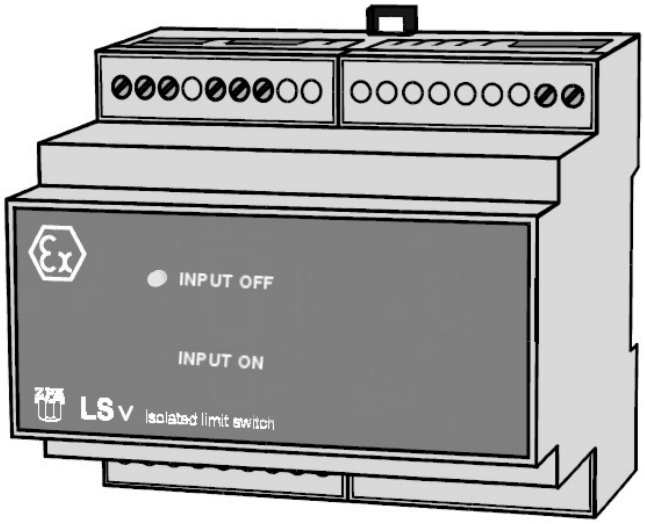
Isolated limit switch

LSv MAX.Ex

- intrinsically safe relay with transformer isolated barrier.

- galvanic isolation of input, output and supply circuits.

- status indication non energy storing simple apparatus (switch - mechanical contacts) located in hazardous areas.



General

Isolated barrier is used for intrinsic safety applications. It transfers binary signals non energy storing simple apparatus (switch - mechanical contacts) from the hazardous area to the safe area.
Mainly are used non energy storing simple apparatus without own capacitance and inductance according to EN 60 079-11 as for example:
mechanical pressure regulators - manostats, mechanical temperature regulators - thermostats, safety switch, float switch , ... located in hazardous area.

Technical specifications

Input: binary signal
- non-voltage producing mechanical contact located in hazardous environments gasses and vapors - Zone 0, 1, 2

Output: signal
- relay with two switching contact 250V, 50Hz, 4A
contact loading ($\cos\varphi$=0,4): 250V AC/ 2A
30V DC/ 2A
energized delay: 10 ms
de-energized delay: 8 ms
electric life: 10^5
mechanical life: 10^7 switching cycles

Power suply: 230V, 50Hz, 10VA
conductors up to 2.5mm²

Method of protection : Intrinsic Safety (I.S.)

Clasification: ⟨Ex⟩ II (1) G [Ex ia Ga] IIC
EC Type Examination Certificate FTZÚ 02 ATEX 0183
parametrs : U_O= 12,6 V I_O = 26,5 mA P_O= 0,167W
C_O = 800 nF L_O= 50 mH

Connection: terminals 19 and 20 required wires leading to an hazardous area 1-2,5mm² Cu.
for example.:JYTY 2x1 max. 500m

Protection degree: IP20

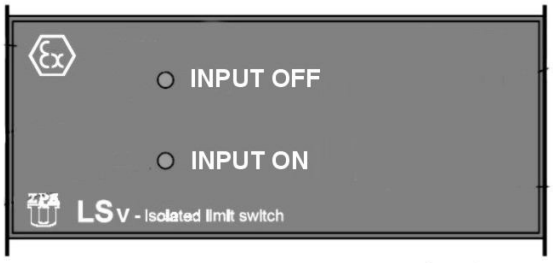
Ambient conditions: temperature -20 ... 70°C
humidity : < 80%

