

CT_ SAINT WIEN PROGRAMMABLE COUNTER/TIMER

P1/4

TYPE CT_

CT- SERIES ARE A PROGRAMMABLE OF COUNTER, TIMER INDICATION/CONTROL METER. 1 UNIT IS GOOD FOR BOTH COUNTER & TIMER. 3 COUNTING VERSIONS, 4 COUNTING SPEEDS FOR COUNTER. 4 TIMER RANGES FOR TIMER. ALL UNIT PROVIDES AUTO/MAN/POWER OFF RESET, EEPROM MEMO, OFFSET, GATE FUNCTIONS. THERE ARE ALSO WIDE PRE SCALE FACTOR FOR COUNTER.

CT_ COUNTER/TIMER



UP/REVERSIBLE COUNT. 1/2 PRESET. PRESCALE. 30HZ~FREE
NCR AUTO RESET 0.0015~999.999S.
TIMER RANGE: 999.999S, 99999.9S, 9999M59S, 9999H59M
NCR AUTO RESET 0.0015~999.999S.

1 ELECTRICAL & GENERAL CHARACTERISTIC

- 1 SUPPLY VOLTAGE: 24, 110, 220VAC 50/60HZ
- 2 OPERATING VOLTAGE: 90 ~ 110% SUPPLY VOLTAGE
- 3 POWER CONSUMPTION: APPROX. 3VA ~ 7VA
- 4 AMBIENT CONDITIONS: -10 ~ 55°C, 35 ~ 85%RH
- 5 WEIGHT: APPROX. 3 ~ 500g
- 6 SETTING METHOD: uR[R], MODE[M], SHIFT[<] & UP[^] 4 KEYS TO SET/PROGRAMME
 - uR [uR]: (A) TO RESET COUNTER, TIMER, RATE METER
 - (B) TO SELECT DP INCORPORATE WITH [<] (EXCEPT TIMER)
 - (C) TO SAVE SETTING VALUE
- MODE [M]: TO CHECK/SET
- SHIFT [<]: (A) TO SHIFT DIGIT
- (B) TO CHECK/SET OFST, IN, DSP INCORPORATE WITH [M]
- UP [^]: (A) TO INCREASE NUMERAL
- (B) TO CHECK/SET COUNT SPEED, TIMER RANGE, NCR, DEL & HYS INCORPORATE WITH MODE [M]
- (C) TO CHECK/SET FUNCTION MODEL INCORPORATE WITH [<]

7 SETTING ACCURACY: 0%

8 INDICATION METHOD: 4 OR 6 DIGITS 1 SET OF DIGITAL DISPLAY, CHARACTER HEIGHT

CT1-=14.2mm(4D,6D); CT2-=14.2mm(4D), 10mm(6D); CT3-=7.6mm(4D)

9 SIGNAL INPUT: HIGH ACTIVE 6 ~ 30VDC 3K3 OHM

	COUNTER		TIMER	SIGNAL FUNCTION
CP1	PHASE IN A	SIGNAL IN	NO USE	SIGNAL IN
CP2/G	PHASE IN B	GATE IN	GATE IN	SIGNAL IN/INHIBIT
uR IN	RESET IN	RESET IN	RESET IN	1.PV=0, 2.OUTPUT OFF
GATE	GATE IN	NO USE	NO USE	INHIBIT CP1,CP2 IN

10 CONTROL OUTPUT: (A) RELAY: 3A250VAC RESISTIVE LOAD

(B) VOLTAGE: 12VDC+-10% 4K7 FOR P1 ONLY

11 POWER FOR SENSOR: (A) CT1-, CT2-: 12VDC 60mA (B) CT3-: 12VDC 20mA

12 PROTECTION: (A) EEPROM MEMORY BACKUP. (B) WATCHDOG. (C) CPU IN CASE OF BREAKDOWN: HOLD[M] [<] [^] 3 KEYS PRESSED AND POWER ON AGAIN. AFTER THE METER RESTORE TO NORMAL OPERATION. RE-CONFIGURE THE METER FOR SPECIFY FUNCTIONS

2 SPECIFICATIONS

* COUNTER

1 3 COUNTING VERSIONS(FIG 1C, 1D); 4 COUNTING SPEEDS(FIG 5A, 5B).

