



# WOERNER

The Experts in Lubrication

- Subject to modifications -



## Level Switch KFA-A

- Two switching points for level monitoring max.
- One switching point for temperature monitoring
- Simple installation
- Small size

### Application:

Monitoring of levels and temperatures of liquids.

### Function - Level Switch:

When the oil level decreases and the float reaches the switching points, the contacts will be actuated magnetically. The switching positions of the contacts are maintained until the float moves over them again by virtue of the raising oil level.

### Function - Thermostat:

A bimetal disc which can be influenced by temperature is switching as soon as the adjusted switching temperature is reached. Thermostats with various switching temperatures and voltages are available (see order designation).

### Technical Data - General:

|                              |                   |
|------------------------------|-------------------|
| Operating pressure at max.:  | 1 bar             |
| Temperature range:           | 0 ... 90 °C       |
| Mounting position:           | vertical ± 10°    |
| Material:                    |                   |
| Tube and thermostat:         | Copper alloy      |
| Float:                       | Polyurethane foam |
| Flange:                      | Copper alloy      |
| Sealing:                     | NBR               |
| Protection type:             | IP 65             |
| Plug- and socket connection: | see BBZ           |
| Weight at L=300:             | 0,16 kg           |

### Technical Data - Reed Contact:

|                                                                                                                     |              |
|---------------------------------------------------------------------------------------------------------------------|--------------|
| Switching voltage at                                                                                                |              |
| Plug- and socket Z3/Z6A:                                                                                            | max. 230 VUC |
| Plug- and socket Z4/ZZ4:                                                                                            | max. 30VDC   |
| Switching current max.:                                                                                             | 0,5A         |
| Switching power max.:                                                                                               | 10/30 W/VA   |
| For inductive an capacitive loads, sup-<br>pressor circuits shall be provided for.<br>(Diode, RC element, varistor) |              |

### Technical Data - Thermostat B 30VDC:

|                                  |         |
|----------------------------------|---------|
| Switching voltage max.:          | 30 VUC  |
| Switching current max.:          | 2A      |
| Tolerance of rated temperature:  | ± 4 k   |
| Hysteresis:                      | ca. 2k  |
| Temperature changing speed max.: | 1 K/min |

### Technical Data - Thermostat C 250VAC:

|                                  |           |
|----------------------------------|-----------|
| Switching voltage max.:          | 250 VAC   |
| Switching current max.:          | 2A        |
| Tolerance of rated temperature:  | ± 5k      |
| Hysteresis:                      | 2 ... 10k |
| Temperature changing speed max.: | 1 K/min   |