Dimensions: 106 x 90 x 58mm

Mass: approx. 0,35 kg

Mounting: on the DIN rail TS35

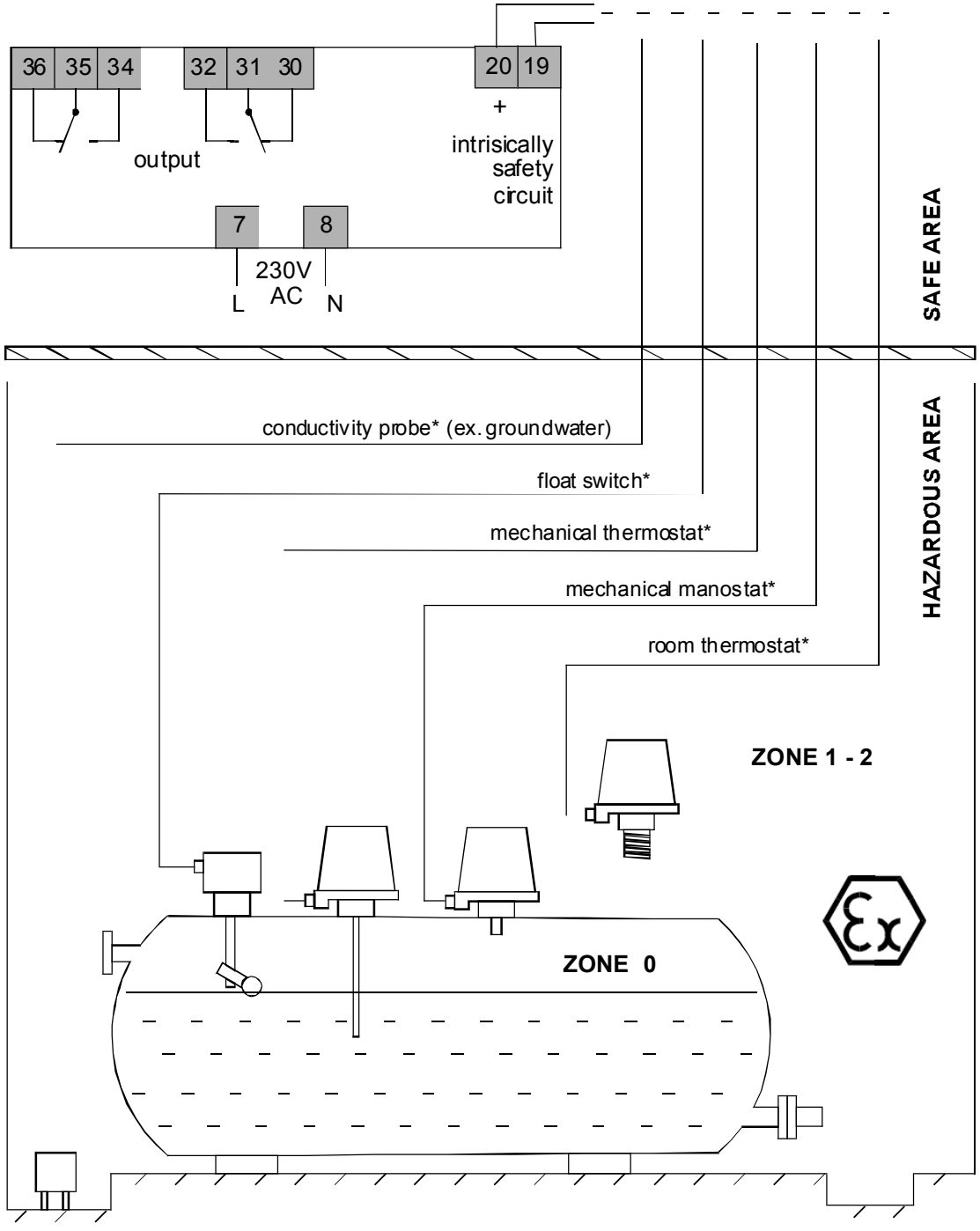
Compositions - front view



INPUT OFF
LED red - operating mode:
mechanical contact (switch) is opened

INPUT ON
LED red - limit or alarm mode:
mechanical contact (switch) is closed

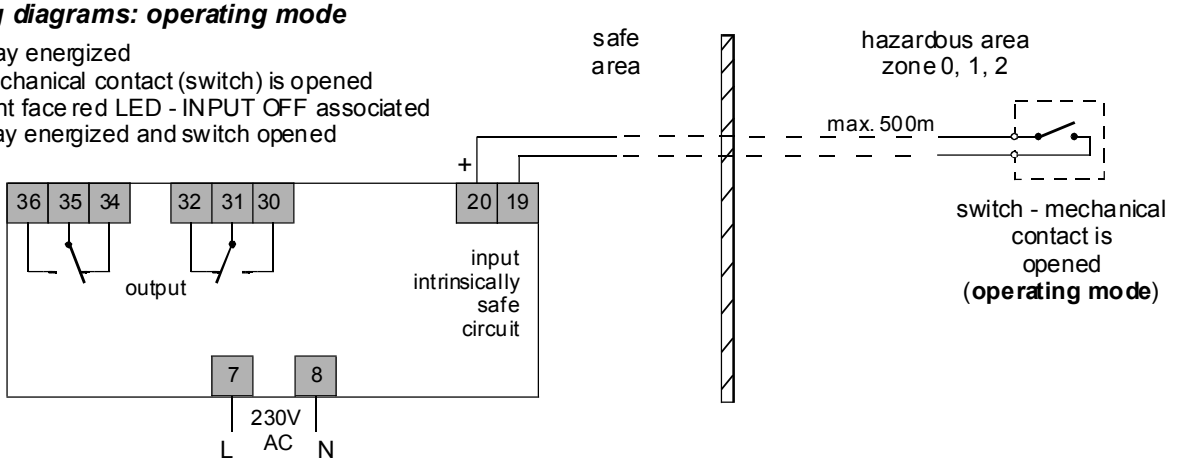
Example installation of associated apparatus LSv MAX.Ex :



