

# VISUAL LEVEL INDICATORS



## LV...

The level indicators series is available for both static and mobile applications; the construction materials used make it possible to guarantee service with wide temperature variations and compatibility with all hydraulic fluids. Series LV... level indicators are available with fixing centre distance from 76 to 1000 mm.

## LVK

This level indicator series is available with electric alarm and visual and electrical temperature switches, level indicators are available with fixing centre distance from 76 to 254 mm.

## LC...

LC... series sight plugs allow visibility of the fluid contained in the reservoirs, showing the level and also any changes in transparency and emulsion.

These indicators are available in three configurations, with transparent plastic body and with black body, and an aluminum body version. Fixing to reservoirs with unthreaded holes or reduced thickness can be achieved using series LCC/T equipped with expansion kit.

### Temperature

- LVA: from -25° to +100°C
- LVU: from -25° to +70°C
- LVU: from -25° to +100°C (only with pyrex lens)
- LVK/LC...: from -20° to +80°C

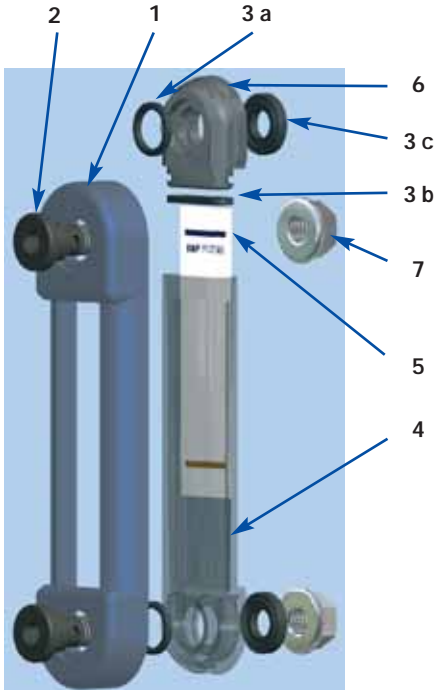
### Compatibility

#### LVA/LVK/LVU

- NBR seals and Cork Gasket, compatible with: Mineral oils to ISO 2943 - aqueous emulsions Synthetic fluids, glycol water.
- FPM seals, compatible with: Synthetic fluids type HS-HFDR-HFDS-HFDU.

#### LC...

- Mineral oils to ISO 2943 - aqueous emulsions Synthetic fluids, glycol water.



LVA (Materials)

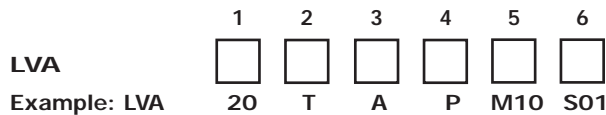
- 1 - Cover: Polyamide
- 2 - Screws: Phosphated steel
- 3 - Seals: NBR  
FPM
- 4 - Lens: Polyamide
- 5 - Nameplate: Painted aluminium
- 6 - Terminal cap: Nylon
- 7 - Nuts: Galvanised steel

