Digital probes for measuring conductivity FYD 741 LFE01 and FYD 741 LFP with ALMEMO® D7 plug

ALMEMO® 202

Just one single probe for measuring conductivity from very low (10 µS/cm) up to very high levels (500 mS/cm)

4-contact graphite electrode with high linearity across the whole measuring range

Integrated NTC sensor for temperature compensation of measured conductivity values

Suitable for the latest ALMEMO® V7 devices, including professional measuring instrument ALMEMO® 202 and precision measuring instrument ALMEMO® 710.

Technical data and functions

The digital conductivity probe provides this high level of precision irrespective of any extension cables used and of any processing in the ALMEMO® V7 display device / data logger.
Overall accuracy is determined exclusively by the conductivity electrode and the ALMEMO® D7 plug.
All parameters for the sensor can be programmed end-to-end via the programming menu on the ALMEMO® V7 measuring instrument. The desired measuring range can be selected and temperature compensation can be activated or deactivated. The temperature coefficient of the solution to be measured, if known, can also be programmed.
The probe is delivered already adjusted and ready-to-use. The electrode's measured cell constant can also be entered, if so required, and / or the probe can be adjusted using a reference solution.

Common technical data FYD 741 LFE01 and FYD 741 LFP ALMEMO® D7 plug with A/D converter

Measuring method	Electrical conductivity measurement with AC voltage (approx. 1 kHz)
Measuring ranges	
Range DLF1	up to maximum 500.00 µS/cm Resolution 0.01 µS/cm
Range DLF2	up to 50.000 mS/cm Resolution 0.001 mS/cm (factory default settings)
Range DLF3	with FYD 741 LFE01 up to 500.00 mS/cm with FYD 741 LFP up to 200.00 mS/cm Resolution 0.01 mS/cm
Range NTC	Resolution 0.01 K
Temperature compensation	either automatic or non-compensated

Temperature coefficient	Natural surface water or linear in range 0.00 to 9,99
Linearization NTC	Calculated error-free (not an approximation)
Nominal temperature	+23 °C ±2 K
Temperature drift	0.004 % / K (40 ppm)
Refresh time	2.5 seconds
Sleep mode on the device	possible with wakeup delay of 5 seconds
Supply voltage	6 to 13 VDC, from ALMEMO® device (sensor supply voltage)
Current consumption	approx. 10 mA

Accessories

	Order no.
Reference solution for monitoring / calibration	
Conductivity 147 µS/cm, Container 250 ml	**ZB96LFRL2**
Conductivity 2.77 mS/cm, Container 250 ml	**ZB96LFRL**
Conductivity 12.88 mS/cm, Container 250 ml	**ZB96LFRL4**
Conductivity 111.8 mS/cm, Container 250 ml	**ZB96LFRL3**

Digital probe for measuring conductivity FYD 741 LFP

Probe for process applications

General description and common technical data
see previous page

Digital probe for measuring conductivity FYD 741 LFE01

Probe for laboratory applications

General description and common technical data
see previous page

Technical data FYD 741 LFP

Uses	Process applications
Conductivity	10 µS/cm up to 200 mS/cm
Temperature	0 to +70 °C
Pressure	up to 16 bar under nominal conditions
Process connection	Thread G ¾-inch Fitted length 145 mm
Electrode type	4-contact graphite electrode electrically connected to the power supply (ALMEMO® device ground)
Cell constant	approx. 0.5 cm^{-1}
Temperature sensor	NTC 10 kilohms, integrated
Accuracy	
Conductivity	±3% of meas. value ±0.2% of final value under nominal conditions
Temperature	±0.2 K under nominal conditions
Nominal conditions	+25 °C ±2 K
Minimum immersion depth	30 mm
Electrode shaft	Material PVC-C diameter 20 mm, length 130 mm
Connecting cable	length = 1.5 meters, permanently fitted, with ALMEMO® D7 plug

Technical data FYD 741 LFE01

Uses	Laboratory applications
Conductivity	10 µS/cm up to 200 mS/cm, on demand up to 500 mS/cm
Temperature	0 to +80 °C
Pressure	Ambient pressure (unpressurized)
Electrode type	4-contact graphite electrode electrically connected to the power supply (ALMEMO® device ground)
Cell constant	approx. 0.5 cm^{-1}
Temperature sensor	NTC 30 kilohms, integrated
Accuracy	
Conductivity	±2% of meas. value ±0.2% of final value under nominal conditions
Temperature	±0.2 K under nominal conditions
Nominal conditions	+25 °C ±2 K
Minimum immersion depth	30 mm
Electrode shaft	Material PC (+ABS) diameter 12 mm, length 120 mm
Connecting cable	length = 1 meter, permanently fitted, with ALMEMO® D7 plug

Variants	Order no.
Digital probe for measuring conductivity, integrated temperature sensor, with process connection G ¾-inch, permanently fitted cable with ALMEMO® D7 plug,	
probe for process applications	**FYD741LFP**

Variants	Order no.
Digital probe for measuring conductivity, integrated temperature sensor, with permanently fitted cable with ALMEMO® D7 plug,	
probe for laboratory applications	**FYD741LFE01**