1) ONE WAY(UP COUNTING): 30, 100, 300, FREE(3000HZ)

2) PHASE IN CYCLE COUNT: 15, 50, 150, FREE(2000HZ, CYCLE COUNTx1=2,000 COUNT)

3) PHASE IN EDGE COUNT : 15, 50, 150, FREE(1000HZ, EDGE COUNTx4=4,000 COUNT)

2 PRE SCALE FACTOR(DSP): 000.000 ~ 999.999(EXCEPT FREE COUNTING SPEED INPUT)

EACH INCREMENT OR DECREMENT IS DSP VALUE. PV DISPLAY INTEGRAL PARTS ONLY.

3 1 OR 2 PRESET OR INDICATION ONLY

4 RESET MODES: N.C.R 000.000 ~ 999.999S ADJUSTABLE FOR AUTO RESET C.R. MODES

5 OFFSET(OFS) LOADING: 0 ~ 999999. COUNTER START FROM OFST, INSTEAD OF 0 WHEN MANUAL RESET THE COUNTER

6 GATE IN: COUNTING INHIBIT

7 DECIMAL POINT: 3 POSITIONS FOR PV, P1, P2, OFST. HOLD [<] USE [uR] TO SELECT DP

8 MINUS(-) SIGN: THE DP OF LEAST SIGNIFICANT DIGIT ACT AS A MINUS (-) SIGN WHEN CP1 LEADING BECOME LAGGING AND DRIVE COUNTER BEYOND 0. PRESET ABSOLUTE PV ONLY & DON'T CARE OF MINUS (-) SIGN.

* TIMER

- 1 4 TIMER RANGES & ACCURACY: (AT 25oC)
 - 1) 9999H59M: +-0.1S+-50PPM/oC
 - 2) 9999M59S: +-1mS+-50PPM/oC
 - 3) 99999.9S: +-1mS+-50PPM/oC
 - 4) 999.999S: +-1mS+-50PPM/oC
- 2 1 OR 2 PRESET OR TWIN PRESET RE-CYCLE TIMER (FIG 2) OR INDICATION ONLY
- 3 OFFSET(OFST) LOADING: 0~999999. TIMER START FROM OFST, INSTEAD OF 0 WHEN MANUAL RESET THE TIMER
- 4 RESET MODES: N.C.R 000.000~999.999S ADJUSTABLE FOR AUTO RESET C.R. MODES
- 5 GATE IN: TIMING INHIBIT

■ 3 MODELS PROGRAMMING (FOR COUNTER/TIMER ONLY, USE [<]+[^]) FIG 1~2

- 1 HOLD SHIFT [<] THEN PRESS UP [^] TO MODEL DISPLAY.
- 2 USE UP [^] TO SELECT PROPER MODEL.
- NOTE:1) NO MODEL'S DISPLAY IF OPTION OF C.T./R AT R INTERNALLY(MINI JUMPER)
- 3 PRESS [M] TO PV AFTER MODEL SELECTED.

* MODELS PROGRAMMING FIG 1

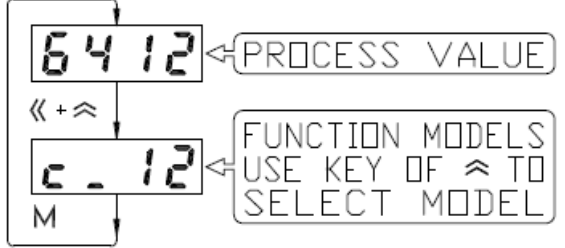


FIG 1B

TYPE	2P	1P	0P	PRESET NOS.	
				6D	FUNCTION DESCRIPTION
CT_-	6D2	6D1	6D0	6D	FUNCTION DESCRIPTION
FUNCTION SYMBOLS	c.12	c.1.	c.---	ONE WAY IN	
	c112	c11.	c1.-	PHASE IN x1	
	c412	c41.	c4.-	PHASE IN x4	
	t.12	t.1.	t.---	TIMER	
	tt12			TWIN TIMER	

