WELTOUCH®

CT-110E / CY-210E

AC Timer
Secondary Constant Current AC Weld Controls



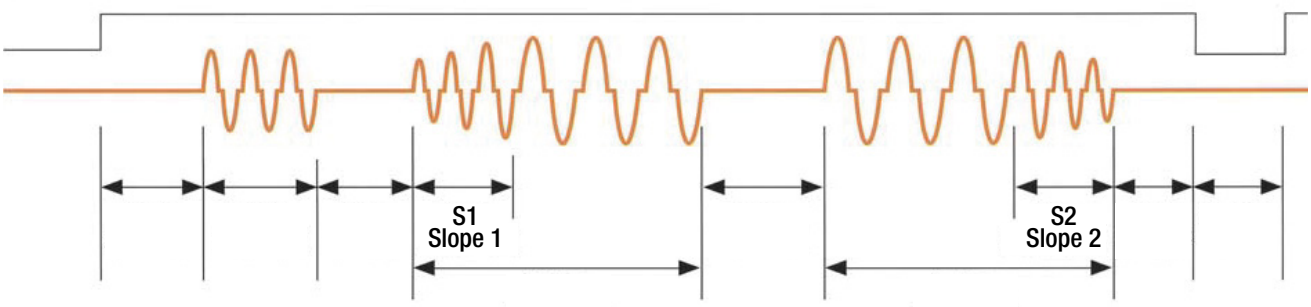
CT-110E *CY-210E*

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-210E and the CT-110E 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-110E Vertical type		CY-210E 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 ±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-110E)		Slope 1 is programmed in 0-9 cylces 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	½ 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: ±2% for +10%/-15% 2. Resistance load fluctuation: ±2% for ±15% 3. Inductive load fluctuation: ±2% for ±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 2. Start input error 3. Current-setting error 4. Current stepper-up ratio setting error	5. Thermostat error 6. Thyristor short-circuit error 7. No-power-supply error	8. Current upper-and-lower-limit error 9. Cond. angle error 10. Full-wave 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 & DIMENSIONS

	CT-110E Vertical type	CY-210E Horizontal type	SC-181B
Dimensions (W x D x H)	4.3 in x 9.8 in x 14 in (110 mm x 250 mm x 355 mm) (excluding fittings)	14 in x 9.8 in x 4.8 in (355 mm x 250 mm x 122 mm)	13.8 in x 15 in x 21.7 in (352 mm x 380 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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