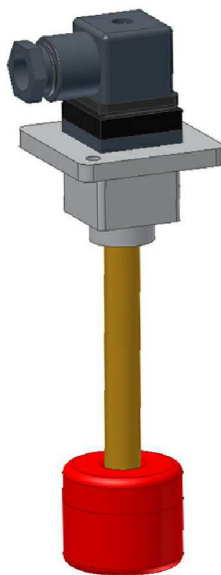


## Level switches with magnetic float



KF01



KF02



KF05



KF04



KF03

KF01 - 481.010.000  
KF02 - 481.020.000  
KF03 - 481.030.000  
KF04 - 481.040.000  
KF05 - 481.050.000

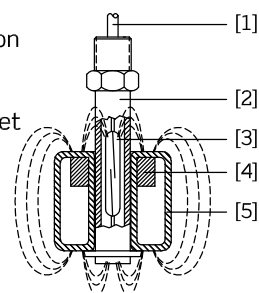
### Application

For the monitoring of oil level in tanks (maximum viscosity 1500 cSt)

### Operation

A float equipped with a permanent magnet fluctuates with the level of liquid and works magnetically over a contact assembled and hermetically sealed inside a guide pipe.

- [1] electric connection
- [2] guide pipe
- [3] reed contact
- [4] permanent magnet
- [5] float



### Detection types

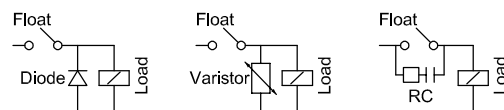
- [C] : 1 level detection
- [D-E-F-G] : 2 levels detection (min. and max.)
- [H] : 2 levels detection (minimum and prealarm)

### Technical characteristics

Guide pipe material.....brass / Aisi 316  
Float material.....nylon void  
Temperature range..... -20°C...+80°C  
Assembly position..... ± 10° vertical  
Degree of protection..... IP54  
Maximum pressure..... 2 bar  
Reed switch:  
Voltage..... 230 VUC  
Connection..... 0,5 A  
Power breakdown..... 30 W

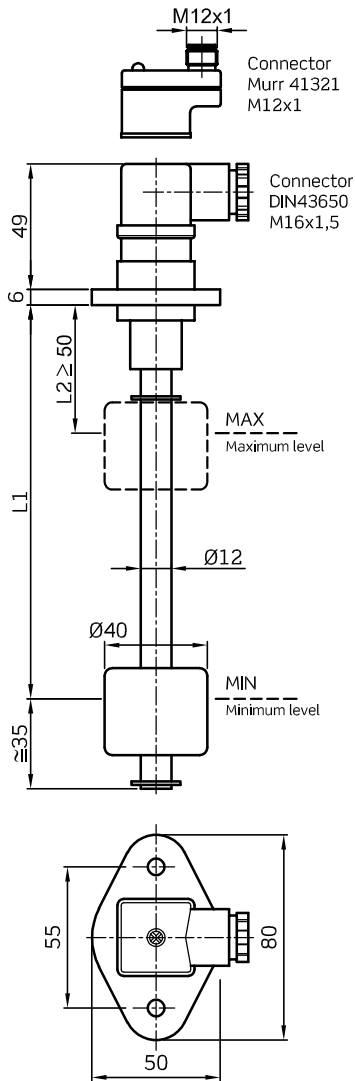
### Warning: protection of reed contacts against overloads

High input voltage, voltage peaks, inductive or capacitive loads may affect negatively the operation of reed contacts and they could even destroy them. Under certain circumstances this energy can be transformed into an electric arc that can cause contact welding therefore it is appropriate to install protective circuits: diodes, varistors, RC elements.

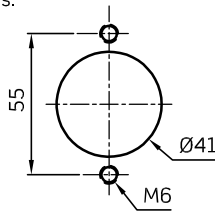


The equipment for a level switch does not include these protection elements therefore they should be foreseen and adapted to the particular needs of each user.

