 150 m with 3 x 1.5mm^2	3m max. 150 m with 3 x 1.5mm^2
Alarm function	High temp/low temp	High temp/low temp	High temp/low temp
Error indications	2 A volt free with indication of sensor errors, voltage errors and low or high temperature alarm	2 A volt free with indication of sensor errors, voltage errors and low or high temperature alarm	2 A volt free with indication of sensor errors, voltage errors and low or high temperature alarm

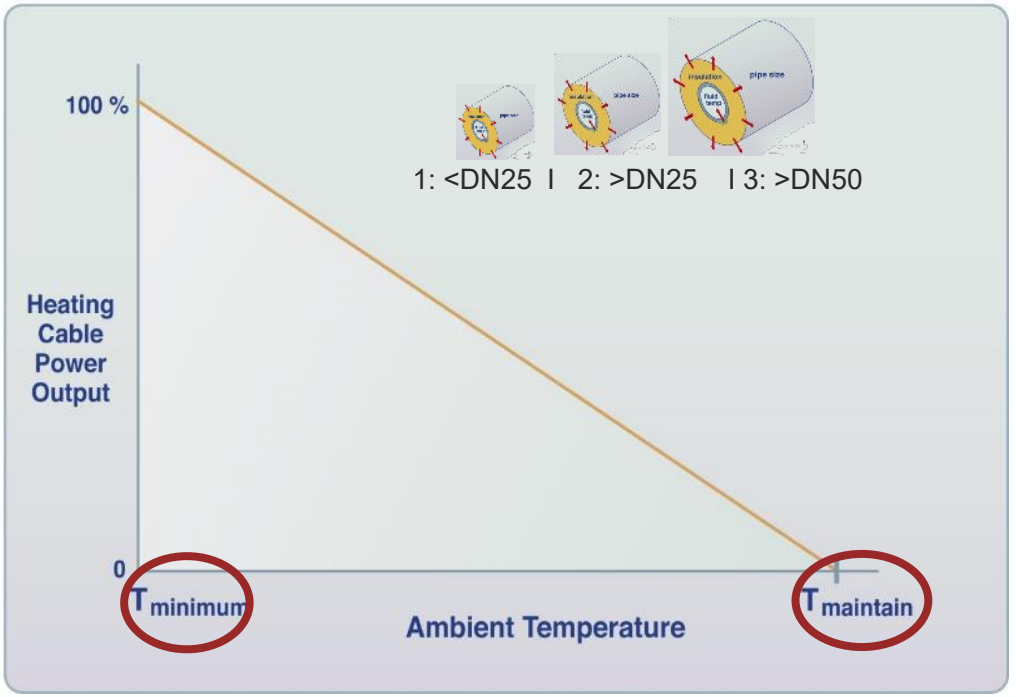
PASC: supplying the required energy (simplified)

Parameter Input

#1: Maintain temperature

#2: Min. Expected ambient temperature

#3: Pipe size



PASC: supplying the required energy (simplified)

Output

#1: time to power the heating cable / switched ON per cycle

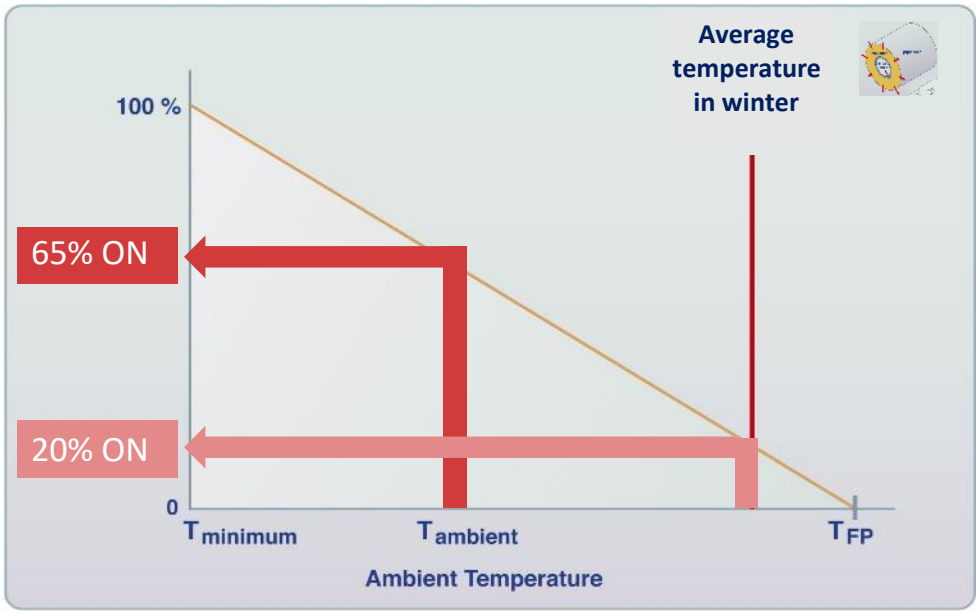
#2: time of OFF-Time per cycle

#3: % of ON

#4: Duty cycle duration in sec. / cycle time

#5: cycle time round closest to 5 min

Relay: using % ON and duty cycle duration in sec.



