



PIERBURG



# SENSOR **VARIETY**

THE WORLD OF SENSORS –  
**IN CONTROL WITH PIERBURG**

**TAKING RESPONSIBILITY** IN A CHANGING WORLD



**RHEINMETALL**

# SENSORS FROM PIERBURG – TAILOR-MADE OFFER, WIDE MARKET COVERAGE

Our sensors in OE quality have proven themselves millions of times over across the globe. They are indispensable components, and several of them can often be found installed in one vehicle. That is why we keep on expanding our product range.



## EXHAUST GAS TEMPERATURE SENSORS

Exhaust gas temperature sensors monitor the hot exhaust gas flow and protect components from overheating.

Typical applications include protecting components which are sensitive to temperature, such as turbochargers and all forms of catalytic converters, monitoring the free-burning process of the diesel particulate filter, controlling the optimal temperature range for catalytic converters and measuring the EGR exhaust gas temperature as part of on-board diagnostics (OBD). In the event of critical overheating, the control unit responds by taking appropriate action to reduce the temperature, e.g. through reduced performance (limp home function).

Motorservice offers more than 200 exhaust gas temperature sensors covering more than 125 million vehicles.



## EXHAUST GAS PRESSURE SENSORS

In addition to lambda sensors and exhaust gas temperature sensors, exhaust gas pressure sensors are the third product group of exhaust gas sensors available from Pierburg.

This group includes the following types of sensor:

- Differential pressure sensors are mainly used to determine how soiled the particulate filter is. They can also be used to detect whether e.g. an air filter or an EGR cooler is clogged or blocked.
- Exhaust back pressure sensors protect the engine and turbocharger against excess pressure.

Motorservice's current range of exhaust gas pressure sensors and differential pressure sensors covers roughly 133 million vehicles worldwide.



## LAMBDA SENSORS

Lambda sensors measure the residual oxygen in the exhaust gas. This produces a lambda value, which the engine management system uses to regulate the mixture composition for the most optimal combustion possible.

Lambda sensors are the most important element in engine management systems in terms of ensuring perfect engine running with low emissions.

High operating temperatures and aggressive exhaust gas place high demands on lambda sensors. You should therefore choose products from the specialist for emission control.

Offering over 130 different lambda sensors, Motorservice covers the needs of more than 170 million vehicles worldwide.



### FUEL PRESSURE SENSORS

Also referred to as fuel rail pressure sensors, these components supplement Pierburg's existing range of fuel supply and sensor products.

In many cases, the rail can only be purchased as a complete unit along with all the attachments. However, Motorservice offers the pressure sensor separately as a spare part.

The item numbers that are currently available are compatible with a huge number of vehicles globally – over 140 million. The range is continually being expanded.



### AIR MASS SENSORS

Air mass sensors have been used in almost every vehicle for the last decade, and have become one of the most important components in engine management. They are therefore a key component in the air supply system and for emission control.

The air mass sensor records the air mass flowing into the engine. Its signal is used to calculate the injected fuel quantity, and in diesel engines also for regulating the exhaust gas recirculation.

Motorservice offers Pierburg air mass sensors with a flow pipe or as a separate plugin probe, suitable for over 1900 applications.



### AIR PRESSURE SENSORS

Air pressure sensors supply important input parameters for the engine control system. The commonly used abbreviation "MAP sensors" stands for "manifold absolute pressure".

With around 60 OE references, these air pressure sensors cater for almost 1100 applications in Audi, VW, Škoda, Seat, Opel, Vauxhall, Fiat and PSA vehicles.

This corresponds to more than 130 million vehicles worldwide.



PIERBURG

We provide a comprehensive product portfolio covering a wide range of engines – some examples of our top sellers in the aftermarket are listed below.