Quantity per pack  
Number of Parts

LVA 10

Screw tightening torque: 15Nm

LVA20T.....S01



1 - Size

- 10
- 20
- 30

2 - Accessories

- S Without thermometer
- T With thermometer

3 - Seals

- A NBR
- V FPM

4 - Cover

- P Cover polyamide

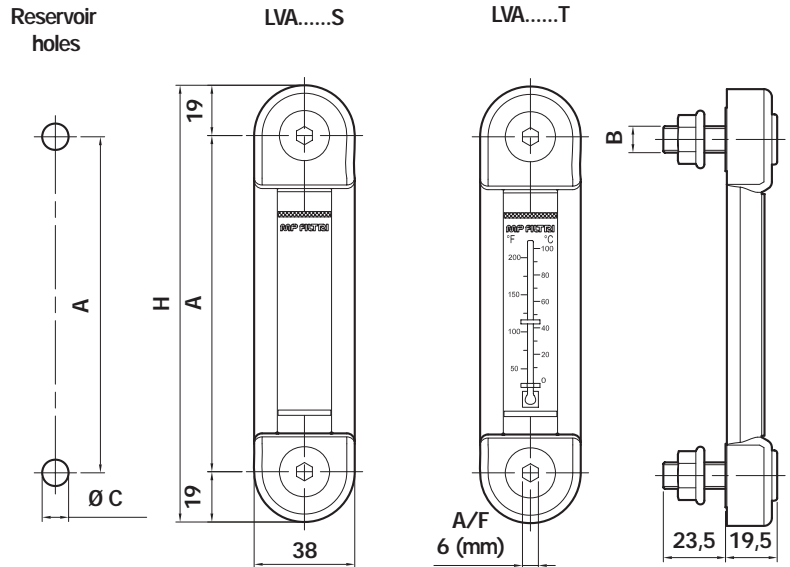
5 - Connection

- M10 Screws M10
- M12 Screws M12
- U38 Screws 3/8" UNC
- U12 Screws 1/2" UNC

6 - Options

- S01 With nuts - Tag MP Filtri
- S02 Without nuts - Tag MP Filtri

Dimensions



Size	A	H	Weight (Kg)
LVA10	76	114	0,13
LVA20	127	165	0,18
LVA30	254	292	0,23

Type	B	C
LVA.....M10	M10	10,5
LVA.....M12	M12	12,5
LVA.....U38	3/8" UNC	10
LVA.....U12	1/2" UNC	13,5

Ordering information

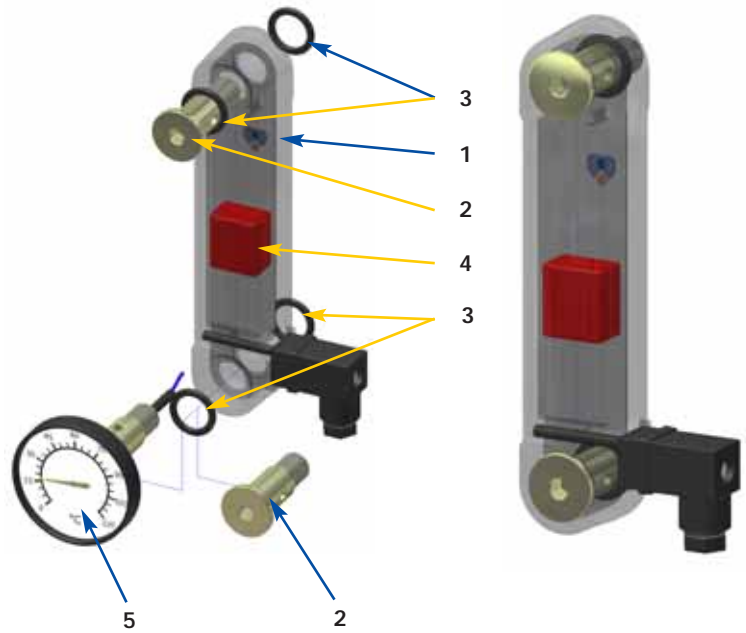
**Description**

Visual/electric level indicator with temperature controls for both static and mobile applications. Completely transparent, it provides a view of the fluid over the entire length, both from the front and on both sides. The quality and thickness, 4 millimetres, of the construction material provides the utmost dependability and mechanical strength without any need for additional protection.