-20°C -12°C -2°C +3°C

We need to also take into account the time continuing

Familiar Hardware Architecture (Cfr. HWAT ECOv5)

Ease-of-Use feature: USB connection

For firmware upgrades

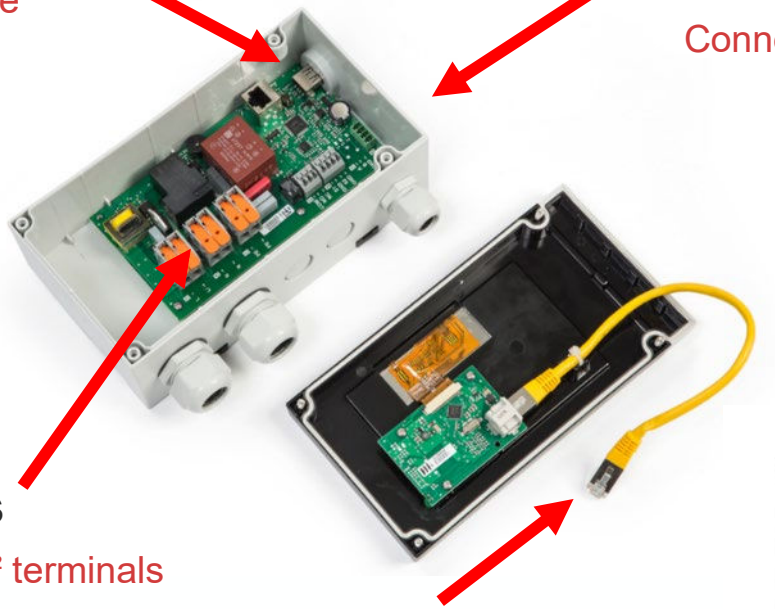
For setup in power-off mode

Prepared for future upgrades:

WIFI-module Plug-in/Modbus functionality

or

Connector for sensor Module



Ease-of-use features

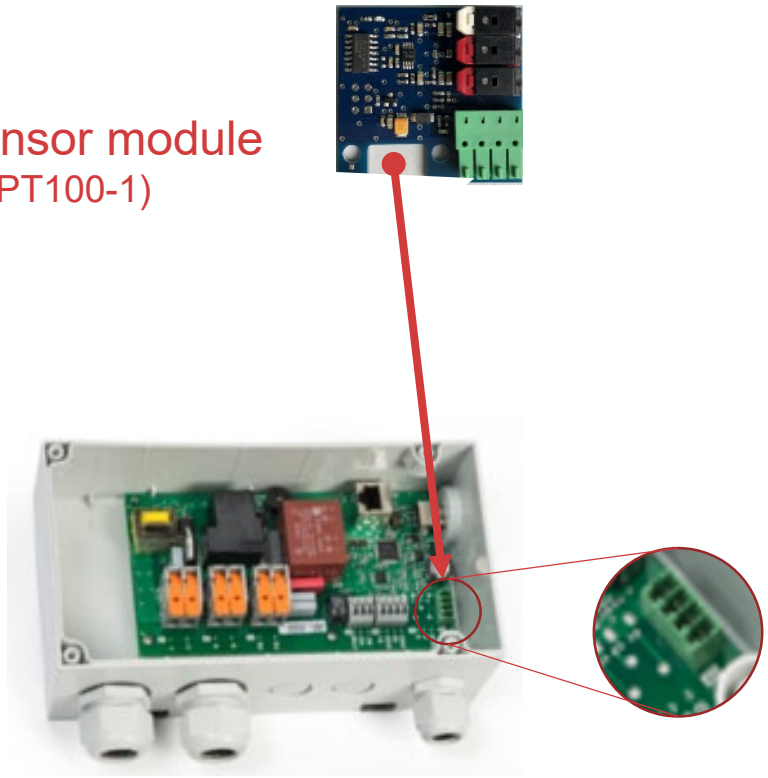
Spring clamps and 6 mm² terminals

Front cover and back part connection via Ethernet cable



Sensor Compatiblity – NTC/PT100 type sensor

Single sensor module
(SM-PT100-1)



Raystat V5 comes with a standard 5m NTC type sensor (2kOhm @25°C)

With an **additional sensor module** – older Hard 78 & 79 sensors (PT100) can be connected to the controller as well

This will allow replacement of old controls without stripping insulation and replacing sensors

What's in the Box?

