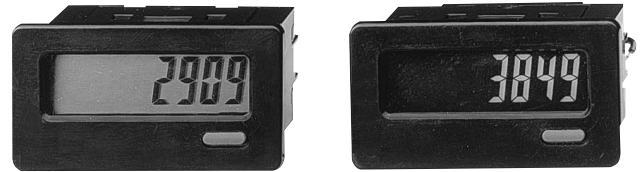




MODEL CUB7 - MINIATURE ELECTRONIC 8 DIGIT COUNTER

- LCD, REFLECTIVE OR TRANSMISSIVE WITH YELLOW/GREEN OR RED LED BACKLIGHTING (9-28 VDC power supply required for versions with LED backlighting)
- 0.35" (8.90 mm) HIGH DIGITS
- REPLACEABLE INTERNAL LITHIUM BATTERY PROVIDES UP TO 7 YEARS OF UNINTERRUPTED OPERATION (Battery included)
- NEMA 4X/IP65 SEALED FRONT BEZEL
- COUNT SPEEDS UP TO 10 KHz (CUB7)
- WIRE CONNECTION MADE VIA SCREW CLAMP TYPE TERMINALS
- FITS DIN STANDARD CUT-OUT 1.77" (45 mm) x 0.874" (22.2 mm)



DESCRIPTION

The CUB7 series is an 8-digit miniature counter with large 0.35 inch (8.90 mm) high digits. It has an LCD read-out available in Positive Image Reflective, Negative Image Transmissive with yellow/green backlighting or red backlighting. The backlight versions require an external 9 to 28 VDC power supply.

The CUB7 series use a CMOS LSI counter circuit chip, mounted on a gold-plated substrate, that is electrically connected by ultrasonic wire-bonding. Proven micro-electronic assembly and manufacturing techniques provide these units with the reliability and dependability required for industrial service.

The CUB7 series is housed in a lightweight, high impact plastic case with a clear viewing window. The sealed front panel with the silicone rubber reset button meets NEMA 4X/IP65 specifications for wash-down and/or dusty environments, when properly installed.

ORDERING INFORMATION

MODEL NO.	DESCRIPTION	PART NUMBERS
CUB7 *	Counter Positive Image Reflective	CUB70000
	Counter W/Yel-Grn Backlighting	CUB70010
	Counter W/Red Backlighting	CUB70020
BNL	3 V Lithium Battery	BNL10000

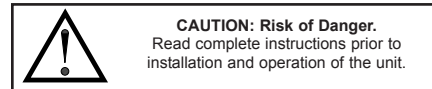
For more information on Pricing, Enclosures & Panel Mount Kits refer to the RLC Catalog or contact your local RLC distributor.

*Battery is included with unit.

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.

Do not use this unit to directly command motors, valves, or other actuators not equipped with safeguards. To do so, can be potentially harmful to persons or equipment in the event of a fault to the unit.

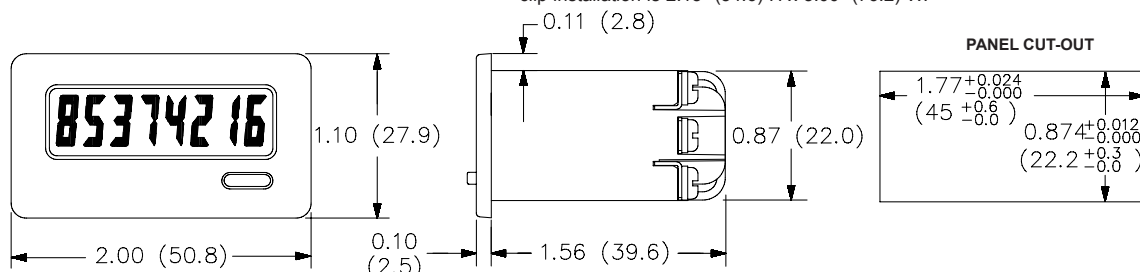


SPECIFICATIONS

- DISPLAY:** 8-digit LCD, 0.35" (8.90 mm) high digits.
- POWER SOURCE:** Replaceable Internal 3.0 V lithium battery to provide up to 7 years of continuous operation. (Battery life is dependent upon usage. Count and reset contacts that remain closed for long periods of time reduce battery life.)
- BACKLIGHT POWER REQUIREMENTS:** 9 to 28 VDC; 35 mA. typical, 50 mA max. Above 26 VDC, derate max. operating temperature to 40°C. Must use a Class 2 or SELV rated power supply.
- INPUTS:** V_{IL} (low) = 0.5 V max
 Low speed input: 30 Hz from switch contact or open collector transistor with 50% duty cycle
 High speed input: V_{IH} (high) = 2.0 V min. (3 V max). 10KHz max from 3.0 V bipolar output with a 50% duty cycle
- REMOTE RESET:** 15 msec min. pulse width (active low) from 3.0 V bipolar output, an open collector transistor, or a switch contact to common.

DIMENSIONS In inches (mm)

Note: Recommended minimum clearance (behind the panel) for mounting clip installation is 2.15" (54.6) H x 3.00" (76.2) W.



6. CERTIFICATIONS AND COMPLIANCES:

SAFETY

IEC 61010-1, EN 61010-1: Safety requirements for electrical equipment for measurement, control, and laboratory use, Part 1.
IP65 Enclosure rating (Face only), IEC 529
UL Listed, File # E137808, UL508, CSA C22.2 No. 14-M95
LISTED by Und. Lab. Inc. to U.S. and Canadian safety standards
Type 4X Indoor Enclosure rating (Face only), UL50

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 ¹ Level 3; 2 Kv power
RF conducted interference	EN 61000-4-6	Level 3; 10 V/rms ² 150 KHz - 80 MHz
Power frequency magnetic fields	EN 61000-4-8	Level 4; 30 A/m
Simulation of cordless telephone	ENV 50204	Level 3; 10 V/m 900 MHz ± 5 MHz 200 Hz, 50% duty cycle

Emissions to EN 50081-1

RF interference	EN 55022	Enclosure class B Power mains class B
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Notes:

1. Burst to DC backlight power had a power line filter installed RLC #LFIL0000 or equivalent at the unit.
2. Self-recoverable loss of performance during EMI disturbance at 10 V/rms to backlight power lines.
LCD segments may flicker during EMI disturbance.
For operation without loss of performance:
Install power line filter RLC #LFIL0000 or equivalent at the unit.
Refer to the EMC Installation Guidelines section of this bulletin for additional information.

7. ENVIRONMENTAL CONDITIONS:

Operating Temperature Range: 0 to 50°C Derate max. operating temperature to 40°C above 26 VDC. (Backlight versions)

Storage Temperature Range: -30 to 80°C

Operating and Storage Humidity: 85% max. (non-condensing) from 0°C to 50°C.

Altitude: Up to 2000 meters

8. CONNECTIONS: Wire clamping screw terminals

Wire Strip Length: 0.3" (7.5 mm)

Wire Gage: 30-14 AWG copper wire

Torque: 5 inch-lbs (0.565 N-m) max

9. CONSTRUCTION: High impact plastic case with clear viewing window. The front panel meets NEMA 4X/IP65 requirements for indoor use when properly installed. Installation Category I, Pollution Degree 2. Panel gasket and mounting clip included.

10. WEIGHT: 2 oz. (57 grams) [with battery]