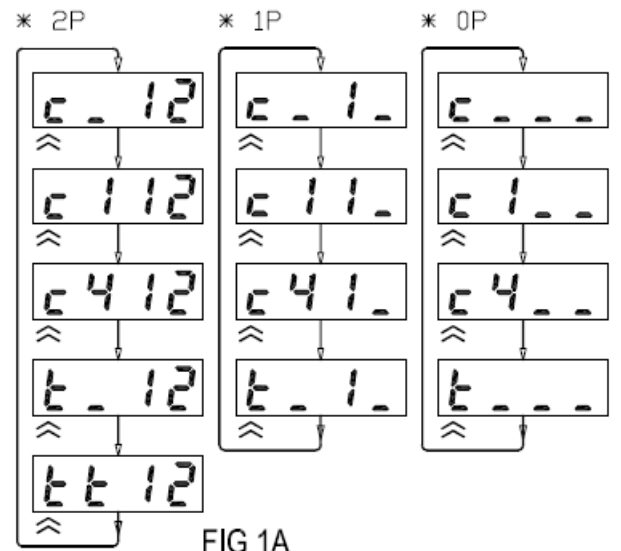


FIG 1A

FIG 1C c112 c11. c1.-

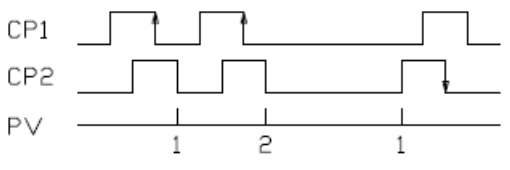


FIG 1D c412 c41. c4.-

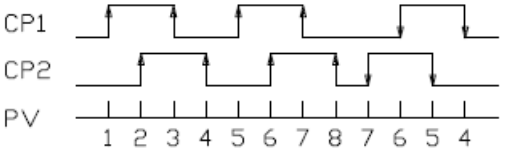
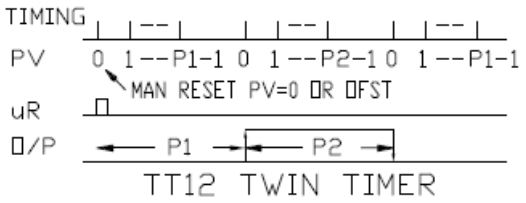


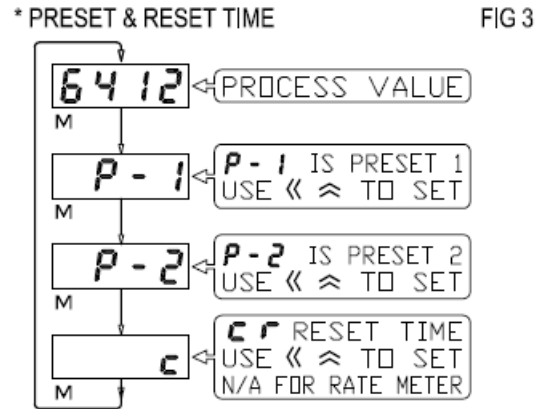
FIG 2 tt12



TT12 TWIN TIMER

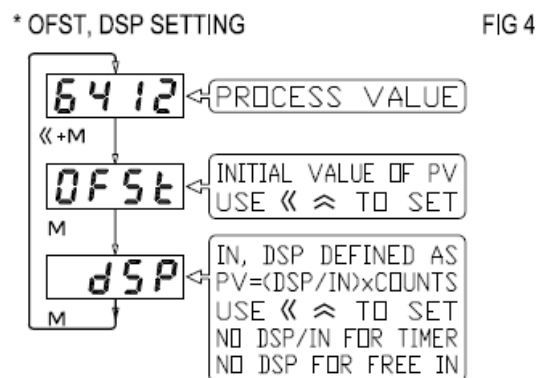
4 PRESET & RESET TIME (FOR P1,P2 & AUTO RESET MODE C,R) FIG.3

