

USER'S OPERATING MANUAL FOR DIGITAL PRESET TIMER COUNTER

(Models: Cx-408 / Cx-728 / Cx-928)



Cx-408
(48 X 48)



Cx-728
(72 X 72)



Cx-928
(96 X 96)

SPECIFICATIONS :

Display : Dual 4 Digit 7-segment LED,

Model no.	Cx-408	Cx-728	Cx-928	Display Colour
Display height (PV)	0.36"	0.56"	0.56"	White
Display height (SV)	0.24"	0.39"	0.39"	Green

Status Indication : a] Relay status (1 / 2)
b] Time Unit (H / M / S)

Control Inputs : a] Count Input (For Counter)
b] Start Input (For Timer)
b] Reset Input

Reset time : < 100 ms

Timing Accuracy : 0.05% Full Scale

Repeat Accuracy : 0.01%

Outputs : 5 Amp @ 230VAC Relay (1C/O) x 2

Reset : a] Front switch (Programmable)
b] Remote Reset (via rear terminals)
C] At On power (Programmable)

Supply : 90 to 270 VAC

Mounting : Panel

Housing : ABS Plastic

Operating temp. : 0 ~ 50° C

Humidity : 95% Rh (Non Condensing).

Configurable Parameters:

Mode : a] Counter
b] Timer

Counter Parameters :

Count Input : AC / DC
Count Frequency : Various selectable frequencies
(For DC Input only)
Count direction : Up / Down
Function : On Delay / Off Delay

Timer Parameters :

Count direction : Up / Down
Timer Start : Various selectable start mode
Timer Function : a] ON / OFF delay b] Cyclic mode
Output 2 Function : a] Auxiliary b] End of Cycle (EOC)
c] Off d] Invert
e] Pre Setpoint

INSTALLATION GUIDELINES

1. Prepare the cut-out with proper dimension as shown in figure.
2. Remove clamp from Controller.
3. Push the Timer through panel cut-out and secure the Controller in its place by tightening the side clamp.

SAFETY INSTRUCTION

MECHANICAL

- ❖ Ambient temperature and relative humidity surrounding the Controller must not exceed the maximum specified limits.
- ❖ The Controller in its installed state must be protected against excessive electrostatic or electromagnetic interferences.

ELECTRICAL

- ❖ The Controller must be wired as per wiring diagram & it must comply with local electrical regulation.
- ❖ The Electrical noise generated by switching inductive loads might create momentary Fluctuation in display, latch up, data loss or permanent damage to the instrument. To reduce this use snubber circuit across the load.

Table No.1
Timer Range & Resolution

Display	Description
	TIMER RANGE & RESOLUTION : Range : 99.99 Sec. Resolution : 0.01 Sec.
	Range : 999.9 Sec. Resolution : 0.1 Sec.
	Range : 9999 Sec. Resolution : 1 Sec.
	Range : 99 Min. 59 Sec. Resolution : 1 Sec.
	Range : 999.9 Min. Resolution : 0.1 Min.
	Range : 9999 Min Resolution : 1 Min.
	Range : 99 Hrs. 59 Min. Resolution : 1 Min.
	Range : 999.9 Hrs. Resolution : 0.1 Hrs.
	Range : 9999 Hrs. Resolution : 1 Hrs.

PROGRAMMING

Press and Hold 'SET' Key for 5 Sec. at Power On.



To access User List Press 'SET' Key
To access View List Press and Release 'Shift' Key Once.

Press and Hold 'Set & Up' Key for 5 Sec. at Power On.

Press and Hold 'SET' Key for 5 Sec. at Power On.

To access User List Press and Release 'SET' Key Once.

Configuration			
Display	Default	Parameter Name	Range
LoCP	0015	Lock Code	1 ~ 9999
ModE	Cnt	Mode Selection	Cnt, Time
ULCP	0015	User Lock Code	1 ~ 9999

Programming as Timer Mode			
Configuration			
Display	Default	Parameter Name	Range
Fn	On	Timer Function	On, Off, CYC1, CYC2, CYC3, CYC4
rnc1	9999 Sec.	Range 1	Ref. Table 1
# rnc2	9999 Sec.	Range 2	Ref. Table 1
x HdrG	9999 Sec.	Setpoint 2	Ref. Table 1
dir	UP	Timer Direction	Up, Down
tSt	PSt	Timer Start	p.st, f.st, r.etp, r.etn, r.elo, r.elc
+ tM	Rrt	Timer Mode	A.r, LO
# rCYC	Cont.	Repeat Cycle	Count, NC, TOT
x StC3	Hold	Start Cycle 3 From	Hold, Forward
x Hold	Enbl	Hold Time	Enable, Disable
■ GRtE	Enbl	Gate Input	Enable, Disable
FrSt	Enbl	Front Reset	Enable, Disable
nEn	Enbl	Memory Backup	Enable, Disable
↑ 2-Fn	RUC	Output 2 Function	OFF, AUX1, EOC, Invert, Pre SP
St.dL	Enbl	Startup Delay	Enable, Disable
▶ t.dLY	100	Startup Delay Time	0.1 ~ 999.9 Sec.

