



WELD CONTROL



Best model of easy operation

for spot & projection welders

Weld Timer model CK4-8-15P/15





Extra-Popular CK Series

To convert customer's feelings into real form

31 Channels Applicable

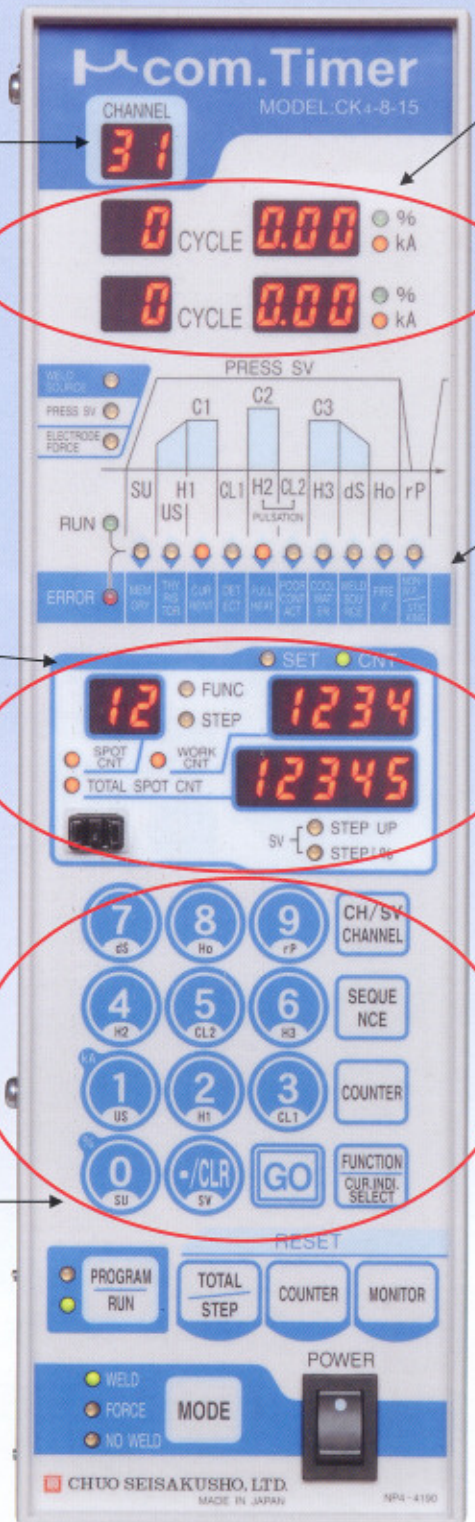
31 kinds of welding condition can be stored. Specifications can be changed into 4 channels and 15 channels by a simple configuration.

Enhanced Counter Function

The counter function for number of dotting per channel, number of work pieces and total number of dotting was equipped with. Counting up output is available respectively.

Direct set-up with numeric keypad

Numeric keypad is adopted for operation. Swift and accurate input is available.



Renewal!

One-look 2-stage current display

The screen can be switched among 1-stage-2-stage, 2-stage-3-stage, and 1-stage-3-stage during 3-stage power on setting.

Direct error signal sign by main parameter

Equipped well with convenient functions

Simple auto-squeeze function

Initial inflating status will be held when starting, and sequence will begin according to the initial inflating time once external input is confirmed.

Defective detecting function

(application example)



If limit switch is ON when the initial inflating time over because of limit switch installing and timer inputting, error will be output while being inflated.

(Limit switch installation is optional.)

※ Combination use of the above simple squeeze function and defective detecting function is not available.

Data backup function

The data can be imported and exported to the related computer upon optional setting.

Power disconnection function

The power can be disconnected immediately by external input.

Panel setting disabling function



Set-up can be blocked with a 4-digit password.

Inflating force switchover function upon panel setting

Inflating force can be switched over together with current and power on time using an electro-pneumatic proportional valve.

Direct set-up is available with kN. (Electro-pneumatic proportional valve unit and connectors are optional)

		Item	Specifications
Fundamental		Welding set data channel	15 or 31
		Number of squeezing channel	2
		Number of pulsation	3
		Welding process step	4 or 8
Time control		Heat 1-3 time	0 - 99 cycles
		Other time	0(2) - 99 cycles
		Pulsation	2 - 99 times
		Current slope	0 - 98 cycles for up or down
Current control		Welding current	2.0 - 50.0kA
		Voltage compensation control	Constant current compensation
		Current detector coil	WMC-451N
Additional function	External input/output	Heat-on output	Solid-state circuit (Alternately switched)
		Pulsation-on output	
		Weld input	Equipped
		Welding step timing output	One make-contact
		Outside squeezing mode input	Equipped
		Squeezing pressure control output	0.00 - 999kN (for 15ch or 31ch) (option)
		No work input	Equipped
	Counter	Spot counter	0 - 99 (for 15ch or 31ch)
		Work counter	0 - 9999 (for 15ch or 31ch)
		Total spot counter	0 - 99999 (for 15ch or 31ch)
		Step-up counter	0 - 9999 (for 3SVch)
	Monitors	memory error	SCR short-circuited
		Up./low. limit current error	Current checker
		Full heat check	Contact checker
Cooling water error		Welding power discontinuation	
Up./low. limit firing angle monitor		Fused electrode detect/ No work	
			(Error memory capacity : 10 points)
Data store	Data backup	with flash memory	
Environmental condition	Operation temperature	0 - 45°C	
	Storing temperature	-10 - +60°C	
	Allowable humidity	45 - 85% (without condensation)	
Power supply	Control power	100V AC+10%/ -15%, 50/60Hz, 30VA	
	Welding power	220V/440V AC+10%/ -20%, 50/60Hz	
Dimensions	Vertical type CK4-8-15	W90 × H300 × D325	
	Lateral type CK4-8-15P	W300 × H90 × D325	
Weight	Vertical type/Lateral type	5kg	

