

Measurement and control solutions

Zelio temperature controller

Zelio RTC48

Catalog

April 2013



Schneider
Electric

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Zelio temperature controller

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Measurement and control solutions

Zelio temperature controller

Zelio RTC48

Zelio RTC48

The A to Z of temperature control

The Zelio RTC48 temperature controllers are key components for temperature regulation solutions (solid state relays, electromechanical relays, PLCs, and displays).



Featuring intelligent adaptive display and Modbus communication, the RTCs offer easy installation and implementation with unique performance.

Added simplicity

Easy to implement

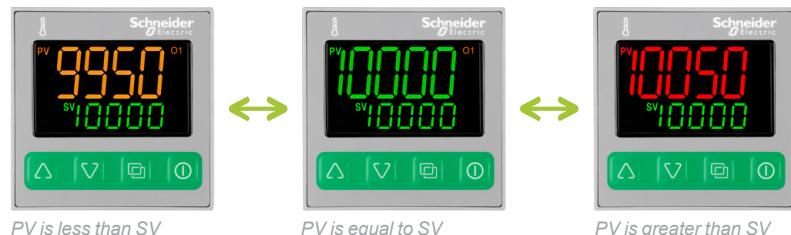
Zelio RTC48 is designed with the operator in mind. The set-up is intuitive and can be completed in a few simple steps. Schneider Electric's powerful PID and auto-tuning algorithm makes the setting up of device faster and simplifies operation.

The Zelio RTC48 can also be configured from a PC loaded with **Zelio Temperature Control Soft** software via a USB cable.



Adaptive display

The minimalist design of Zelio RTC48 makes the display panel simple and user friendly. The intelligent PV (Process Value) display continuously changes color (Red, Green, Orange) according to its varying value from the SV (Set Value) range. This high quality display with status indicated by color can be easily viewed and read from a distance.



Make the most of your energy

Measurement and control solutions

Zelio temperature controller Zelio RTC48

Combined performance and economy

Zelio RTC48 clearly demonstrates Schneider Electric's determination to do more with less, in line with the efficiency needs of machine manufacturers.

Simplified installation

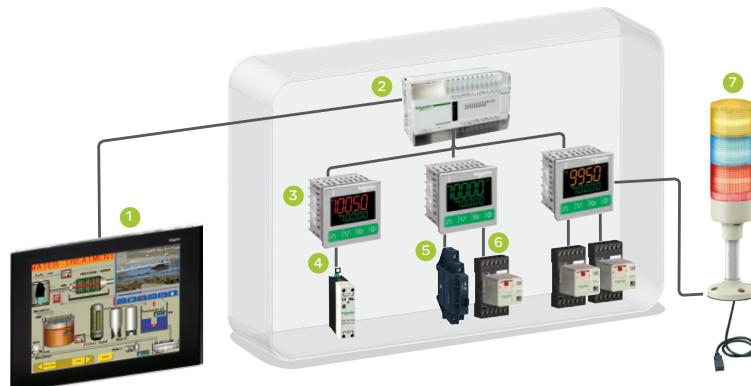
Zelio RTC48 is a compact and space saving solution that requires less panel depth than the conventional temperature controllers. Installation is easy, quick and much simpler that makes it ideal for various types of machines.

The display front face is IP66 rated, thus making the device suitable for operation in harsh industrial environments.



Open communication

With an ever increasing level of automation, the Zelio RTC48 is built to be Modbus communication ready. By connecting to a central monitoring system, up to 31 temperature controllers can be daisy-chained in a single loop and monitored easily.



