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BRIEF INFORMATION

NOx sensor

- Tested in accordance with HELLA quality standards
- Complies with OEM specifications
- The product has been developed with particular attention being given to engine vibration resistance and also to increased temperatures
- NOx sensors are part of the standard equipment found in passenger cars as well as in commercial vehicles which comply with Euro 5 and Euro 6 regulations

PRODUCT FEATURES

Application

Comprehensive range available for passenger cars and commercial vehicles with different part numbers, suitable for the most relevant global applications.

Design and function

The NOx sensor comprises a probe and a control unit. Via a cable harness these are firmly connected with each other to form a unit. This sensor unit is installed in the exhaust gas system and is used to recognise nitrogen oxides in the flow of exhaust gas.

The NOx sensor is an important component in the post-treatment system to reduce NOx, which is used in diesel vehicles with urea-based SCR systems (selective catalytic

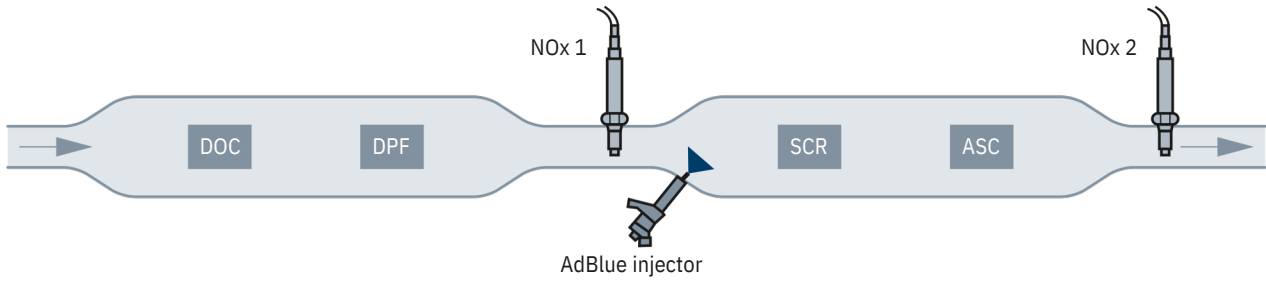
reduction). The sensor enables compliance with the stringent emission values starting from Euro 5 norm onwards. Consequently the NOx sensor guarantees an optimal dosage of AdBlue by the engine system, thus bringing about an effective reduction of nitrogen oxides which are harmful to the environment.

If the SCR system has an upstream and a downstream NOx sensor, the downstream one has the task of monitoring the effect of the SCR catalytic converter.

Mounting

Easy to install because of 1:1 fit according to OE quality standards. Mounting instructions are supplied with the product.

SCHEMATIC STRUCTURE



The exhaust gas flow resulting from the running of the diesel engine enters the diesel oxidation catalytic converter (DOC) and then the diesel particulate filter (DPF).

Once the particulate filter load of the DPF reaches a certain value, cleaning has to be carried out.

Such particulate filter regeneration is automatically triggered and monitored by the relevant higher-level system control unit.

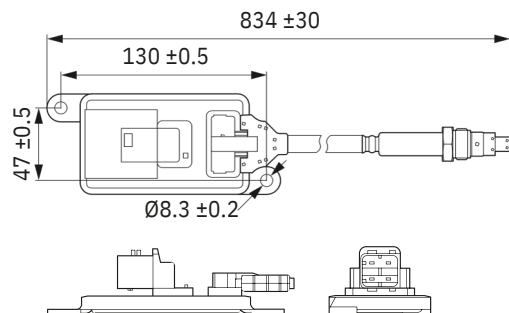
What is more, vehicles with an SCR system (selective catalytic reduction) can be equipped in such a way so as to reduce amounts of nitrogen oxide.

With the systematic addition of a reducing agent (AdBlue) to the exhaust gas system, a reaction takes place as a result of which nitrogen oxides (NOx) are converted into nitrogen (N₂) and water (H₂O). Furthermore, in combination with a cleaning catalyser (an ASC), excess ammoniac (NH₃) can be converted into nitrogen (N₂).