**LVK (Materials)**

- 1 - Body: Polyamide
- 2 - Screws: Nickel plated brass (Standard)  
AISI 316 (Option)
- 3 - Seals: NBR (Standard)  
FPM (Option)
- 4 - Float: Polyamide
- 5 - Sensor thermometer: Screw + thermometer

**Temperatures:** from -20°C to +80°C  
**Screw tightening torque:** 10Nm

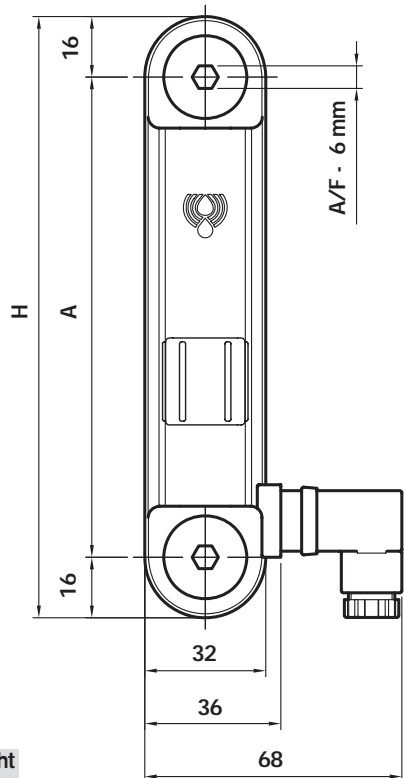
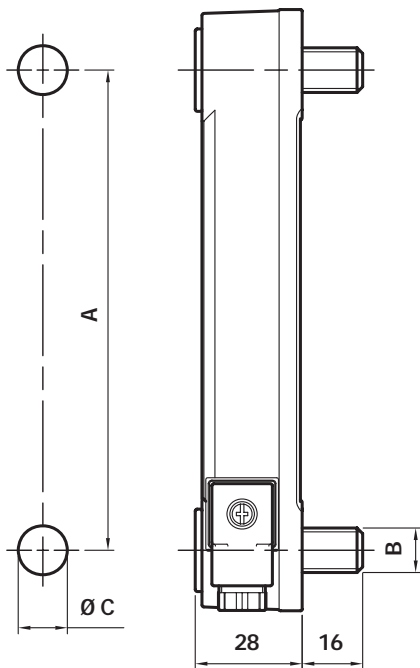


**Compatibility**

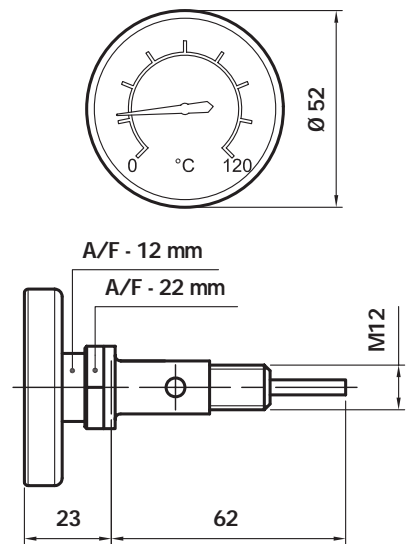
- NBR seals, compatible with:  
Mineral oils to ISO 2943 - aqueous emulsions  
Synthetic fluids, glycol water.
- FPM seals, compatible with:  
Synthetic fluids type HS-HFDR-HFDS-HFDU.

**Dimensions**

Reservoir holes



Sensor thermometer



Weight (Kg)

TV12 0,100 Kit Sensor thermometer + Screw M12

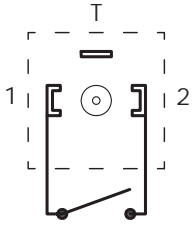
Size	A	H	Weight (Kg)
LVK10	76	108	0,14
LVK20	127	159	0,17
LVK30	254	286	0,25

Type	B	C
LVK...M10	M10	10,5
LVK...M12	M12	12,5

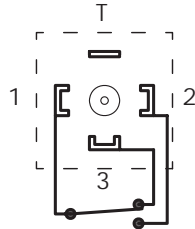
## Combination of available electrical contacts

### Electrical contact with no liquid

Normally open  
N.O.

