

1. Introduction

LP-Cator is universal indicator used with any transmitter, measuring any parameter like level, temperature, pressure & flow. It is directly powered through 4-20 mA loop and provide precise indication.

It is available in LED display with weatherproof enclosure and in LCD display with weather proof and ex-proof enclosure.



*LP- Cator-JA
IP65 Enclosure x LED Display*



*LP- Cator-JB
IP65 Enclosure x LCD Display*



Exd. Enclosure x LCD Display

2. Unpacking and Storage

- Ensure display unit received is correct as per PO and it is not physically damaged in transit.
- Techtrol products should preferably be stored in their original packing, wherever possible.
- It should be protected from dirt, rain, water leakage, contaminants, direct sunlight and severe weather conditions.
- Any damage caused to product due to inappropriate storage shall release Pune Techtrol Pvt. Ltd. of any obligations derived from warranty and product liability.

3. Installation

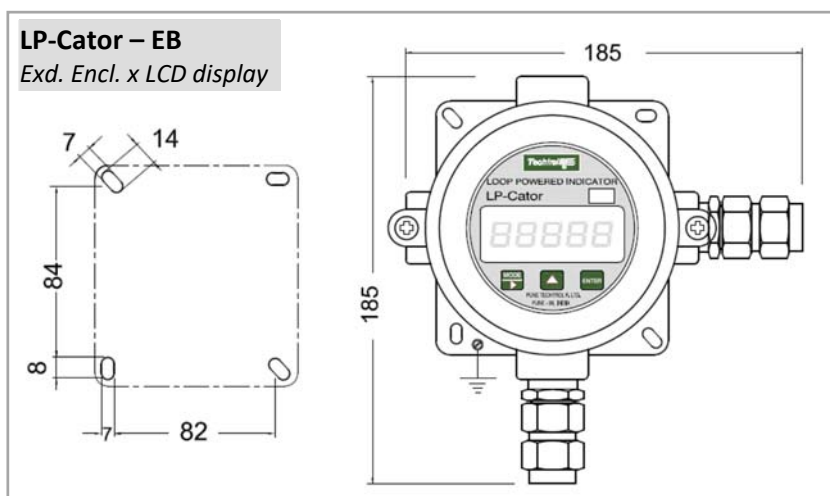
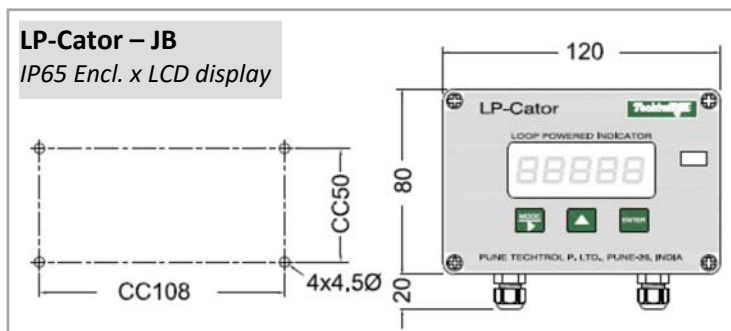
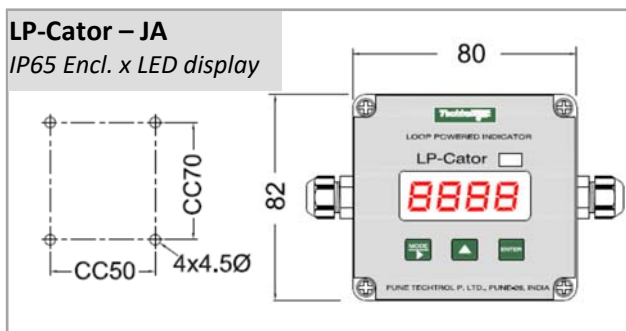
- Mount LP- Cator on identified location and secure it on four mounting holes.
- Please ensure -mounting surface should be flat and without vibration.
- Mounting location should be away from high voltage cables & contactor.
- The temperature of indicator location should be below rated temp (60°C)
- Where installed outdoor, it should be protected from direct sunlight using canopy