### KF01

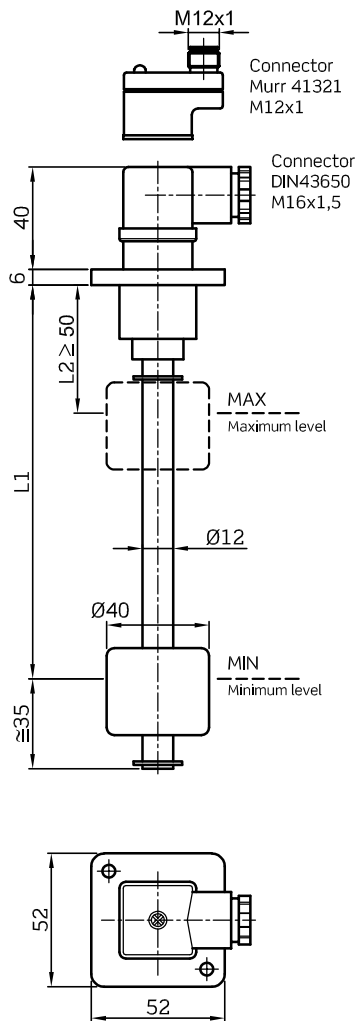


Accommodation dimensions:

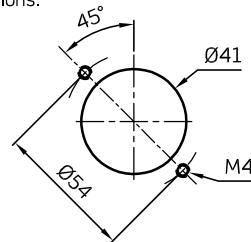


Guide pipe material .....Brass  
 .....Aisi316  
 Float material.....nylon void  
 Mounting flange material .....nylon  
 Sealing joint.....NBR  
 Connector.....DIN43650 M16x1,5  
 .....Murr 41321 M12x1

### KF02

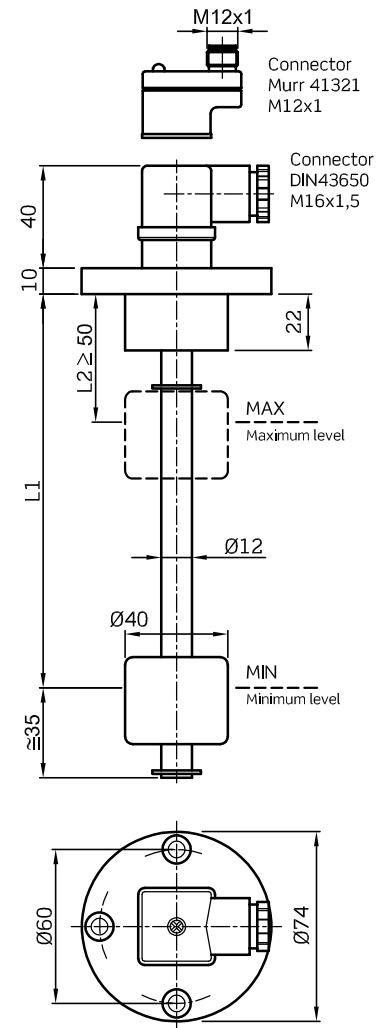


Accommodation dimensions:

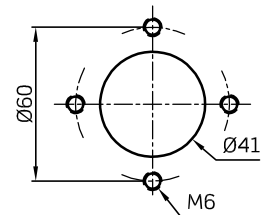


Guide pipe material .....Brass  
 .....Aisi316  
 Float material.....nylon void  
 Mounting flange material .....nylon  
 Sealing joint.....NBR  
 Connector.....DIN43650 M16x1,5  
 .....Murr 41321 M12x1

### KF03

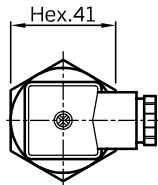
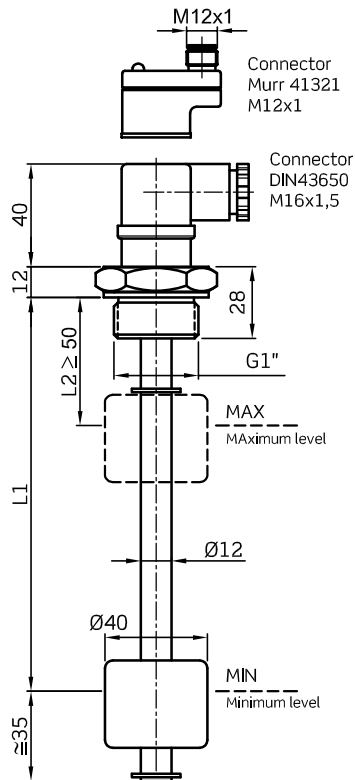