- ① Display unit Magelis XBT GT
- ② Programmable controllers Twido TWD LC
- ③ Temperature controller Zelio RTC48
- ④ Solid-state relay Zelio SSR
- ⑤ Solid-state relay Zelio SSM
- ⑥ Electromechanical relay Zelio RUM
- ⑦ Illuminated indicator bank Harmony XVGU

Measurement and control solutions

Zelio temperature controller Zelio RTC48

Supply voltage	~ 24 V	~ 100...240 V
		
Size - Standard	48 x 48 mm/1.900 x 1.900 in. – 1/16 DIN	48 x 48 mm/1.900 x 1.900 in. – 1/16 DIN
Inputs	Universal – Thermocouple, RTD, DC voltage, and DC current	Universal – Thermocouple, RTD, DC voltage, and DC current
Sampling time	250 ms	250 ms
Communication on Modbus	Yes, with "C" models RTC48PUNC****	Yes, with "C" models RTC48PUNC****
IP degree of protection for front panel	IP66 (conforming to NEMA-4X)	IP66 (conforming to NEMA-4X)
Conformity to international standards	LVD EN 61010-1, EMC EN 61326-1	LVD EN61010-1, EMC EN61326-1
Functions	Hysteresis ON/OFF PID Auto-tuning Auto-reset (For PD control only) Operating mode Control output OFF	Yes Yes Yes Yes Automatic/Manual control Yes
Alarm outputs	Number of outputs Output voltage	1 output on RTC48PUN1**** or RTC48PUNC**** and 2 outputs on RTC48PUN2**** 3A, 250 V ~ for resistive load
Display	11 segments, 5 digits Operating indicators	LCD 9
Process Outputs	Number-type Relay output rating Relay electrical durability (operating cycles per hour) Solid state output rating	Output 1 and Output 2 are available in various relay and SSR output combinations depending on the model (1) 3A, 250 V ~ for resistive load and 1 A, 250 V ~ for inductive load 100,000 cycles Max 40 mA, 12 V --- +/-15% (short-circuit protected)
Temperature controller type	RTC48PUN***LU	RTC48PUN***HU
Page	8	8

(1) For more information on output types and the models, please refer to the Reference table on page 8.



Presentation

Product

The Zelio RTC48 is a compact sized temperature controller with high quality display and performance. This user-friendly device can be easily installed and integrated into various solutions.

The range includes 28 models which offer the following characteristics:

- 48 x 48 mm/1.900 x 1.900 in. (1/16 DIN),
- 62 mm/2.440 in. depth,
- Supply voltage: ~ 100 to 240 V or ≈ 24 V,
- Input: Thermocouple, RTD, DC Voltage, or DC current,
- 11 segment LCD display in 3 colors (Green, Red, Orange),
- 1 or 2 alarm outputs, depending on the model,
- Communication: Serial and Console, with communication on Modbus ("C" models RTC48PUNC••••).

Operation

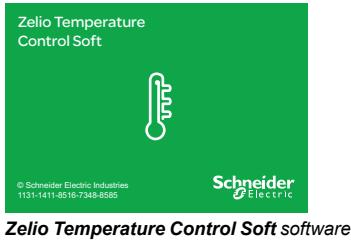
- One or two dedicated outputs for heating or cooling based on PID algorithms.
- Advanced functions:
 - hysteresis (for ON/OFF control),
 - auto-tuning or auto-reset,
 - automatic or manual operating mode.

Applications

The **RTC48** temperature controller is aimed at system integrators and machine manufacturers. RTC48 offers temperature control solutions for industries like HVAC, industrial machines, packaging, and textiles.

Application examples:

- Extrusion lines,
- Plastic and rubber injection presses,
- Thermo-forming,
- Production of synthetic fibres and polymerisation,
- Food and beverage processing lines,
- Moulding presses,
- UV and Laser technologies,
- Maintaining temperature of a color bath,
- Cold rooms,
- Paint booths,
- Horticultural and livestock farms.

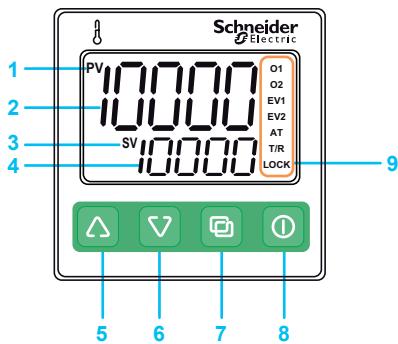


Zelio Temperature Control Soft software

Software configuration

"Zelio Temperature Control Soft" software is used to configure the parameter settings of RTC temperature controller with Modbus communication ("C" models RTC48PUNC••••).

