

Features:

- Measures **multiple pressure signals** simultaneously
- Measurement range: **0,025 ... 50kPa (0,25... 500mbar)** uni- and bidirectional
- Non-Linearity & hysteresis **max. +/- 0,25% FSS (typically +/-0,1%)**
- Data transmission via **CAN bus** and power supply via **CAN connector**
- **Easy configuration via USB**
- Incl. **Software and LabVIEW driver**

Customer-Specific Adaptations:

- **Channel ranges** can be individually customized

Applications:

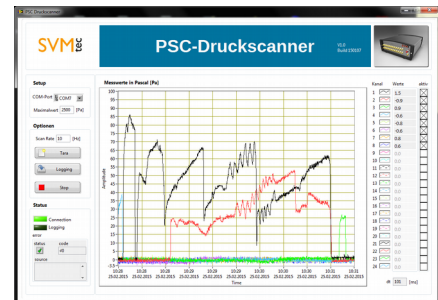
- Pressure measurement in **wind tunnels**
- Aerodynamic measurements in **automotive and aerospace industry** and many additional fields of application
- Performance measurement of **ventilators/ventilating systems**



PSC4-CAN



PSC5-CAN



Software

Pressure Scanner Options

Measurement Range			Max. Pressure		
kPa	mbar	Range	Proof pressure		
0,025	0,25	uni/bi	2000	mbar	on request
0,05	0,5	uni/bi	2000	mbar	on request
0,1	1	uni/bi	2000	mbar	on request
0,25	2,5	uni/bi	250	mbar	
1,25	12,5	uni/bi	500	mbar	
2,5	25	uni/bi	500	mbar	
5	50	uni/bi	750	mbar	
7,5	75	uni/bi	1200	mbar	
10	100	uni/bi	1200	mbar	
25	250	uni/bi	2000	mbar	
50	500	uni/bi	2000	mbar	
Accuracy and Sample Rates					
Non-linearity & hysteresis			max +/- 0,25% FSS (+/-0,1%)		
Sample rate per channel			PSC4/5:	1-500Hz	
Power Supply					
PSC4/5-CAN			via CAN connector (7-24V, 50mA)		
Environmental Conditions					
Temperature			5°C...50°C		
Humidity			0...95%, non-condensing		
Operating medium			Air and non-corrosive gases		
Dimensions					
Housing			all PSCs: 60 x 30 x 80 mm (W x H x D)		
Pressure connections			Hose barb D=2,0mm		
Reccomended tubes			Soft-PE and silicone tubes 1,5x3,5mm		
Driver and Software					
Virtual COM-Port-Driver					
Configuration software					
LabVIEW-example program as source code					
Supported Operating Systems					
Windows XP, 7, 8, 10, Linux					

General Description

The PSC pressure scanners are capable of measuring multiple pressure signals simultaneously. Temperature-compensated transducers feature high accuracy and a minimal offset drift. Due to the extremely high proof pressure it is possible to overload the sensors without damage.

The PSC4-CAN and PSC-5CAN devices are equipped with 4, respectively 5 pressure channels, each with its own reference port. Each channels measurement range can be individually customized according to customer specifications. Ranges can be unidirectional (e.g. 0... 25kPa) or bidirectional (e.g. -25kPa... +25kPa).

The data is transmitted as ASCII text in the unit Pascal [Pa]. The transmission rate can be set in the range between 1 and 50Hz (100Hz for PSC8). Furthermore, it is transmitted according to the CAN 2.0A or CAN 2.0B specification. Baudrates up to 1Mbs are supported. For easy integration in measurement environments a DBC-file is supplied.

A tare function can be triggered by a software command.

Power is supplied over the CAN bus connector (M8 connector). Thus, only a single supply unit is necessary for all devices in the bus. The voltage can vary in the range between 7 and 24V.

The PSC-CAN version is equipped with a USB interface, allowing for easy configuration. When connected via USB the pressure scanner identifies itself as virtual COM port to the host PC. Thus, any software supporting serial protocols can be used for communication. A recording software and an example program in LabVIEW (source code) are shipped with the device.

On request all PSC devices can be customized.

Serial Interface

Command	Function	Answer
CAL a x	Set scaling factor for sensor a to value x	#Scaler=.... Offset=....
CAL? a	Read scaling factors for sensor a	#Scaler=.... Offset=....
EE_LOAD	Load calibration data from EEPROM	#EEPROM:loaded
EE_SAVE	Save calibration data to EEPROM	#EEPROM:saved
*IDN?	Read device ID	TYPE PSC8-USB VERSION 1.0 SER- NUM #SN31xxxxx
RATE x	Define sample rate range x = 10...5000 [ms] standard: 1000[ms] ~> 1[Hz]	#Rate=x ms #Error: Rate-Range
RATE 0	Activate request and trigger mode Actual values are read only after manual command „?“ is sent	#Request-Mode active
?	Read actual value (request-mode only)	
*RST	Load default settings	#RESET
SCAN_A x SCAN_B x SCAN_C x	Defines a scanlist (channel selection) Binary, each bit represents one channel	
TARA	Zero adjustment for all sensors	#TARA
FILTER x	Activate exponential filter 0 = deactivated; >0 = filter range in ms	#Filter=x
CAN_ID x	set CAN-ID	#OK
CAN_IT x	set interface x = 0: normal (11bit, CAN 2.0A) x = 1 extended 23bit (23bit, CAN 2.0B)	#OK
CAN?	request CAN configuration	#ID:0x[...]_Speed:[baud]_IDT: [0,1]
CAN_SPEED x	set CAN bus rate 0: 125 kBaud 1: 250 kBaud 2: 500 kBaud 3: 1 MBaud	#OK

Every command is terminated by a line break (CR, LF or CR+LF). The sensor enumeration of all devices starts at 1.