

## Relay C

### 3PH Power Controller



**Dimensions:**  
SR9 H 121 x W 72 x D 185 - 1,15kg.



SR15 H 273 x W 93 x D 170 - 3,6kg.



S12 H 520 x W 137 x D 270 - 15kg.

#### Technical Specification

Load type	Normal Resistance, Infrared Short, Medium and Long, Transformer Primary using Phase Angle, Cold resistance and SiC elements
Inputs	4:20mA, 0:10V, SSR and Modbus® as std and different Field Bus Listed in the Product Coding
Firing mode	Burst Firing, Delayed Triggering and Phase Angle with or without Soft Start
Control Mode	Voltage, Current and Power or V2 and I2 with additional Transfer to VxI
Communication	RS485 port, RTU Modbus® Protocol and other Field Bus available
USB	Port integrated for configuration in safety mode (No Load and Auxiliary Voltage needed) Unit Powered Through USB
Approvals	cULus® 508 listed and cUL® listed
100 KA	Short Circuit Current rating (SCCR) up to 600V
Dual Current Limit	For peak and RMS value

## Option Energy Totalizer

This function totalises the energy consumption of the load allowing the calculation cost of heat treatment.

## Data Logging

This feature allows viewing of the historical parameter data like Current, Voltage and Power and can be useful to diagnose a fault.

## HB

Alarm for partial or total load failure and Short Circuit on SCR (relay output).

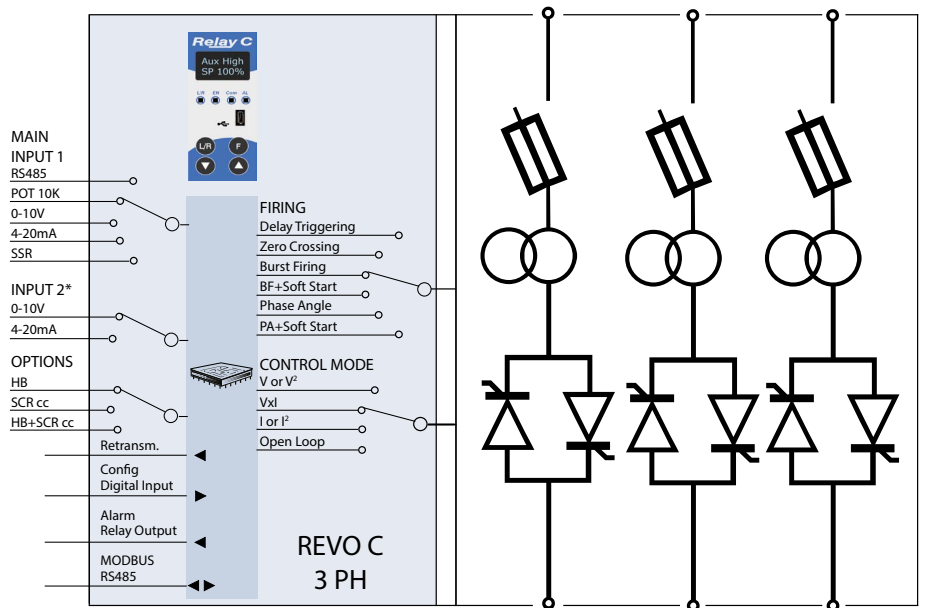
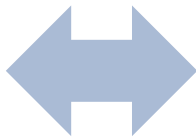
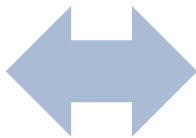
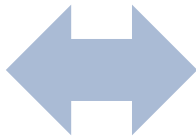
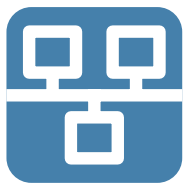
## I Limit (Current Limit)

This option is used to keep the overcurrent to a set limit. This is necessary when driving primary transformers and cold resistance. This option is not available on 30-35-40A units.