- Available as a freeware and can be downloaded from our web site: www.schneider-electric.com,
- Runs on a PC with Microsoft Windows 98, Windows XP, Windows Vista or Windows 7 operating system,
- Allows you to modify and save parameter settings in the PC and upload the configurations to RTC48.



Description

48 x 48 size/1.900 x 1.900 in. – 1/16 DIN standard

- 1 PV indicator: Lights when the PV (Process Value) is indicated in PV/SV display mode.
- 2 PV display: Indicates the PV.
- 3 SV indicator: Lights when the SV (Set Value) is indicated in PV/SV display mode.
- 4 SV display: Indicates the SV.
- 5 Increase key: Increases the numeric value.
- 6 Decrease key: Decreases the numeric value.
- 7 Mode key: Selects the setting mode or registers the set value.
- 8 ON/OFF key: Switches control output ON/OFF or Auto/Manual control function.
- 9 Action indicators:
 - O1(OUT1): Lights when control output is ON or when heating output is ON
 - O2(OUT2): Lights when cooling output is ON
 - EV1: Lights when Alarm 1 output is ON
 - EV2: Lights when Alarm 2 output (A2 option) is ON or when Heater burnout alarm is ON
 - AT: Flashes during AT (Auto-tuning)
 - T/R: Lights during Serial communication (TX output)
 - LOCK: Lights when Lock 1, Lock 2, or Lock 3 is selected

Measurement and control solutions

Zelio temperature controller

Zelio RTC48



RTC48PUN1RNHU

Zelio temperature controller

48 x 48 mm/1.900 x 1.900 in. size – 1/16 DIN standard, Universal input

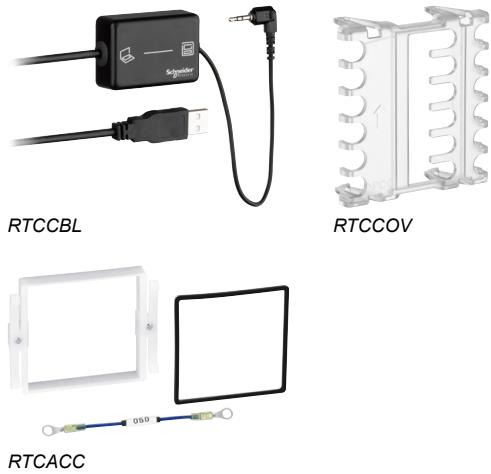
Description	Supply voltage	Output 1		Output 2		Alarm	Reference	Weight kg/lb	
		Relay	SSR	Relay	SSR				
Temperature Controller	~ 100 to 240 V	Yes	–	–	–	2	RTC48PUN2RNHU	0.135/0.298	
		–	Yes	–	–	2	RTC48PUN2SNHU	0.135/0.298	
		Yes	–	–	–	1	RTC48PUN1RNHU	0.135/0.298	
		–	Yes	–	–	1	RTC48PUN1SNHU	0.135/0.298	
		Yes	–	Yes	–	1	RTC48PUN1RRHU	0.135/0.298	
		Yes	–	–	Yes	1	RTC48PUN1RSHU	0.135/0.298	
		–	Yes	Yes	–	1	RTC48PUN1SRHU	0.135/0.298	
		–	Yes	–	Yes	1	RTC48PUN1SSHU	0.135/0.298	
Temperature Controller with Modbus communication	~ 100 to 240 V	Yes	–	–	–	1	RTC48PUNCRNHU	0.135/0.298	
		–	Yes	–	–	1	RTC48PUNCSNHU	0.135/0.298	
		Yes	–	Yes	–	1	RTC48PUNCRRHU	0.135/0.298	
		Yes	–	–	Yes	1	RTC48PUNCRSHU	0.150/0.331	
		–	Yes	Yes	–	1	RTC48PUNCSRHU	0.135/0.298	
		–	Yes	–	Yes	1	RTC48PUNCSSHU	0.150/0.331	
		Temperature Controller	~ 24 V	Yes	–	–	2	RTC48PUN2RNLU	0.135/0.298
		–	Yes	–	–	2	RTC48PUN2SNLU	0.135/0.298	
Temperature Controller with Modbus communication	~ 24 V	Yes	–	–	–	1	RTC48PUN1RNLU	0.135/0.298	
		–	Yes	–	–	1	RTC48PUN1SNLU	0.135/0.298	
		Yes	–	Yes	–	1	RTC48PUN1RRLU	0.135/0.298	
		Yes	–	–	Yes	1	RTC48PUN1RSLU	0.135/0.298	
		–	Yes	Yes	–	1	RTC48PUN1SRLU	0.135/0.298	
		–	Yes	–	Yes	1	RTC48PUN1SSLU	0.135/0.298	
		Temperature Controller with Modbus communication	~ 24 V	Yes	–	–	1	RTC48PUNCRNLU	0.135/0.298
		–	Yes	–	–	1	RTC48PUNCSNLU	0.135/0.298	

