



HERBERGER®
WASSERAUFBEREITUNG GMBH

CONDUCTIVITY SENSORS



CONDUCTIVITY SENSORS

General

Our conductivity sensors are specifically designed for water, aqueous solution and brine. They are conceived for the application in water treatment (i.e. demineralised water, pure water, ultrapure water, drinking water and also waste water etc.). Therefore we use predominantly materials like PVC, POM, PVDF. The sensors are available with permanent cast cable (LFSP) or with cable coupling (LFSC) for easy maintenance.

Applications

- ④ Water treatment, demineralised water, pure water
- ④ Waste water treatment
- ④ Reverse osmosis systems
- ④ Water softening systems
- ④ Beverage industry
- ④ Monitoring of softeners or dosing feeders
- ④ Level Indication in tanks
- ④ Monitoring of operating systems

Tailor made cables

- ④ Up to 10 meter length
- ④ Shielded or unshielded
- ④ Permanent cast cables (LFSP) or cable coupling (LFSC)
- ④ Wire end at buyer's option with: wire termination, stereo jack, plug connector, etc.

Installation details

The sensors are to be mounted vertically from below or horizontally in order to avoid air blisters. In a gas-free fluid, the sensors can also be mounted from the top. The electrodes must be fully bathed by the medium.

Pressure data

The mentioned compression loads in the detailed descriptions refer to static or steadily flowing media. In case of pulsating pressure the maximum pressure load is reduced by approximately 30%.

Measurement process

The sensors are conceived for alternating voltage (AC). For conductivity measurement, a sine wave generator is to connect with one electrode while the other is to ground. The amplitude and the frequency of the sine wave generator are to be adapted according to the media to be measured.

	Frequency (Hz)	Amplitude (Uss)
Salt solution	4000	ca. 75 mV
Town water and permeate	1000	ca. 6 Volt
Ultrapure water	2,7	ca. 6 Volt



CONDUCTIVITY SENSORS

To stick or glue

LFSP-K160

Sensor to glue
in Tee 16 mm

- ✎ C = 0,1 to 0,6 /cm
- ⊞ PVC-U
- ⊖ -10 to +40° C
- 🔧 Mounting in Tee 16 mm
- ⚡ 2 x 0,25 mm² unshielded
- ⚡ 2 x 0,34 mm² shielded



LFSP-K160T

Sensor to glue in Tee 16mm
with temperature sensor

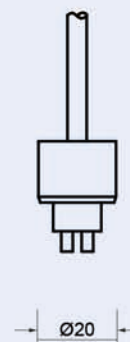
- ✎ C = 0,1 to 0,6 /cm
- ⊞ PVC-U
- ⊖ -10 to +40° C
- 🔧 Mounting in Tee 16 mm
- ⚡ 4 x 0,25 mm² unshielded
- ⚡ 4 x 0,34 mm² shielded
- 👍 Temperature sensor NTC / PTC



LFSP-K200

Sensor to glue
in Tee 20 mm

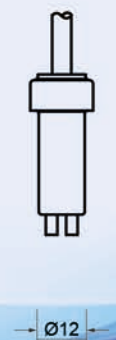
- ✎ C = 0,1 to 0,6 /cm
- ⊞ PVC-U
- ⊖ -10 to +40° C
- 🔧 Mounting in Tee 20 mm
- ⚡ 2 x 0,25 mm² unshielded
- ⚡ 2 x 0,34 mm² shielded



LFSP-S120JG

Sensor to stick
in John-Guest-Fitting (Push-in)

- ✎ C = 0,1 to 0,6 /cm
- ⊞ PVC-U
- ⊖ -10 to +40° C
- 🔧 Mounting in JG-Push-in Ø12 mm
- ⚡ 2 x 0,25 mm² unshielded
- ⚡ 2 x 0,34 mm² shielded



LFSP-S160 / LFSP-S161

Sensor with o-ring
to mount in 16 mm bore hole

- ✎ C = 0,1 to 0,6 /cm
- ⊞ PVC-U / PVC-C
- ⊖ -10 to +40° C / -10 to +95° C
- 🔧 Mounting in 16 mm bore hole
- ⚡ 2 x 0,25 mm² unshielded
- ⚡ 2 x 0,34 mm² shielded



LFSP-S240

Sensor with o-ring
to mount in 24 mm bore hole

- ✎ C = 0,2 to 0,6 /cm
- ⊞ PVC-U
- ⊖ -10 to +40° C
- 🔧 Mounting in Tee 24 mm bore hole
- ⚡ 2 x 0,25 mm² unshielded
- ⚡ 2 x 0,34 mm² shielded



