

## TMN 300 TB INOX

### LEVEL MAGNETIC TRANSDUCERS



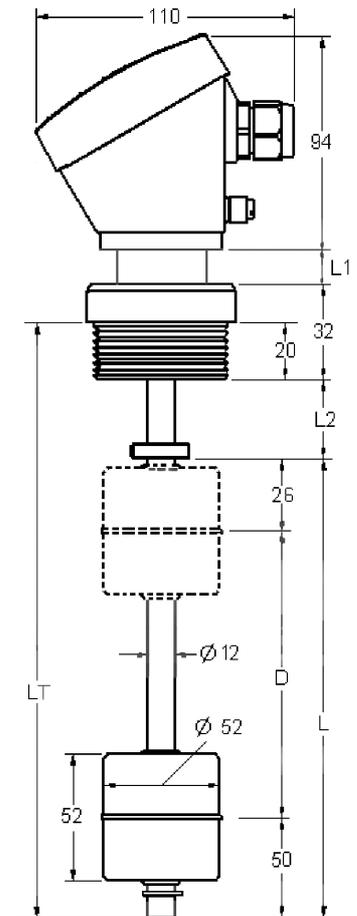
|                      |   |
|----------------------|---|
| Operating principle  | When the float goes up or down through the stem by the action of the liquid, a row of reed contacts turns on or off and generates an output proportional to the level height. |
| Difference character | It allows the connection in systems of 2, 3 or 4 threads, with he himself model.  |

#### Sensor

|                       |   |
|-----------------------|---|
| Connection            | PBT connection box. 64 x 95 x 110 mm                                    |
| Attachment            | Top screw. SS AISI316. 2" G   |
| Dead zone (L2)        | Optional  |
| Top stopping ring     | Optional  |
| Length / Stem         | 150..1000 mm / Ø12 mm. SS AISI316<br>1010..2500 mm / Ø13 mm. SS AISI316 |
| Bottom stopping ring  | SS AISI316  |
| Float                 | Cylindrical. SS AISI316. Ø 52 x 52 mm                                   |
| Pressure              | 30 K/cm <sup>2</sup>  |
| Density               | e < 0,5 g/cm <sup>3</sup>   |
| Length (D)            | 150 mm > D < 2500 mm  |
| Temperature           | Air: -20..+50°C - Liquid: -20..+100°C                                   |
| Protection            | IP 65   |
| Step between contacts | Standard 10 mm · Optional 5 mm  |

#### Converter

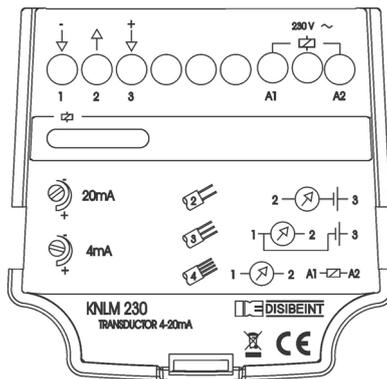
|                     |                       |  |
|---------------------|-----------------------|--|
| Supply voltage      | 3 wires               | 735 - 10..35 VDC (Terminals 1-3)                               |
|                     |                       | 024 - 24 VAC (Terminals 4-5)                                   |
|                     | 4 wires               | 048 - 48 VAC (Terminals 4-5)                                   |
|                     |                       | 110 - 110 VAC (Terminals 4-5)<br>230 - 230 VAC (Terminals 4-5) |
| Analog output       | 4..20 mA              |  |
| Voltage range       | 10..35 VDC            |  |
| Repeating precision | ± 1%                  |  |
| Leds indication     | Supply voltage: Green |  |



|  |
|--|
| How to order   |
| Supply voltage:<br>to only specify if one needs<br>(systems 3 or 4 wires). |
| If L1 and/or L2 are not stated,<br>it will be understood<br>as null.       |

