



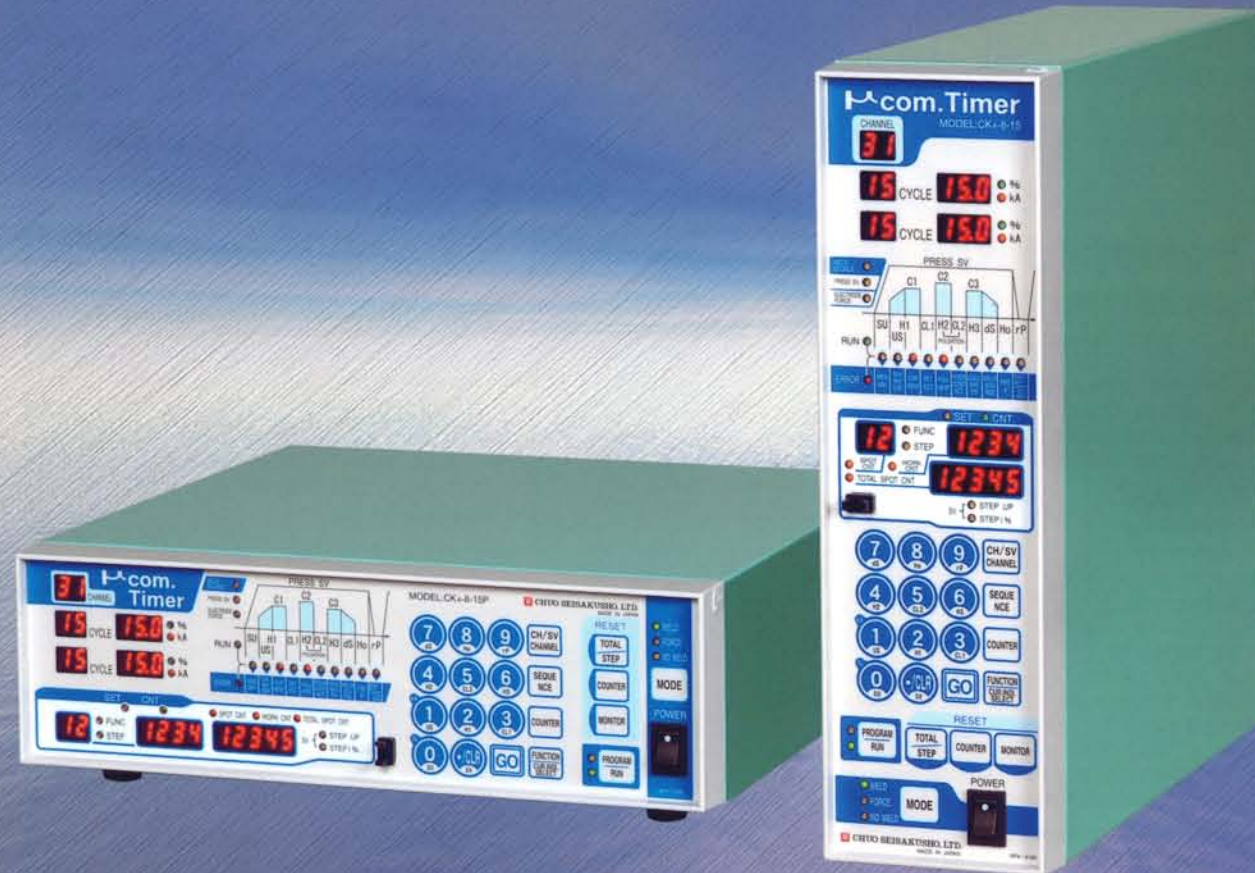
WELD CONTROL

Best model of easy operation



for spot & projection welders

**Weld Timer
model
CK4-8-15P/15**



MODEL		CE1-6-4	CE1-6-4P	8CH INTERLOCK DEVICE
Fundamental	Welding set data channel/Number of squeezing channel Number of pulsation/Welding process step		4/2 2/6	■ 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.
Time control	Heat 1 - 2 time Other time Current slope		0 - 99 cycles 0(2) - 99 cycles 0 - 29 cycles for up	
Current control	Welding current Current range (secondary) Current response speed Voltage compensation response speed		2.0 - 49.9kA 5.0 - 50.0kA 0.5 cycle 0.5 cycle	
	Additional function	External input/output	Weld interlock output Off time output Monitor error output	Non-contact circuit 1a contact 1a contact
		Monitors	Constant current monitor Full heat Lack of cooling water Welding power discontinuation SCR	±5% Voltage compensation full heat detection Lack of cooling water for SCR Welding power & voltage SCR short-circuited
Power supply	Control power Welding power		AC100V + 10% -15% 50/60Hz AC220V/440V + 10% -20% 50/60Hz	
Outline	Dimensions	W90 x H300 x D265mm	W300 x H90 x D265mm	■ 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.
Weight	Vertical type/Lateral type		4.5kg	