Product	Item no.	Ref. no.	Manufacturer	Vehicle examples
Exhaust gas temperature sensors	7.08369.01.0	03L 906 088 J	VAG Group	Golf VI, Passat B6, Jetta IV, A3, Octavia II
	7.08369.04.0	03L 906 088 CC		Golf VI, Tiguan, Jetta IV, A3, Octavia II
	7.08369.24.0	03L 906 088 HG		Transporter V, Transporter VI
	7.08369.00.0	03L 906 088 BS		Golf V, Touran, Tiguan, A3, Octavia II
	7.08369.87.0	A 007 153 96 28	Mercedes-Benz	M-Class, Vito /V-Class
Exhaust gas pressure sensors	7.12061.00.0	82 00 974 421, 22365-00QAK	Renault, Nissan	Clio IV, Scenic III, Kangoo, Qashqai II, Juke
	7.12061.02.0	22 36 509 01R, 22760-00Q0C	Renault, Nissan, Dacia	Clio IV, Sandero II, Kangoo, Qashqai II, Juke
	7.12061.01.0	A 000 905 30 03, A 000 905 27 06	Mercedes-Benz	C-Class, E-Class, GLC, Sprinter
	7.12061.03.0	A 009 153 51 28		C-Class, E-Class, Sprinter (906)
	7.12061.05.0	A 004 153 98 28, A 009 153 50 28, A 007 153 43 28		A-Class, B-Class, C-Class, E-Class
Differential pressure sensors	7.11190.08.0	22 77 014 54R, 22771-JG70A, A 607 905 05 00	Renault, Nissan, Mercedes-Benz	Clio IV, Captur, Juke, X-Trail, A-Class
	7.11492.07.0	22 77 011 77R, 20 81 565 51R, 20827-00Q0L	Renault, Nissan, Dacia	Clio IV, Sandero II, Kangoo, Qashqai II, Juke
	7.11190.10.0	1 415 606, 30750460	Ford, Volvo	Focus II, Mondeo III, Kuga I, V50, XC90
	7.11492.01.0	1618 Z9	Stellantis Group	207, 208 (I), 3008, C3 II, C4, 407, Partner
	7.11190.04.0	51792301, 93187247		Firoino, 500, Corsa D, Zafira B, Meriva A, Mokka
Fuel pressure sensors	7.11225.00.0	1920.GW	Stellantis Group, Toyota	Berlingo, Jumpy, C3, Scudo, 1007, 206, 307, Bipper, Aygo
	7.11225.01.0	98 137 355 80		DS3, Scudo, 3008, 5008, Traveller, ProAce
	7.11225.11.0	98 143 838 80		Jumper, Spacetourer, C4, Scudo, Grandland, Vivaro, 3008, Boxer, Expert, Traveller
	7.11225.02.0	82 00 584 034, 1 334 946, 15730-84A51	Renault, Nissan, Ford, Suzuki, Dacia	Logan, Mondeo, Almera, Micra, Clio, Kangoo, Thalia, Megane, Jimny
	7.11225.04.0	03L 906 054 A	VAG Group	A4, A6, Q3, Q5, Alhambra, Caddy, Crafter, T6
Lambda Sensors	7.05271.62.0	55353811, 55353812	Opel, Vauxhall	Zafira B, Astra H, Omega B, Vectra C
	7.05271.74.0	1618 V3	Stellantis Group, Mini	207, 308 (I), Cooper (R56)
	7.02604.99.0	55182912, 39350 4A410, A 004 542 69 18	Stellantis Group, Hyundai, Kia, Mercedes-Benz	Ducato, Sportage III, i20, ix35, A-Class, B-Class
	7.05271.85.0	1K0 998 262 AD, 1K0 998 262 K, 1K0 998 262 L	VAG Group	Golf V, Touran, Tiguan, A3, Octavia II
	7.05271.05.0	036 906 262 D, 03D 906 265 C		A2-A4, Polo, Passat B5, Ibiza III
Air mass sensors	7.22184.25.0	7M51 12B579 BB, C2Z18798, LR029074, 31251735	Ford, Jaguar, Land Rover, Volvo	C-Max, Focus, XF, XJ, Range Rover, C30, V50
	7.07759.42.0	93856812, 82 00 280 060, 22680-JD50A, 13800-84A50	Opel, Renault, Nissan, Suzuki	Movano, Vivaro, Master, Trafic, Interstar, Primastar, Jimny
	7.07759.48.0	93863896, 82 00 651 315, 22680-00QAD, A 607 094 00 48	Opel, Dacia, Renault, Nissan, Mercedes-Benz	e
	7.28342.07.0	1929 LC, 9647570080, 023002144151A	Citroën, Suzuki	C3, Liana
	7.07759.46.0	03L 906 461	VAG Group	A1, A3, Altea, Leon, Fabia, Roomster, Beetle, Caddy
Air pressure sensors	7.18222.27.0	55219298, 93171176	Fiat, Opel, Saab	159, Giulietta, 500, Doblo, Musa, Ypsilon, Astra, Insignia, 9-3, 9-5
	7.18222.26.0	04E 906 051, 3M21-9E928-AA, K05149001AA, MN191138, 955 606 180 10	VAG Group, Ford, Dodge, Mitsubishi	A1, A5, Altea, Exeo, Superb, Yeti, Amarok, Arteon, Galaxy, Journey, Grandis, Outlander, Cayenne, Macan

