USER'S OPERATING MANUAL FOR CTR
(Models: CTR - 33 / 44 / 77 / 88 / 99)

CTR - 33
(36 X 72)

CTR - 44
(48 X 48)

CTR - 77
(72 X 72)

CTR - 88
(48 X 96)

CTR - 99
(96 X 96)

Specification:-

Display : 6 Digit, 7 segment LED (Bright White)

Model No.	CTR-33	CTR-44	CTR-88	CTR-77	CTR-99	Display Color
Display Height	0.39"	0.30"	0.56"	0.39"	0.56"	White

Control Input : a) Proximity Switch (PNP / NPN)
b) Potential free contact (Limit switch)
c) 230VAC input pulse (Optional)

Reset : a) Front Key (Programmable)
b) Remote Reset (Via Rear terminals)

Setting : Through Keyboard

Memory : Non Volatile (Flash)

Memory Retention: Up to 10 Years

Mains Supply : 90 to 270VAC

Sensor Supply : 12VDC (±10%) @ 30mA

Accuracy : 0.05% FSD

Mounting: Panel Mounting

Housing : Abs Plastic

Operating Temp. : 0 to 55°C

Relative Humidity : Below 95% RH (Non Condensing)

Dimensions : See Table no.1 on Page 2

Configuration Parameter:-

Type : a) As Event Counter
b) As Time Totaliser
c) As Rate Indicator

Range : a) AC / DC (Selective) (For Event Counter)
b) Auto / Manual (Selective)
(For Time Totaliser & Rate Indicator)

Resolution : a) 0.01 b) 0.1 c) 1 (For Rate Indicator)

Max. Range : a) 1 to 999999 Counts(For Counter)
b) See Table 2 (For Time Totaliser)
c) 4 to 9999 RPM (For rate Indicator)

Front Reset : Enable / Disable (Selective)

Memory : Enable / Disable (Selective)

Hold : Enable / Disable (Selective) (Optional)

Leading Zero : Enable / Disable (Selective)

Scalar : Multiply / Division (Selective) (for Counter)

Filter : 1 to 10 (Selective) (for Rate Indicator)

Ratio : 1 to 99 (Selective) (for Rate indicator)

SAFETY INSTRUCTION

This controller is meant for Counter, Timer & Rate Indicator applications. It is important to read the manual prior to installing or commissioning of controller. All safety related instruction appearing in this manual must be followed to ensure safety of the operating personnel as well as the instrument.

GENERAL

- The Controller must be configured correctly for intended operation. Incorrect configuration could result in damage to the equipment or the process under control or it may lead personnel injury.
- The Controller is generally part of control panel and in such a case the terminals should not remain accessible to the user after installation.

MECHANICAL

- The Controller in its installed state must not come in close proximity to any corrosive/combustible gases, caustic vapors, oils, steam or any other process by products.
- The Controller in its installed state should not be exposed to carbon dust, salt air, direct sunlight.
- Ambient temperature and relative humidity surrounding the Controller must not exceed the maximum specified limit for proper operation.
- The Controller in its installed state must be protected against electromagnetic interferences. Ventilation holes provided on the chassis of the instrument are meant for thermal dissipation hence should not be obstructed in the panel.

ELECTRICAL

- The Controller must be wired as per wiring diagram & it must comply with local electrical regulation.
- Care must be taken not to connect AC supplies to low voltage sensor input.
- Circuit breaker or mains s/w with fuse (275V/1A) must be installed between power supply and supply terminals to protect the Controller from any possible damage due to high voltage surges of extended duration.
- Circuit breaker and appropriate fuses must be used for driving high voltage loads to protect the Controller from any possible damage due to short circuit on loads.
- To minimize pickup of electrical noise, the wiring for low voltage DC and sensor input must be routed away from high current power cables. Where it is impractical to do this, use shielded ground at both ends.
- The Controller should not be wired to a 3-Phase supply with unearthed star connection. Under fault condition such supply could rise above 264 VAC which will damage the Controller.
- The Electrical noise generated by switching inductive loads might create momentary Fluctuation in display, alarm latch up, data loss or permanent damage to the instrument. To reduce this use snubber circuit across the load.