WARNING

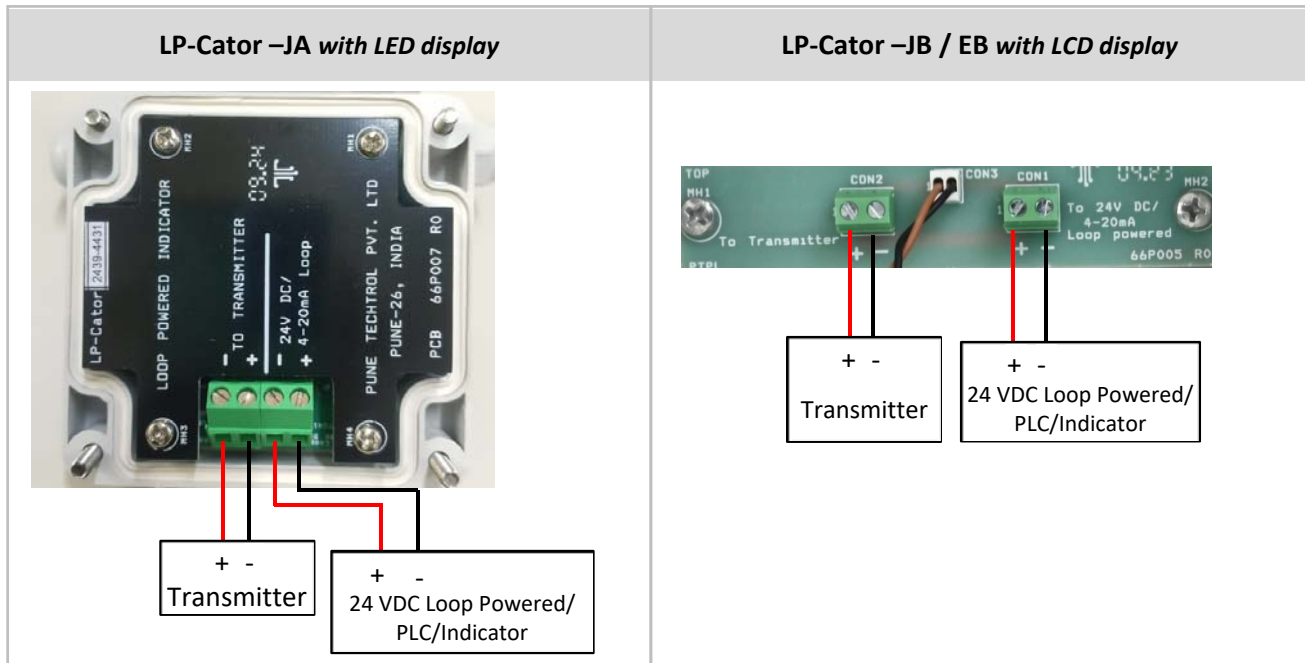
- Installation must be carried out by trained personnel.
- Use LP-Cator –EB with flameproof enclosure in hazardous area
- In '**hazardous locations**' do not open the enclosure cover before disconnecting switch from supply and carry out maintenance then after to prevent ignition/ explosion
- Don't disassemble, repair or modify the product without authorization
- Don't drop metal piece or lead wire scraps inside the enclosure, it may cause short circuit, fire or malfunction.

4. Mounting Dimensions



5. Termination & Wiring

- While wiring the indicator, power supply should be OFF.
- Connect 24 VDC loop supply from PLC/ DCS /Process indicator and transmitter to LP-Cator as shown in figure with correct polarity.



6. Precautions




- Wiring should run away from power cable, contactors or motors.
- Ensure enclosure is closed properly along with its gasket in place and there is no gap between cable OD and cable gland ID to maintain (IP65) weather proofness.
- Cable/wires from the enclosures should be routed downward to avoid seepage of water inside the enclosure
- Before switching on the supply, ensure wiring is correct and completed.
- In '**hazardous locations**' do not open the enclosure cover before disconnecting switch from supply and carry out maintenance then after to prevent ignition/ explosion.

7. Periodic Maintenance

- During maintenance, switch off the supply.
- Check and tighten loose electric connections
- After maintenance, close the enclosure properly with its cover and gasket for weather proofness.
- Clean internally to ensure, it is free from metallic particles and dust

