



DIGITAL COUNTER ECXXX MANUAL

Operating Manual

Revision: **2.4**

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ELECTRO-MED



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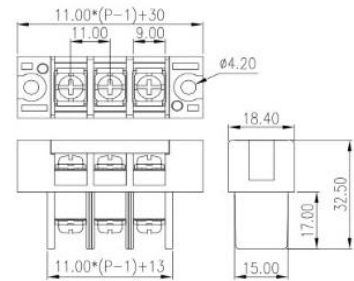
1 OVERVIEW



1.1 FEATURES

- Supports Potential Free Contact / PNP / NPN sensors / DC Pulse inputs.
- Customizable debounce time (0 to 100 ms) and minimum time between counts (0 to 10 minutes).
- Compatible with 12-24V DC signals.
- Over-voltage and reverse polarity protection.
- 1000 V AC isolation between input and internal circuitry.

1.2 CONNECTIONS



Input Signal:
Potential Free Contacts: NO COM

Power Supply
230VAC 50 Hz



2 DISPLAY SETTINGS

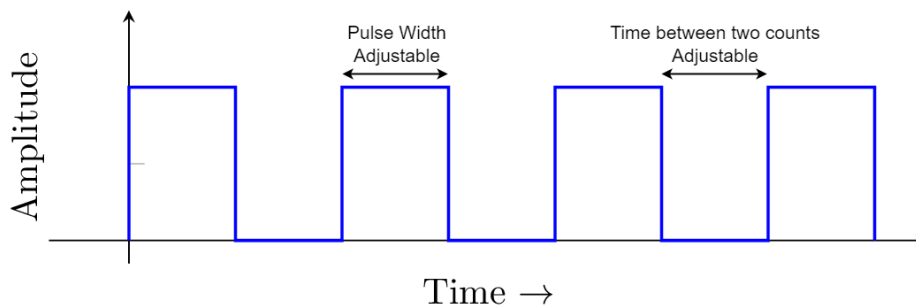
2.1 INITIAL COUNT SETTING

1. Display will show existing count
2. Press **DEC** button show **COUNT**
 - a. Press **Decr** for decrement
 - b. Press **Incr** for increment
 - c. Press **Esc** for next digit (left to right)
 - d. Press **Enter** to Save and Exit

(A)	ENTER
(B)	DCR
(C)	INCR
(D)	ESC

2.2 DELAY & PULSE WIDTH SETTING

Square wave



1. Press **Enter**
2. First, we set Time between two counts
3. Display will show **DELAY** (time between 2 pulses) (0 to 1000 sec)
4. Set the delay time (in sec) as follows
 - a. Press **Decr** for decrement
 - b. Press **Incr** for increment
 - c. Press **Enter** to Save and Exit
5. Second, we set Pulse Width
6. Display will show **PULSE** (pulse width in msec) (10 msec – 1000 msec)
7. Set the pulse value as follows:
 - a. Press **Decr** for decrement
 - b. Press **Incr** for increment
 - c. Press **Enter** to Save and Exit

3 TROUBLESHOOTING GUIDELINES

3.1.1 COUNTER NOT TURNING ON

#	POSSIBLE CAUSES	SOLUTION
1	Power supply not connected or faulty.	Verify the power connection.
2	Fuse blown.	Check and replace the fuse if necessary.
3	Internal wiring issue.	Contact technical support for internal wiring issues.

3.1.2 COUNTER NOT RESPONDING TO INPUT

#	POSSIBLE CAUSES	SOLUTION
1	Sensor or button malfunction	Inspect and test the sensor or button for functionality
2	Incorrect wiring of input devices	Ensure input devices are correctly wired as per the manual
3	Input configuration mismatch	Verify the input configuration in the setting menu.

3.1.3 INCORRECT COUNT DISPLAYED

#	POSSIBLE CAUSES	SOLUTION
1	Noise or interference in the input signal.	Use shielded cables to minimize interference
2	Faulty input device	Replace or repair the input device
3	Less or more counts displayed	Adjust time between pulses and delay settings

3.1.4 DISPLAY MALFUNCTIONING

#	POSSIBLE CAUSES	SOLUTION
1	Loose connection between display and the board.	Tighten the connections and ensure secure fitting.
2	Display module failure	Replace the display module if required.

4 GENERAL MAINTENANCE

Cleaning: Wipe the device with a soft, dry cloth to remove dust. Avoid using harsh chemicals or water directly on the unit.

Regular Inspections: Periodically check all connections, including power and input cables, for wear and tear. Replace any damaged components immediately.

Calibration: Verify the counter's accuracy periodically by comparing it with a standard reference. Readjust Pulse width and Time between intervals, if required.

5 POWER REQUIREMENTS

Input Voltage: Operates on 230V AC $\pm 10\%$, 50Hz. Ensure compatibility with the power supply.

Backup Power (if applicable): Use an uninterruptible power supply (UPS) to avoid interruptions during power failures.

6 ENVIRONMENTAL CONDITIONS

Operating Temperature: Designed to function between 0°C to 50°C. Avoid exposing the unit to extreme temperatures.

Humidity: Operates reliably in 20-80% relative humidity, non-condensing. Avoid exposure to excessive moisture.

Installation Location: Place the counter in a clean, dust-free environment. Avoid direct sunlight, vibrations, or proximity to high electromagnetic interference (EMI) sources.

7 SAFETY PRECAUTIONS

Electrical Safety: Ensure the unit is powered off and disconnected before servicing.

Handling: Avoid applying excessive force to buttons, connectors, or the casing.

Grounding: Always connect the unit to a properly grounded outlet.

8 CONTACT SUPPORT

If issues persist after troubleshooting, please contact Electromed Technical Support:

Phone: +91-9415085804

Email: support@electromed.com

Website: www.electromed.com