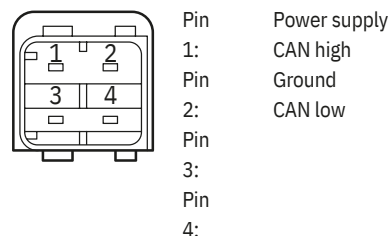
TECHNICAL DETAILS

Technical data	
Supply voltage	12V & 24V
Measuring range	0 – 3000 ppm
Operating temperature	-40°C to 800°C
Vibration resistance	Yes
Sensor thread	M20 x 1,5
Weight	Approx. 300 g
Protection class	IP6K9K

Dimensional sketch (example)



Pin assignment (example)



PROGRAM OVERVIEW*


 Manufacturer	OE number**	Part number
BMW	11787571263 / 11787587130 / 11787580517 / 758713005	6PN 358 307-061
BMW	11787565447 / 11787587129 / 758712903 / 758712905	6PN 358 307-071
BMW	13628576471 / 13628518791 / 13628511666 / 13628509721 / 13627812530 / 13628589846	6PN 358 307-081
BMW	11787590402	6PN 358 307-091
MERCEDES-BENZ	A0035428818 / A0065427218 / A0009053000 / A0009057000 / A0009053503	6PN 358 307-131
MERCEDES-BENZ	A0009057100 / A0009052900 / A0009052800 / A0065420918 / A0009053603	6PN 358 307-141
MERCEDES-BENZ	A0009056104 / A0009052210 / A0009054310	6PN 358 307-151
MERCEDES-BENZ	A0009053109	6PN 358 307-161
MERCEDES-BENZ	A0009058411	6PN 358 307-171
MERCEDES-BENZ	A0009059803	6PN 358 307-181
MERCEDES-BENZ	A0009053606 / A0009055106 / A0009051512	6PN 358 307-191
MERCEDES-BENZ	A0009050208 / A0009052909	6PN 358 307-201
MERCEDES-BENZ	A0009053403	6PN 358 307-251
MERCEDES-BENZ	A0009056204	6PN 358 307-261
MERCEDES-BENZ	A0009058011	6PN 358 307-271
OPEL/ VAUXHALL	55487269 / 55495340 / 55500319	6PN 358 307-101
OPEL/ VAUXHALL	55487270 / 55495341 / 55589458 / 55500320	6PN 358 307-111
PEUGEOT/ CITROËN	9817454580 / 9821120780	6PN 358 307-041
PEUGEOT/ CITROËN	9821121180	6PN 358 307-051
PEUGEOT/ CITROËN	9821120980	6PN 358 307-241
PEUGEOT/ CITROËN	9678570780	6PN 358 307-291
RENAULT	227905433R	6PN 358 307-281
VAG	03L907807R / 03L907807AE	6PN 358 307-001
VAG	03L907807AD / 8K0907807C / 8K0907807E / 03L907807AF	6PN 358 307-011
VAG	04L907807AD	6PN 358 307-021
VAG	04L907807EB	6PN 358 307-031
VAG	04L907807DT	6PN 358 307-231

* You can get an up-to-date overview of the product range in TecDoc or in your local catalogue.

** The OE numbers are for comparison purposes only.

PROGRAM OVERVIEW*

 Manufacturer	OE number**	Part number
Cummins & Paccar	2894943 / 2871974 / 4984912 / 1861423PRX / 1869930PRX / 1869930PE	6PN 358 186-921
Cummins & Paccar	2894939 / 2871978 / 4984053 / 4984576 / 1831900 / A034X846	6PN 358 186-931
DAF	2011649 / 1836060 / 1793379	6PN 358 186-061
DAF	2011648 / 1793378 / 1836059	6PN 358 186-071
DAF	2006243	6PN 358 186-081
DAF	2011650 / 1793380 / 1836061 / 1746581	6PN 358 186-681
DAF	2006245 / 1973527 / 1936258	6PN 358 186-691
DAF	2894940 / 2871979 / 4984577 / 4954222 / 1705572 / 1705520 / 1703687 / 1702178	6PN 358 186-701
DAF	2139930 / 4326769	6PN 358 186-711
DAF	2236408 / 2293965	6PN 358 186-891
DAF	2236406 / 2293964	6PN 358 186-901
DAF / Cummins	4326864 / 1710806 / A045S158	6PN 358 186-911
DAF / Cummins & Paccar	1928760 / 1953530 / 4326868	6PN 358 186-851
DAF / Cummins & Paccar	1952565 / 4326862 / 4326470	6PN 358 186-861
Iveco	5801754016 / 5801443021	6PN 358 186-811
Iveco	5801754015 / 5801424181	6PN 358 186-821
Iveco	5801754014 / 5801627703	6PN 358 186-831
Iveco	5801777219 / 5801627702	6PN 358 186-841
MAN	51154080015 / 51154080009 / 81154080000 / 81154080004	6PN 358 186-121
MAN	51154080016 / 51154080007 / 51154080003	6PN 358 186-131
MAN	51154080018 / 51154080011	6PN 358 186-141
MAN	51154080019 / 51154080012	6PN 358 186-151
MAN	51154080017 / 51154080008	6PN 358 186-801