8. Programming

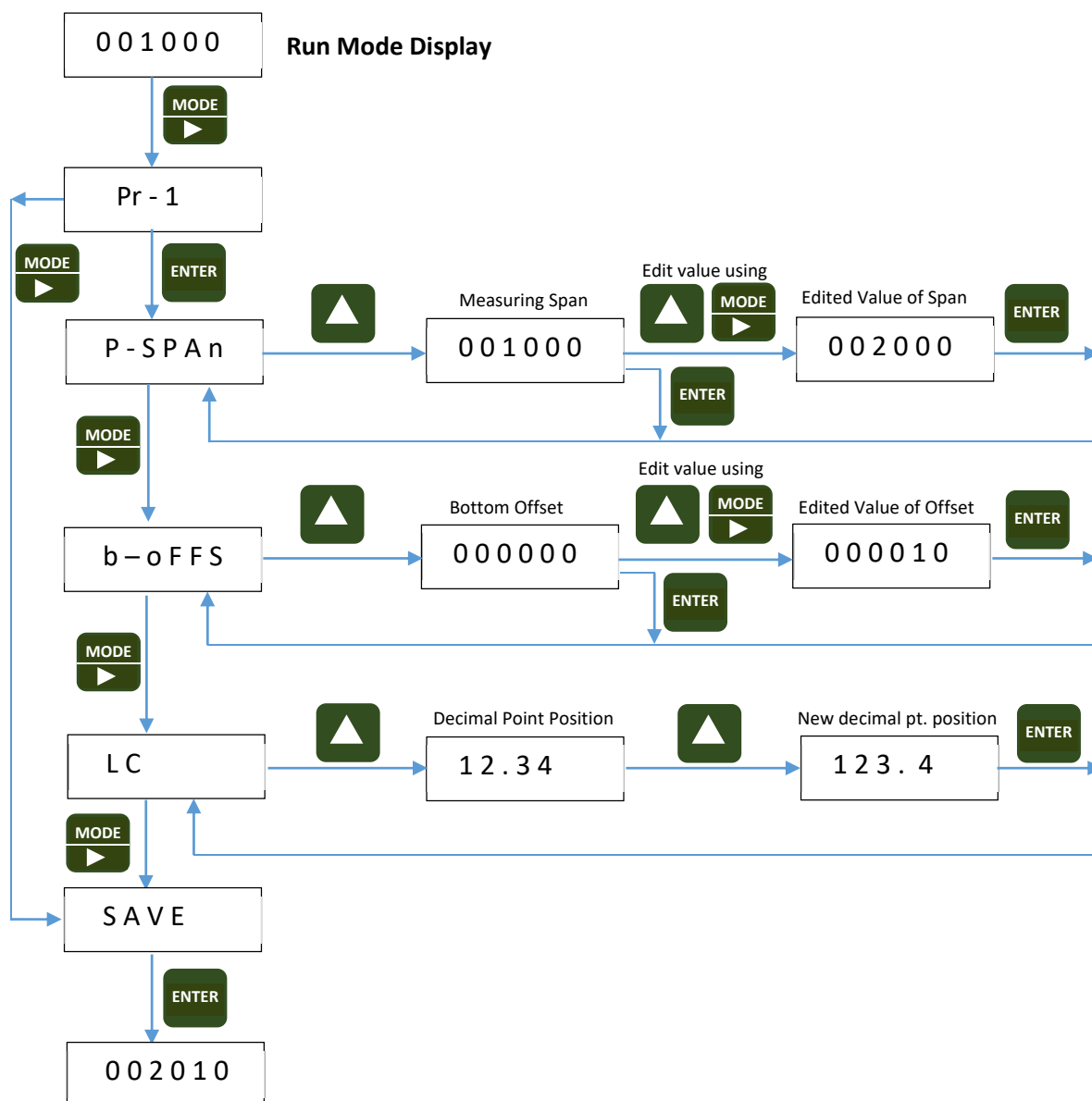
8.1 Key Functions

-  **MODE/DEC Key** - To enter in the program menu to configure data or decrement digit value when in sub menu. Also to enter in next menu
-  **UP/ SHIFT Key** - To enter in submenu to increment the digit value. Also to shift decimal point.
-  **ENT Key** - To enter or save parameter