✎ Cell factor ⊞ Material ⊖ Temperature range 🔧 Assembly ⚡ Cable



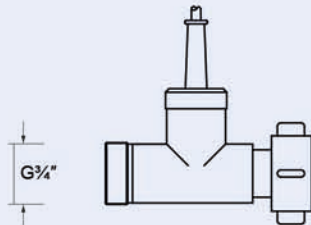
CONDUCTIVITY SENSORS

Mounted in Tee

LFSP-T160G

Sensor LFSP-K160 in Tee 16 mm
with straight pass

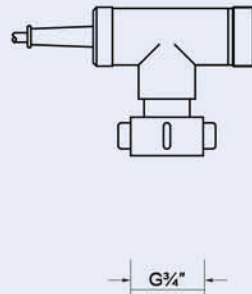
-  C = 0,6 / cm
-  PVC / POM (wing nut)
-  -10 to +40° C
-  3/4" coupling nut
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded



LFSP-T160W

Sensor LFSP-K160 in Tee 16 mm
with 90° pass

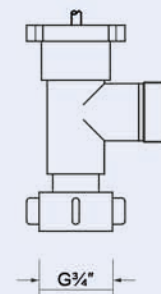
-  C = 0,1 to 0,6 / cm
-  PVC / POM (wing nut)
-  -10 to +40° C
-  3/4" coupling nut
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded



LFSP-T160F

Sensor LFSP-K160 in Tee 16 mm
with flange

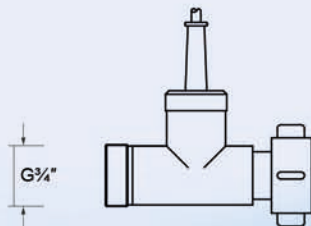
-  C = 0,1 to 0,6 / cm
-  PVC / POM (wing nut)
-  -10 to +40° C
-  3/4" coupling nut
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded



LFSP-T200G

Sensor LFSP-K200 in Tee 20 mm
with straight pass

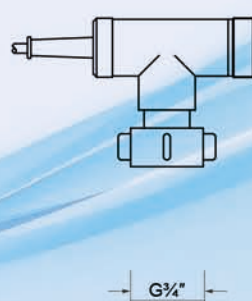
-  C = 0,6 / cm
-  PVC / POM (wing nut)
-  -10 to +40° C
-  3/4" coupling nut
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded



LFSP-T200W

Sensor LFSP-K200 in Tee 20 mm
with 90° pass

-  C = 0,1 to 0,6 / cm
-  PVC / POM (wing nut)
-  -10 to +40° C
-  3/4" coupling nut
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded



LFSP-T200F

Sensor LFSP-K200 in Tee 20 mm
with flange

-  C = 0,1 to 0,6 / cm
-  PVC / POM (wing nut)
-  -10 to +40° C
-  3/4" coupling nut
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded



 Cell factor  Material  Temperature range  Assembly  Cable



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CONDUCTIVITY SENSORS

Screw-in sensors / Leakage sensor

LFSP-E140-OL

Sensor to screw in 1/4" thread
with sealing ring

-  C = 0,1 to 0,6 /cm
-  PVC-U
-  -10 to +40° C
-  1/4" screw thread
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded



G 1/4"

LFSP-E140-OR

Sensor to screw in 1/4" thread
with o-ring

-  C = 0,1 to 0,6 /cm
-  PVC-U
-  -10 to +40° C
-  1/4" screw thread
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded



G 1/4"

LFSP-E141-OL

Sensor to screw in 1/4" thread
with sealing ring

-  C = 0,1 to 0,6 /cm
-  PVC-C
-  -10 to +80° C
-  1/4" screw thread
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded



G 1/4"

LFSP-E141-OR

Sensor to screw in 1/4" thread
with o-ring

-  C = 0,1 to 0,6 /cm
-  PVC-C
-  -10 to +80° C
-  1/4" screw thread
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded



G 1/4"

LFSP-E120

Sensor to screw in 1/2" thread
with o-ring

-  C = 0,1 to 0,6 /cm
-  PVC-U
-  -10 to +40° C
-  1/2" screw thread
-  2 x 0,25 mm² unshielded
-  2 x 0,34 mm² shielded

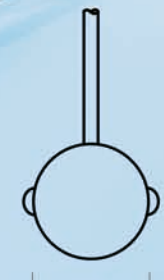


G 1/2"

LWSP-200

Leakage sensor

-  Conductive measurement
-  PVC-U in grey
-  -10 to +40° C
-  2 x 0,14 mm² unshielded
-  A thin layer of a conductive fluid already makes an interpretable signal



