



nVent RAYCHEM **Raystat V5**



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.



RAYSTAT V5

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

AT-TS 13/14

Standard PFP electronic thermostat

GOOD



Base business

Raystat V5

Intuitive PFP/TM controller with energy saving features and remote alarm capability

BETTER



Advanced control

SBS-Panel line-up

for advanced PFP/TM control with Elexant 450c controller

BEST

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 x 1,5 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

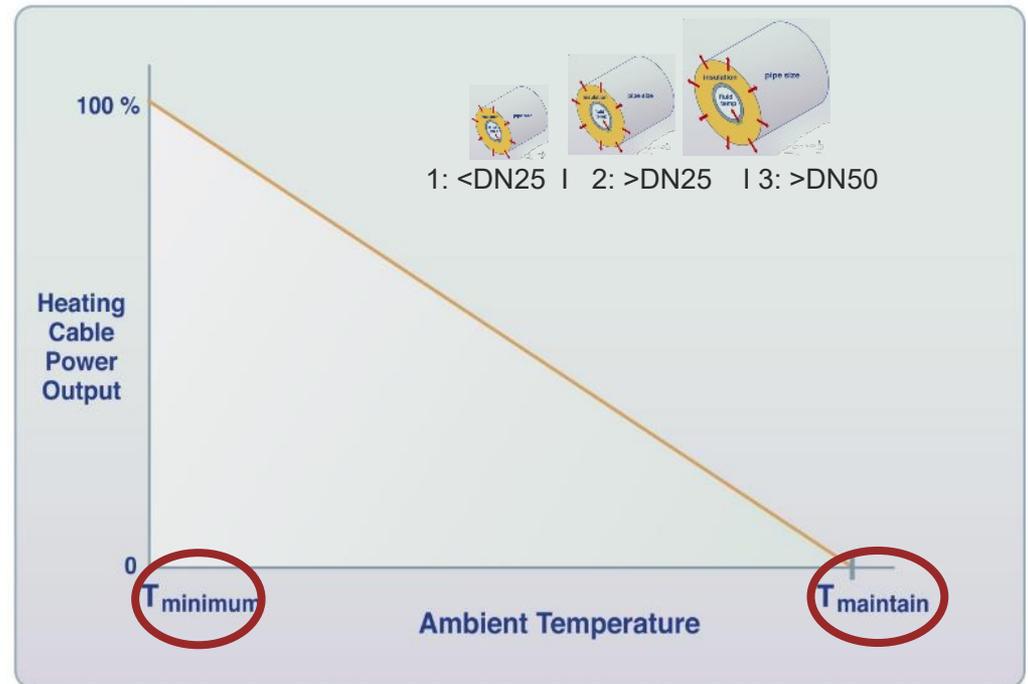
PASC: supplying the required energy (simplified)