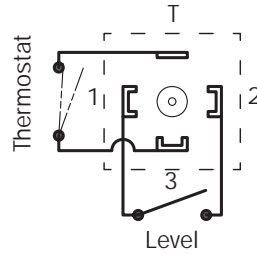


SPDT  
Switch

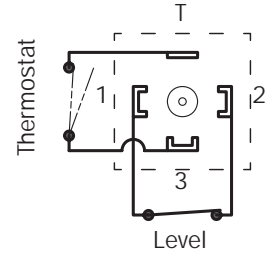


### Electrical contact with no liquid + thermostat

Normally  
open N.O.



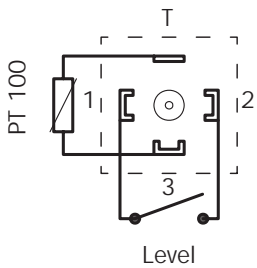
Normally  
closed N.C.



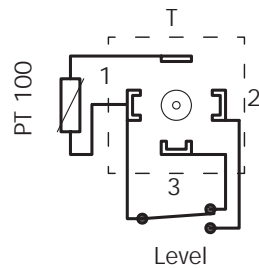
Available thermostated contact N.C. - N.O. in both setups

### Electrical contact with no liquid + PT 100

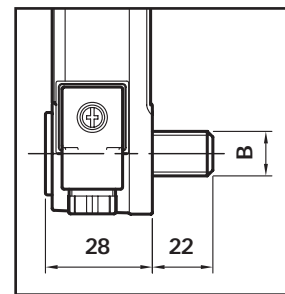
Normally  
closed N.O.



SPDT  
Switch



### Dimension inferior screw electrical contact + thermostated or PT 100



#### Thermostat electrical specifications

Voltage: 250 V Switchable

Frequency: 50 Hz

Load values: 4.0 A.  $\cos \varphi 0.6$  (IMOT)

6,3 A.  $\cos \varphi 1$  (IN)

Max load: 10 A.  $\cos \varphi 1$

Switching temperature: 50°C - 60°C - 70°C

Tolerances:  $\pm 5^\circ\text{C}$

#### Electrical specifications

Contact with no liquid

	N.O. N.C.	Switch
D.C. Switchable Power	40 W	20 W
D.C. current intensity - A.C.	40 V.A.	-
Switchable voltage	2 A	1 A
Voltage switchable	230 V	150 V

**LVK**  
 Example: LVK    1   2   3   4   5   6   7  
                     □   □   □   □   □   □   □  
                     20   A   M12   1   S   S   P01

**1 - Size**

- 10
- 20
- 30

**2 - Seal**

- A    NBR

**3 - Connection**

- M10    Screws M10
- M12    Screws M12 (Standard)

**4 - Electrical contacts with no liquid\***

- 1    N.A.
- 2    N.C.
- 3    Switch SPDT

**5 - Style**

- S    Standard
  - T    Thermostatted
  - P    PT 100
- } Only for connection **M12**

**6 - Thermostated**

- S    Standard Without
  - 1    50° N.A.
  - 2    60° N.A.
  - 3    70° N.A.
  - 5    50° N.C.
  - 6    60° N.C.
  - 7    70° N.C.
- } Only for style **T**

**7 - Options**

- P01    MP Standard

\* Available electrical contacts see page 49

**Accessories/Options\***

<b>TV12</b>	Kit w/ Sensor thermometer Screw M12
<b>M10 X</b>	Kit w/ Screws M10 stainless steel AISI 316
<b>M12 X</b>	Kit w/ Screws M12 stainless steel AISI 316
<b>02050432</b>	Kit w/ FPM seals

\* All the accessories are supplied separately from code LVK

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

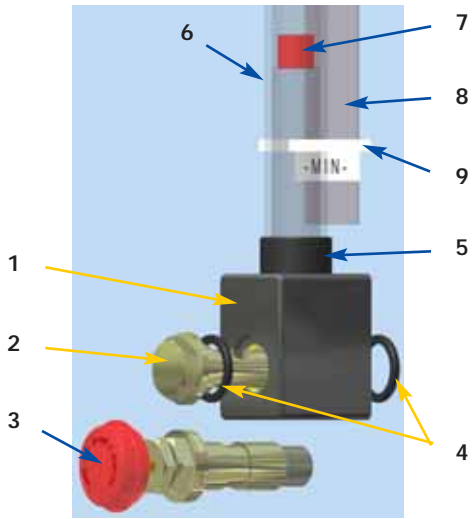
.....