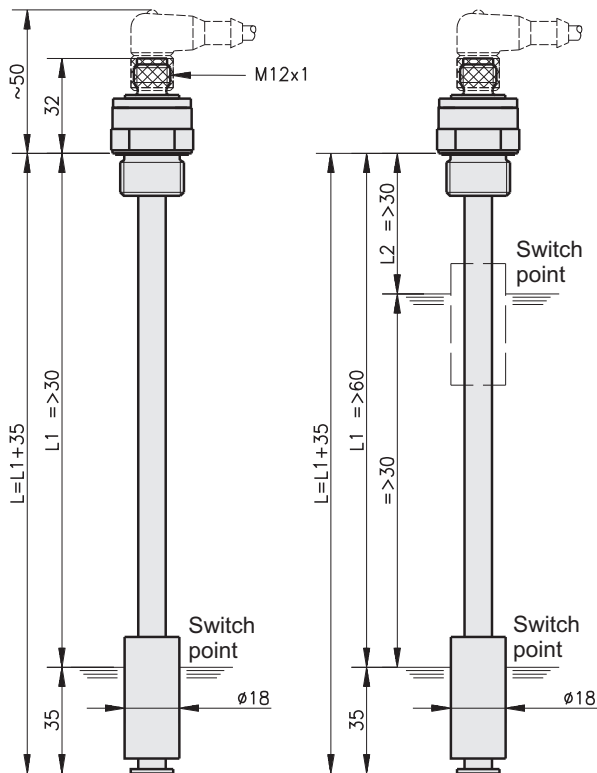
## Level switch

### Version 30 VDC

Plug- and socket connection Z4N  
M12x1 4-pin

1 Level switching contact

2 Level switching contacts

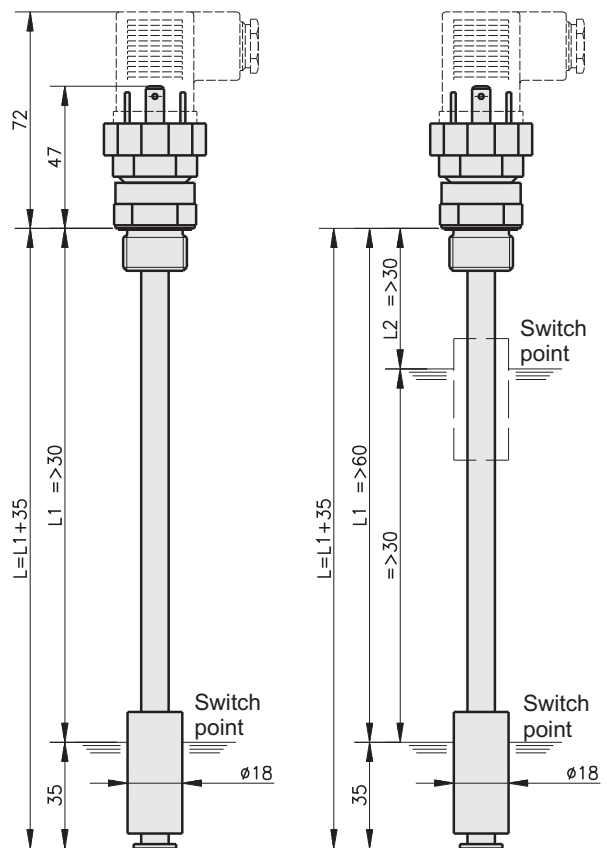


### Version 230 VUC

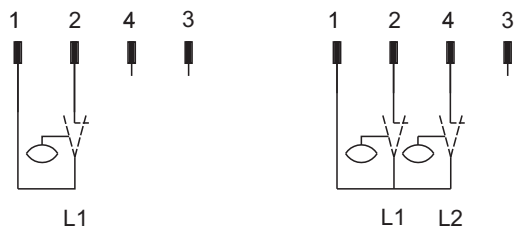
Plug- and socket connection Z3N  
DIN EN 175 301-803A 3-pin +PE

1 Level switching contact

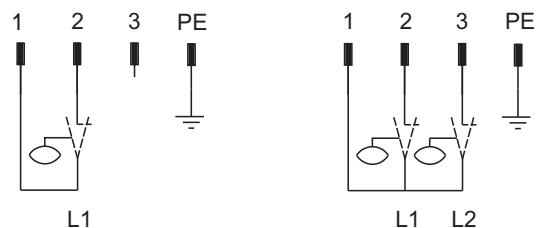
2 Level switching contacts



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L1 = Min. NO or NC contact  
L2 = NO or NC contact