Press and Hold RST Key for 3 Sec. at Power On

Programming

Display	Default	Parameter Name	Range
tYPE	Count	Type	Count, Time, Rate

Type	=	Event Counter →	A
Type	=	Time Totaliser →	B
Type	=	Rate Indicator →	C

A — CTR as Event Counter

Display	Default	Parameter Name	Range
C InPUt	dC	Count Type	AC , DC
# FrEq	03Hz	Input Frequency	30Hz , 1KHz , 100Hz , 2.5KHz
F.rESEt	EnbL	Front Reset	Enable, Disable
mEmorY	EnbL	Memory	Enable, Disable
HOLd	dSbL	Hold Input	Enable, Disable
LEAd-0	EnbL	Leading Zero	Enable, Disable
ScALAr	mUL	Scaler	Multiply, Divison
FActor	01	Factore	1 ~ 99

B — CTR as Time Totaliser

Display	Default	Parameter Name	Range
trAnGE	Auto	Time Range	Auto, Manual
mrAnGE	999999	Manual Time Range	Ref. Table 1
F.rESEt	EnbL	Front Reset	Enable, Disable
mEmorY	EnbL	Memory	Enable, Disable
LEAd-0	EnbL	Leading Zero	Enable, Disable

C — CTR as Rate Indicator

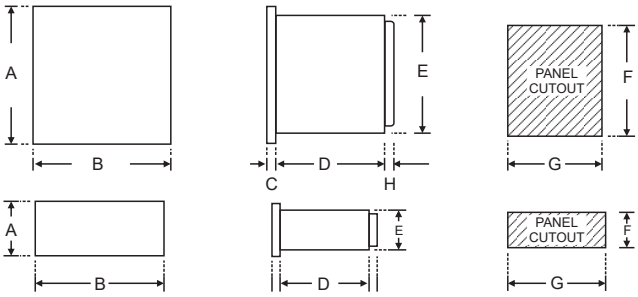
Display	Default	Parameter Name	Range
rAnGE	Auto	Time Range	Auto, Manual
* rESL.	0.1	Resolution	0.01, 0.1, 1
LEAd-0	EnbL	Leading Zero	Enable, Disable
FilEr	01	Filter	1 ~ 20
rAtio	01	Ratio	1 ~ 99

Parameter will display according to below symbols	
#	C.Input = DC
*	Range = Manual

Mechanical Installation :-

Over all Dimensions & Panel Cutout in “mm”.

MODEL:- CTR-33 / CTR-44 / CTR-77 / CTR-88 / CTR-99



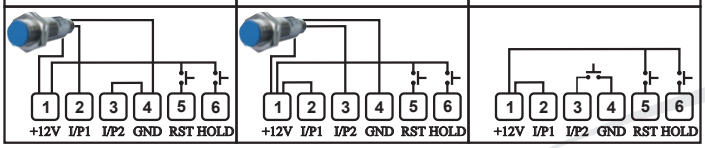
Over all Dimensions:-

Model \ Dim	A	B	C	D	E	F	G	H
CTR - 33	36	72	5	64	21	32	68	9
CTR - 44	48	48	8	75	43	44	44	9
CTR - 77	72	72	10	65	66	68	68	9
CTR - 88	48	96	10	45	43	44	92	9
CTR - 99	96	96	10	45	89	92	92	9

Typical Application:-

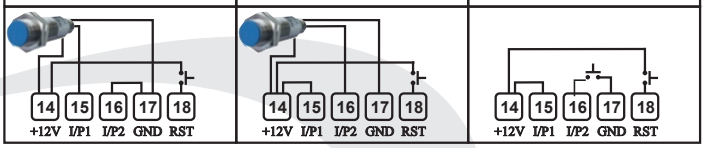
CTR-33 / CTR-44 / CTR-77 / CTR-99

Proximity (PNP)	Proximity (NPN)	Contact Switch



CTR-88

Proximity (PNP)	Proximity (NPN)	Contact Switch



Reset Function:-

Event Counter	Time Totaliser	Function
Actual Count 632457 After Reset Display RESET to Zero 0	Hrs Min Sec 632457 After Reset Display RESET to Zero Hrs Min Sec 0	**Note**:- (a) If Reset key is pressed & Front reset is enable Display will Reset to Zero. (b) Via rear Reset Terminal Display will Reset to Zero.

Hold Function:-

Error Message	HOLd 123456	If Hold input is Enabled and Hold terminal is closed at rare. Counting will be Hold & Error message will be displayed with the last count until error is corrected.

Table 1:-

Range No.	Range	Resolution
1	9999.99 s	0.01 sec
2	99999.9 s	0.1 sec
3	999999 s	1 sec
4	9999 m 59 s	1 sec
5	99999.9 m	0.1 min
6	999999 m	1 min
7	99 h 59 m 59 s	1 sec
8	9999 h 59 m	1 min
9	99999.9 h	0.1 hrs
10	999999 h	1 hrs

Leading Zero Function:-

Leading Zero Enable	Leading Zero Disable
000123	123

EL21 SYSTEMS
+91 98249 51027
el21systems@gmail.com
Block No. 569, Plot No. 7/A, First Floor Shop, Behind Ice Factory, Near. Swaminarayan Temple,Palsana Chokdi, Palsana, N.H.53, Surat-394 315
www.el21systems.com