INCLUDED IN THE BOX:

Front cover
Power / back Part
2 x M25 Glands
2 x M20 Glands and 3 pins (for IP rating)
1 Sensor –Type NTC (2kOhm @25°C)
Alu tape
2 dowels and 2 screws
1 DIN Rail

DOCUMENTATION

Multilingual Installation Manual



Logistic Data – New/Obsolete Items



Raystat V5



Single Sensor Module



SB-100 SB-101

Support Brackets

	Product Name	Article Code	PCN	Status
	CONTROLS			
NEW	Raystat V5 Control unit	RAYSTAT – V5	1244-022440	New item
	Raystat ECO 10	RAYSTAT-ECO-10	*145232-000*	*Obsolete in 2020*
	Raystat Control 10	RAYSTAT-CONTROL-10	*828810-000*	*Obsolete in 2020*
	SENSORS			
	NTC Sensor 10m	SENSOR-NTC-10M	1244-015847	Exisitng pcn
NEW	Single Sensor module	SM-PT100-1	1244-022441	New item
	ACCESSORIES			
	Support bracket	SB-100	192932-000	Exisitng pcn
	Support bracket	SB-101	990944-000	Exisitng pcn
	Powerbank	RAYCHEM-PB	1244-020365	Exisitng pcn

Raystat V5 Resource Page

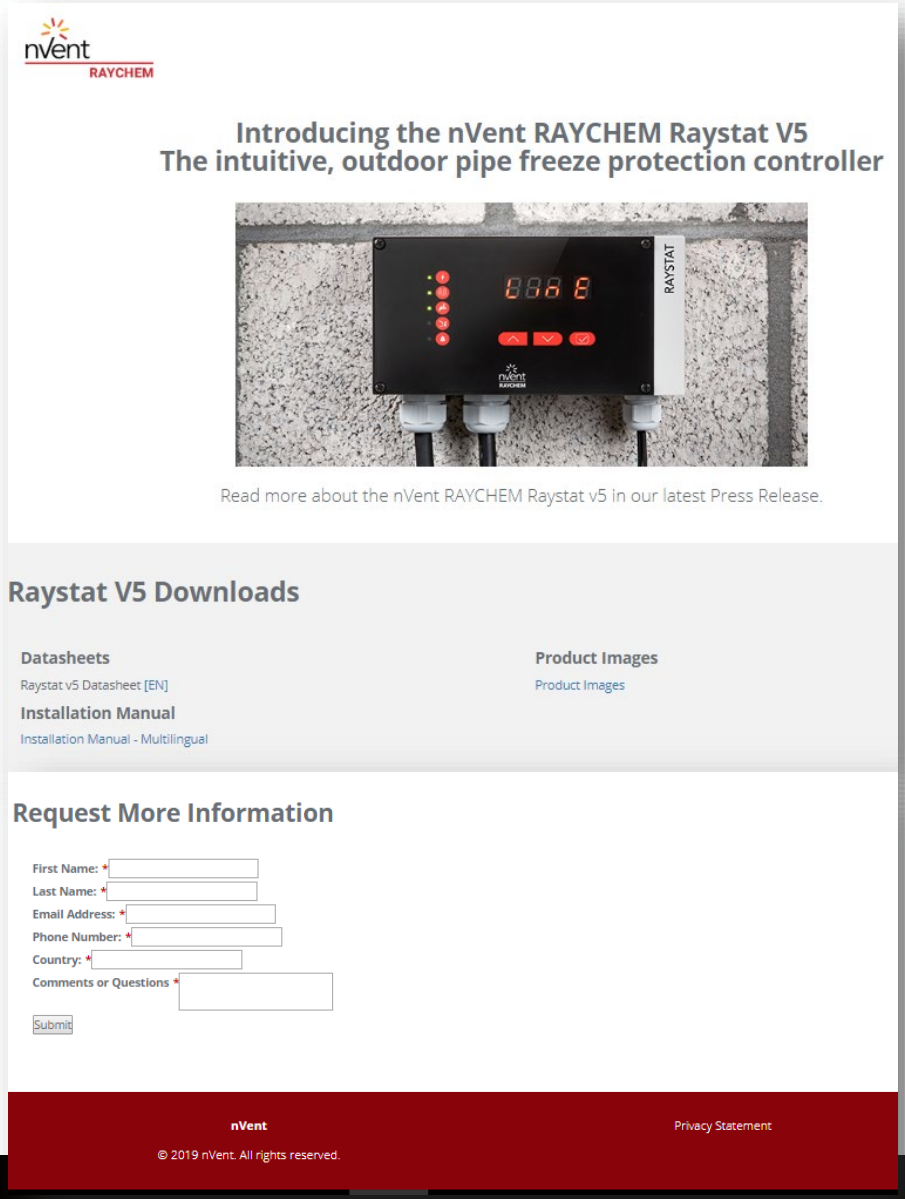
All marketing tools are published on

The Raystat V5 Resource page

https://go.nvent.com/RaystatV5-Resources.html

1. Check this page for regular updates

2. Customers can request Extra info through this page as well



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Key Takeaway - Raystat V5

- ✓ New controller replacing Legacy Raystats ECO 10 & Control 10
- ✓ Improved Design and installation freedom:
  - PASC or Line sensing modes
  - Energy savings through PASC
- ✓ Inventory reduction for Stockists: 1 item replacing 2 items
- ✓ Improved installation features:
  - Improved hardware/IP65 enclosure
  - Easy wiring through clamp terminals
  - LED touch button interface
  - Off-line programming through USB power bank
- ✓ Compatible with installed PT100 sensors