MODEL		CE1-6-4	CE1-6-4P	
				
Fundamental	Welding set data channel/Number of squeezing channel	4/2		
	Number of pulsation/Welding process step	2/6		
Time control	Heat 1 - 2 time	0 - 99 cycles		
	Other time	0(2) - 99 cycles		
	Current slope	0 - 29 cycles for up		
Current control	Welding current	2.0 - 49.9kA		
	Current range (secondary)	5.0 - 50.0kA		
	Current response speed	0.5 cycle		
	Voltage compensation response speed	0.5 cycle		
Additional function	External input/output	Weld interlock output	Non-contact circuit	
		Off time output	1a contact	
		Monitor error output	1a contact	
	Monitors	Constant current monitor	±5%	
		Full heat	Voltage compensation full heat detection	
		Lack of cooling water	Lack of cooling water for SCR	
		Welding power discontinuation	Welding power & voltage	
SCR	SCR short-circuited			
Power supply	Control power	AC100V + 10% -15% 50/60Hz		
	Welding power	AC220V/440V + 10% -20% 50/60Hz		
Outline	Dimensions	W90 × H300 × D265mm	W300 × H90 × D265mm	
Weight	Vertical type/Lateral type	4.5kg		

8CH INTERLOCK DEVICE



■ Main features

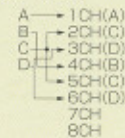
1. Interlock for a maximum of 8 units.
2. Interlock priority is programmable.
3. Use of PC board circuit makes unit compact, reliable, and long-lasting.

■ Main specifications



Control unit power source: 90 - 110V AC.

Dimensions: W300 × H80 × D285

■ Priority interlocking program (ex.)



During A or B are heating if C and D become waiting to heat at the same time, first heat C then D.

MODEL		WM-5	WM-4
			
Measurement objects	Wavelength	Single-phase AC/DC, AC/DC inverter and Capacitor types	Single-phase AC type, Single-phase/Three-phase rectifier type, Inverter type
	Welders	Resistance welders of spot, projection, and upset butt types	Resistance welders of spot, projection welder
Number of channel		Manual: 99 channels (Remote: 63 channels)	8 channels
Current measurement		1.00 - 50.0kA (Auto-range) 1/5 cycle tool-measure square operation within instructed time frame	2.0 - 50.0kA RMS (75.0kA Peak)
Time measurement		0.5 - 99.5 cycles (every: 0.5 cycles) DC (ms), CAP: 1 - 199 ms	00 - 99 cycle (per 0.5 cycles)
Measurement error	Current	±2% in 40% load	Current settings: Max ±2%
	Time	None	None
Monitoring functions	Current	1.00 - 50.0 kA (in standard) (3 digits indicated)	2.0 - 50.0 kA (in standard) (3 digits indicated)
	Time	0 - 99 cycles (2 digits indicated)	0 - 99 cycles (2 digits indicated)
Current detection		WMC-800DN	WMC-451
Analog Input		0 - 5 V DC, 1 - 5 V DC, Max. 3 V for AC50Hz and AC60Hz	-
Displacement input		-99.99 - 99.99	-
Counting		0 - 99999 in total count	-
Displaying items		Channel, current (A/B), cycle (A/B)	Channel, Current, Cycle
Communicative function		Based on RS-485	Based on RS-485
Printing sheet		Heat-sensitive sheet role: 58 mm W × 52 dia.	-
Data storage capacity		1000 points	10 points
Operation ambient temperature		0 to 40°C	0 - 40°C
Allowable humidity		45 - 85% without condensation	45 - 85% without condensation
Storage temperature		-10 - 60°C	-10 - 60°C
Data store		10 years in ambient temperature of 25°C	10 years in ambient temperature of 25°C
Power supply		85 to 284V AC 50/60Hz	AC85 - 110V 50/60Hz (Switching by 50/60Hz interior switch)
Power consumption		80 VA	100 VA
External dimensions		W141 × H251 × 315 mm excluding projection	W80 × H210 × D195 mm
Net weight		4.5 kg	1.7 kg

CONTACTOR



Volt	Size	Model	
200V	C	CT3-C	
	D	CT3-D	
	E	CT3-E	
	F	CT3-F	
	G	CT3-G	
	H	CT3-H	
	Thyristor Firing System	Separate excitation firing	
	Cooling Water	5ℓ/min	
Dimensions	W350 × H500 × D360mm		

※ Due to ongoing improvements, specifications may change without notice.

※ Please install in a place with good environment condition as they are electronic precision devices.

※ Make sure the grounding wiring is executed for your safety guarantee.

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