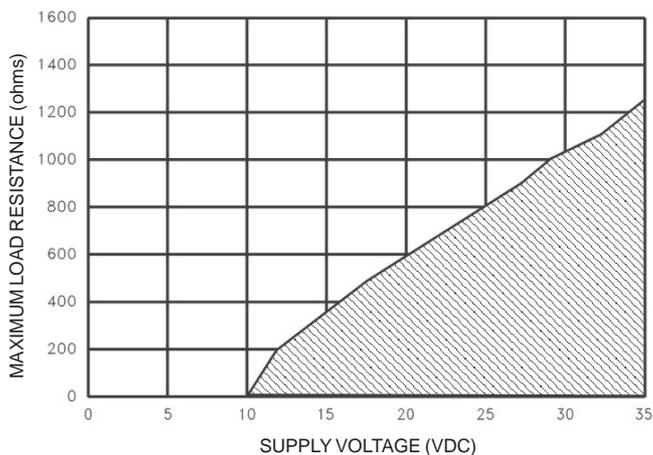
|                                |                        |            |            |             |            |
|--------------------------------|------------------------|------------|------------|-------------|------------|
| <b>TB</b> - Top screw. 2" G    | <b>TMN 300 TB INOX</b> | <b>230</b> | <b>P05</b> | <b>D500</b> | <b>S40</b> |
| <b>735</b> - 10..35 VDC        |                        |            |            |             |            |
| <b>024</b> - 24 VAC            |                        |            |            |             |            |
| <b>048</b> - 48 VAC            |                        |            |            |             |            |
| <b>110</b> - 110 VAC           |                        |            |            |             |            |
| <b>230</b> - 230 VAC           |                        |            |            |             |            |
| <b>P05</b> - Step 5 mm         |                        |            |            |             |            |
| <b>P10</b> - Step 10 mm        |                        |            |            |             |            |
| <b>Dnnn</b> - Distance D (mm)  |                        |            |            |             |            |
| <b>Snnn</b> - Distance L2 (mm) |                        |            |            |             |            |

## Connection diagram



### Load resistance in the loop (Convert)

**DC supply:** The maximum load resistance allowed in the current loop depends on the supply voltage and must not exceed of the values indicated in the following table:



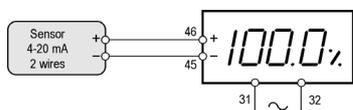
### Parameters calculation (Sensor)

$L$  : Total height (mm)  $L = D + 76$   
 $D$  : Distance to control (mm)  
 $N$  : Number of readings  $N = D / P$   
 $P$  : Step between readings (mm)  
 $R$  : Resolution (mA/reading)  $R = 16 / N$

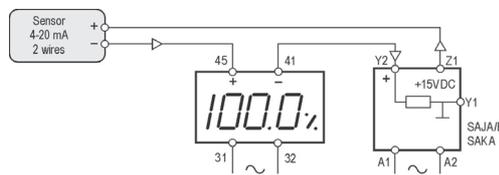
| D \ P | 5    | 10   |
|-------|------|------|
| 150   | 0,53 | 1,06 |
| 500   | 0,16 | 0,32 |
| 1000  | 0,08 | 0,16 |
| 1500  | 0,05 | 0,11 |
| 2000  | 0,04 | 0,08 |
| 2500  | 0,03 | 0,06 |

Examples of resolutions

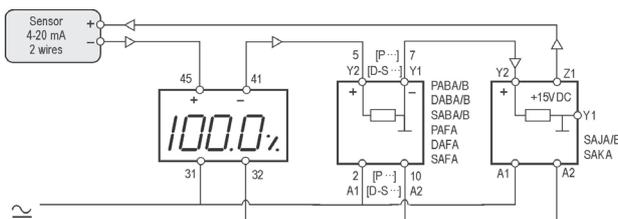
### Application examples



Only visualization.



Visualization, supply of the sensor and 1 or 2 set points.



Visualization, supply of the sensor and several set points, using different models.