- 1 PRESS [M]. DISPLAY FROM PV TO PATTERN & NUMERAL OF P1(SWAP AT 3S)
 - 2 USE SHIFT [<] TO SELECT DIGIT, THE SELECTED DIGIT WILL FLASH.
 - 3 USE UP [^] TO SET REQUIRED NUMERAL.
 - 4 PERFORM STEP 2,3 FOR ALL DIGITS OF P1
 - 5 PRESS [M] AFTER SETTING AND TO P2.
DISPLAY TO PATTERN & NUMERAL OF P2
 - 6 PERFORM STEP 2,3 FOR ALL DIGITS OF P2
 - 7 PRESS [M] AFTER SETTING AND TO C OR R.
DISPLAY TO PATTERN & NUMERAL OF C (R)
 - 8 REPEAT STEP 2,3 FOR ALL DIGITS OF C(R)
- * NO RESET TIME IF SELECT N MODE
 - * NO NCR FOR RATE/RPM METER
- 9 PRESS [M] AFTER SETTING AND TO PV



5 OFST, IN & DSP SETTING (FOR RATE/RPM METER ONLY) FIG 4

- 1 HOLD [<] THEN [M]. DISPLAY FROM PV TO OFST. PATTERN, NUMERAL SWAP AT 3S.
- 2 USE SHIFT [<] TO SELECT DIGIT, SELECTED DIGIT WILL FLASH.
- 3 USE UP [^] TO SET REQUIRED NUMERAL.
- 4 REPEAT STEP 2,3 FOR ALL DIGITS OF OFST.
- 5 PRESS [M] AFTER SETTING AND TO IN.
DISPLAY TO PATTERN & NUMERAL OF IN.
- 6 PERFORM STEP 2,3 FOR ALL DIGITS OF IN
- 7 PRESS [M] AFTER SETTING AND TO DSP.



* OFST=OFFSET, AFTER MANUAL RESET, COUNTER/TIMER BE LOADED A VALUE OF OFST, AND START FROM THIS OFST. USE OFST TO ALIGN COUNTER, TIMER FOR INITIAL POINT.

* DSP (TO FORM A PRE SCALE. DEFINED AS PV=DSP x COUNT. N/A FOR TIMER)
FOR COUNTER: IN IS N/A & DESIGN IN=1. DSP NOT APPLICABLE FOR FREE INPUT
DSP=DISPLAY VALUE OF 1 COUNT, EACH INCREMENT OR DECREMENT WITH DSP VALUE.
USE DSP TO MEASURE THE TRUE MAXIMUM ACCURATE OF ENGINEER'S UNIT OF COUNT, SUCH AS LENGTH, VOLUME, QUANTITY & ETC.

6 COUNT SPEED & NCR FIG 5~8.

- 1 HOLD UP [^] THEN PRESS [M].
DISPLAY TO PATTERN & PATTERNS OF COUNT SPEED AND SWAP AT 3S.
- 2 USE UP [^] TO SELECT COUNT SPEED. 4 COUNTING SPEEDS
- 3 PRESS [M] TO NCR. DISPLAY TO PATTERN & PATTERNS OF NCR
- 4 USE UP [^] TO SELECT N.C.R.
- 5 PRESS [M] TO PV DISPLAY

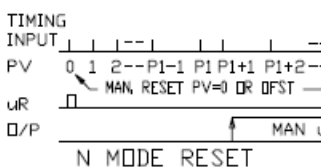
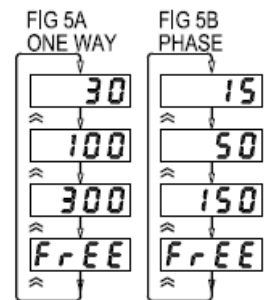
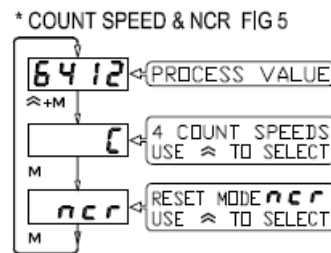


