

SPC / Self-Powered Counter

The freedom of counting whenever, wherever and whatever without external power!





SPC



Self-Powered Counter

- > Simple, innovative and cost effective
- > ATEX certification for Gas
- > No power supply required
- > Extreme shock and vibration resistant: 300 g shock; 20 g vibration
- Most compact design of its class: 36.5 mm mounting depth; 28 mm diameter
- > Suitable for all fluid media types: water, gas, etc.
- > Easy and fast field installation
- Fraud protection
- Various communication protocols available: NAMUR, HART, MBUS, Wireless

Applications: Electronic consumption data acquisition in custom gas meters for areas exposed to explosive hazards

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Measurements of the rate or volume of fluid flow may be desirable or even mandatory for operations involving the transport, manufacture, or storage of various fluids. Where conventional electronics or other circuitry are provided for performing various functions related to the fluid measurement, power must be provided to operate them. In some applications, an independent power source may be readily available for supply the fluid meter. However, in other applications, such an independent power source maybe unavailable, impractical, or too costly. Batteries offer only a limited solution due to their typical limitations, such as battery life, cost, and reliability in harsh environments.

Therefore, a fluid meter capable of performing fluid measurements while also providing the power necessary for those measurements would be highly desirable, as it eliminates the cost and inconvenience of independent power sources and batteries. The Hengstler Self-Powered Counter (SPC) is just such a product! SPC provides the benefits and advantages of a conventional, industrial fluid meter while supplying its own power, making it the ideal, cost-effective solution for harsh environments, especially where a power source is lacking. The self-powering feature also ensures that the meter can be replaced at any time without metering data loss.

For further information, contact Hengstler today at info@hengtsler.com, or by phone at +49 (0) 7424 89201.

Technical Data

MECHANICAL

Housing Diameter	38 mm
Shaft Diameter	3 mm
Housing Size	36.5 mm
Protection Class (EN 60529:2014-09)	IP20
Revolution (Limitation of IECEx/ATEX)	typ. up to 3,000 rpm, up to 5,000 rpm short time
Shaft Load Axial / Radial	typ. <5 N / <5 N, (max. 10 N / 10 N)
Drive Torque	< 0.15 Nmm
Operating Temperature (Limitation of IECEx/ATEX)	-20 °C +100 °C
Storage Temperature (Limitation of IECEx/ATEX)	-25 °C +120 °C
Climate (EN60068-2-78:2014-02)	+60 °C at 90 % RAH (non-condensing)
Mounting Position	variable
Lifetime (MTTF ta=30°C / Method S217F2)	>> 10 years
Vibration Resistance (DIN EN 60068-2-6:2008)	10 m/s ² (10150 Hz)
Shock Resistance (DIN EN 60068-2-27:2010)	300 m/s² (6ms)
Material Shaft	Aluminium
Material Housing	Stainless Steel
Weight	71 g
Drop Test (DIN ISO 22248)	800 mm height (packed)
Certifications	CE, ATEX, RoHS, REACH
UL Flammability Classification	UL94-V2 (0.75mm)
Warranty Period	12 Months
HS-Code	90289090

ELECTRICAL

Supply Voltage typ.	
(Only for read out internal memory)	3.2 V ± 5 %
Power Consumption	< 55 mW (acc. ATEX-approval)
Memory Capacity	39- bit; equates 500 bn revolutions in both directions
Magnetic Immunity	200 mT; built-in in index Reference magnet u-shaped: 50 x 40 x 45 mm / 10 mm thick; Material: AlNiCo, approx. 350g
Electrical Connection	Depends on interface
Communication Protocols	NAMUR, UART, M BUS, I ² C, Wireless
HF-Signal typ.	pulse length 100 μs
LF-Signal typ.	pulse length 50 ms
Power Supply Requirements for HF / LF typ.	1.2 V –8 V; max. 24 V
LF / HF Frequency	Programmable if wanted
Counting Direction	Both directions
Electrical Safety	DIN EN 61010-1
EMC	EN 61326-1: 2013

Dimensional Drawing





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