

**Description**

The TLS100 tube sensor works on the capacitive measuring principle and detects the presence of a liquid in a plastic tube. These plastic tubes may also be mounted as a by-pass on a compensator in order to signal the required medium level in containers.

The sensor is simply snapped onto the tube at the ideal level of the medium and provides versatile usage for a wide range of applications in medical equipment, the food stuffs industry etc.

The sensor can additionally be fixed by means of the two mounting lugs to ensure a tight fit on the tube.



**TLS100**

**Ordering information**

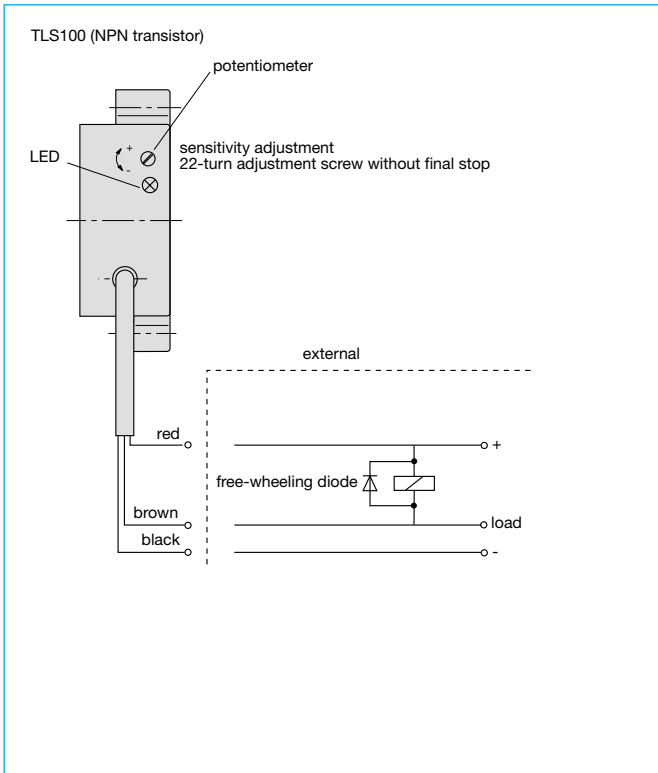
<b>Type</b>	
<b>TLS100</b>	tube sensor (DC 9...36 V)
<b>Media</b>	
<b>W</b>	water
<b>Process Connection/tube diameter</b>	
<b>A10</b>	mounting clips /10 mm
<b>Function</b>	
<b>A</b>	Minimum OC (open circuit principle)
<b>B</b>	Maximum OC (open circuit principle)
<b>C</b>	Minimum RC (closed circuit principle)
<b>D</b>	Maximum RC (closed circuit principle)
<b>Output signal</b>	
<b>L</b>	LSS (minus switching)
<b>H</b>	HSS (plus switching)
<b>Response delay</b>	
<b>0</b>	100 ms
<b>Cable Connection</b>	
<b>A</b>	Cable (type: LVCC, AWG 24, 3 x 0,2 mm <sup>2</sup> )
<b>Cable length 2 m</b> (standard) <sup>(1)</sup>	
<b>TLS100 - W A10 A L 0 - A 2 m</b> ordering example	

<sup>(1)</sup> Cable lengths available: 0.1 m, 1m, 2 m, other lengths upon request.

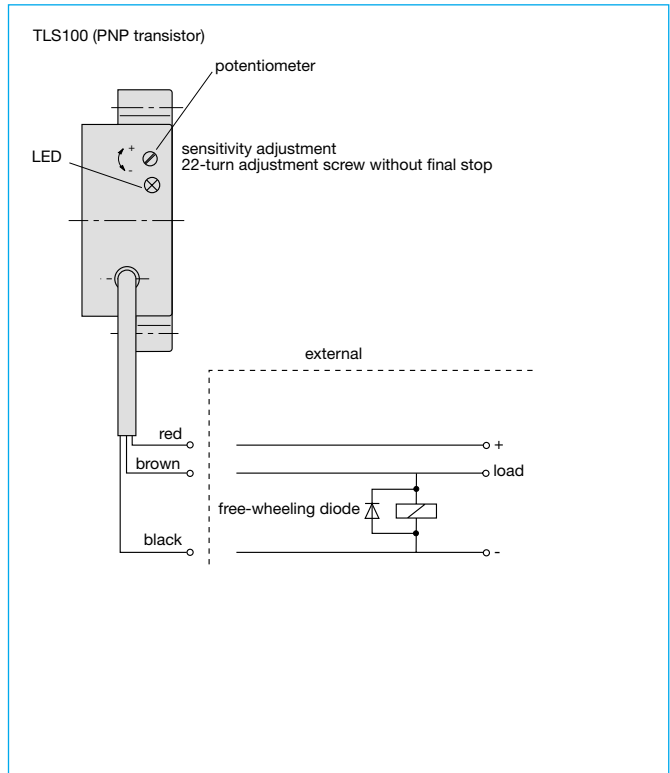
**Technical data** (T<sub>U</sub> ambient temperature= 25°C, operating voltage U<sub>B</sub> = DC 24 V)