Timer Mode User List			
a For ON & OFF Delay Mode			
Display	Default	Parameter Name	Range
St1	010	Set Time 1	0.01 Sec ~ 9999 Hrs
St2	009	Set Time 2	0.01 Sec ~ 9999 Hrs
⊗ EoC	5.0	EOC Time	0.01 Sec ~ 9999 Hrs

b For CY1 & CY2 Delay Mode			
Display	Default	Parameter Name	Range
tOn	010	Set Time 1	0.01 Sec ~ 9999 Hrs
tOFF	010	Set Time 2	0.01 Sec ~ 9999 Hrs
◆ nC	5	EOC Time	1 ~ 9999
▲ tOt	15	Total Time	1 ~ 9999 Min

c For CY3			
Display	Default	Parameter Name	Range
Hold	5.0	Hold Time	0.01 Sec ~ 9999 Hrs
FrYd	5.0	Forward Time	0.01 Sec ~ 9999 Hrs
rEv	5.0	Reverse Time	0.01 Sec ~ 9999 Hrs
◆ nC	5	Number of Cycles	1 ~ 9999
▲ tOt	15	Total Time	1 ~ 9999 Min

d For CY4			
Display	Default	Parameter Name	Range
SP1	5.0	Control Setpoint	0.01 Sec ~ 9999 Hrs
SP2	5.0	Ramp Rate	0.01 Sec ~ 9999 Hrs
◆ nC	5	Number Of Cycles	1 ~ 9999
▲ tOt	15	Total Time	1 ~ 9999 Min

Counter Mode User List			
Display	Default	Parameter Name	Range
Scnt	0005	Set Count	1 ~ 9999
Sc2	0005	Set Count 2	1 ~ 9999
SbCH	0005	Set Batch	1 ~ 9999
rt	0050	Auto Reset Time	0.1 ~ 999.9 Sec

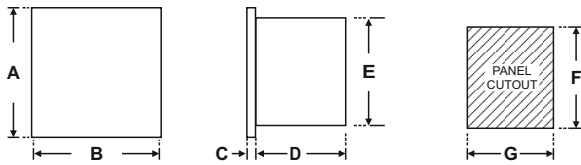
Counter Mode View List			
Display	Default	Parameter Name	Range
bCnt	0005	Batch View	—

Parameter will display according to below symbols	
●	Count Input = DC
★	DIP = UP
#	FN = CYC1, CYC2, CYC3, CYC4
x	FN = CYC3
+	T.ST ≠ P.ST
■	T.ST = P.ST, F.ST
↑	FN ≠ CYC3
▶	ST.DL = Enable
◆	R.CYC = NC
▲	R.CYC = TOT
⊗	2-FN = EOC

Programming as Counter Mode			
Configuration			
Display	Default	Parameter Name	Range
LinP	dC	Count Input Type	AC, DC
● FrE9	nEd	Input Frequency	V.Low, Low, Medi, High, V.High
1-Fn	On	Output 1 Function	On, Off
dir	UP	Count Direction	Up, Down
cn	Lo	Counter Mode	LO, ArSt, TPR
★ QrUn	Enbl	Over Run Mode	Enable, Disable
FrE	Enbl	Front Reset	Enable, Disable
nEn	Enbl	Memory Backup	Enable, Disable
SdP	0000	Select Decimal Point	0000., 000.0, 00.00, 0.000
FRct	0001	Scale Factor	Enable, Disable
rES	0000	Resolution	0000., 000.0, 00.00, 0.000
2-Fn	RUC	Output 2 Function	Off, Aux1, Batch, Invert, Pre SP

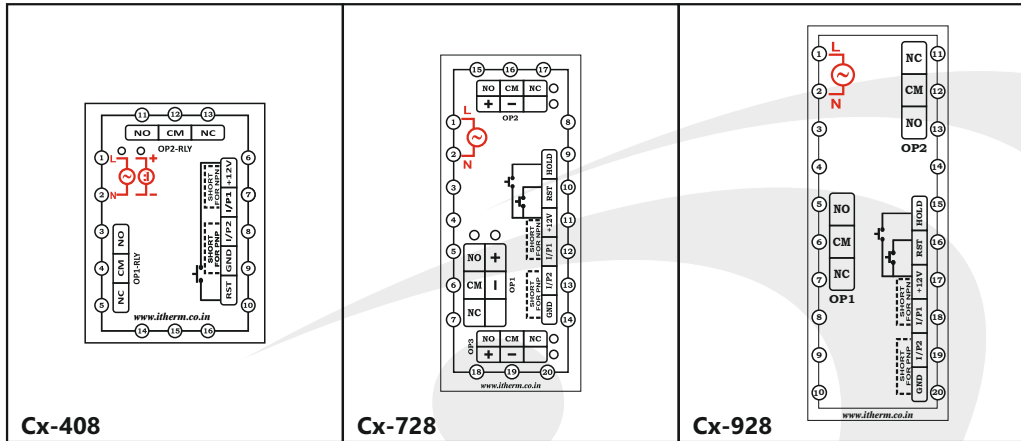
OVER ALL DIMENSIONS & PANEL CUT OUT (IN MM)

Model : Cx-408 / Cx-728 / Cx-928



Dim Model	A	B	C	D	E	F	G
Cx-408	50	50	3	70	45	45	45
Cx-728	73	73	3	59	68	68	68
Cx-928	96	50	3	90	90	68	68

TERMINAL CONNECTIONS :



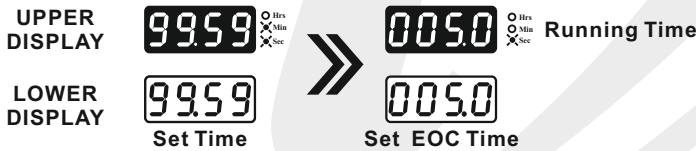
Cx-408

Cx-728

Cx-928

Run Mode

a) For On & Off Delay Mode:



a) For Cyclic Mode:





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