\* The reference numbers listed are for comparison purposes only and must not be used on invoices to the consumer. All content including pictures and diagrams is subject to change. For assignment and replacement, refer to the current catalogs or systems based on TecAlliance.



### **NITROGEN OXIDE / NOX SENSORS**

These sensors are a key component for reducing harmful nitrogen oxides, NOx for short. But high operating temperatures and aggressive exhaust gases make high demands of NOx sensors. So this is why Motorservice is offering NOx sensors on the aftermarket from its sister company Pierburg, with the reliable quality you associate with original manufacturers.

With diesel engines, NOx sensors help inject the right amount of urea in the SCR catalytic converter (SCR = selective catalytic reduction). If two NOx sensors are fitted, the second NOx sensor monitors the function of the SCR catalytic converter.

NOx sensors are installed in utility vehicles from Euro VI as standard. In the case of petrol engines with direct injection, the NOx sensor monitors the load on the NOx catalytic converter.



### **SENSORS FOR THE TIRE PRESSURE MONITORING SYSTEM**

Motorservice has expanded its portfolio in the area of sensors to include active sensors for the tire pressure monitoring system (TPMS).

Motorservice has expanded its sensors portfolio to include active sensors for the tire pressure monitoring system (TPMS). The data is sent wirelessly to the on-board computer. The advantage is that air pressure and temperature can be accurately monitored for individual wheels in real time.

The sensors are available as clamp-in sensors with cap nut and as snap-in sensors with rubber coating. These are active sensors (433 MHz) in the direct TPMS.



### **WHEEL SPEED SENSORS**

Wheel speed sensors are among the most important sensors in a vehicle. Their signal serves as an input variable for safety and comfort systems, such as the anti-lock braking system (ABS), electronic stability control (ESC), traction control system (TCS) or in the tire pressure monitoring system. In this way, they make a direct contribution to driving safety, driving comfort and fuel consumption.



## NITROGEN OXIDE / NO<sub>x</sub> SENSORS IN THE RANGE

The available item numbers cover more than 13 million vehicles worldwide, including utility vehicles from the “big seven” – DAF, IVECO, MAN, Mercedes-Benz, Renault, Scania and Volvo.