.....

.....

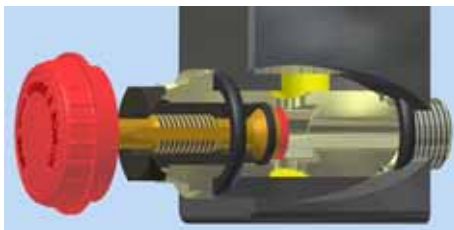
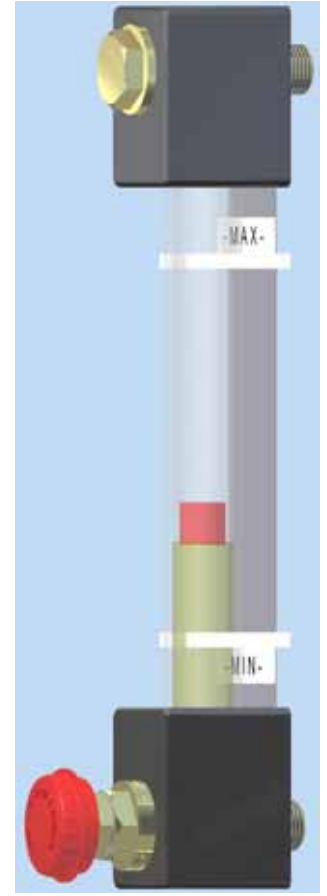
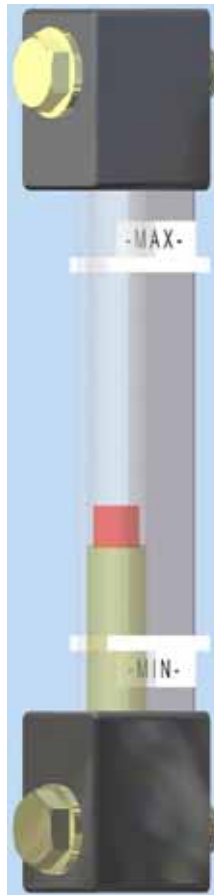
.....

.....



LVU (Materials)

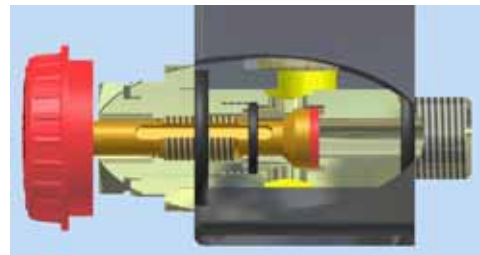
- 1 - Head: Nylon
- 2 - Connection G 3/8": Nickel plated brass
- 3 - G 3/8" valve: Steel
- 4 - Seal: NBR
- 5 - Pipe Seal: NBR
- 6 - Pipe: Acrylic  
Pyrex
- 7 - Float: Nylon
- 8 - Protection: Aluminium
- 9 - Clamps MIN - MAX: Nylon



Open the valve completely.

Allows the oil to flow from the reservoir to the level tube.

