

- 3 Power controller all in one product
- Voltage supply 480-600V
- Process data always available via fieldbus
- Frontal Leds for easy Diagnostic
- RMS voltage, current and power monitoring
- V-I-V<sup>2</sup>-I<sup>2</sup>-P Control Mode
- All types of Firing and Control Modes available
- RS485 and USB port
- Complies with EMC
- Cable wiring and space reduction

**CD AUTOMATION**

**POWERED BY INNOVATION**

# REVO TH

MULTIZONE POWER CONTROLLER



**Compact MultiZone  
Power Controller**



[www.cdautomation.com](http://www.cdautomation.com)  
REVO TH Catalog 2022

# REVO TH

## REVO TH is a three independent power controller, designed to manage heating elements within production processes that use electric heating

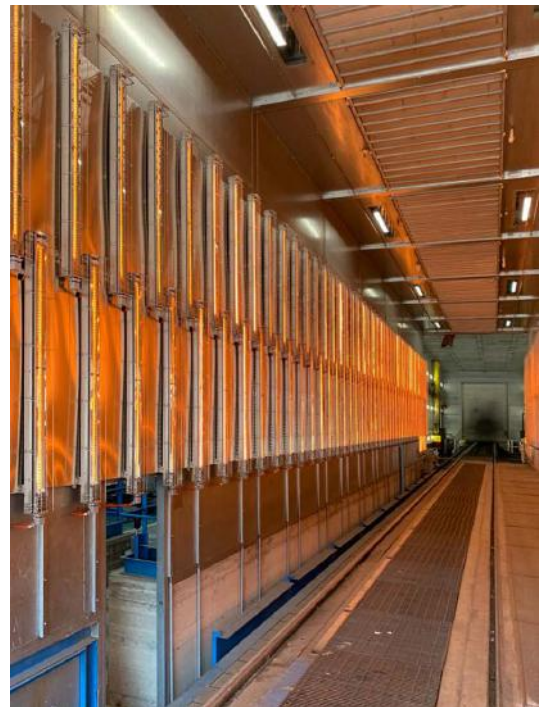
This series is suitable for industrial applications in the following sectors:

- Multi-zone ovens
- Plastics machines (extruders and extrusion lines, extrusion heads and hot runner mold control units)
- Packaging machines
- Long, medium and short wave IR lamp ovens



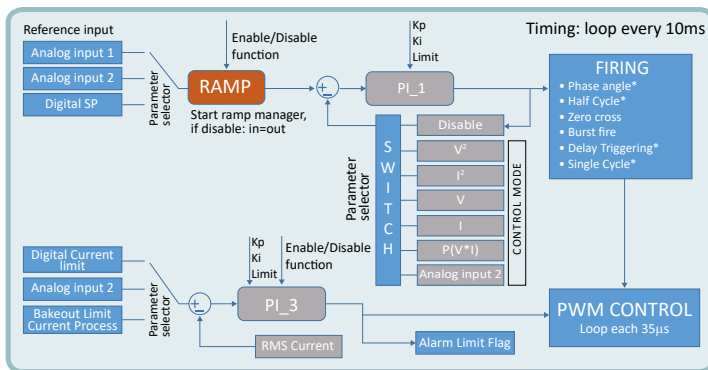
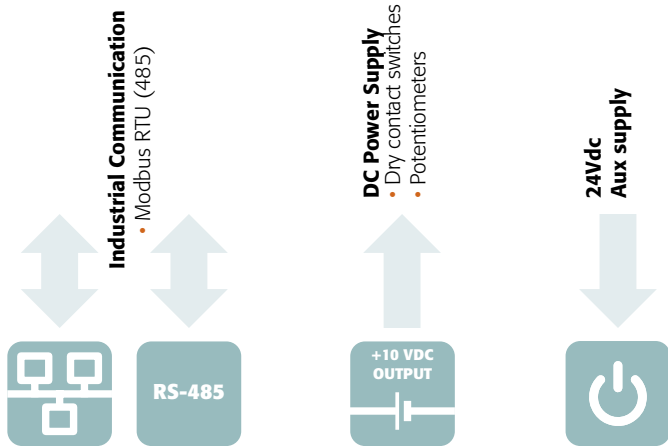
### REVO TH integrate in a single product up to THREE independent power control, which include:

