

# WELTOUCH® CT-110D / CY-210D

## AC Timer Secondary Constant Current AC Weld Controls



CT-110D

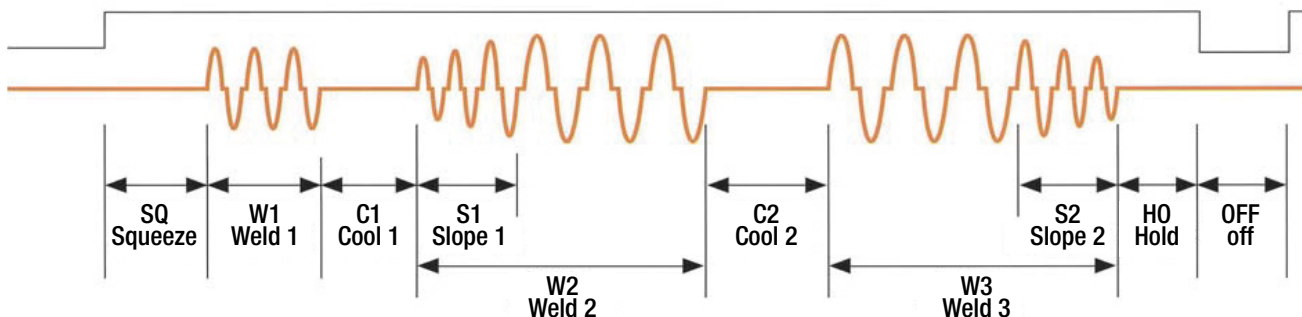
CY-210D

The Weltouch® AC weld controls with secondary constant current feedback examine each half cycle of the actual weld current flow and compensate for changes in the secondary current during welding. Standard built-in current and conduction degree monitors allow for simultaneous viewing of both programmed and actual weld conditions. Secondary constant current feedback combined with our built-in weld monitors can provide a higher degree of accuracy, confidence and control in AC resistance welding. The CY-210D and the CT-110D are easily adaptable to most existing contactor cabinets.

### KEY FEATURES

- Welding mode for high-tensile steel plate
- Easy-to-see LED screen displays weld schedule number, weld current and set time
- Fifteen weld schedules
- Nine current steps
- Primary constant current, secondary constant current and power supply voltage compensation
- Built-in current monitor and conduction angle monitor
- Three counters: production, shot and total

Three-step welding with UPSLOPE and DOWNSLOPE features:



## TECHNICAL SPECIFICATIONS

Model	CT-110D Vertical type	CY-210D Horizontal type	
Welding power source	220 V / 230 V / 240 V / 380 V / 400 V / 415 V / 440 V / 460 V / 480 V AC -25% +10%, 50/60 Hz (voltage set at time of shipment)		
Control power source	100 V / 120 V / 220 V / 230 V / 240 V AC $\pm 20\%$ , 50/60 Hz (voltage set at time of shipment)		
Control method	Primary- or secondary-current feedback constant-current control by phase control using a thyristor, or source-voltage fluctuation compensation control method		
Setting of timers	15 schedules Squeeze, Weld 2, Cool 2, Weld 3, Slope 2, Hold, Off are programmed in 0-99 cycles		
	Weld 1 and Cool 1 0-99 cycles (for CT-110D)	Slope 1 is programmed in 0-9 cycles and Weld 1 and cool 1 is 0-9 cycles (for CY-210D)	
Pulsation count	0 – 9 times. Switch to OFF mode.		
Current setting	1.0 – 80.0 kA (maximum current setting: 5.0 – 80.0 kA)		
Control speed	$\frac{1}{2}$ cycle @ secondary constant current control (toroidal coil is required.)		
	1 cycle @ primary constant current control (CT coil is required.)		
	1 cycle @ power supply voltage compensation mode		
Current accuracy (error in full scale)	@ Secondary constant current control		
	1. Welding power source voltage fluctuation: $\pm 2\%$ for +10%/-15%		
	2. Resistance load fluctuation: $\pm 2\%$ for $\pm 15\%$		
	3. Inductive load fluctuation: $\pm 2\%$ for $\pm 15\%$		
Valve output	2 (Schedules 1-7: Valve 1 schedules 8-15: Valve 2)	Valve 1 or 2 can be selected for 15 schedules.	
	Control voltage (1 A max.) or 24 V DC (0.6 A max.)		
Step-up	1 series, 9 stages Counter: 0 – 9999	2 series, 9 stages Counter: 0 – 9999	
	Counter increase ratio: 50 – 200% of the set current in 1% step		
Current monitor (Available only at constant current control)	1. Upper limit: 0 – 49% 15 schedules 2. Lower limit: 0 – 49% 15 schedules (no monitoring at 0%)		
Conduction angle monitor	1 – 180° 15 schedules (no monitoring at 0°)		
External input signals	INTERLOCK/COUNT RESET (dip switch selectable): If a closed-contact signal is input, the system waits for the power to be turned on or the count to be reset.	INTERLOCK/WELD No. SET (dip switch selectable): If a closed-contact signal is input, the system waits for the power to be turned on when the interlock function is selected.	
External output signals	INTERLOCK/COUNT UP (dip switch selectable): Outputs from 2 cycles from when the power is turned on until the power is turned off, or outputs when the counter expires (contact capacity: 110 V AC, 0.5 A)	INTERLOCK/WELD No. ERROR (dip switch selectable): Output from 2 cycles before the power is turned on until the power is turned off, or when a weld-count error occurs (contact capacity: 110 V AC, 0.5 A)	
Error output	1. Self-diagnosis error	5. Thermostat error	8. Current upper-and-lower-limit error
	2. Start input error	6. Thyristor short-circuit error	9. Cond. angle error
	3. Current-setting error	7. No-power-supply error	10. Full-wave error
	4. Current stepper-up ratio setting error		11. Total counter- up
			12. Insufficient weld count (CY-210D Only)
			13. Step-up completion

Note: The conduction-angle monitor does not work in the source-voltage fluctuation compensation control mode. This monitor cannot be used when the control is used for a welder of the single-phase rectifier type.

## SC-181B (THYRISTOR CONTACTOR)

Power requirements for welding power supply	200 – 240 VAC / 380 – 480 VAC, 50/60 Hz
Primary weld current	Duty cycle @ 100%: 1150 A Duty cycle @ 1 sec. in 30%: 1600 A
CT coil	SC-181B-00-00: NA SC-181B-00-10 (built in (for CY-210))
Cooling	Water cooling, Flow rate: 5 L/min
Piping for cooling water	3/8 PT (attachment hose: ID 9 mm)
Protective feature	60°C thermostat

## WEIGHT &amp; DIMENSIONS

	CT-110D Vertical type	CY-210D Horizontal type	SC-181B
Dimensions (L x W x H)	9.8 in x 4.3 in x 14 in (250 mm x 110 mm x 355 mm) (excluding fittings)	9.8 in x 14 in x 4.8 in (250 mm x 355 mm x 122 mm)	15 in x 13.8 in x 21.7 in (380 mm x 352 mm x 551 mm)
Weight	9.9 lb (4.5 kg)	9.9 lb (4.5 kg)	30.9 lb (14kg)



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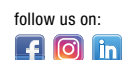
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