MODEL		WM-5	WM-4	CONTACTOR																									
Measurement objects	Waveform Welders	Single-phase AC/DC, AC/DC inverter and Capacitor types Resistance welders of spot, projection, and upset butt types	Single-phase AC type, Single-phase/Three-phase rectifier type, Inverter type Resistance welders of spot, projection welder	<table border="1"> <thead> <tr> <th>Volt</th> <th>Size</th> <th>Model</th> </tr> </thead> <tbody> <tr> <td rowspan="8">200V</td> <td>C</td> <td>CT3-C</td> </tr> <tr> <td>D</td> <td>CT3-D</td> </tr> <tr> <td>E</td> <td>CT3-E</td> </tr> <tr> <td>F</td> <td>CT3-F</td> </tr> <tr> <td>G</td> <td>CT3-G</td> </tr> <tr> <td>H</td> <td>CT3-H</td> </tr> <tr> <td>Thyristor Firing System</td> <td colspan="2">Separate excitation firing</td> </tr> <tr> <td>Cooling Water</td> <td colspan="2">5l/min</td> </tr> <tr> <td>Dimensions</td> <td colspan="2">W350 x H500 x D360mm</td> </tr> </tbody> </table>	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 x H500 x D360mm	
Volt	Size	Model																											
200V	C	CT3-C																											
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	Cooling Water	5l/min																											
Dimensions	W350 x H500 x D360mm																												
Number of channel		Manual: 99 channels (Remote: 63 channels)	8 channels																										
Current measurement		1.00 - 50.0 kA (Auto-range) 1/5-cycle root-mean 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 Time	±2% in 40% load None	Current settings: Max ±2% None																										
Monitoring functions	Current Time	1.00 - 50.0 kA (in standard) (3 digits indicated) 0 - 99 cycles (2 digits indicated)	2.0 - 50.0 kA (in standard) (3 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 x 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 264V AC 50/60Hz	AC85 - 110V 50/60Hz (Switching by 50/60Hz interior switch)																										
Power consumption		80 VA	100 VA																										
External dimensions		W141 x H251 x D315 mm excluding projection	W80 x H210 x D195 mm																										
Net weight		4.5 kg	1.7 kg																										

※ 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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Extra-Popular CK Series Renewal!

To convert customer's feelings into real form

31 Channels Applicable

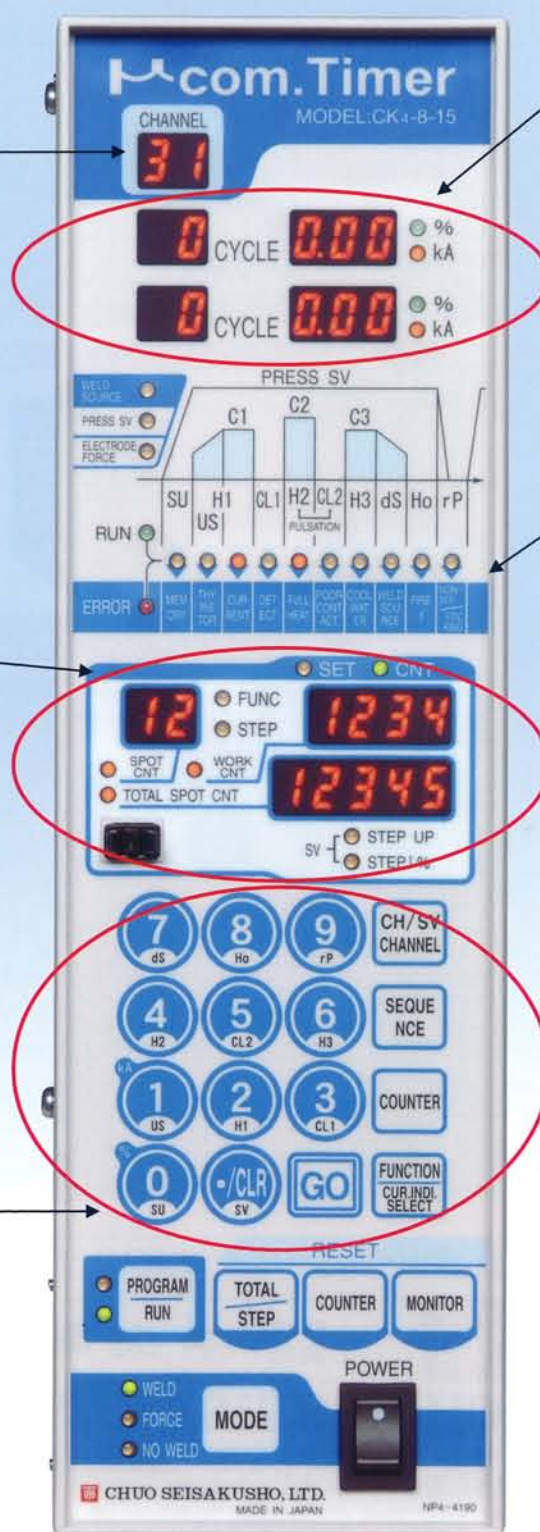
31 kinds of welding condition can be stored. Specifications can be changed into 4 channels and 15 channels by a simple configuration.

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.



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		
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		
	Additional function	Counter	Spot counter	0 - 99 (for 15ch or 31ch)
			Work counter	0 - 9999 (for 15ch or 31ch)
		Monitors	Total spot counter	0 - 99999 (for 15ch or 31ch)
Step-up counter			0 - 9999 (for 3SVch)	
Data store	memory error	SCR short-circuited		
	Up./low. limit current error	Current checker		
	Full heat check	Contact checker		
	Cooling water error	Welding power discontinuation		
Environmental condition	Up./low. limit firing angle monitor	Fused electrode detect/No work		
	(Error memory capacity : 10 points)			
	Data backup	with flash memory		
Power supply	Operation temperature	0 - 45°C		
	Storing temperature	-10 - +60°C		
Dimensions	Allowable humidity	45 - 85% (without condensation)		
	Control power	100V AC+10%/-15%, 50/60Hz, 30VA		
Weight	Welding power	220V/440V AC+10%/-20%, 50/60Hz		
	Vertical type CK4-8-15	W90 x H300 x D325		
	Lateral type CK4-8-15P	W300 x H90 x D325		
	Vertical type/Lateral type	5kg		