



## ELSA DIGI-FLEX SUPERVISING PANEL 3L-DF/SP & DIGI-FLEX SENSOR MODULE 3L-DF/SM50-HC

3L-DF/SP is a Liquid Leak Locating & Detection System Panel  
operates with Sensor Module 3L-DF/SM50-HC

### GENERAL FEATURES:

- 3L-DF/SP is a Supervising panel to monitor and directly power each 3L-DF/SM50-HC sensor module linked. (up to 40 Sensor Modules in series connection).
- Each 3L-DF/SM50-HC is an independent sensor module (no length association) and connected with cut-to-length hydrocarbons sensing cable (3L-HCS). (Note: Maximum length of 3L-HCS cable for each sensor module = 15m).
- Reliable frequency modulation is used for the digital communication between the panel and the modules.
- Precision to locate leak location : By each sensing cable length identification.
- 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-HC sensor modules in use).
- Max accumulated length of sensing cable : up to 600m :
  - eg: 40 units of 3L-DF/SM50-HC x [15m of Sensing cable connected on each 3L-DF/SM50-HC unit] . (Note: 3L-HCS Sensing cables comes with standard length of 2m; 5m; 10m and 15m. Custom length is available upon request)
- 3L-DF/SP Box dimensions : Rugged ABS UL-VO case. Dim: L222 x W146 x H55mm.
- 3L-DF/SM50-HC 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

