

Reliable
Compact
Versatile

pSENS Pressure Measurement



Unique Measurement Accuracy

➤ pSENS Pressure Sensors

WIKA Mobile Control pressure transducers are an ideal choice for measuring static and dynamic pressures of liquids and gases in challenging environments.

- Designed for precise, reliable operation in rough environmental conditions
- Ideal for hydraulic control systems on mobile machines
- State-of-the-art technology with the highest standards of quality

Overview of the pSENS Series

WIKA Mobile Control works continuously to improve its products. Three types of pSENS pressure sensors with different interfaces, sizes, and accuracies ensure reliable pressure measurement.

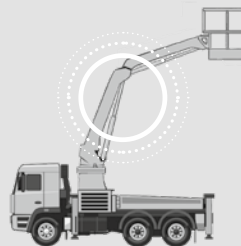
↗ pSENS DAVS Superior

- Standardized or customized solutions
- CANopen Safety
- High quality with high accuracy



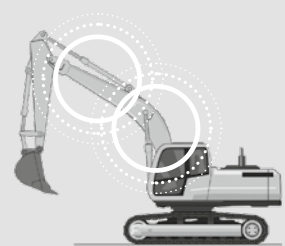
↗ pSENS DAVC Compact

- Ultra-compact dimensions
- High repeatability and minimal long-term drift



↗ pSENS DAVE Economic

- Cost-effective alternative with all essential features
- Excellent vibration and shock resistance



Common Features

- Rugged design for reliable operation in challenging environments
- Operational safety under extreme conditions
- Made of robust stainless steel
- Highly resistant to industrial liquids and gases
- Pressure measurement up to 600 bar
- Large overload capacity (> 200 %)
- Temperature range from -40°C to +70 °C
- Temperature compensation -25°C to +85 °C
- IP67 protection rating
- Easy installation and startup
- Interface depending on needs of application (current/voltage/CAN)
- Reverse battery polarity and short-circuit protection
- Pressure connection with different threads (standard: G 1/4") and suitable hydraulic adapters
- Customized configurations
- Long service life
- pSENS pressure sensors comply with all standards on mobile applications and can be used in harsh environments

Customized Configuration

These characteristics can be configured to meet individual needs by specifying a unique ordering code.

➤ Software characteristics

- Determination of parameters (dynamic, data filter, etc.)
- Behavior on CAN bus (node ID, transmission rate, etc.)

➤ Hardware characteristics

- Pressure range
- Mechanical connection
- Interface (CAN, 4...20 mA, etc.)

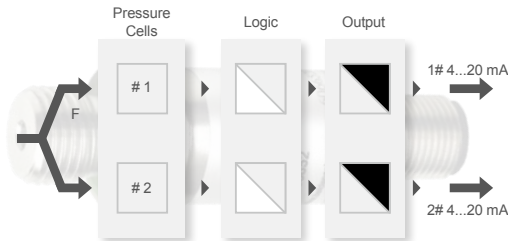
	pSENS DAVS	pSENS DAVC	pSENS DAVE
Measuring range	60-600 bar	300/400/600 bar	300/400/600 bar
Accuracy**	±0.15 % FS typ./ ±0.25 % FS max.	±0.15 % FS typ./ ±0.25 % FS max.	±0.25 % FS typ./ ±0.5 % FS max.
Output signals: 4....20 mA 2 x (4....20 mA) 2,5....7,5 V DC CANopen CANopen Safety	x (3-wire)	x (3-wire)	x (2-wire)
	x	-	-
	x	-	-
	x	x	-
	x	-	-
Further CAN protocols	on request	-	-
Hydraulic connection			
Thread	G1/4 A, SAE 6	G1/4 A	G1/4 A
Gasket	Eolastic Flat, O-Ring	Eolastic Flat	Eolastic Flat, O-Ring
Supply Voltage	8...35 V DC*	8...35 V DC*	8...36 V DC*
PL d/SIL 2	optional	-	-

* Depending on Output Signal
** Details in technical Data Sheet

Safety Concept

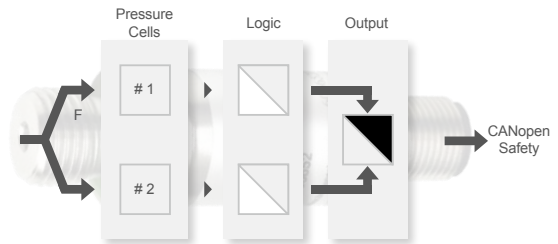
Both redundant analog versions and PL d graded sensors with CANopen Safety interface comply with the new European machine directive and relevant safety standards.

