

MODEL CUB3L & CUB3LR - General Purpose, Miniature Electronic Counters With Lithium Battery - Economical Replacement For Electro-Mechanical Counters



- WIDE TEMPERATURE RANGE (-30° to +75°C)
- IDEAL FOR PORTABLE, MOBILE, OR STATIONARY INDUSTRIAL APPLICATIONS
- AVAILABLE IN TWO VERSIONS:
FRONT PANEL RESET OR REMOTE RESET
- LOW COST/HIGH PERFORMANCE
- OPERATES FROM SWITCH CONTACT OR OPEN COLLECTOR INPUTS
- PROVIDES YEARS OF SILENT OPERATION WITHOUT MECHANICAL WEAR
- SELF POWERED, ELIMINATES POWER WIRING
- BUILT-IN STRAIN RELIEF
- EASY SNAP-IN MOUNTING IN 1" X 2" (25 mm x 50 mm) PANEL OPENING



DESCRIPTION

The CUB3Ls are miniature electronic counters. The CUB3L has front panel reset, while the CUB3LR has remote reset. These units fill a wide variety of applications.

The CUB3Ls feature a rugged reinforced nylon case that snap-fits into a standard rectangular opening without screws or other hardware. Hook-up is simply a matter of connecting two wires, and since the operating voltage is only 3 V and with currents in microamps, almost any kind of wire can be used. No external power is required since the internal batteries provide years of uninterrupted service. In addition to these advantages, the CUB3Ls offer the inherent ruggedness, reliability, and permanence of completely integrated circuitry, embedded in a single monolithic, silicon, micro-chip.

SAFETY SUMMARY

All safety related regulations, local codes and instructions that appear in the manual or on equipment must be observed to ensure personal safety and to prevent damage to either the instrument or equipment connected to it. If equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.



CAUTION: Read complete instructions prior to installation and operation of the unit.

WARNING: Lithium battery may explode if incinerated. Signal input voltage should not exceed 3.0 VDC to prevent damage to the battery.

ORDERING INFORMATION

| MODEL NO. | DESCRIPTION | PART NUMBERS |
|-----------|--|--------------|
| CUB3L | CUB3L (Front Panel Reset Only) w/Lith Bat. | CUB3L000 |
| CUB3LR | CUB3LR (Remote Reset Only) w/Lith Bat. | CUB3LR00 |

SPECIFICATIONS

1. **DISPLAY:** 6-Digit, LCD, 0.2" (5.1 mm) High.
2. **POWER:** 3 V supplied by a lithium battery. Nominal battery life 10 years, depending on usage.
3. **RESET:**
 - CUB3L** - Via front panel reset button only.
 - CUB3LR** - (Remote Reset Only) Switch Contact or Solid State Transistor Switch (See Connections). Contact burden 14 μ A; Max. OFF-State leakage current must be less than 2 μ A. Counter resets with negative pulse on a min. pulse width of 5 msec.
4. **COUNT INPUT:** Switch Contact or Solid-State Transistor Switch (See Connections). Contact burden 14 μ A; Max. OFF-State leakage current must be less than 2 μ A. Counter increments on negative going edge of input.
5. **COUNT SPEED:** 100 counts/sec (6000 counts/min). Min. input pulse width 5 msec, with 5 msec spacing between count pulses.
6. **ENVIRONMENTAL CONDITIONS:**
 - Operating Temperature:** -30° to +75°C
 - Storage Temperature:** -40° to +80°C
 - Operating and Storage Humidity:** 85% max. relative humidity (non-condensing) from 0°C to 50°C.
 - Altitude:** Up to 2000 meters
7. **CERTIFICATIONS AND COMPLIANCES:**

SAFETY

IEC 1010-1, EN 61010-1: Safety requirements for electrical equipment for measurement, control, and laboratory use, Part 1.

ELECTROMAGNETIC COMPATIBILITY

Immunity to EN 50082-2

| | | |
|-----------------------------------|--------------|---|
| Electrostatic discharge | EN 61000-4-2 | Level 2; 4 Kv contact Level 3; 8 Kv air |
| Electromagnetic RF fields | EN 61000-4-3 | Level 3; 10 V/m 80 MHz - 1 GHz |
| Fast transients (burst) | EN 61000-4-4 | Level 4; 2 Kv I/O |
| RF conducted interference | EN 61000-4-6 | Level 3; 10 V/rms 150 KHz - 80 MHz |
| Power frequency magnetic fields | EN 61000-4-8 | Level 4; 30 A/m |
| Simulation of cordless telephones | ENV 50204 | Level 3; 10 V/m 900 MHz, \pm 5 MHz 200 Hz, 50% duty cycle |

Emissions to EN 50081-2

| | | |
|-----------------|----------|-------------------|
| RF interference | EN 55011 | Enclosure class B |
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Note:

Refer to the EMC Compliance Installation section of this bulletin for additional information.

8. **CONSTRUCTION:** Installation Category I, Pollution Degree 2
9. **WEIGHT:** 3 oz. (85 g) [less batteries]