

# S2Tech Srl

Smart Solutions

DISPLACEMENT TRANSDUCERS - INDUSTRIAL MEASUREMENT SYSTEMS - LEVEL TRANSDUCERS



## PCS III LEVEL TRANSDUCERS



PCS displacement transducers are robust and reliable, accurate, without mechanical wear between moving parts, they resist to shocks and vibrations typical of the industrial environment and are protected against hostile environments. PCS Magnetostrictive transducers are absolute sensors that measure—with continuity—by digital means the position of the cursor/floater, with reference to the housing that contains the electronics (measuring head). They can be supplied with connector or cable output.

It is possible their use for linear measurements, using a magnetic ring cursor, or—using specific floaters with magnetic rings inside—to use it as a level transducer.

Other mechanical executions or firmware customization are available, upon request.

### Main characteristics:

- *Stainless Steel AISI 316L measuring rod  $\varnothing$  10 mm* (wet parts) Tig soldered, suitable for industrial, food, chemical or pharmaceutical applications, with working pressures up to 350 bar (peak up to 700).  
Installation thread: M18x1,5 mm (standard, other mechanical solutions upon request)
- *Measurement range:* from 0 to 100 and up to 3.000 mm
- *3 in 1 measurements:* Product level + Interface level + Temperature  
Internal temperature measurement, on measurement rod's tip and on electronic head.
- Availability to set on PCS transducer specific *linearization table for tank shape* linearization/compensation (up to 100 interpolation points), to obtain precise volume measurements
- Easy to calibrate, using *free software utility*, to be used also to enter linearization table.
- Internal auto-diagnostic functions and protected power supply (resettable thermal fuse + reversal polarity protection)
- *Digital outputs* already in engineering units as *Modbus* (RS485) or *CANopen*
- *Analog output:* voltage or current
- CE / EMC Certified - Explosion proof housing version available - IP65 Environment protection

- |                        |                 |                   |
|------------------------|-----------------|-------------------|
| ◆ Petroleum            | ◆ Chemical      | ◆ Tank farms      |
| ◆ Liquid petroleum gas | ◆ Wastewater    | ◆ Terminals       |
| ◆ Pharmaceutical       | ◆ Battery tanks | ◆ Bullet tanks    |
| ◆ Food & beverage      | ◆ Storage tanks | ◆ Separator tanks |



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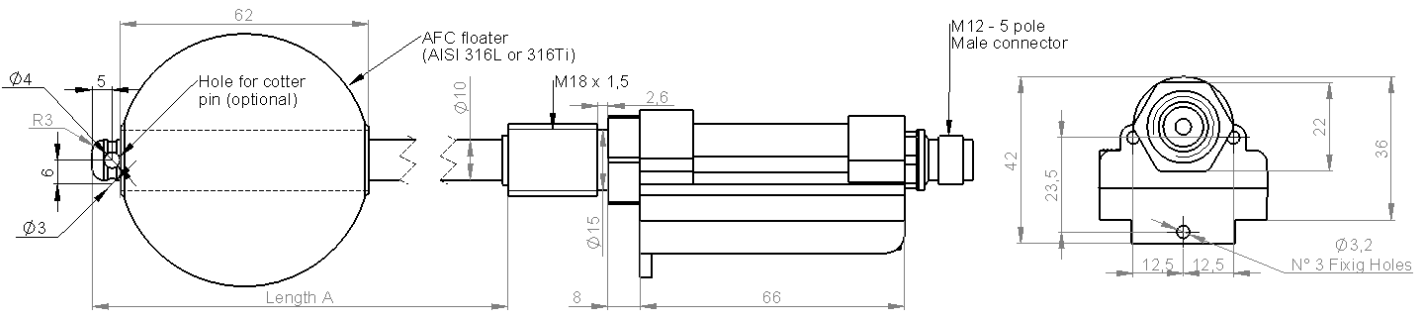
E-mail: [info@s2tech.it](mailto:info@s2tech.it) — Skype: commerciale.s2tech