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

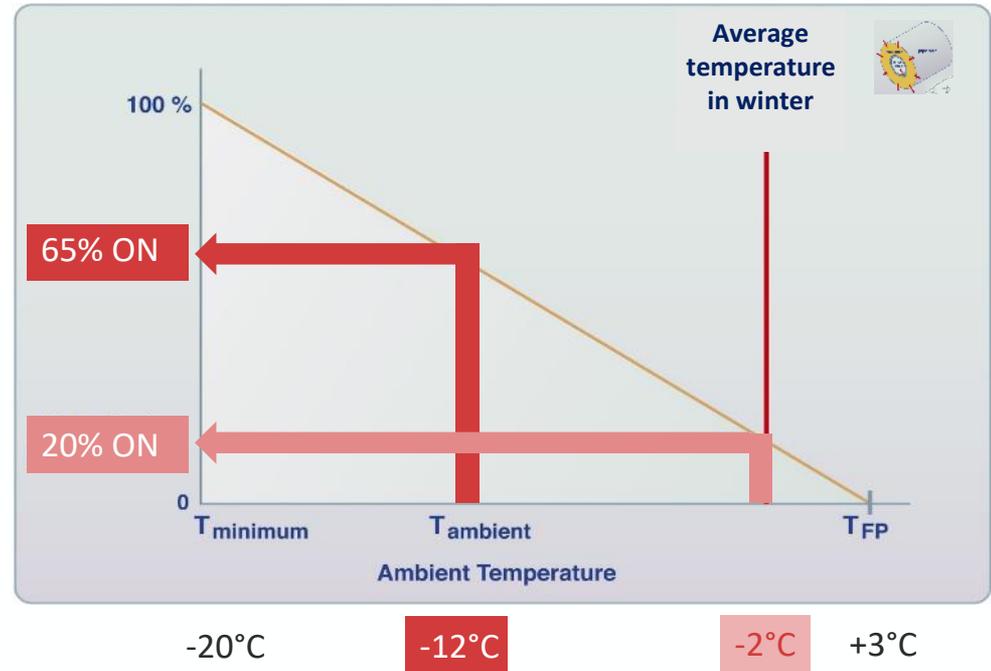
#2: time of OFF-Time per cycle

#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.



We need to also take into account the time continuing

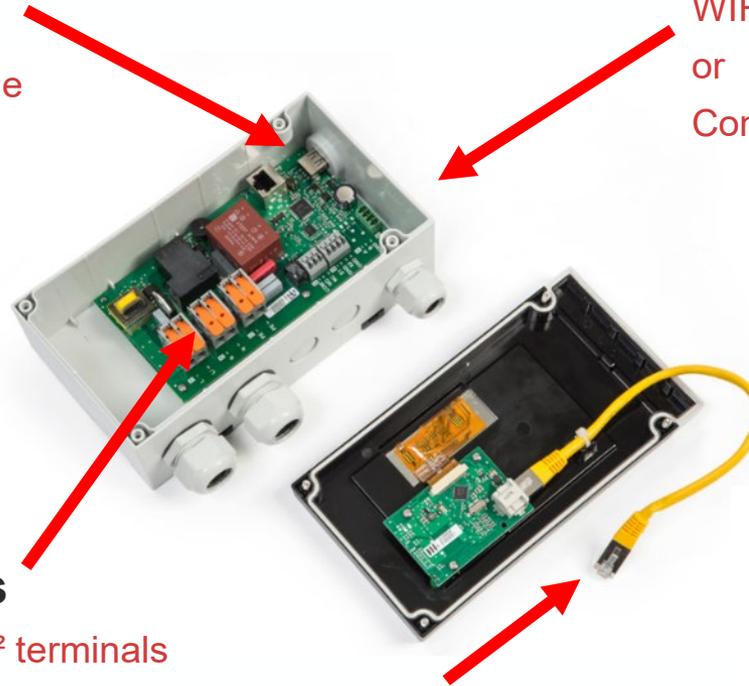
Familiar Hardware Architecture (Cfr. HWAT ECOv5)

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 Compatibility – 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
	<i>Raystat ECO 10</i>	RAYSTAT-ECO-10	<i>145232-000</i>	<i>Obsolete in 2020</i>
	<i>Raystat Control 10</i>	RAYSTAT-CONTROL-10	<i>828810-000</i>	<i>Obsolete in 2020</i>
SENSORS				
	NTC Sensor 10m	SENSOR-NTC-10M	1244-015847	Existing pcn
NEW →	Single Sensor module	SM-PT100-1	1244-022441	New item
ACCESSORIES				
	Support bracket	SB-100	192932-000	Existing pcn
	Support bracket	SB-101	990944-000	Existing pcn
	Powerbank	RAYCHEM-PB	1244-020365	Existing pcn