References (continued)

Measurement and control solutions

Zelio temperature controller

Zelio RTC48



Accessories		
Description	Reference	Weight kg/lb
USB cable	RTCCBL	0.135/ 0.298
Terminal cover	RTCCOV	0.135/ 0.298
Spare parts pack (gasket, shunt resistor, and mounting frame)	RTCACC	0.135/ 0.298

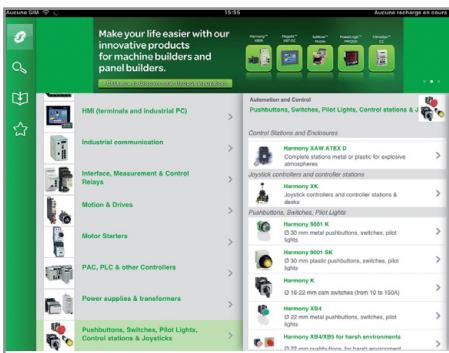
Search, visualize, and download

Use your tablet or your PC to quickly access detailed and comprehensive information on all our products

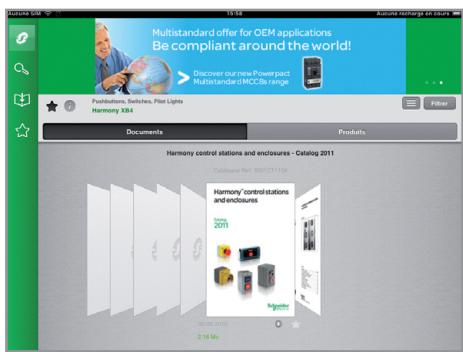
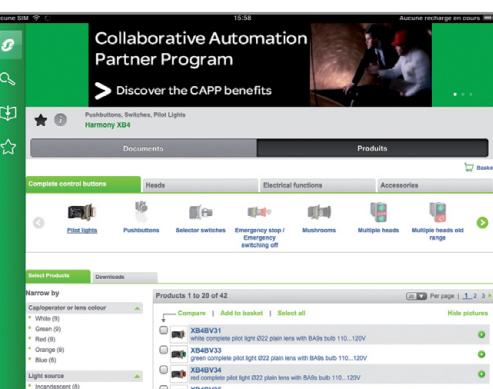


Tablets

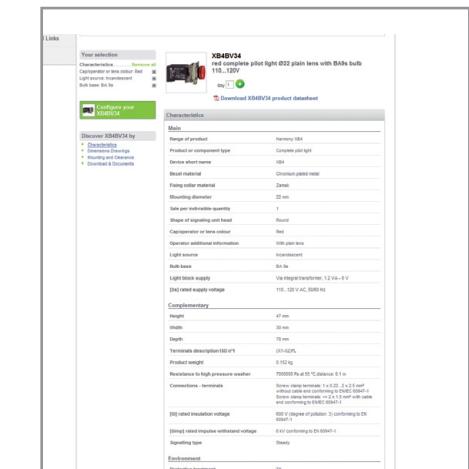
Application name: "Automation Library by Schneider Electric"



All product ranges
displayed by function



Dynamic catalogs
(hyperlinks, video, ...)



