RIL100 Electronic submersion level transmitter

The Riels ® RIL100 hydrostatic level meter is a compact measuring device containing a silicon strain gauge in a stainless steel probe body.
A multipolar cable comes out of the probe housing, equipped with a tube for compensation with atmospheric pressure.
RIL100 is suitable for continuous measurement of the level of non-aggressive liquids, without impurities (solid), in non-pressurized tanks, wells, tanks and pools.
It is also used in industrial and naval applications to measure the level of diesel fuel.

The installation is carried out by letting the probe descend into the area to be measured (tanks, wells) and can remain hanging on the cable or reclining on the bottom of the tank.

- The cable includes a system for air compensation (capillary), so the connection must be made in the non hermetic junction box.
- In tanks where there are strong turbulence or waves, it would be preferable to place the probe inside a still pipe, behind the wall, or at least as far away from the turbulence source as possible.
- When using a liquid other than water it is necessary to adjust the outlet according to the density of the liquid, if necessary contact one of our technicians.

Main Features

- Water-repellent, antiperspirant, no leakage, IP68 protection degree.
- Excellent resistance to impacts, overloads, shocks and erosion.
- Efficient lightning protection, strong EMI/RFI protection.
- Advanced digital temperature compensation and wide range operating temperature.
- High sensitivity and precision, high frequency response and long-term stability.

Applications

- Automation systems and constant pressure water supply systems.
- Urban water supply and wastewater treatment.
- Liquid level testing and control in other automation systems.
- Liquid level testing and control in industrial processes.
- Testing and control in hydraulic and hydroelectric engineering.

Available Measure Ranges

NOMINAL PRESSURE	
0-1 mH_2O	0-50 mH_2O
0-2 mH_2O	0-80 mH_2O
0-5 mH_2O	0-100 mH_2O
0-10 mH_2O	0-150 mH_2O
0-15 mH_2O	0-200 mH_2O
0-20 mH_2O	On request

A2X Digital Indicator

The indicator is dedicated to the measurement of analog process signals from 4÷20 mA transmitters; 0÷10V; 0÷5V; 1÷5V; ±10V or to any type of signal included in the following ranges: ±40 mA, ±4 Vdc and ±40 Vdc.

When ordering, the desired entry scale can be specified.
If not specified, the device is delivered calibrated with the 4÷20mA input scale and reading scale 0÷1000.

The 5-digit display allows you to display values between ±99999.
The calibration operations are simplified by the possibility of associating two values of the input variable (start and full scale) to the two parameters "reading at start of scale" and "reading at full scale" with simple manual operations or through the two digital remote commands.

There are two alarm thresholds that can be set as minimum, maximum, at precise values and hysteresis thresholds, both with adjustable differential and possibility to operate manually.

- Multi-function process indicator 96x48
- 5-digit indicator suitable for the detection of signals from industrial transmitters 4÷20mA or 0÷10V
- Two, four or six relay alarm thresholds
- Programming with 4-key keypad, EEPROM storage
- Self-learning of calibration levels using two digital inputs
- Working temperature -10+50°C
- Flush mounting (drilling template 92x45) IP54

RIL100

ELECTRONIC LEVEL TRANSMITTER

LEVEL CONTROLS

Technical features

Pressure Range	0÷200 mH_2O				
Overpressure	1,5 x FS mH_2O				
AMBIENT					
Working temperature	-20°C...+70°C				
Compensated temperature range	0°C...+70°C				
Storage temperature	-40°C...+125°C				
Vibrations	10 g [20...2000 Hz]				
Shocks	100 g [10 ms]				
Cycles	$10x10^6$				
ELECTRONIC @ 25°C					
Output signal	**4...20 mA** **12...36 Vdc**	**0...5 V** **12...36 Vdc**	**1...5 V** **12...36 Vdc**	**0...10 Vdc** **15...36 Vdc**	**0,5...4.5 Vdc** **5 Vdc**
Load resistance	< (Vs - 12)/0.02A (for current output), > 10k**Ω** (for voltage output)				
Insulation resistance	100 MΩ @ 50 Vdc				
MECHANICAL					
Compatible liquids	All liquids compatible with AISI316L stainless steel				
Chassis	AISI316L Stainless Steel				
Membrane	AISI316L Stainless Steel				
Oring	VITON or NBR				
Filling oil	Silicone oil				
Protection	IP68				
Net weight	225 g				

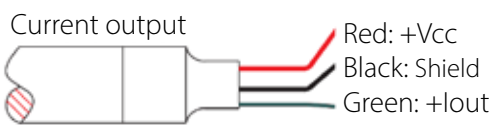
Accuracy parameters

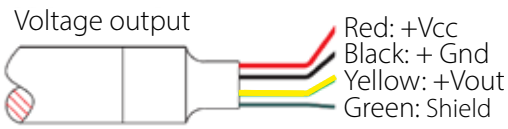
PARAMETERS	Minimum	Tipical	Maximum	Unit	Notes
Accuracy	0.1	0.25	0.5	% FS	1,2
Temperature coeff. zero		±0.75	±1.5	% FS	3
temperature coeff. spam		±0.75	±1.5	% FS	3
Long term stability		±0.2	±0.3	% FS/year	1

Notes:
1. All values are measured at 25°C
2. includes non-linearity, hysteresis and repeatability
3. from 0°C to 70°C with reference to 25°C

Electrical connections

Cable connection	2 wires (current)	3 wires (voltage)
Supply [+]	Red	Red
Signal [-]	Green	Yellow
GND	-	Black





Dimensions (mm)