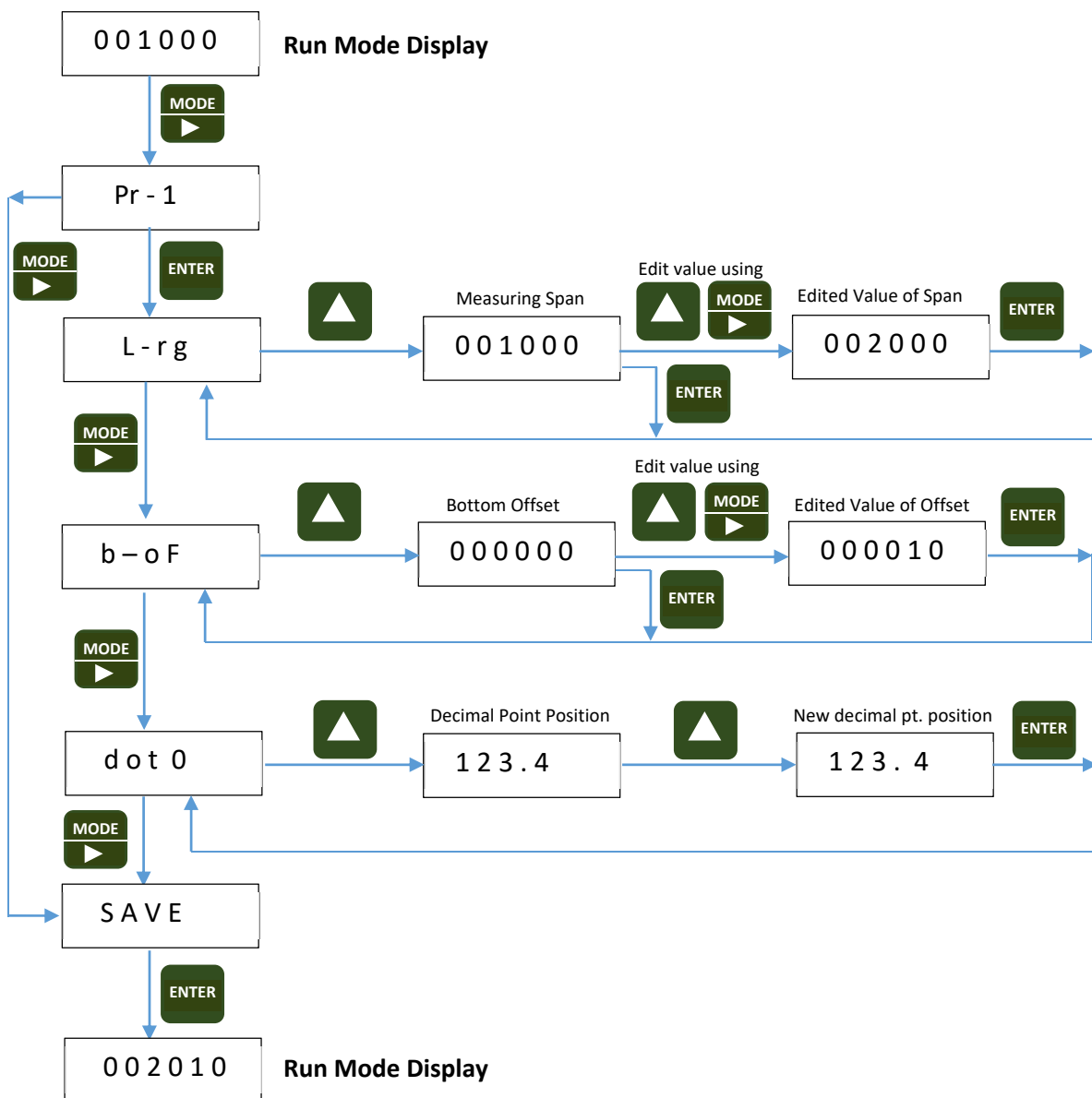
Run Mode - Data viewed on display is operating value

Programming Mode – Operator can use keypad in conjunction with display to set parameters

8.2 Programming Flow Chart of 'LP-Cator –JB/EB' with LCD display



8.3 Programming Flow Chart of 'LP-Cator –JA', LED Display



9. Trouble Shooting

Problem	Cause	Solution
No Display	a) Incorrect wiring and termination b) Loose connections c) Improper supply	a) Check & correct wiring. Refer Termination & Wiring b) Tighten loose connections c) Check & ensure correct supply (24VDC)
Display value not proper	a) Level range and bottom offset value not proper b) Calibration not proper	a) Check & re-program. b) Contact factory

10. Specifications

Model	LP-Cator - JA	LP-Cator - JB	LP-Cator - EB
Display Indication	LED 7 segment, 4 digits, 0.56" H	LCD, 5 digits, 15 mm character height	
Range Indication	0 to 9999	0 to 40000	
Input	4 - 20 mA		
Accuracy	± 0.15%	± 0.25%	
Resolution	16 bit		
Least Count	Decimal point selectable		
Power Supply	24 VDC loop powered (≤ 28 VDC)		
Loop Voltage Drop	< 4.5	< 5 VDC	
Under/Over Range	NA	'Und' or 'Ovr'	
Terminals	Suitable for 1.5mm ² conductor		
Amb. Temperature	0 to 55°C		
Humidity	Below 95% Rh non condensing		
Enclosure x Cable Gland (2 nos.)	ABS (Weather proof) IP65, Wall Mtd. x Cable Glands PG9, Nylon, Size : 80L x 82 W x 55 H	ABS (Weather proof) IP65, Wall Mtd. x Cable Glands PG9, Nylon, Size: 120L x 80W x 55H mm	Cast Al (Ex-proof) Exd Gr. IIB, Wall Mtd. x Cable Glands ½" NPT DC Brass, Size:145L x 145W x 100H

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