Redundant analog output requires two analog inputs on the controller side plus software to compare the two sensor values.



The advantage of using integrated safety products with a standardized CANopen Safety interface:

- Only one input needed on controller side
- Measured value is reverified
- These “out-of-the-box” PL d safety components simplify design and application programming when used with an appropriate safety controller.



pSENS within the iSCALE Control System

pSENS sensors are suitable for the installation in hydraulics within mobile machine applications and safety systems.



pSENS DAVS – Superior



➤ pSENS DAVS – Precise and accurate

- Equipped with new pressure heads that allow finer adjustment of the pressure range
- Customized according to standard and special requirements: standard interfaces, pressure ranges, or special flange types
- High accuracy: typically within 0.15 % of nominal pressure (max. 0.25 %)
- Burst pressure: 2000 bar (safety limit)
- Output signal: current/voltage/CAN
- Zero-point stability at all temperatures
- High repeatability and minimal long-term drift
- Redundant safety versions (PL d/SIL 2): two times 4...20 mA or CANopen Safety
- Signal stability because of three-wire technology



➤ Technical Specifications

pSENS Versions	Order Code	Measurement range (bar)	Interface				CAN ID	Thread	Seal	Con- nector		Accuracy class*
			4...20 mA	2.5...7.5 V	CANopen	CANopen safety				M12 4 pol.	M12 5 pol.	
pSENS DAVS 250/1101-V1/02-G14-R01-05	607501	250		X			-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 375/1101-V1/02-G14-R01-05	607502	375		X			-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 500/1101-V1/02-G14-R01-05	607503	500		X			-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 250/1401-I1/02-G14-R01-05	606666	250	X				-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 300/1401-I1/02-G14-R01-05	606652	300	X				-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 350/1401-I1/02-G14-R01-05	606668	350	X				-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 400/1401-I1/02-G14-R01-05	606669	400	X				-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 500/1401-I1/02-G14-R01-05	606670	500	X				-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 600/1401-I1/02-G14-R01-05	606647	600	X				-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 060/1510-C1/03-G14-R02-05**	608263	60			X		7F/127	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 060/1511-C1/03-G14-R02-05**	608264	60			X		3C/60	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 300/1504-C1/03-SAE6/OR-R02-05	608128	300			X		3C/60	SAE6	OR		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 300/1505-C1/03-SAE6/OR-R02-05	608129	300			X		3D/61	SAE6	OR		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 300/1510-C1/03-G14-R02-05	608265	300			X		7F/127	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 300/1511-C1/03-G14-R02-05	608266	300			X		3C/60	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 300/1512-C1/03-G14-R02-05	608267	300			X		3D/61	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 300/1513-C1/03-G14-R02-05	608401	300			X		3E/62	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 300/1514-C1/03-G14-R02-05	608402	300			X		3F/63	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 400/1510-C1/03-G14-R02-05	608268	400			X		7F/127	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 400/1511-C1/03-G14-R02-05	608269	400			X		3C/60	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 400/1512-C1/03-G14-R02-05	608270	400			X		3D/61	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 400/1521-C1/03-G14-R02-05	608271	400			X		08/08	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 600/1510-C1/03-G14-R02-05	608272	600			X		7F/127	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 600/1511-C1/03-G14-R02-05	608273	600			X		3C/60	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 600/1512-C1/03-G14-R02-05	608274	600			X		3D/61	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 600/1521-C1/03-G14-R02-05	608275	600			X		08/08	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 600/1610-C2/01-G14-R02-05	608819	600				X	1	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 400/1610-C2/01-G14-R02-05	608825	400				X	1	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 300/1610-C2/01-G14-R02-05	608826	300				X	1	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVS 300/1701-I1/01-G14-R01-01	608896	300	X				-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.