Accommodation dimensions:

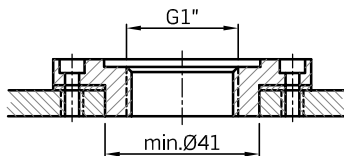


Guide pipe material .....Brass  
 .....Aisi316  
 Float material.....nylon void  
 Mounting flange material...aluminium  
 Sealing joint .....NBR  
 Connector .....DIN43650 M16x1,5  
 .....Murr 41321 M12x1

### KF04



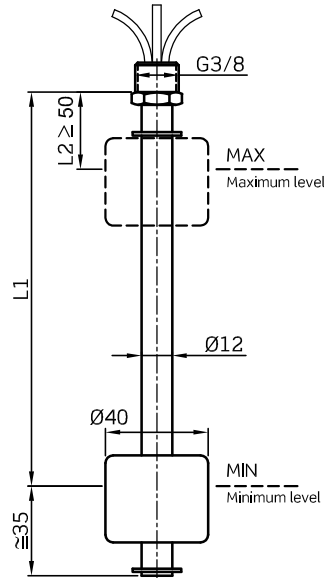
Accommodation dimensions:



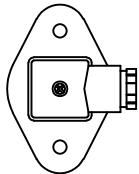
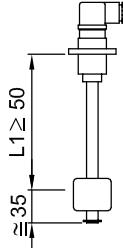
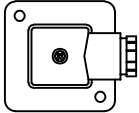
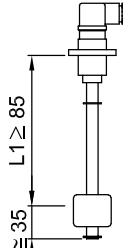
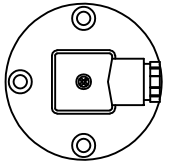
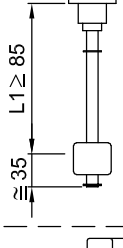
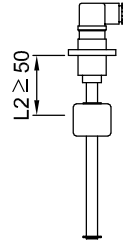
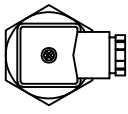
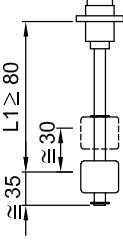
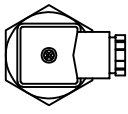
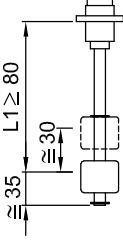
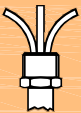
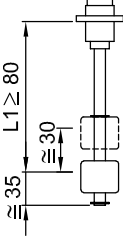
Assembly: release the buoy and thread the plug to the cap. Assemble the buoy and screw the cap.

- Guide pipe material.....Brass
- .....Aisi316
- Float material.....nylon void
- Mounting flange.....G1"
- Sealing joint.....copper washer
- Connector.....DIN43650 M16x1,5
- .....Murr 41321 M12x1

### KF05



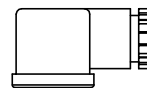
- Pipe guide material.....Brass
- .....Aisi316
- Float material .....nylon void
- Mounting flange thread .....G3/8"
- Cable connection

| Level switch model  | X  | Detection type       | X | Connection                      | X        | L1 (mm)   | L2 (mm)  | Guide-pipe material | X      | Float material | X |
|---|----|----------------------|---|---------------------------------|----------|---|--|---------------------|--------|----------------|---|
|    | 01 | Minimum level        | C | DIN43650<br>Murr 41321<br>M12x1 | 10<br>20 |    |  | Brass<br>Aisi 316   | L<br>A | Nylon          | N |
|    | 02 | Maximum and minimum  | D |                                 |          |   |  |                     |        |                |   |
|  | 03 | Maximum and minimum  | E |                                 |          |   |  |                     |        |                |   |
|  | 04 | Maximum and minimum  | F |                                 |          |  |  |                     |        |                |   |
|  | 04 | Minimum and prealarm | G |                                 |          |  |  |                     |        |                |   |
|  | 05 |                      | H | G3/8"                           | 50       |  |  |                     |        |                |   |

