Leakage Sensor

DF1000i (selective)

control and read-out unit

Description

The DF1000i control and read-out unit is mainly used for leak detection in underground and above-ground double-walled, compartmentalized pipe systems. When connected to programmable leak sensors (DF1030i) and an end unit (DF1037i), it is possible to locate a leak very accurately. The DF1000i has an alarm memory in which alarm notifications are saved. The system monitors and controls itself. The control interval can be set between 1 and 99 days. Notification of a short circuit or cable interruption is given separately by means of a red LED. After a detected leak in a pipe system has been repaired, the system can easily be restarted by means of a simple reset without having to replace any sensors.

Operation

Using the DF1000i, up to 99 different sections can be defined within a double-walled pipe system. The leak sensors are configured using two coding switches based on the section numbers in the specifications.

A fixed recording protocol (init log), which must be observed, is integrated in the system. The system monitors itself at a pre-defined time interval to see whether the current status is in accordance with the recording protocol (every sensor, including the electrode, is checked).

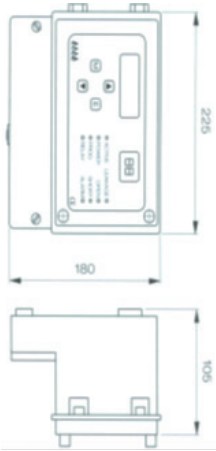
If a leak is detected, the section in which the leak is located is displayed for approximately 20 seconds. After that time, the leak monitoring is restarted. The active alarm is saved, together with the date and time. Simultaneously with the active alarm, a potential-free relay is switched, which activates an external source. The user can quickly and easily see in the memory in which section the leak is located.

Once the leak has been repaired, an authorized person can delete the alarm notifications and place the DF1000i back in the active mode. Thanks to the possibility of connecting an external power supply (24 VDC), leak monitoring is not interrupted in the event of a power cut. The DF1000i control and read-out unit provides the power for the leak sensors.

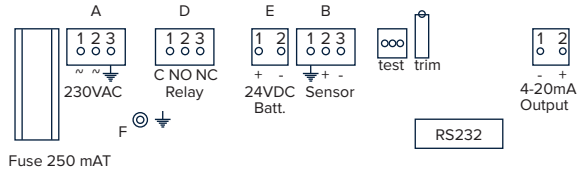
The DF1000i is connected to the leak sensors (and end unit) by means of a 2-wire, insulated cable. The maximum combined length of the cable within the system is 4000 metres.

Technical specifications

Technical specifications DF1000i	
Supply voltage:	230 VAC / 50/60 Hz (110 VAC optional)
Emergency power supply:	24 VDC
Display:	2-character display LCD 2x 16 characters
Max. current consumption:	60 mA (230 VAC) 500 mA (24 VDC)
Figure height:	13 mm
Figure colour:	Green
Housing:	225 x 180 x 105 mm
Alarm relay:	Potential-free changeover contact 2.0 A at 250 VAC
Alarm output:	0/4 - 20 mA
Alarm memory:	Max. 99 sections
Ingress protection:	DIN 40050, IP54
Relative humidity:	90% non-condensing according to DIN40042
Alarm indication:	Leak (LED red) Short circuit (LED red) Open circuit (LED red)



Electrical connection:



A 1 Supply voltage: 230 VAC / 50 HZ
2 Supply voltage: 230 VAC / 50 HZ
3 Earth

B 1 Insulation and earth
2 + White
3 - Black

C 1 - Analogue output
2 + Analogue output

D 1 Relay common
2 NO (normally open)
3 NC (normally closed)

E 1 + 24 VDC emergency power supply
2 - 24 VDC emergency power supply

Test and trim are for internal operation and may never be connected or changed, because that might damage the device.