 Manufacturer	OE number**	Part number
Mercedes-Benz	A0101531628	6PN 358 186-021
Mercedes-Benz	A0081539828 / A0101539328	6PN 358 186-031
Mercedes-Benz	A0101531428	6PN 358 186-041
Mercedes-Benz	A0091533628 / A0061537328	6PN 358 186-051
Mercedes-Benz	A0101539628 / A0091530128	6PN 358 186-101
Mercedes-Benz	A0091530028 / A0101539528	6PN 358 186-721
Mercedes-Benz	A0101539428 / A0081539928	6PN 358 186-731
Mercedes-Benz	A0101531528	6PN 358 186-741
Mercedes-Benz	A0101531728	6PN 358 186-751
Scania	2294290 / 2064768 / 2247380 / 2296800	6PN 358 186-001
Scania	2294291 / 2064769 / 2247381 / 2296801 / 2064767	6PN 358 186-011
Scania	2296799 / 1872080 / 2247379 / 2020691 / 1908536	6PN 358 186-091
Volvo	22827992 / 22219276 / 22315986	6PN 358 186-781
Volvo & Renault	22827995 / 22315987 / 22219284 / 21691455 / 21567742 / 21474017 / 21326719 / 7422827995 / 7422315987 / 7422219284 / 7421691455	6PN 358 186-761
Volvo & Renault	22827993 / 21473997 / 21244501 / 21567736 / 21984358 / 22219283 / 22315990 / 21531794 / 21387788 / 20873395 / 20873117 / 20751663 / 7422219283 / 7422315990 / 7422827993 / 7421984358 / 7485133215	6PN 358 186-771
Volvo & Renault	22827991 / 21474015 / 21531797 / 21567737 / 22219281 / 22315988 / 7421531797 / 7422219281 / 7422315988 / 7422827991 / 7485023779	6PN 358 186-791

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Q&A

– NOx sensors –



What is a NOx sensor and what is its function in a vehicle?

A NOx sensor measures the nitrogen oxide content in the exhaust gases emitted by the engine into the atmosphere via the exhaust gas aftertreatment system.

How can you choose the right NOx sensor for your vehicle?

Read the part number of the sensor to be replaced or look up the OE reference from the relevant EPC based on the VIN (vehicle identification number).

How can we avoid diagnostic errors when considering replacing a NOx sensor?

Check the system before replacing the NOx sensor. Check the system after installation of the new NOx sensor.

What happens when driving with a defective NOx sensor?

Once the fault has been detected, the vehicle's control unit starts a manufacturer-specific countdown based on the applicable emission regulations. This process soon leads to a continuous reduction of engine torque and vehicle speed over a designated period of time, thus giving the driver the opportunity to call in at the nearest specialist workshop and have the exhaust problem rectified.

What is the most important factor that can shorten the service life of a NOx sensor?

Inadequate engine maintenance is one of the main factors that can shorten the service life of a NOx sensor. Over time this can lead to excessive engine wear, which in turn results in exhaust gas contamination, e.g. an imbalanced air-fuel mixture, which will then directly have a negative impact on the exposed sensor head.

Which components can be affected by a defective NOx sensor?

It is important to note that failure to replace a defective NOx sensor over time can have serious and irreversible consequences for expensive components of the exhaust aftertreatment system, such as the DPF (diesel particulate filter) or the SCR (selective catalytic reduction).