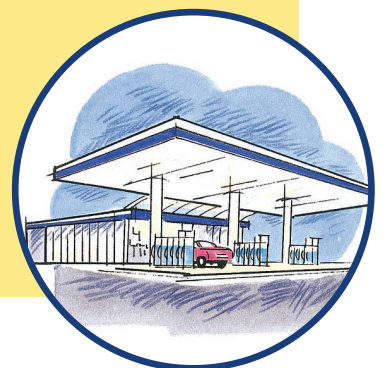


MAWAX

Manhole Monitoring System



The Manhole Monitoring System MAWAX

The manhole monitoring system MAWAX is a safety device which indicates the entry of liquids into the manhole. When working with water polluting liquids MAWAX is an indispensable system for environmental protection. MAWAX consists of a manhole sensor and a transducer with alarm system and output terminal.

Advantages of FAFNIR's Technology

- Tested and tried under the most difficult conditions
- More than 25 years of FAFNIR-experience in using this technology
- Space-saving, robust and corrosion-resistant design
- Alignment on site not necessary
- Two-wire connection to the transducer, independent of polarity
- Sensor without moving components
- Totally maintenance-free
- Permanent self-checking of sensor
- Registered for zone 0 / zone 1



Manhole Monitoring System
MAWAX with
Manhole Sensor
Type LS 300 X

Our Terminology

Sealed sensor: indicator
Indicator with sheath: manhole sensor
Ex-zone: zone 0 / zone 1
Sensor self-check: scanner function

PTC-resistor heats up better in air or gas. When dipped into liquid the PTC-resistor is cooled down and the changing resistance- value is interpreted by the transducer.

Function

The electrical connection between the manhole sensor, series LS 300, inside the manhole and the transducer, series LS 500, is made by a two-wire cable.

The indicator on the threshold point of the manhole sensor is a sealed PTC-resistor. The PTC-resistor is a variable resistance whose value increases in relation to the rising temperature. As liquids are better thermal conductors than air or gas, the

The correct functioning of the PTC-resistor is permanently checked through a scanner function. The relay card has floating relay contacts to control motors and pumps.

If the threshold point of the manhole sensor is dipped into liquid or a defect in the manhole sensor, series LS 300, is detected, an alarm is triggered and if it is required a pump or motor is shut off.

Installation Possibilities

The variable threshold length can be easily adjusted by shifting the probe tube inside the screw-in unit. The transducer is built into a 19" plastic housing.

Design

The manhole sensor consists of:

- Sensor
- Probe tube
- Screw-in unit
- Connection housing with overvoltage protection

The transducer consists of:

- Signal conditioning electronics for manhole sensor with scanner function
- Panel lights (operation, scanner, sensor)
- 2 manhole sensors can be connected to one transducer

The 19" plastic housing consists of:

- Prewired connection for max. 3 transducers
- Type LS 500 19" Duo
- Central acknowledgement-unit
- Collective-alarm lamp
- Acoustic alarm
- Acknowledgement button
- Relay board with 6 x floating N/O and warning lamps

Process Connection

The manhole sensor type LS 300 is supplied with a screw-in unit.

Installation Advice

The transducer must not be operated in an ex-zone. It must be installed in closed rooms.

Technical Data

Manhole Sensor Type LS 300:

Operating Data:

- Temperature: - 25°C to + 50 °C
- Immersion switching delay: < 2 seconds
- Supply housing: brass, chromium-plated
- Protection type of housing: IP 67

Materials of parts

in contact with media:

- Stainless steel 1.4571

Dimensions:

- Pipe diameter: 10 x 1.5
- Lengths of probes: 100 mm

Transducer LS 500 DUO 19":

Operating Data:

- Auxiliary power: 230 V; 50/60 Hz
- Power consumption: 4 VA
- Ambient temperature: - 25 °C to + 50 °C

Outputs for relay cards:

- Acoustic alarm
- Relay board: floating contacts; load AC: ≤ 250 V; ≤ 4 A; cosφ ≥ 0.7; max 500 VA

Inputs:

- 2 x level sensor input, two-wire, independent of polarity, max. cable length: 750 m for 1,5 mm²

Dimensions:

- LS 500 19" Duo: Europe card 160 x 100, 7TE

19"- Plastic Housing:

- Prewired for max 3 transducers
- Type LS 500 19" Duo
- Collective acknowledgement unit
- Collective-alarm lamp
- Acoustic signal
- Acknowledgement button
- Relay board with 6 x floating N/O (230V / 50 Hz) and warning lamps
- Protection type of housing 19" IP 20

Dimensions:

- H 225 x W 300 x D 225

Purchase Order Codes

Please state the following order number in your purchase order.

MAWAX

19"- Plastic Housing

- with 1 x transducer for 2 x manhole sensor 001
- with 2 x transducer for 4 x manhole sensor 002
- with 3 x transducer for 6 x manhole sensor 003

Manhole Sensor

Manhole Sensor Type LS 300 x 010

Order Number

114

For further information contact us on telephone +49/40/39 82 07-0

Current information under: www.fafnir.com