RLFP

RADAR
LEVEL METERS

LEVEL

RIELS
INSTRUMENTS

RLFP Cubic

Flexible up to the probe tip

LEVEL SENSORS

Technical data overview

Measurement principle	TDR sensor
Detection principle	Contact
Medium	Fluids
Measurement	Switch, Continuous
Process temperature	−20 °C ... +150 °C (depending on type)
Process pressure	−1 bar ... 16 bar (depending on type)
Output signal	1 x PNP + 1 x PNP/NPN + 4 mA ... 20 mA / 0 V ... 10 V / 1 x PNP + 3 x PNP/NPN + 4 mA ... 20 mA / 0 V ... 10 V (depending on type)

Product description

The RLFP Cubic is a level sensor for liquids using TDR technology – a process for determining the time of flight of electromagnetic waves. The time difference between the sent pulse and the reflected pulse is used to generate a level signal. The sensor can emit this a as continuous measured value (analog output) and a freely positionable switching point (switching output). The RLFP Cubic iscompatible for use in virtually any liquid. Thanks to its modular probe, the sensor can be integrated quickly into any application. Itcan even be used in deposit-forming and foaming liquids. The sensor's intuitive setup uses four pushbuttons and a display to ensure quick and easy adaptation to the application. Remote amplifier, IO-Link interface, and a design which features a process connection in titanium are additional features for versatile use.

At a glance

- Level sensor for liquids
- No mechanical moving parts
- Interchangeable rod probe which can be cut to lengths between 200 mm and 2,000 mm (cable probe up to 4,000 mm)
- Resistant to deposit formation
- Process temperature up to 100 °C,process pressure up to 10 bar
- 3 in 1: combines display, analog output (according to NAMUR NE 43), and binary output
- High enclosure rating of IP 67, rotatable housing and remote amplifier
- IO-Link 1.1

Your benefits

- Rugged design increases service life
- High flexibility with interchangeable rod probe or cable probe that can be cut to length
- Cost savings due to multiple output signals: One system for both point level and continuous level measurement
- Maintenance-free and easy to commission without calibration, saving time and money
- Titanium process connection is highly resistant to chemicals
- Compact, rotatable housing and remote amplifier for flexible installation
- High availability, even when several sensors are installed in parallel, since there is no mutual device interference
- Universal technology facilitating calibration-free measurement saves time and money

Fields of application

- Monitoring coolants and lubricants in machine tooling
- Monitoring cleanser and detergents in cleaning and washing machines
- Monitoring filling tanks in automobile assembly
- Level measurement in industrial processes with difficult ambient conditions

Type code

Probe length in mm

0025	Without probe
0200	200 mm (rod probe in 10 mm increments; cable probe in 1,000 mm increments)
4000	4,000 mm

Process connection / probe version

A	G ¾ A / rod probe 1.4404 interchangeable, 100 °C; 10 bar
B	¾" NPT / rod probe 1.4404 interchangeable, 100 °C; 10 bar
E	G ¾ A / 3 mm cable probe, 1.4404 interchangeable, 100 °C; 10 bar
F	¾" NPT / 3 mm cable probe, 1.4404 interchangeable, 100 °C; 10 bar

Housing / display / device connection

4	Plastic housing with display / 1 x M12 male connector / 5-pin
5	Plastic housing with display / 1 x M12 male connector / 8-pin

Application type / design

N	Standard
B	Remote amplifier; length of cable 1 m
C	Remote amplifier; length of cable 2 m
D	Remote amplifier; length of cable 3.3 m

Signal output

M	4 ... 20 mA / 0 ... 10 V switchable

Switching output

B	1 x PNP + 1 x PNP/NPN
C	1 x PNP + 3 x PNP/NPN

Device type

	Standard
L	LABS-free

RLFP		-			M		

Not all variants of the type code can be combined!

Dependence between length of coaxial cable and probe length

Length of coaxial cable (mm)	Max. probe length (mm) foam mode deactivated	Max. probe length (mm) foam mode active
1000	4,000	2000
2000	3,000	1500
3300	1,000	500