L1 = Min. NO or NC contact  
L2 = NO or NC contact



## Level - Temperature Switch

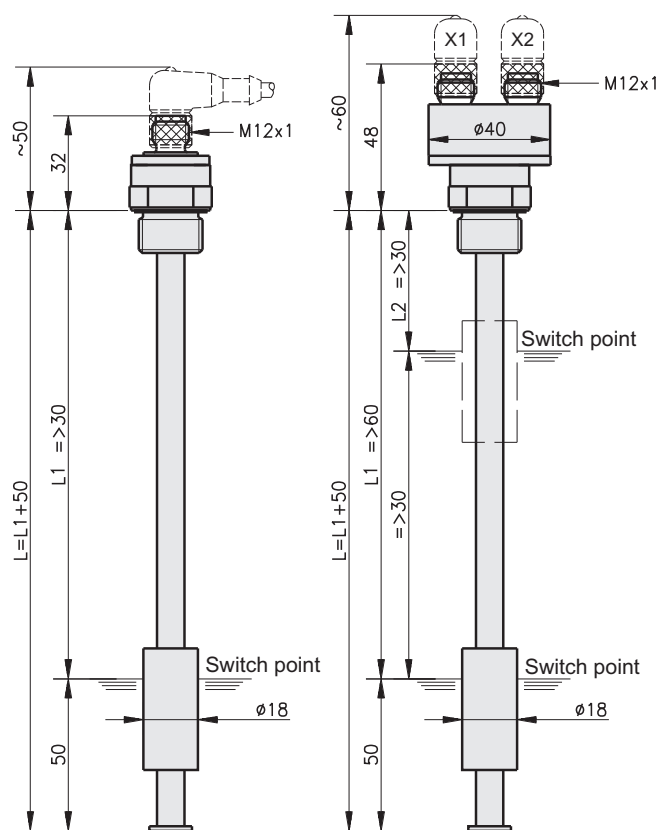
### Version 30VDC

Plug-type connection Z4N  
M12x1 4-pin

1 Level switching contact  
1 Temperature switching contact

Plug-type connection 2Z4N  
M12x1 4-pin

2 Level switching contacts  
1 Temperature switching contact



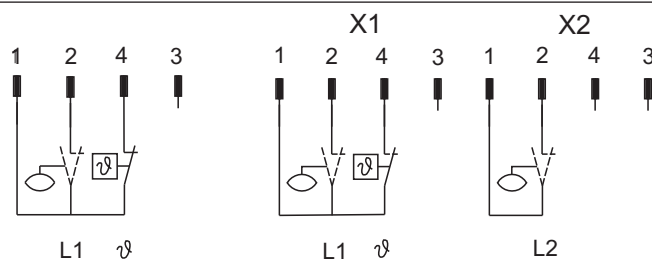
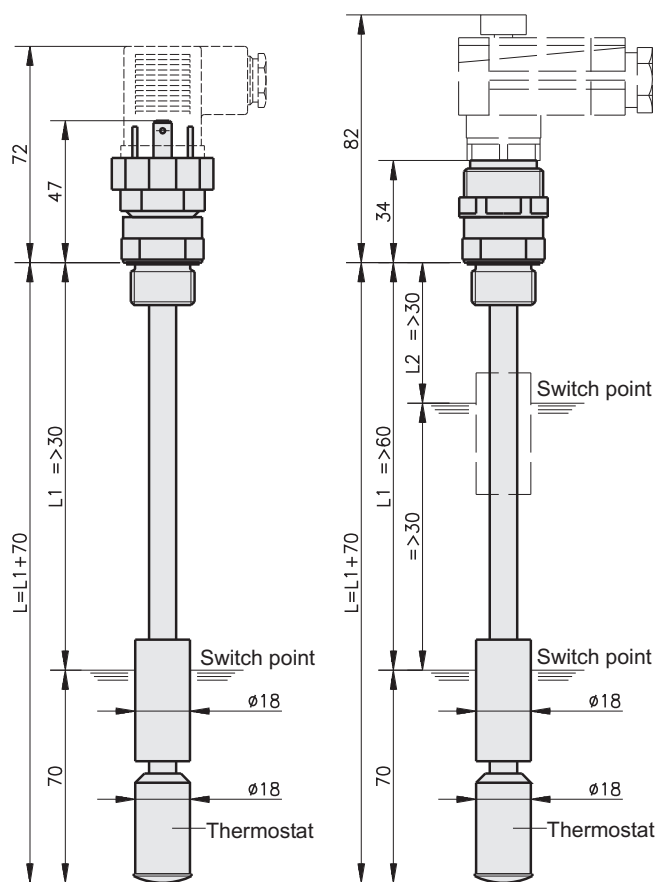
### Version 230VUC

Plug-type connection Z3N  
DIN EN 175 301-803A 3-pin+PE

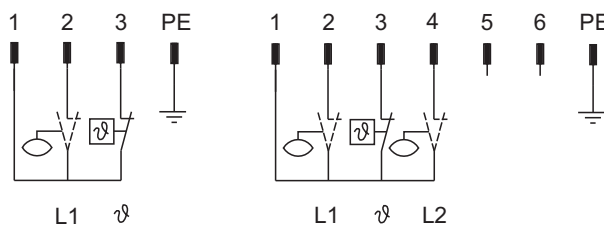
1 Level switching contact  
1 Temperature switching contact