FIG 6

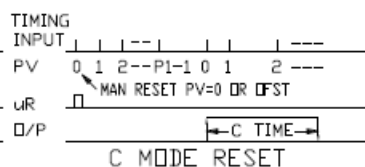


FIG 7

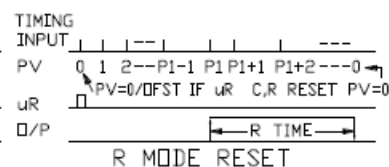


FIG 8

7 TIMER RANGE & NCR SELECT FIG 9

- 1 HOLD UP [^] THEN PRESS [M]. DISPLAY TO PATTERN & PATTERNS OF TIMER RANGE. PATTERN & PATTERNS SWAP AT 3S.
- 2 USE UP [^] TO SELECT TIMER RANGE. 4 TIMER RANGES AVAILABLE FIG 9A
- 3 PRESS [M] TO NCR. DISPLAY FROM TIMER RANGE TO PATTERN & PATTERNS OF NCR
- 4 USE UP [^] TO SELECT 1 OF N.C.R MODE.
- 5 PRESS [M] TO PV DISPLAY

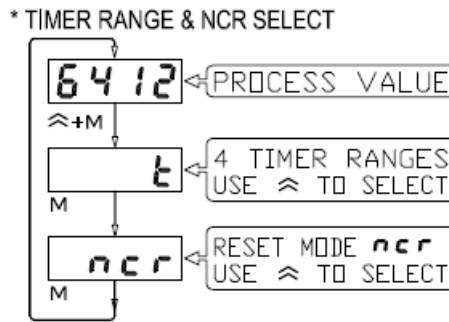


FIG 9

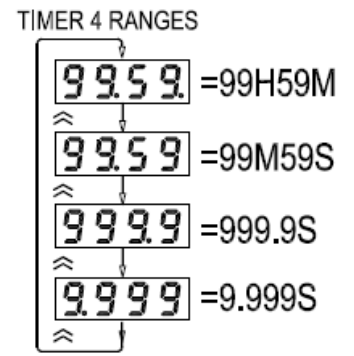


FIG 9A

8 CONNECTION DIAGRAMS

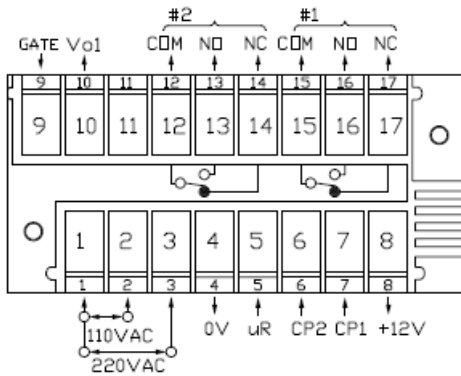


FIG 11 FOR CT1-

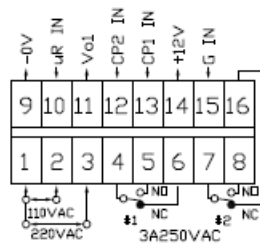


FIG 11A FOR CT3-

9 DIMENSIONS (mm)

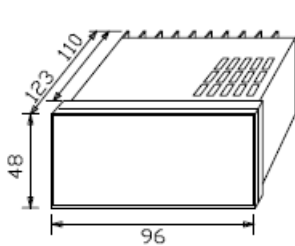


FIG 12

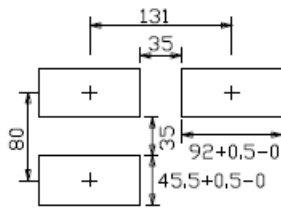


FIG 13

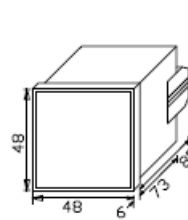


FIG 14

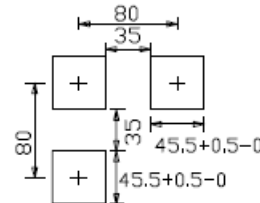


FIG 15

10 ORDERING INFORMATIONS

CT1-6D2-52

- 1=110V, 2=240V, 4=24V
- 6=60HZ, 5=50HZ, 7=DC
- 2=2 PRESET, 1=1 PRESET, 0=NO PRESET
- 6D=6 DIGITS, 4D=4 DIGITS
- 1=H48xW96mm, 2=72x72mm, 3=48x48mm
- TYPE NO, COUNTER/TIMER