* Accuracy at minimum value setting (BFSL)

** Burst pressure 500 Bar

pSENS DAVC – Compact

pSENS DAVE – Economic



➤ pSENS DAVC – Efficient and compact

- Ultra-compact dimensions:
 - Only 18.5 mm in diameter
 - The housing is only slightly larger than a standard hydraulic flange (G $\frac{1}{4}$ ") and permits the use of a 19 mm wrench (instead of 27 mm)
 - The overall length, including connector and flange, is approximately 64 mm
- Interface: 4...20 mA/CANopen
- High repeatability and minimal long-term drift
- Signal stability because of three-wire technology



➤ Technical Specifications

pSENS Versions	Order Code	Measurement range (bar)	Interface		CAN ID	Thread	Seal	Con- nector		Accuracy class*
			4...20 mA	CANopen				M12 4 pol.	M12 5 pol.	
pSENS DAVC 300/2401-I1/03-G14/ED-R01-05	608424	300	X		-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVC 400/2401-I1/03-G14/ED-R01-05	608425	400	X		-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVC 600/2401-I1/03-G14/ED-R01-05	608426	600	X		-	G1/4	ED	X		± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVC 300/2510-C1/04-G14/ED-R02-05	608421	300		X	7F/127	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVC 300/2511-C1/04-G14/ED-R02-05	608505	300		X	3C/60	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVC 300/2512-C1/04-G14/ED-R02-05	608506	300		X	3D/61	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVC 400/2510-C1/04-G14/ED-R02-05	608422	400		X	7F/127	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVC 600/2510-C1/04-G14/ED-R02-05	608423	600		X	7F/127	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVC 400/2511-C1/04-G14/ED-R02-05	608876	400		X	3C/60	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.
pSENS DAVC 600/2511-C1/04-G14/ED-R02-05	608877	600		X	3C/60	G1/4	ED		X	± 0,15 % FS typ. / ± 0,25 % FS max.

➤ pSENS DAVE – Robust and powerful

- High quality
- Cost-effective alternative with all essential features
- Excellent vibration and shock resistance due to low weight
- Temperature range between -40°C and +100°C (depending on type of seal)
- Accuracy: typically within 0.25 % of nominal pressure (max. 0,5 %), adequate for most applications
- Available with a two-wire 4...20 mA interface



➤ Technical Specifications

pSENS Versions	Order Code	Measurement range (bar)	Interface		CAN ID	Thread	Seal	Con- nector		Accuracy class*
			4...20 mA	0,5...4,5 V				M12 4 pol.	Metri Pack 3 pol.	
pSENS DAVE 300/3401-I1/04-G14/ED-R01-10	608442	300	X		-	G1/4	ED	X		± 0,25 % FS typ. / ± 0,5 % FS max.
pSENS DAVE 400/3401-I1/04-G14/ED-R01-10	608444	400	X		-	G1/4	ED	X		± 0,25 % FS typ. / ± 0,5 % FS max.
pSENS DAVE 600/3401-I1/04-G14/ED-R01-10	608445	600	X		-	G1/4	ED	X		± 0,25 % FS typ. / ± 0,5 % FS max.
pSENS DAVE 050/3401-V4/01-G14/ED-R01-10	608791	50		X	-	G1/4	ED	X		± 0,25 % FS typ. / ± 0,5 % FS max.
pSENS DAVE 500/3401-V4/01-G14/ED-R01-10	608792	500		X	-	G1/4	ED	X		± 0,25 % FS typ. / ± 0,5 % FS max.
pSENS DAVE 050/3402-V4/01-G14/OR-D01-10	608837	50		X	-	G1/4	OR		X	± 0,25 % FS typ. / ± 0,5 % FS max.
pSENS DAVE 500/3402-V4/01-G14/OR-D01-10	608838	500		X	-	G1/4	OR		X	± 0,25 % FS typ. / ± 0,5 % FS max.
pSENS DAVE 100/3401-I1/04-G14/ED-R01-05	608879	100	X		-	G1/4	ED	X		± 0,25 % FS typ. / ± 0,5 % FS max.
pSENS DAVE 400/3402-I1/04-G14/ED-R01-10	608828	400	X		-	G1/4	ED	X		± 0,25 % FS typ. / ± 0,5 % FS max.

* Accuracy at minimum value setting (BFSL)

Worldwide



We make lifting loads safer!

As an experienced specialist, we have spent many years providing reliable safety solutions for lifting loads, setting innovative standards in the process and ensuring dependable communication between machines and their operators, particularly in harsh environments.

By developing application software, mobile controllers and robust sensors, we ensure that our customers benefit from maximum safety and equipment uptime.

We are system integrators, supporting our customers through all project phases: from

analysis and concept evaluation, through system design and project planning to prototype testing and field launches. Our safety experts support certification processes and are available for seamless life cycle management.

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