## Tools

- A very easy and Powerful Configurator Software is available on [www.west-cs.com](http://www.west-cs.com)

## Connectivity



# Relay C Features and Dimensions

Description		Relay C 1PH		Relay C 2PH		Relay C 3PH			
CODE		RC1		RC2		RC3			
LOAD TYPE	Max voltage 480V	●		●		●			
	Max voltage 600V	●		●		●			
	Max voltage 690V	●		●		●			
	Single phase	●							
	3 phase load star no neutral or delta			●		●			
	3 phase load star with neutral					●			
	3 phase load open delta	● (1)							
INPUT TYPE	SSR 4:30VDC	●		●		●			
	4:20 mA	●		●		●			
	0:10 Vdc	●		●		●			
	Potentiometer	●		●		●			
FIRING	Single Cycle	●							
	Half Cycle	●							
	Burst Firing	●		●		●			
	Phase Angle	●				●			
	Delayed Triggering	●				●			
	Zero Crossing	●		●		●			
CONTROL MODE	Open Loop	●		●		●			
	Voltage	●		●		●			
	Voltage square	●		●		●			
	Current	●		●		●			
	Current Square	●		●		●			
	Power V x I	●		●		●			
OPTIONS	Current Limit CL	○				○			
	Heater Break Alarm + SCR Short Circuit	○		○		○			
	Logging	○		○		○			
	Totalizer	○		○		○			
COMM.	Modbus® RTU	○		○		○			
	Profibus® DP + 1 Modbus® RTU	○		○		○			
	2 Profinet® IO + 1 Modbus® RTU	○		○		○			
	2 Modbus® TCP + 1 Modbus® RTU	○		○		○			
CURRENT		CURRENT		SIZE		SIZE		SIZE	
				600V Max	690V	600V Max	690V	600V Max	690V
	30					SR10		SR11	
	35		SR9			SR10		SR11	
	40		SR9			SR10		SR11	
	60		SR12	S11		SR13	S11	SR14	S11
	90		SR15	S11		SR16	S11	SR17	S11
	120		SR15	S11		SR16	S13	SR17	S13
	150		SR15	S11		SR16	S13	SR17	S13
	180		SR15	S11		SR16	S13	SR17	S13
	210		SR15	S11		SR16	S13	SR17	S13
	300		S12	S12		S14	S14	S14	S14
	400		S12	S12		S14	S14	S14	S14
	450					S14	S14	S14	S14
	500		S12	S12		S14	S14	S14	S14
	600		S12	S12		S14	S14	S17	S17
	700		S12	S12		S14	S14	S17	S17
800		S15	S15		S16	S16	S17	S17	

● Standard ○ Option ■ CE standard + cUL® as an option ■ CE Only Note (1): Use n° 3 Relay-C 1PH

Agency Approval and Regulatory: cUL508 Listed File E231578; cUL® Listed to C22.2 No. 14; CE EMC Directive 2014-30-EU, EN 60947-4-3 Class A Emissions; CE Safety Directive 2014-35-EU, EN 60947-4-1, -4-3; RoHS 2011-65-EU; W.E.E.E 2012-19-EU

# Order Code

## Current Rating

030	30A <sup>(1)</sup>
035	35A <sup>(1)</sup>
040	40A <sup>(1)</sup>
060	60A <sup>(1)</sup>
075	75A <sup>(1)</sup>
090	90A
120	120A
150	150A
180	180A
210	210A
300	300A
400	400A
450	450A <sup>(1)</sup>
500	500A
600	600A
700	700A
800	800A <sup>(1)</sup>

## Aux. Voltage Supply

1	90 to 135 VAC (100/120 VAC)
2	180 to 265 VAC (200/208/230/240 VAC)
3	238 to 330 VAC (277 VAC)
5	342 to 528 VAC (380/415/480 VAC)
6	540 to 759 VAC (600 VAC)
7	540 to 759 VAC (690 VAC)

## Control Mode

0	Open loop
U	Voltage
Q	Voltage square U <sup>2</sup>
I	Current
A	Current square I <sup>2</sup>
W	Power

## Fan Voltage

0	No fan - for 1phase and 2PH < 90A No fan - for 3 phase < 120A
1	Fan 110V - for 1 phase and 2PH < 90A Fan 110V - for 3 phase ≥ 120A
2	Fan 220V - for 1 phase and 2PH < 90A std. version Fan 220V - for 3 phase ≥ 120A std. version

