



Extract from our online catalogue:

hps+340/DIU/TC/G2

Current to: 2015-01-12

*hps+ in safety gear -
When you need
chemically resistant,
pressure-resistant
sensors.*



Highlights

- › **Optionally used in normal pressure or overpressure**
- › **Teflon membrane** ::: *for protection against aggressive media*
- › **Stainless-steel or optional PVDF housing for hps+340** ::: *for use in the food industry*
- › **Sealed against the housing with an O-ring made from FFKM** ::: *for the highest possible chemical resistance*
- › **Digital display with direct measured value output in mm/cm or %**
- › **Numeric configuration of the sensor using digital display**

Basics

- › **2 switching outputs in pnp variant**
- › **Analogue output plus 1 pnp switching output**
- › **4 detection ranges with a measurement range of 30 mm to 8 m**
- › **microsonic Teach-in using T1 or T2 buttons**
- › **0.025 mm to 2.4 mm resolution**
- › **Temperature compensation**
- › **9–30 V operating voltage**
- › **LinkControl** ::: *for configuration of sensors from a PC*

Description

For fill level measurements of aggressive media and in overpressure

the ultrasonic transducers of the new hps+ sensors are now fitted out - as standard - with a Teflon film. It is sealed with a FFKM O-ring against the housing made of 1.4571 stainless steel or PVDF. This ensures a high degree of resistance to aggressive media.



Fill level measurement in tanks

The hps+ sensors can be used for fill level measurement under normal pressure or in tanks and containers with an overpressure of up to 6 bar. Its special software filters also allow its use in containers filled from above or that have a stirring system.

Pressure-tight installation in a tank is undertaken by means of a 1" threaded flange or a 2" one in the case of hps+340.

Chemical resistance

and seal tightness were tested through being stored over cellulose thinner and 1,000,000 alternating pressure stresses. Cellulose thinner is extremely corrosive and has a high rate of penetration.



hps+340 in highly resistant PVDF housing - PTFE protective film sealed with an O-ring made from FFKM against the housing

Two different output stages are available for four detection ranges:



2 switching outputs in pnp switching technology



1 analogue output plus 1 pnp switching output

The hps+ sensors with switching output have three operating modes:

- > Single switching point
- > Two-way reflective barrier
- > Window mode

Two three-colour LEDs

always show the current state of the switching outputs or the analogue output.

With TouchControl

all configuration can be done right at the sensor. The easily legible three-digit LED display continually shows the current distance value and automatically switches between millimetre and centimetre displays.

Setting a switching or analogue output

can optionally be carried out by numeric input of the desired distance values, or using a Teach-in procedure. This permits the user to select the configuration method preferred. The hps+ sensors support synchronisation and multiplex operation and have extensive parameterisation options via LinkControl.

Further information on how to set up hps+ sensors can be found at mic+ sensors.

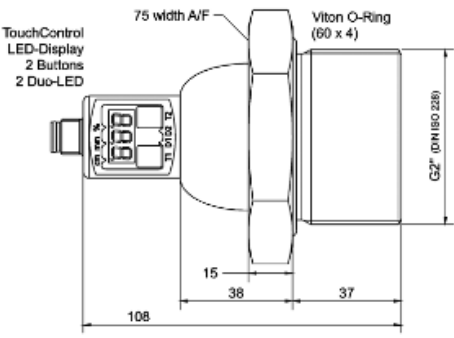
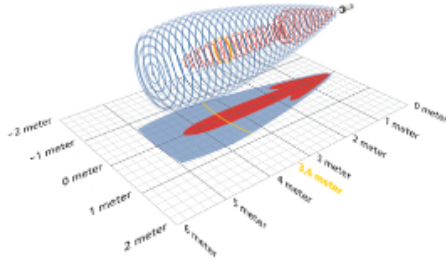


LinkControl

consists of the LinkControl adapter and the LinkControl software and facilitates the configuration of the hps+ sensors via a PC or laptop with any conventional Windows® operating system.



Sensor connected to the PC via LCA-2 for programming

hps+340/DIU/TC/G2

scale drawing	detection zone
	
 1 x pnp + 1 x analogue 4-20 mA / 0-10 V	 8,000 mm
operating range	350 - 3,400 mm
design	cylindrical
operating mode	proximity switch/reflective mode reflective barrier window mode analogue distance measurement
particularities	pressure-resistant high chemical resistance PVDF housing display process connection G2
ultrasonic -specific	
means of measurement	echo propagation time measurement
transducer frequency	120 kHz
blind zone	350 mm
operating range	3,400 mm
maximum range	8,000 mm
angle of beam spread	please see graphics detection zone
resolution/sampling rate	0.18 mm to 2.4 mm, depending on the analogue window
reproducibility	± 0.15 %
accuracy	± 1 % (temperature drift internally compensated)
electrical data	
operating voltage U_B	9 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
no-load current consumption	≤ 80 mA
type of connection	5-pin M12 initiator plug

hps+340/DIU/TC/G2

outputs	
output 1	analogue output current: 4-20 mA / voltage: 0-10 V, short-circuit-proof switchable rising/falling
output 2	switching output pnp: $I_{max} = 200 \text{ mA}$ ($U_B - 2V$) NOC/NCC adjustable, short-circuit-proof
switching hysteresis	50 mm
switching frequency	3 Hz
response time	240 ms
delay prior to availability	< 450 ms
inputs	
input 1	com input synchronisation input
housing	
material	PVDF, PBT, TPU
ultrasonic transducer	coated with PTFE film, FFKM O-ring
class of protection to EN 60529	IP 67
operating temperature	-25°C to +70°C
storage temperature	-40°C to +85°C
weight	350 g
further versions	stainless steel
further versions	hps+340/DIU/TC/E/G2
technical features/characteristics	
temperature compensation	yes
controls	2 push-buttons + LED display (TouchControl)
scope for settings	Teach-in and numeric configuration via TouchControl LCA-2 with LinkControl
synchronization	yes
multiplex	yes
indicators	3-digit LED display, 2 x three-colour LED
particularities	pressure-resistant high chemical resistance PVDF housing display process connection G2
documentation (download)	
pin assignment	