- Three independent single-phase thyristor power controller
- Fixed extrarapid fuses
- Current transformers
- V - I - V<sup>2</sup> - I<sup>2</sup> - P Control Mode
- Input signal in digital mode, no link jumpers inside
- Firing mode: Single cycle, Half cycle, Burst, Phase Angle, Delayed Triggering, different types of adjustable ramp
- Two Analog input
- Two Digital input
- Load and SCR diagnostics
- Current limit feature
- Outputs for alarms



Multiple REVO TH modules can be used and connected to a communication module to communicate with the most common field buses.





**USB**

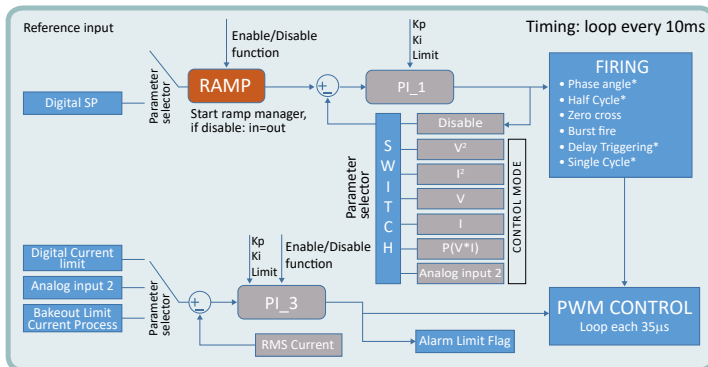
- Configuration
- Software connections



**Fan power**

- 24 Vdc

**REVO TH**



**Mechanical Relay Output**

- Alarm Annunciation



**2 analog inputs**

- Set point
- Feedback
- Current limit



**2 digital inputs**

- Enable
- Select feedback
- Local remote
- Set firing mode



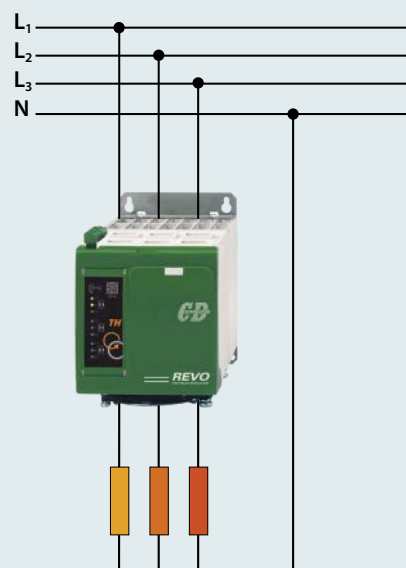
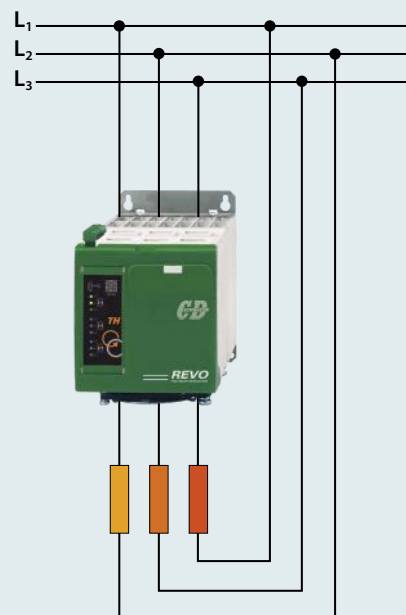
# FEATURES AND DIMENSIONS