Ø30

 Cell factor  Material  Temperature range  Assembly  Cable



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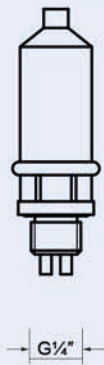
CONDUCTIVITY SENSORS

Screw-in sensors with cable coupling

LFSC-E143

Sensor to screw in ¼" with o-ring and cable coupling

- C = 0,1 to 0,6 /cm
- PVDF
- 10 bis to 135° C
- ¼" screw thread
- 2 x 0,25 mm² unshielded
- 2 x 0,34 mm² shielded



LFSC-E122

Sensor to screw in ½" with o-ring and cable coupling

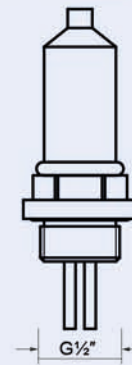
- C = 0,1 to 0,6 /cm
- POM
- 10 to +80° C
- ½" screw thread
- 2 x 0,25 mm² unshielded
- 2 x 0,34 mm² shielded



LFSC-E123

Sensor to screw in ½" with o-ring and cable coupling

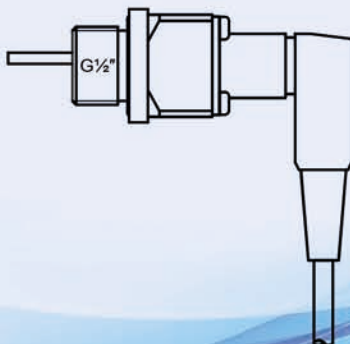
- C = 0,1 to 0,6 /cm
- PVDF
- 10 to +135° C
- ½" screw thread
- 2 x 0,25 mm² unshielded
- 2 x 0,34 mm² shielded



LFSC-E122T

With temperature sensor and cable coupling

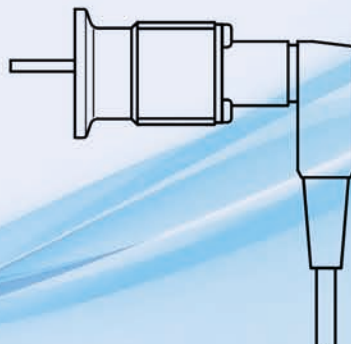
- C = 0,1 to 0,6 /cm
- POM
- 10 to +80° C
- ½" screw thread
- 4 x 0,25 mm² unshielded
- 4 x 0,34 mm² shielded



LFSC-C342T

With temperature sensor and cable coupling

- C = 0,1 to 0,6 /cm
- POM
- 10 to +80° C
- Tri-Clamp 34 mm
- 4 x 0,25 mm² unshielded
- 4 x 0,34 mm² shielded



Delivery program

Besides our standard products, we also manufacture **tailor made conductivity sensors**.

Cable length and end

The sensors are provided with cable lengths up to 10 meters with custom-made wire ending.

Cell factor Material Temperature range Assembly Cable



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	MATERIAL	CELL FACTOR	SCREW THREAD	SENSOR TO STICK	SENSOR TO GLUE	TEE	SPECIAL	WRENCH SIZE	SEALING	CABLE	TEMP. SENSOR	TEMP. RANGE
	PVC-U	0,1	1/4"	d=16	d=20	Tri-Clamp	John-Guest	27	O-Ring	0,14 mm ² ush	PTC	< 135° C
	PVC-C	0,2	3/8"	d=16	d=20			22	O-Ring	0,25 mm ² ush	NTC	< 80° C
	PVC-C	0,6	1/2"	d=24					O-Ring	0,34 mm ² sh	cast	
	PVC-C	1,0	3/4"							coupling		
LFSP-K160		0,1	1/4"									
LFSP-K160T		0,2	1/4"									
LFSP-K200		0,6	1/4"									
LFSP-T160G		0,1	1/4"									
LFSP-T160W		0,2	1/4"									
LFSP-T160F		0,6	1/4"									
LFSP-T200G		0,1	1/4"									
LFSP-T200W		0,2	1/4"									
LFSP-T200F		0,6	1/4"									
LFSP-E140-OL		0,1	1/4"									
LFSP-E140-OR		0,2	1/4"									
LFSP-E141-OL		0,6	1/4"									
LFSP-E141-OR		0,1	1/4"									
LFSP-E120		0,2	1/4"									
LFSP-S120JG		0,6	1/4"									
LFSP-S160		0,1	1/4"									
LFSP-S161		0,2	1/4"									
LFSP-S240		0,6	1/4"									
LFSC-E143		0,1	1/4"									
LFSC-E122		0,2	1/4"									
LFSC-E123		0,6	1/4"									
LFSC-E122T		0,1	1/4"									
LFSC-C342T		0,2	1/4"									
LWSP-200		0,6	1/4"									



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