***switching device in the standard version can be used in explosion risk areas Zone 0 to 2, if they are incorporated into an "intrinsically safe circuit" and the same time have character non energy storing simple apparatus without own capacitance and inductance according to EN 60 079-11**

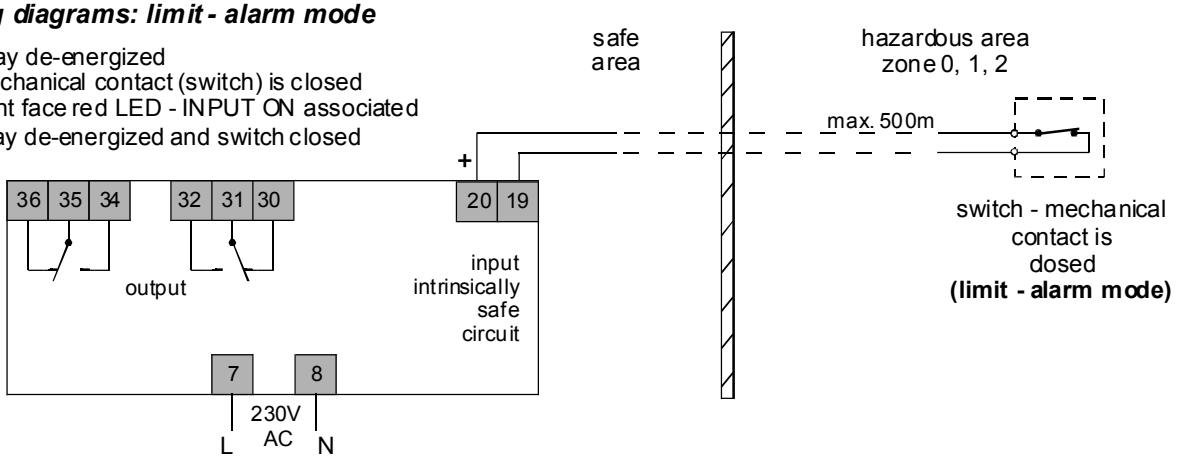
Wiring diagrams: operating mode

- relay energized
- mechanical contact (switch) is opened
- front face red LED - INPUT OFF associated relay energized and switch opened

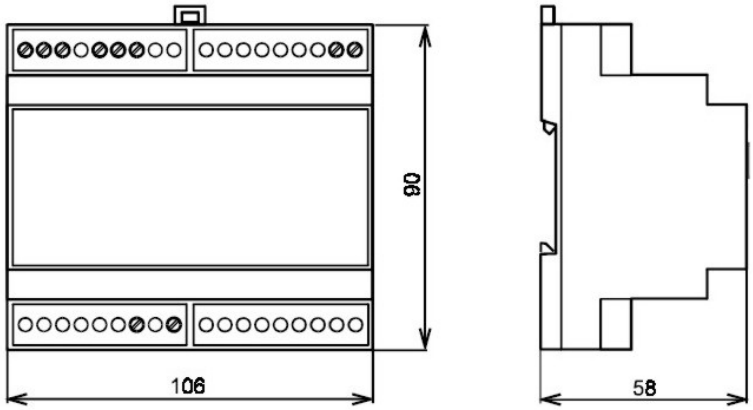


Wiring diagrams: limit - alarm mode

- relay de-energized
- mechanical contact (switch) is closed
- front face red LED - INPUT ON associated relay de-energized and switch closed



Approximate Dimensions



Conditions to instalation

LSv Max.Ex must be installed in a non explosive atmosphere, in an environment free of condensation, corrosives and conducting dusts.The equipment is part of an association following the I.S. rules. The installation must comply to the EN 60079-0 and EN 60079-11 standard.
Product must be maintained and installed in strict accordance with the National Electrical Code.

Ordering:

order number	type	name
4004013 903004	LSv MAX.Ex	Isolated limit switch

This manual is available in several languages as well as the EC type Examination Certificate on our website www.zpaul.cz