



## GENERAL FEATURES:

- 3L-DF/SP is a Supervising panel to monitor and directly power each 3L-DF/SM50-LD sensor modules linked (up to 40 units).
- Each 3L-DF/SM50-LD is an independent sensor module (no length association) and connected with cut-to-length liquid leak detection sensing cable (3L-LS, 3L-AS and/or 3L-AD).
- Reliable frequency modulation is used for the digital communication between the panel and the modules.
- Precision to locate leak location : +/-1m or 0.5%
- Redundancy : Fail-Safe Loop Back or Token Ring connection feature built-in.  
(continues to detect leaks even cable break at 1st meter of sensing cable).
- LCD Display : Backlight with LCD of 4 lines x 20 English characters
- Sound Alarm : 90dB max. buzzer with silencing button
- System Menu : Access to Event Log, System Reset, Configuration Mode
- Multiple leak alarms simultaneously : Yes (No. of simultaneously leak = No. of 3L-DF/SM50-LD sensor modules in use).
- Max accumulated length of sensing cable : up to 2,000m :
  - eg: 40 units of 3L-DF/SM50-LD x [ 50m of Sensing cable connected on each 3L-DF/SM50-LD unit] .  
(Note: 3L-LS or 3L-AS Sensing cables comes with standard length of 1m; 3m; 7m and 15m.)
- 3L-DF/SP Box dimensions : Rugged ABS UL-VO case of L222 x W146 x H55mm.
- 3L-DF/SM50-LD Box dimensions : Rugged UV stable Polyamide encapsulated case with UL-94-V-0 approved  
Dim: L75 x W16 x H15mm. (comparable to the size of a "AA" battery)
- Zone names setup : By PC-software (input each zone name up to 35 characters).
- Event Log : 896 Time-stamped Events stored in non-volatile memory,  
First-In-First-Out (in case overflow)

## ENVIRONMENTAL RATINGS

Operating temperature	: 0°C to 40 °C (indoor installation only)
Storage temperature	: -20 °C to 70 °C
Humidity	: 5% to 95% non-condensing

## POWER REQUIREMENTS

Power supply	: 100 - 240VAC
Optional input	: 12 - 24VAC/DC
Power consumption	: 8 VA/3 W maximum

## POWER RELAYS SWITCHING CHARACTERISTICS

Cable break/power failure by contact	Operation – SPDT Switching current – 0.5 A at 250 VAC, 1A at 30 VDC
Liquid leakage dry contact	Operation – SPDT Switching current – 0.5 A at 250 VAC, 1A at 30 VDC

## SERIAL COMMUNICATION INTERFACE

Physical support	: Opto-isolated RS485-two-wire, ESD and surge protected as per IEC 61000-4-2
Protocol	: Modbus
Optional GSM/GPRS transmitter interfacing	
Optional Modbus over TCP/IP (allow world-wide remote supervision through Internet connection)	
Optional BACnet/IP interface	
Optional Profibus interface	
Optional LONworks interface	

## COMPLIANCE TO INTERNATIONAL STANDARDS

EMC emission	: IEC61000-6-3(2001) – Electromagnetic compatibility Generic emission standard for residential, commercial and light industrial environment
EMC immunity	: IEC61000-6-1(2001) – Electromagnetic compatibility Generic immunity standard for residential, commercial and light industrial environment

## TYPICAL SCHEMATIC DIAGRAM