	DESCRIPTION	
<b>LOAD TYPE</b>	Max voltage 480V	•
	Max voltage 600V	•
	Single phase	•
	3 phase load star with neutral	•
	3 phase load open delta	•
<b>INPUT TYPE</b>	SSR 4:30VDC	•
	4:20 mA	1
	0:10 Vdc	1
	Potentiometer	1
<b>FIRING</b>	Single Cycle	•
	Half Cycle	•
	Burst Firing	•
	Phase Angle	•
	Delayed Triggering	•
	Zero Crossing	•
<b>CONTROL MODE</b>	Open Loop	•
	Voltage	•
	Voltage square	•
	Current	•
	Current square	•
	Power V x I	•
<b>OPTIONS</b>	Current Limit CL	○
	Heater Break Alarm + SCR Short Circuit	○
	Fuse	○
<b>COMM.</b>	Modbus® RTU	•

• Standard - ○ Option - 1 Control only on phase L1-T1

	CURRENT	SIZE
<b>CURRENT</b>		600V Max
	35	SR25
	50	SR25
	75	SR25
	90	SR25

## Load Connection 3x Single Phase Unit



# REVO TH CODING



SIZE: SR25  
Dimensions (mm): H180 x W116 x D183 - 2,35Kg

## Technical Specification

- Current:** 35A - 50A - 75A - 90A
- Load Type:** Normal Resistance, Infrared Short, Medium and Long, Transformer Primary, Cold resistance and SiC elements
- Inputs:** RS485 Modbus RTU communication and DI
- Firing Mode:** Single Cycle, half Cycle, Burst Firing, Phase Angle, Delayed Triggering, Zero Crossing
- Control Mode:** Voltage, Current and Power or V2 and I2 with additional Transfer to VxI
- USB:** Port integrated
- Approvals:** Comply with EMC

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>REVO TH</b>	<b>T</b>	<b>H</b>	<b>3</b>	-	-	-	-	-	-	-	-	-	-	-	-	-

CURRENT RATING		4	5	6	
description		code		note	
35A		0	3	5	
50A		0	5	0	
75A		0	7	5	
90A		0	9	0	

MAX VOLTAGE		7	
description		code	note
480V		4	
600V		6	

AUXILIARY VOLTAGE		8	
description		code	note
24Vdc		4	

INPUT		9	
description		code	note
RS485 Modbus RTU Communication and DI		0	

FIRING	START OPTION	10	
description	description	code	note
Single Cycle	No Soft Start	C	
	Linear Soft Starter	S	
Half Cycle	No Soft Start	H	
	Linear Soft Starter	L	
Burst Firing	Soft Start for short wave infrared lamp	I	
	No Soft Start	B	
Phase Angle	Linear Soft Starter	J	
	No Soft Start	P	
Delayed Triggering	Linear Soft Starter	E	
	No Soft Start	D	
Zero Crossing	Linear Soft Starter	T	
	No Soft Start	Z	
	Linear Soft Starter	R	

CONTROL MODE		11	
description		code	note
Open Loop		0	
Voltage		U	
Voltage Square		Q	
Current		I	
Current Square		A	
Power VxI		W	

OPTION		12	
description		code	note
See table below		...	

FAN VOLTAGE		13	
description		code	note
24Vdc Fan		3	

APPROVALS		14	
description		code	note
CE EMC For European Market		0	

LOAD TYPE		15	
description		code	note
1PH Normal Resistance		0	
1PH IRSW Infrared Short Wave		1	
1PH MoSi2 Heaters		2	2
1PH SiC Heaters		3	
1PH Transformer coupled with Normal Resistance		4	1
1PH Transformer coupled with MoSi2 Heaters		5	1
1PH Transformer coupled with SiC Heaters		6	1
1PH Transformer coupled with UV Lamp		7	1