Plug-type connection Z6AN  
DIN 43651 6-pin+PE

2 Level switching contacts  
1 Temperature switching contact

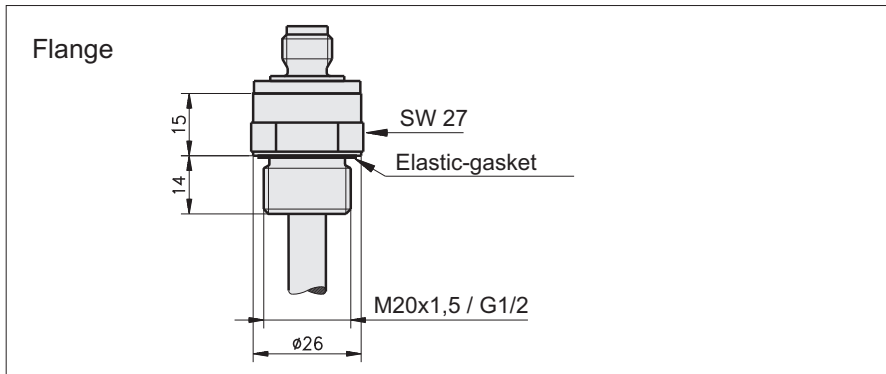


L1 = Min. NO or NC contact  
L2 = NO or NC contact  
☺ = Max. temperature NO contact



L1 = Min. NO or NC contact  
L2 = NO or NC contact  
☺ = Max. temperature NO contact

- Subject to modifications -


**Order-designation:**

Level switch

KFA-A / / / / / / / / / /

| Flange                   | Switching functions                           |                                            |                                                                   | Plug-type connection<br>without / with cable jack                                                                                                                                                                | Lengths                                                                                               |            |
|--------------------------|-----------------------------------------------|--------------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------|
|                          | L1 Switch point<br>bottom<br>Level decreasing | L2 Switch point<br>top<br>Level decreasing | Thermostat                                                        |                                                                                                                                                                                                                  | * L1<br>[mm]                                                                                          | L2<br>[mm] |
| M20x1,5 (F)<br>G 1/2 (G) | NO (O)<br>NC (S)                              | NO (O)<br>NC (S)<br>without (N)            | without (N)                                                       | up to 2 switch functions <b>30V</b><br>M12x1 4-pin<br>without cable jack (Z4N)<br><br>up to 2 switch functions <b>230V</b><br>3-pin +PE<br>DIN EN175301-803A<br>without cable jack (Z3N)<br>with cable jack (Z3) | state when ordering,<br>please<br><br><br><br><br><br><br><br><br><br>* for<br>KFA-A/.../N/N...L1 ≧ L |            |
|                          | NO (O)<br>NC (S)<br>without (N)               | without (N)                                | NO 30V 63°C (063B)<br>NO 30V 70°C (070B)<br>NO 30V 80°C (080B)    | up to 2 switch functions <b>30V</b><br>M12x1 4-pin<br>without cable jack (Z4N)                                                                                                                                   |                                                                                                       |            |
|                          | NO (O)<br>NC (S)<br>without (N)               | without (N)                                | NO 230V 63°C (063C)<br>NO 230V 70°C (070C)<br>NO 230V 80°C (080C) | up to 2 switch functions <b>230V</b><br>3-pin +PE<br>DIN EN175301-803A<br>without cable jack (Z3N)<br>with cable jack (Z3)                                                                                       |                                                                                                       |            |
|                          | NO (O)<br>NC (S)                              | NO (O)<br>NC (S)                           | NO 30V 63°C (063B)<br>NO 30V 70°C (070B)<br>NO 30V 80°C (080B)    | 3 switch functions <b>30V</b><br>2xM12x1 4-pin<br>without cable jack (2Z4N)                                                                                                                                      |                                                                                                       |            |
|                          | NO (O)<br>NC (S)                              | NO (O)<br>NC (S)                           | NO 230V 63°C (063C)<br>NO 230V 70°C (070C)<br>NO 230V 80°C (080C) | 3 switch functions <b>230V</b><br>6-pin +PE<br>DIN43651<br>without cable jack (Z6AN)<br>with cable jack (Z6A)                                                                                                    |                                                                                                       |            |

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