Product selector: dynamic filters to
get easily your part number



Personal computer

Path: www.schneider-electric.com > **Products and Services** > Automation and control > Product offer

All product ranges displayed by function




Dynamic catalogs
(hyperlinks, video, ...)

Product selector: dynamic filters to
get easily your part number

Access product references with adapted tools



Path: www.schneider-electric.com > **Products and Services** > Automation and control > ... > Product offer

The screenshot shows a product offer for "Harmony XB4 - Ø 22 mm metal pushbuttons, switches, pilot lights". It includes a product image, a brief description, and a sidebar with navigation links like "Product Information", "Product Configurator", "Product Selector", "Documents & Downloads", "Additional Links", and "Support". A callout box highlights the "Product Selector" link.

Graphic product configurator
Select the right product with just a few clicks

Dynamic product selector
Visualize product characteristics and dimensions

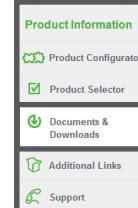
This diagram shows a transition from the "Product Selector" interface to the "Configuration Area". The "Configuration Area" screenshot displays a 3D model of a pushbutton and various configuration parameters such as "Type of contact", "Type of actuator", and "Material". A callout box highlights the "Configure your complete product" button.

This diagram shows a transition from the "Configuration Area" to the "Dynamic Product Selector". The "Dynamic Product Selector" screenshot shows a detailed list of product characteristics and dimensions for a specific product, with a callout box highlighting the "Configure your complete product" button.

This diagram shows a transition from the "Dynamic Product Selector" to the "Product data sheet" and "Technical characteristics" tools. The "Product data sheet" screenshot shows a detailed PDF document with technical specifications and a callout box highlighting the "PDF" icon. The "Technical characteristics" screenshot shows a detailed table of product characteristics and dimensions, with a callout box highlighting the "Dimensions" and "Technical characteristics" sections.

Documents and downloads

Visualize and download catalogs, technical publications, certificates, etc.



Document Type	Title	File Type	Date	Size	Actions
Product Configurator	Harmony XB4 - Ø 22 mm metal pushbuttons, switches and pilot lights	HTML	Jan 29, 2012	13 kB	View
Product Selector	Harmony XB4 pushbutton, surface and pilot light	HTML	Dec 10, 2012	1.7 kB	View
Documents & Downloads	Harmony XB4 pushbutton, surface and pilot light	PDF	Dec 10, 2012	1.7 kB	Download
Additional Links	Emergency Stop or Emergency switch of maximum head pushbutton, Ø 30, 40, 60 mm	HTML	Jan 30, 2012	1.6 kB	View
Support	Harmony XB4 pushbutton, surface and pilot light	HTML	Jan 30, 2012	1.6 kB	View

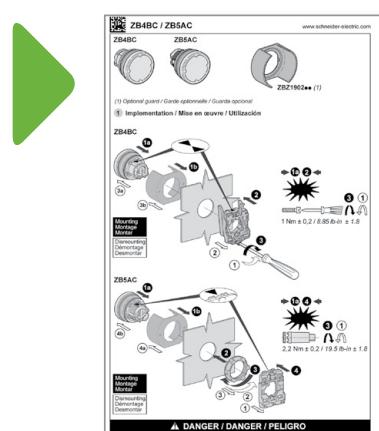


Control and signaling units Ø 22
January 2013



Dynamic catalogs

Essential guides



Certificates

Technical publications



Compare, select, and compile



Path: www.schneider-electric.com > **Products and Services** > Automation and control > ... > Harmony XB4*

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Solutions Products and Services Support Your business Company and Careers

You are here: Home > Products > Pushbutton, Switches, Pilot Lights, Control stations & Joysticks > Pushbutton, Switches, Pilot Lights > Harmony XB4

Harmony XB4 - Ø 22 mm metal pushbuttons, switches, pilot lights

Chromed plated metal bezel pushbutton, switches and pilot lights, Ø 22 mm.