ISO 9001:2008 - Cert. n.6687/0

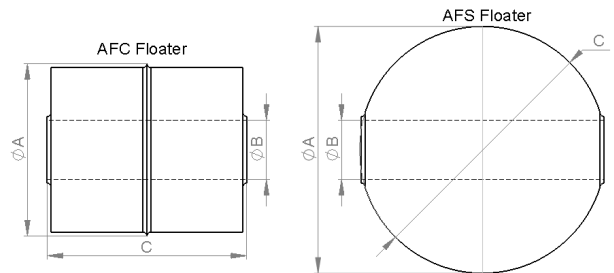
## TECHNICAL SPECIFICATION

<b>Standard measurement ranges:</b>	from 0 to 100 mm and up to 3000 mm FS (in +50 mm steps)
<b>Analog Outputs:</b>	Voltage 0 ÷ 10 V or 10 ÷ 0 V Current 4 ÷ 20 mA or 0 ÷ 20 mA
<b>Resolution on analog output</b>	16 bit (on internal A/D converter)
<b>Digital outputs:</b>	<b>Modbus</b> (RS485) standard, also used for settings of the unit, allows to connect on the network up to 32 sensors <b>CANOpen:</b> faster than the Modbus, used where high speed data transmission is required
<b>Accuracy (non-linearity):</b>	on transducers up to 500 mm = ± 0,06 mm on transducers from 500 to 3000 mm = ± 0,3 mm
<b>Sampling frequency:</b>	200 Hz (length dependent)
<b>Zero adjust range:</b>	anywhere within the active measurement length
<b>Power supply:</b>	from 18 to 30 Vdc (± 15%) with polarity reversal protection (series diodes) and re-settable thermal fuse current < 50 mA max (connection through 5 wires with twisted pairs shielded cable)
<b>Temperature output:</b>	from NTC type sensors Temperature accuracy: 2°C Resolution: 0,2°C
<b>Environment protection:</b>	IP65
<b>Working Temperature:</b>	from -40 to +110 °C for measurement rod (Rh 95%) from -40 to +85 °C for electronic head (Rh 95%)
<b>Working pressure :</b>	350 bar (occasional burst up to 700 bar for measurement rod)

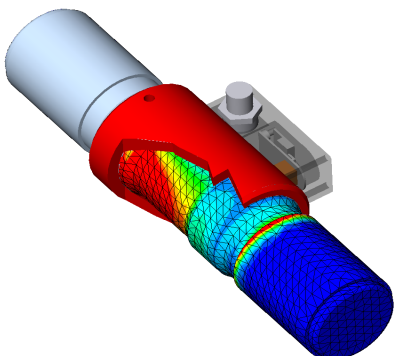


Measuring range (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
Length : A	163	213	263	313	363	413	463	513	563	613	663	713	763	813	863	913
Measuring range (mm)	900	950	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2250	2500	3000
Length : A	963	1013	1063	1163	1263	1363	1463	1563	1663	1763	1863	1963	2063	2313	2563	3063

Floater	A	B	C
AFC-2S	44,5 (42)	15	52 (50)
AFC-4S	52 (50)	13	88 (85)
AFS-8S	29,5 (28)	10	33,5
AFS-10S	62	15	60
AFS-12S	82	15	80



## DEVELOPMENT AND MANUFACTURING OF CUSTOM PRODUCTS



- S2Tech technical department**, with 30 years experience acquired with DS Europe, can develop products accordingly to customers' technical specifications with the following tools:
- 3D mechanical design CAD software stations.
  - Finite Element Analysis **FEA** software stations.
  - *Digital and analog electronic* development accordingly to EMC (= CE) stricter industrial marking regulations (with tests in anechoic room at Competent Body third party laboratory).
  - *Software and embedded firmware* development accordingly to most popular industrial bus systems (CANopen, Modbus, PROFIBUS etc.)
  - Fast prototyping.

S2Tech develops new products or modifies existing ones, in order to realize the fittest and more convenient product.