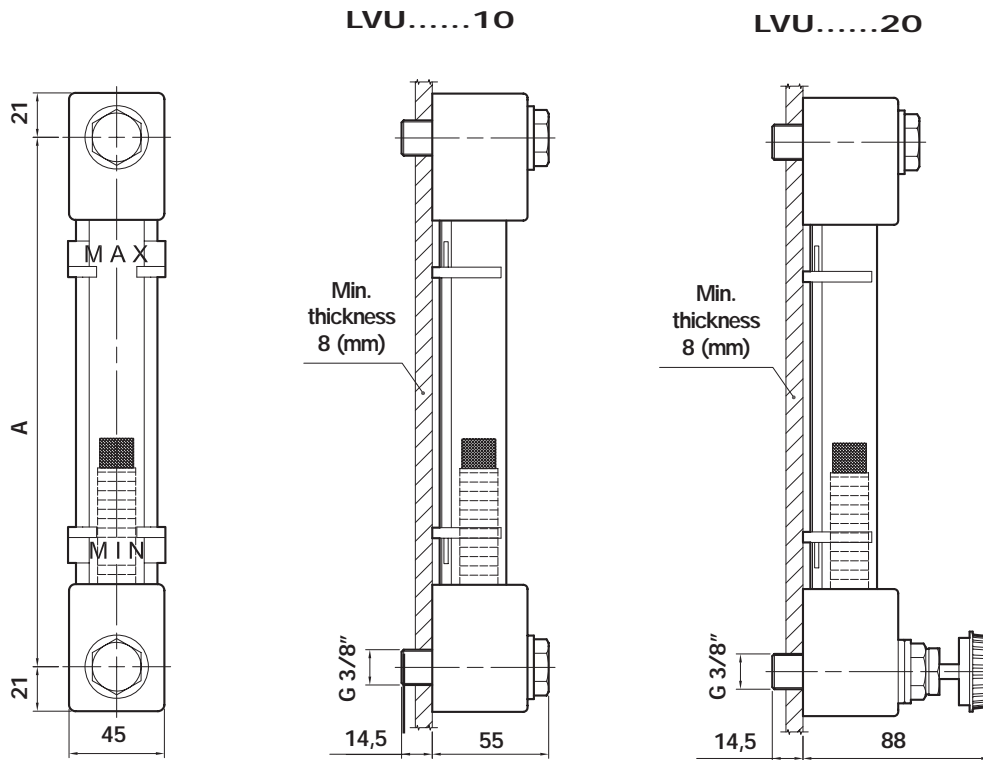
**ATTENTION** - The intermediate valve opening or closing position allows the oil to flow from the reservoir to the exterior.



Close the valve fully.

Stops the oil flow from the reservoir to the level tube.

Allows the oil to be discharged from the level tube to an external container.



## LVU spare parts

Pos.	Description	Q. ty	LVU
1	Seals kit	1	02050130
4	O-Ring	4	OR 4181 Ø 20,22 x 3,53
2	Fixing element kit series 10	1	02049014
2	G 3/8" connection	2	
3	Fixing element kit series 20	1	02049015
2	G 3/8" connection	1	
3	G 3/8" bibcock	1	

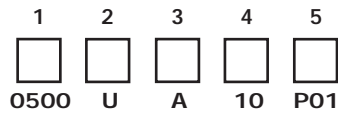
Weights	Version U (Kg)	Version S (Kg)
0500	0,780	0,580
1000	1,150	0,790
1500	1,550	1,100
2000	1,950	1,400

Size	A (mm)
0500	500
1000	1000
1500	1500
2000	2000

## Ordering information

### Visual level indicator series LVU

Example: LVU



#### 1 - Size

0500	Dimension "A" in mm
1000	Dimension "A" in mm
1500	Dimension "A" in mm
2000	Max. dimension "A" in mm
XXXX	Dimension "A" in mm (on request)

#### 2 - Variants

S	Standard
U	"U" protection
P	"U" protection + Pyrex lens (max Size 1500)

#### 3 - Seal

A	NBR
---	-----

#### 4 - Filter

10	2 G 3/8" connections
20	1 G 3/8" connection + 1 valve

#### 3 - Options

P01	MP Standard
-----	-------------