Item no.	Manufacturer	Ref. no.	Vehicle examples
7.13557.00.0	Citroën, Peugeot, DS, Opel, Vauxhall	98 211 209 80	208, 308, C4, DS3, DS4, DS5, Expert, Jumpy, Vivaro c, Zafira Life (1.6 & 2.0 Hdi)
7.13557.01.0	Renault, Nissan, Opel, Vauxhall, Fiat	22 79 054 33R, 93 463 067, 22790-00Q0F	Movano B, Master III, Trafic III, NV300, NV400, Talento (1.6 & 2.3 dCi)
7.13557.02.0	BMW	13 62 8 589 846	1 / 2 / 3 / 5 series, X3 / X4 / X6 (B47, N47, M57, N57 engines)
7.13557.03.0	Citroën, Peugeot, DS, Opel, Vauxhall	98 211 211 80	3008, 5008, 508, C5, DS7, Expert, Jumpy, Vivaro C, Zafira Life
7.13557.04.0	Renault, Nissan, Opel, Vauxhall, Fiat	22060-00Q0E, 6.000.620.236, 93 457 719, 22 79 085 39R	NV300, Vivaro B, Trafic III, Talento
7.14350.00.0	Mercedes-Benz	A 006 153 73 28	Actros MP2 / MP3 12L + 16L
7.14350.01.0	Mercedes-Benz	A 008 153 98 28	Actros MP4 / MP5 7.7L, 10.7L, 12.8L, 15.6L
7.14350.02.0	Mercedes-Benz	A 008 153 99 28	Actros MP4 / MP5 7.7L, 10.7L, 12.8L, 15.6L
7.14350.03.0	Mercedes-Benz	A 009 153 00 28	Actros MP4 / MP5 7.7L, 10.7L, 12.8L, 15.6L
7.14350.04.0	Mercedes-Benz	A 009 153 01 28	Actros MP4 / MP5 7.7L, 10.7L, 12.8L, 15.6L
7.14350.05.0	Mercedes-Benz	A 010 153 14 28	Actros MP4 / MP5 7.7L, 10.7L, 12.8L, 15.6L
7.14350.06.0	Mercedes-Benz	A 010 153 16 28	Actros MP4 / MP5 7.7L, 10.7L, 12.8L, 15.6L
7.14350.08.0	Volvo / Renault	22827991	FE / FH / FL / FM 7.1L, 7.7L, 8.8L, 12.8L
7.14350.09.0	Volvo / Renault	22827993	FH / FL / FM 7.1L, 7.7L, 8.8L, 12.8L, 16.1L
7.14350.10.0	Volvo / Renault	22827995	FE / FH / FL / FM 5.1L, 7.1L, 7.7L, 12.8L, 16.1L
7.14350.11.0	Scania	1872080	P, G, R, T series 8.9L, 9.3L, 10.6L, 11.7L, 12.7L, 15.6L, 16.4L
7.14350.12.0	Iveco	5801754015	Eurocargo / Stralis / Trakker 3.9L, 5.9L, 7.8L, 8.7L, 10.3L, 11.1L, 12.9L
7.14350.13.0	Iveco	5801777219	Stralis / Trakker 7.8L, 8.7L, 10.3L, 11.1L, 12.9L
7.14350.14.0	Iveco	5801754016	Eurocargo 3.9L, 4.5L, 5.9L, 6.7L
7.14350.15.0	Iveco	5801754014	Eurocargo / Stralis / Trakker 3.9L, 5.9L, 7.8L, 8.7L, 10.3L, 11.1L, 12.9L
7.14350.16.0	MAN	51.15408-0000	TGA / TGL / TGM / TGS 4.6L, 6.8L, 9.0L, 10.5L, 12.4L, 12.8L
7.14350.17.0	MAN	51.15408-0011	TGA / TGL / TGM / TGS 4.6L, 6.8L, 9.0L, 10.5L, 12.4L, 12.8L
7.14350.18.0	DAF	1744683	CF / XF 5.9L, 6.7L, 9.2L, 12.9L
7.14350.19.0	DAF	1793380	CF / XF 5.9L, 6.7L, 9.2L, 12.9L
7.14350.20.0	DAF	1793379	CF / XF 5.9L, 6.7L, 9.2L, 12.9L
7.14350.21.0	DAF	1705572	CF / LF 3.8L, 4.5L, 5.9L, 6.7L, 9.2L, 12.9L



## SENSORS FOR THE TIRE PRESSURE MONITORING SYSTEM

Motorservice has expanded its sensors portfolio to include active sensors for the tire pressure monitoring system. The 30 articles cover approx. 222 million vehicles worldwide.