An offer visualized in context:

- Pilot buttons, spring return
- Multiple-headed pushbutton, spring return
- Pushbutton, switch, with integrated LED mushroom head pushbutton, Ø 20, 40, 60 mm
- Selector switches and key switches
- Pilot lights (LED, incandescent and neon lights)

[Read more](#)

Product Information

[Product Selector](#)

[Product Configurator](#)

[Product Selector](#)

[Documents & Downloads](#)

[Additional Links](#)

[Support](#)

[Gallery](#)

Complete control buttons

Heads Electrical functions Accessories

Products 1 to 20 of 42

Per page: 1 2 3 Hide pictures

[Compare](#) | [Add to basket](#) | [Select all](#)

<input type="checkbox"/>	XB4BV31	white complete pilot light Ø22 plain lens with BA9s bulb 110...120V	+/-
<input type="checkbox"/>	XB4BV33	green complete pilot light Ø22 plain lens with BA9s bulb 110...120V	+/-
<input checked="" type="checkbox"/>	XB4BV34	red complete pilot light Ø22 plain lens with BA9s bulb 110...120V	+/-

[Configure your complete control buttons](#)

[Compare](#) | [Add to basket](#) | [Select all](#)

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You are here: Home > Products > Pushbutton, Switches, Pilot Lights, Control stations & Joysticks > Pushbutton, Switches, Pilot Lights > Harmony XB4

Harmony XB4 - Ø 22 mm metal pushbuttons, switches, pilot lights

Chromed plated metal bezel pushbutton, switches and pilot lights, Ø 22 mm.

An offer visualized in context:

- Pilot buttons, spring return
- Multiple-headed pushbutton, spring return
- Pushbutton, switch, with integrated LED mushroom head pushbutton, Ø 20, 40, 60 mm
- Selector switches and key switches
- Pilot lights (LED, incandescent and neon lights)

[Read more](#)

Product Information

[Product Selector](#)

[Compare products](#)

[Product Selector](#)

[Basket](#)

Products 1 to 2 of 3

Per page: 1 2 3 Hide pictures

[Remove from basket](#) | [Compare](#) | [Select all](#)

<input type="checkbox"/>	XB4BV33	+/-
<input type="checkbox"/>	XB4BV34	+/-
<input type="checkbox"/>	XB4BV35	+/-

[Empty](#) | [Print this](#) | [Import from Excel](#) | [Export to Excel](#) | [Export as PDF](#) | [Export product data sheets](#)

Compare technical characteristics

Select and store your products into the basket

Product data sheets

PDF Adobe

* Example of research on a product

Check the product status, design your equipment



Path: www.schneider-electric.com > **Support** > Product Substitution Tool
 Path: www.schneider-electric.com > **Support** > CAD files

Product status:
 indicate whether the product
 is still commercialized.
 Otherwise, the tool suggests a
 product substitution.

CAD files:
 available in various formats
 they will be easily integrated
 into your installation design
 software.

Please note that all references to products and services are just examples.

15

R	
RTC48PUN1RNHU	8
RTC48PUN1RNLU	8
RTC48PUN1RRHU	8
RTC48PUN1RRLU	8
RTC48PUN1RSHU	8
RTC48PUN1RSLU	8
RTC48PUN1SNHU	8
RTC48PUN1SNLU	8
RTC48PUN1SRHU	8
RTC48PUN1SRLU	8
RTC48PUN1SSHU	8
RTC48PUN1SSLU	8
RTC48PUN2RNHU	8
RTC48PUN2RNLU	8
RTC48PUN2SNHU	8
RTC48PUN2SNLU	8
RTC48PUNCRNHU	8
RTC48PUNCRNLU	8
RTC48PUNCRRHU	8
RTC48PUNCRRLU	8
RTC48PUNCRSHU	8
RTC48PUNCRSLU	8
RTC48PUNCNSNHU	8
RTC48PUNCNSNLU	8
RTC48PUNCNSRHU	8
RTC48PUNCNSRLU	8
RTC48PUNCSSHU	8
RTC48PUNCSSLU	8
RTCAcc	9
RTCCBL	9
RTCCOV	9

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