VERSION		16	
description		code	note
Standard Version		0	

**Note (1):** This configuration is possible only with Delayed Triggering or Phase Angle Firing

**Note (2):** This configuration is possible only with Phase Angle Firing

## Option Code Table (digit 12)

Current Limit	HB Alarm	Option Code (digit 12)
Y	Y	2
Y	N	3
N	N	4
N	Y	D

**N** Option you want removed

**Y** It serves my project

# FIELD BUS & COMMUNICATION

## Terminal Unit Modules

### Technical Specification

- Up to n°24 Channel with N°8 TH3 can be connected for each terminal module
- Main process variable available
- 24Vdc Power Supply
- Simplified configuration



**TU-RS485-TCP-3580MB**



**TU-RS485-PNT-067602**

**TU-RS485-EIP-067591**

ORDER CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	T	U	-	R	S	4	8	5	-	-	-	-	-	-	-	-

COMMUNICATION	3	4	5	6	7
Modbus RTU	R	S	4	8	5

FIELDBUS, COMMUNICATION OR OTHER FUNCTIONS	8	9	10	11	12	13	14	15	16		
Modbus TCP Protocol Converter	-	T	C	P	-	3	5	8	0	M	B
Modbus TCP, Modbus Slave, IO, Data Logger, Logic	-	E	T	H	-	I	O	D	L	0	0
Profinet	-	P	N	T	-	0	6	7	6	0	2
Ethernet IP	-	E	I	P	-	0	6	7	5	9	1
RS232	-	2	3	2	-	3	5	8	0	2	W

# GENERAL FEATURES

## Display Software

0.1	LED Diagnostic	LED diagnostics provides clear alarm notification
0.2	Fully Software Configurable	REVO TH is fully Software configurable

## Electrical Features

1.1	Current rating	35 to 90A
1.2	Voltage	Up to 600V
1.3	Integrated Fuse	Reduces labour time and cabinet space compared to external fusing whilst benefiting from internal fan cooling helping to reduce fuse temperature
1.4	Quick and easy access to Fuses	Fuses and thyristors are mounted directly behind the front panel door.

## Firing

2.1	Firing mode	Half Cycle, Single Cycle, Burst Firing, Delayed Triggering Phase Angle and Soft Start
2.2	Universal Input	The std analog inputs 0-1V, 0-5V, 0-10V, 0-20mA, 4-20mA
2.3	Control Mode 3x1Ph	REV can be configured for Current, Voltage Power feed back or open loop

## Communication

3.1	Modbus® RTU	Standard
3.2	USB device on front unit for configuration	Allows the user to easily and safely configure the REVO TH unit by powering through the USB connection only, without connecting a standard voltage line supply

## Extra Features

4.1	Automatic Selection of the configuration	Automatically select the correct parameters for your application via Configurator Software by using the wiring and load type icons via PC configuration software
4.2	HB and Sc Alarm	Alarm for Partial or Total Load Failure and Short Circuit on SCR with Electromechanical Relay output 5A at 30Vdc
4.3	High precision measurement (True RMS Value for V, I and VxI)	≤1%
4.4	Free configuration Software	Easy to use and powerful Configurator Software, available free of charge from <a href="http://www.cdautomation.com">www.cdautomation.com</a>

## General Features and Approvals

5.1	Industry-leading and Serviceability	Generous sizing of Thyristors and Thermal Parts using high efficiency Heatsink
5.2	Approvals	CE-EMC



### **Italy**

CD Automation Srl  
Via Picasso, 34/36  
20025 Legnano MI  
Italy  
**T** +39 0331 577479  
**F** +39 0331 579479  
sales@cdautomation.com  
www.cdautomation.com

### **United Kingdom**

CD Automation UK Ltd  
Unit 9 Harvington Business Park  
Brampton Road, Eastbourne  
East Sussex, BN22 9BN  
England  
**T** +44 1323 811100  
info@cdautomation.co.uk  
www.cdautomation.co.uk

### **India**

M/s Toshcon CD Automation Pvt. Ltd.  
H1 - 75 Gegal Industrial Area  
Ajmer - 305023 (Raj.)  
India  
**T** +91 145 2791112  
**T** +91 145 6450601/2/3  
sales.cd@toshcon.com  
www.cdautomation.in