Item no.	Manufacturer	Ref. no.	Type <sup>*)</sup>
7.14060.00.0	Renault	A 453 905 75 01, 40 70 056 42R, 93461364	Snap-in
7.14060.01.0	Renault	40700-3VU0A, 40 70 056 63R	Clamp-in
7.14060.02.0	Mercedes-Benz / BMW	36 10 6 877 937, A 000 905 41 04, 36 10 6 887 147	Clamp-in
7.14060.03.0	BMW	36 10 6 881 890	Clamp-in
7.14060.04.0	Volkswagen	2N0 907 251 A	Clamp-in
7.14060.05.0	Mercedes-Benz	A 000 905 39 07	Clamp-in
7.14060.06.0	Ford	EV6T-1A180-DD, 2318530	Snap-in
7.14060.07.0	Toyota	42607-02031	Clamp-in
7.14060.08.0	Ford	F2GT-1A180-CE, 5285838	Snap-in
7.14060.09.0	HKMC	52933-D4100, 52933-F2000	Clamp-in
7.14060.10.0	Ford	JX7T-1A180-DA, 2197279	Snap-in
7.14060.11.0	Suzuki	43139-52S14, 43139-52S14-000	Clamp-in
7.14060.12.0	HKMC	52933-C1100	Snap-in
7.14060.13.0	GM	13581561	Snap-in
7.14060.14.0	PSA	9811536380	Snap-in
7.14060.15.0	HKMC	52933-3N100, 52933-B1100, 52933-2J100	Clamp-in
7.14060.16.0	Mitsubishi	1612477080, 4250C477	Clamp-in
7.14060.17.0	Chrysler / Fiat	95523608, 670034786	Clamp-in
7.14060.18.0	Ford	BB5T-1A180-BA, 5091251	Snap-in
7.14060.19.0	GM	13598775, 10 10 063	Clamp-in
7.14060.20.0	Chrysler	68193586AC, 53386476	Snap-in
7.14060.21.0	Nissan / Mercedes-Benz	40700-6WY0C, A 470 905 78 00	Clamp-in
7.14060.22.0	GM	13598773, 13540602	Snap-in
7.14060.23.0	Mercedes-Benz	A 447 905 17 04	Snap-in
7.14060.24.0	GM	13506028	Snap-in
7.14060.25.0	Toyota	42607-02070, 42607-F4020	Clamp-in
7.14060.26.0	Volvo	4H23-1A189-AE, 31445474, FX23-1A189-AA	Clamp-in
7.14060.27.0	HKMC	52940-BV100, 52940-CG100	Snap-in
7.14060.28.0	Mercedes-Benz	A 000 905 84 13, 000 905 84 13	Clamp-in
7.14060.29.0	Chrysler	K68241067AB, 53351971	Snap-in

\*) The reference numbers listed are for comparison purposes only and must not be used on invoices to the consumer. All content including pictures and diagrams is subject to change. For assignment and replacement, refer to the current catalogs or systems based on TecAlliance.



## WHEEL SPEED SENSORS RANGE

Wheel speed sensors are among the most important sensors in a vehicle. Motorservice has therefore expanded its sensor technology portfolio. The 35 articles cover approx. 270 million vehicles worldwide.