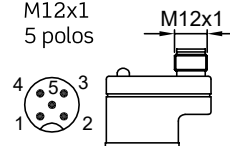
Diagrams  
in page 5

The diagrams shown refer to levels assembled in tanks without oil (minimum level contact activated).  
When the float reaches the stops: it opens or closes the contact. While the float remains at the stops the signals are kept.

DIN43650  
with M16x1,5  
cable inlet

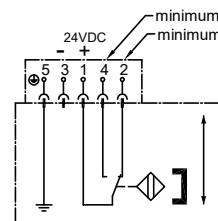
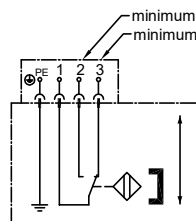


Murr 41321  
M12x1  
5 polos



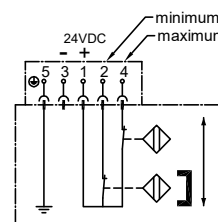
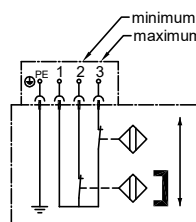
**C** 1 level detection (SPDT)

With full tank the float closes contact 1-2.  
As the tank empties the float opens 1-2 on its descending route and closes 1-3 when it reaches the minimum level.  
As the float rises the cycle reverses.



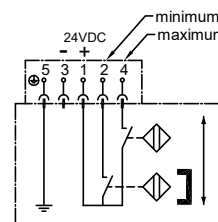
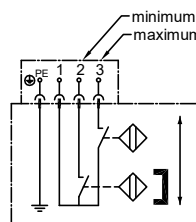
**D** 2 levels detection: minimum (NO) and maximum (NC)

With full tank the float reaches the stop at the top ring and opens contact 1-3.  
As the tank empties the float closes contact 1-3 on its descending route and closes 1-2 when it reaches the bottom stop.  
As the float rises the cycle reverses.



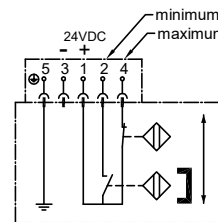
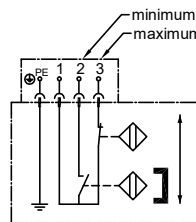
**E** 2 levels detection: minimum (NC) and maximum (NO)

With full tank the float reaches the stop at the top ring and closes contact 1-3.  
As the tank empties the float opens contact 1-3 on its descending route and opens 1-2 when it reaches the bottom stop.  
As the float rises the cycle reverses.



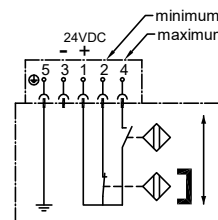
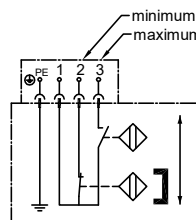
**F** 2 levels detection: minimum (NC) and maximum (NC)

With full tank the float reaches the stop at the top ring and opens contact 1-3.  
As the tank empties the float closes contact 1-3 on its descending route and opens 1-2 when it reaches the bottom stop.  
As the float rises the cycle reverses.



**G** 2 levels detection: minimum (NO) and maximum (NO)

With full tank the float reaches the stop at the top ring and closes contact 1-3.  
As the tank empties the float opens contact 1-3 on its descending route and closes 1-2 when it reaches the bottom stop.  
As the float rises the cycle reverses.



**H** 2 levels detection: minimum (NC) and prealarm (NO)

With full tank the float reaches the stop at the top ring and closes contact 1-3.  
As the tank empties the float opens contact 1-3 on its descending route and opens 1-2 when it reaches the bottom stop.  
As the float rises the cycle reverses.

The distance between prealarm and alarm is fixed: ~30mm