<b>Operating data</b>	
Operating voltage U <sub>B</sub>	DC 12/24 V (DC 9...36 V)
Power consumption	typically 8 mA
Output current	max. 1 A, low-side switching, short-circuit proof and overload protected over the entire temperature range, with free-wheeling diode
Voltage drop at output transistor	< 200 mV at 1 A
Response delay of output signal	typically 100 ms (red LED lighted when output is switched)
Reverse polarity protection	fitted between plus and minus pole
Short circuit and overload protection	reset of output and autoreset after remedy of short circuit
Switching point with vertical mounting position	adjustable by means of potentiometer, ideally between the two mounting clips
Visual indication	red LED lighted when output is switched
Switching point hysteresis	vertically mounted: typically < 3 mm
Medium temperature	0 °C...+90 °C
Ambient temperature	0 °C...+80 °C
Storage temperature	0 °C...+80 °C
Vibration	to be defined
Protection class	IP65 (standard)
<b>Materials:</b>	
sensors	aluminium ALMg 3
housing	ultramid
epoxy	polyurethane
Connecting cable	LVCC, AWG 24, 3 x 0.2 mm <sup>2</sup> , length min. 0.1 m
Mounting	clip-on and lug mounting
Marking	laser marking / label
EMC requirements	CE logo in accordance with EMC directive 89/336/EWG
Dimensions	59 x 39.5 x 20 mm
Mass	approx. 50 g (without cable)

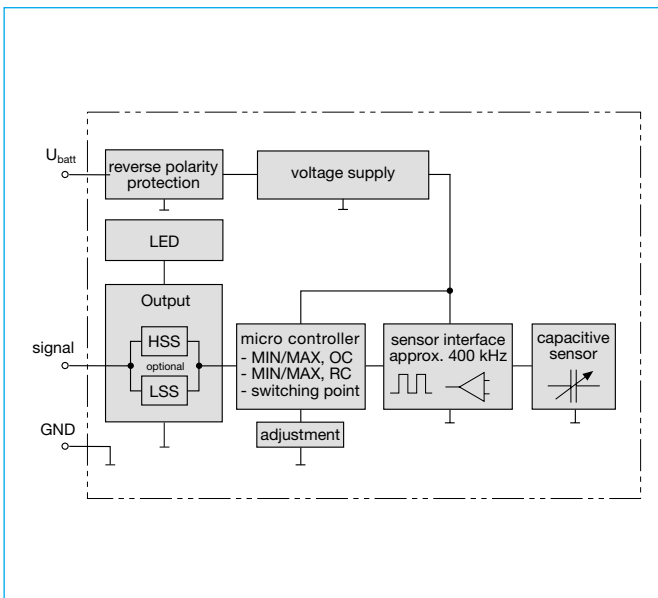
**Connection diagram LSS**



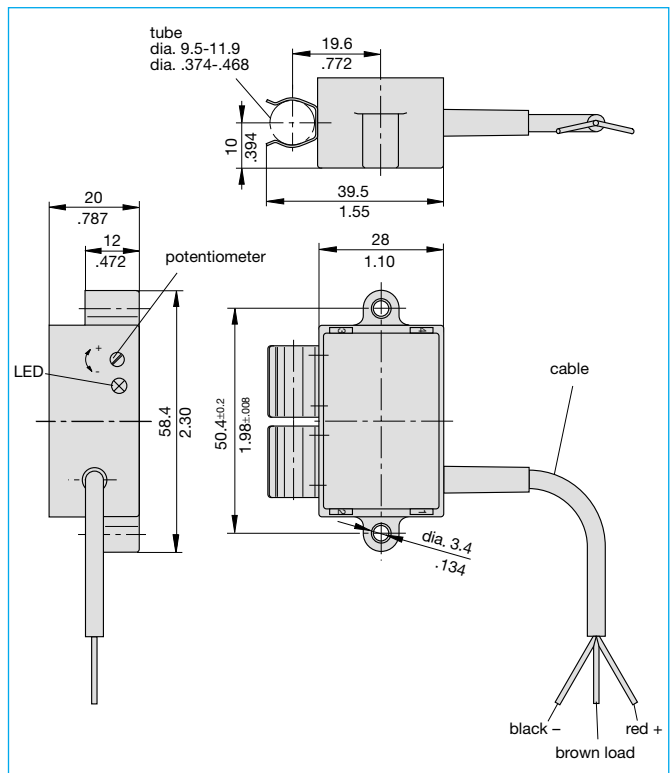
**Connection diagram HSS**



**Schematic diagram**



**Dimensions**



This is a metric design and millimeter dimensions take precedence ( $\frac{mm}{inch}$ )

All dimensions without tolerances are for reference only. In the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved. Product markings may not be exactly as the ordering codes. Errors and omissions excepted.

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