Item no.	OEM	Ref. no.	Measurement type*	Installation side		Installation location		Cable
				Left	Right	Front	Rear	
7.14059.00.0	VAG	WHT 003 857, PAF 003 857, 65.27120-0000	Active	X		X	X	None
7.14059.01.0	VAG	WHT 003 856, PAF 003 856, 65.27120-0002	Active		X	X	X	None
7.14059.02.0	VAG	WHT 003 858, 1K0 927 808	Active		X	X	X	None
7.14059.03.0	Ford, Mazda, Volvo	1 223 620, BP4K-43-701A, 30748149	Active	X	X	X		None
7.14059.04.0	Ford, Mazda, Volvo	HV6T-2C190P-1A, BP4K-43-711B, 30793635	Active	X	X		X	None
7.14059.05.0	VAG	WHT 003 864 D, 65.27120-0004	Active	X	X		X	None
7.14059.06.0	Fiat, PSA	98 137 596 80, 4545 E7	Active	X	X	X		With
7.14059.07.0	Ford, Jaguar	C2S43216, 1S7T-2B372-AD	Active	X	X	X	X	None
7.14059.08.0	Mercedes-Benz	A 164 905 82 00, A 164 905 84 00	Active	X	X	X		With
7.14059.09.0	VAG	WHT003857B, 65.27120-0010, 955 606 405 12	Active	X			X	With
7.14059.10.0	VAG	WHT003856B, 65.27120-0009, 955 606 406 12	Active		X		X	None
7.14059.11.0	BMW	34 52 6 870 075	Active	X	X	X		With
7.14059.12.0	Ford, Volvo	31423609, LV6C-2C190-B2A, JV6C-2C190-B2A	Active	X	X		X	None
7.14059.13.0	Mercedes-Benz	A 246 905 76 03, 479005DA0A	Active	X	X		X	With
7.14059.14.0	Mercedes-Benz	A 204 905 29 05, A 204 905 79 00	Active	X	X	X		With
7.14059.15.0	Mercedes-Benz	A 164 905 83 00, A 164 540 15 17	Active	X	X	X	X	With
7.14059.16.0	BMW	34 52 6 762 466	Active	X	X		X	With
7.14059.17.0	VAG	WHT 003 859	Active	X		X	X	None
7.14059.18.0	VAG	WHT 003 858 B	Active		X	X	X	None
7.14059.19.0	VAG	WHT 003 859 B	Active	X			X	None
7.14059.20.0	VAG	1J0 927 807 B	Passive	X	X		X	None
7.14059.21.0	VAG	1J0 927 803	Passive	X		X		None
7.14059.22.0	VAG	WHT 003 860	Active		X	X		None
7.14059.23.0	VAG	WHT 003 861	Active	X		X		None
7.14059.24.0	VAG	WHT 003 863	Active	X			X	None
7.14059.25.0	VAG	WHT 003 857 D	Active		X	X		None
7.14059.26.0	VAG	WHT 003 856 D	Active	X		X		None
7.14059.27.0	VAG	WHT 003 860 B	Active		X	X		None
7.14059.28.0	VAG	WHT 003 861 B	Active	X		X		None
7.14059.29.0	VAG	WHT 003 863 C	Active	X			X	None
7.14059.30.0	VAG	WHT 003 862 C	Active		X		X	None
7.14059.31.0	VAG	WHT 003 857 C	Active	X		X	X	None
7.14059.32.0	VAG	WHT 003 856 C	Active		X	X	X	None
7.14059.33.0	VAG	6Q0927808A, 6Q0927808B, WHT 003 862	Active		X		X	None
7.14059.34.0	VAG	1H0 927 808, 1J0 927 804	Passive		X	X		None

\*) Passive sensors are sensors that only contain passive elements without a permanent power supply. Active sensors contain integrated electronic components at which current is continuously applied. The signal is output as a square-wave signal.



# KNOW-HOW TRANSFER

## PROFESSIONAL KNOWLEDGE FROM THE EXPERTS

### WORLDWIDE TRAININGS

Each year, around 4,500 mechanics and engineers benefit from our training courses and seminars, which we hold on-site in locations across the world or in our training centres in Neuenstadt, Dormagen and Tamm (Germany).

### TECHNICAL INFORMATION

Our Product Information and Service Information publications, technical brochures and posters keep you at the forefront of the latest technological developments.

### TECHNICAL VIDEOS

Our videos provide you with useful information on our products, such as hands-on fitting instructions and system descriptions.

 **YouTube**

### PRODUCTS IN FOCUS ONLINE

Interactive elements, animations and video clips provide interesting information about our products in and around the engine.

### ONLINESHOP

Order at any time. Quick availability check. Extensive product search by engine, vehicle, dimensions etc.

### NEWS

Subscribe online to our free newsletter now and receive regular information about additions to the product range, technical publications and much more.

### INDIVIDUAL INFORMATION

We provide extensive information and services relating to our wide range of services: e.g. personalised sales-promoting materials, sales support, technical support and much more.



### TECHNIPEDIA

We share our know-how with you in our Technipedia. You can get professional knowledge direct from experts here.

### MOTORSERVICE APP

Here, you will find the latest information and services relating to our products quickly and easily.

### SOCIAL MEDIA

Always up to date



**HEADQUARTERS:**

**MS Motorservice International GmbH**

Wilhelm-Maybach-Straße 14–18

74196 Neuenstadt, Germany

[www.ms-motorservice.com](http://www.ms-motorservice.com)

**[www.rheinmetall.com](http://www.rheinmetall.com)**

© MS Motorservice International GmbH – FL 2094-24 – EN-US – 08/22 (092024)