## Load Type

0	Normal resistance <sup>(1)</sup>
1	IRSW infrared short wave <sup>(1)</sup>
2	MoSi2 heaters <sup>(1)</sup>
3	SiC heaters <sup>(1)</sup>
4	Transformer coupled with normal resistance <sup>(1)</sup>
5	Transformer coupled with MoSi2 heaters <sup>(1)</sup>
6	Transformer coupled with SiC heaters <sup>(1)</sup>
7	Transformer coupled with UV lamp <sup>(1)</sup>

RC1

090

4

1

V

D

0

0

0

0

2

1

## Model

1	1 phase
2	2 phase
3	3 phase

## Max Voltage

4	480V
6	600V
7	690V

## Input

S	SSR
B	0:20 mA
A	4:20 mA
V	0:10V
K	10kΩ Poti

## Firing

C	Single cycle no soft start <sup>(1)</sup>
S	Single cycle linear soft start <sup>(1)</sup>
H	Half cycle no soft start <sup>(1)</sup>
L	Half cycle linear soft start <sup>(1)</sup>
I	Half cycle soft start for infrared lamp <sup>(1)</sup>
B	Burst firing no soft start
J	Burst firing linear soft start <sup>(1)</sup>
P	Phase angle no soft start <sup>(1)</sup>
E	Phase angle soft start <sup>(1)</sup>
D	Delayed triggering no soft start <sup>(1)</sup>
T	Delayed triggering linear soft start <sup>(1)</sup>
Z	Zero crossing no soft start
R	Zero crossing linear soft start <sup>(1)</sup>

## Approvals

0	CE
L	cUL + CE

## Option

0	No option
1	Energy totaliser
2	Datalogger
3	Datalogger + energy totaliser
8	Heater break alarm
9	Heater break alarm + energy totaliser
A	Heater break alarm + datalogger
B	Heater break alarm + datalogger + energy totaliser
G	Current limit <sup>(1)</sup>
H	Current limit + energy totaliser <sup>(1)</sup>
I	Current limit + datalogger <sup>(1)</sup>
J	Current limit + datalogger + energy totaliser <sup>(1)</sup>
O	Current limit + heater break alarm <sup>(1)</sup>
P	Current limit + heater break alarm + energy totaliser <sup>(1)</sup>
Q	Current limit + heater break alarm + datalogger <sup>(1)</sup>
R	Current limit + heater break alarm + datalogger + energy totaliser <sup>(1)</sup>

## Communication and Retransmission

0	Nr. 1 Modbus RTU - no retransmission
1	Nr. 1 Modbus RTU - retransmission 4:20mA
2	Nr. 1 Modbus RTU - retransmission 0:10V
3	Nr. 2 Modbus RTU - no retransmission
4	Nr. 2 Modbus RTU - retransmission 4:20mA
5	Nr. 2 Modbus RTU - retransmission 0:10V
6	Nr. 2 Profibus DP + Nr.1 Modbus RTU - no retransmission
7	Nr. 2 Profibus DP + Nr.1 Modbus RTU - retransmission 4:20mA
8	Nr. 2 Profibus DP + Nr.1 Modbus RTU - retransmission 0:10V
9	Nr. 2 Profinet + Nr.1 Modbus RTU - no retransmission
A	Nr. 2 Profinet + Nr.1 Modbus RTU - retransmission 4:20mA
B	Nr. 2 Profinet + Nr.1 Modbus RTU - retransmission 0:10V
C	Nr. 2 Modbus TCB + Nr. 1 Modbus RTU - no retransmission
D	Nr. 2 Modbus TCB + Nr. 1 Modbus RTU - retransmission 4:20mA
E	Nr. 2 Modbus TCB + Nr. 1 Modbus RTU - retransmission 0:10V

<sup>(1)</sup> Not available for all combinations of part numbers. Please refer to the datasheet for further details

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