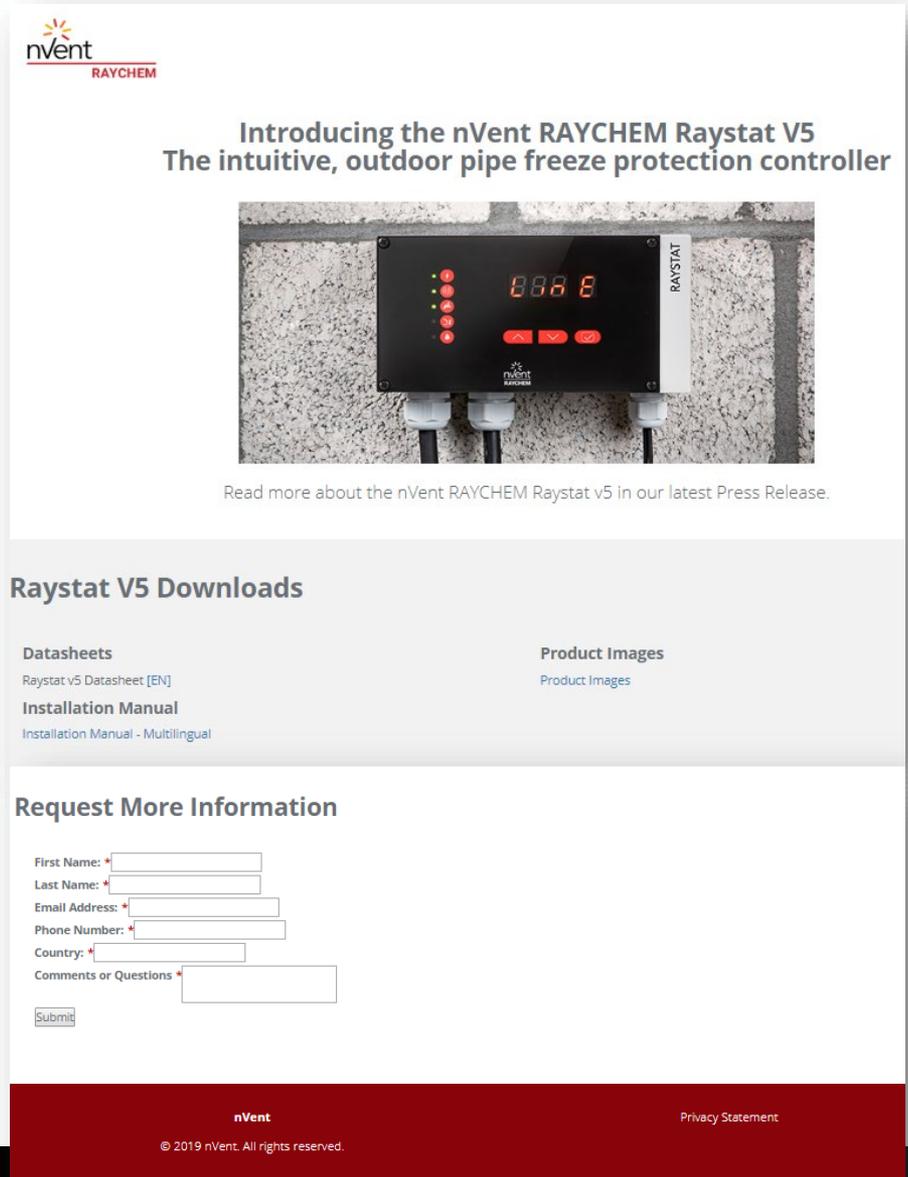
Raystat V5 Resource Page

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 



The screenshot shows the nVent RAYCHEM website page for the Raystat V5. At the top left is the nVent RAYCHEM logo. The main heading reads "Introducing the nVent RAYCHEM Raystat V5 The intuitive, outdoor pipe freeze protection controller". Below this is a photograph of the Raystat V5 controller, a black rectangular device with a digital display showing "8888", several indicator lights, and control buttons. A vertical label on the right side of the device reads "RAYSTAT". Below the photo is a link: "Read more about the nVent RAYCHEM Raystat v5 in our latest Press Release." The page is divided into sections: "Raystat V5 Downloads" with links for "Datasheets" (Raystat v5 Datasheet [EN]) and "Installation Manual" (Installation Manual - Multilingual); "Product Images" with a link for "Product Images"; and "Request More Information" which contains a form with fields for First Name, Last Name, Email Address, Phone Number, Country, and Comments or Questions, along with a Submit button. The footer includes the nVent logo, a Privacy Statement link, and the copyright notice "© 2019 nVent. All rights reserved."

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

