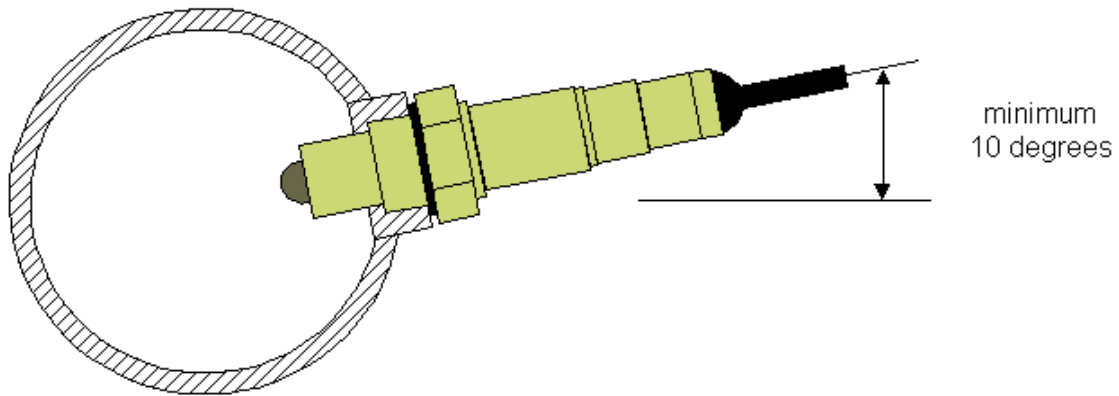


LSU4.2 WideBand Oxygen Sensor Connector Pinout

Important warning: **DO NOT LEAVE THE LSU4 sensor in the exhaust (with engine running) when it is not powered by the controller.** Without heating, carbon deposit will damage the sensor in a short time. If the engine needs to run when the sensor is not powered for some reason (for, say, more than 5 minutes), remove the sensor and plug with a blind plug (18x1.5 mm thread), or with a failed sensor (a narrowband sensor is also perfect for this, same thread).

Preferrably install the LSU4 sensor only after the engine has started. Dumping fuel on the sensor (which often happens during initial unsuccessful cranking, and also in ALS application) will shorten sensor lifetime considerably (oil from a turbo will also shorten the sensor lifetime). The >1000h lifetime (Bosch datasheet) can only be achieved in optimal conditions (like cruising at $\lambda=1.0$).

The LSU4 sensor must be mounted with cable pointing up (min 10 degrees respect to horizontal). This prevents condensed water to collect in the sensing element that can cause sensor damage.



The receptacles are not inserted in the 6pin LSU4 WBO2 connector so it is easier (or possible at all) to pull through the firewall.

- Make sure the purple backout plate is in the open position.
- Pull the cable through the firewall if necessary.
- Insert receptacles in the correct position. Check the pin numbers on the connector housing. Insert receptacles from the back, in the right angle, not perpendicularly (see the sensor connector). A small 5mm/3mm plastic (pneumatic) tube (with a small triangle-cutout) might be useful to push the pins (seal) to final position, without damaging the rubber-seal.
- Make sure the purple backout plate is in the closed position.
- Now it is possible to mate with the sensor.

green (pump- appr 4V)	5	●	●	6	white (Pump+)
red and orange (+12V)	3	●	●	4	yellow (heater-)
black (nernst)	1	●	●	2	blue (rcal)

LSU4.2 WBO2 connector pinout

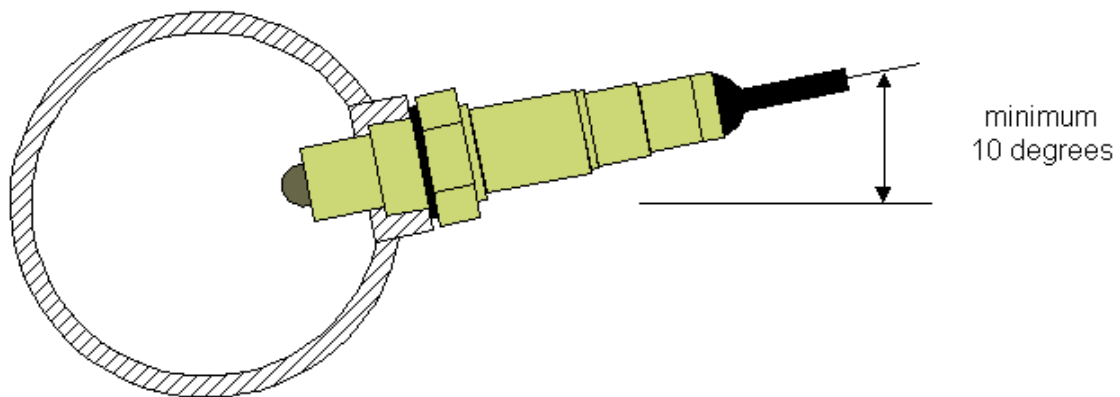
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LSU4.2 WideBand Oxygen Sensor Connector Pinout

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- Insert receptacles in the correct position. **Check the pin numbers on the connector housing.** Insert receptacles from the back, in the right angle, not perpendicularly (see the sensor connector). A small 5mm/3mm plastic (pneumatic) tube (with a small triangle-cutout) might be useful to push the pins (seal) to final position, without damaging the rubber-seal.
- Make sure the purple backout plate is in the closed position.
- Now it is possible to mate with the sensor.

thin brown or transparent (pump-)	5	●	●	6	thin red (Pump+)
thick red (+12V)	3	●	●	4	thick brown (heater-)
Black (nernst)	1	●	●	2	Blue (rcal)

LSU4.2 WBO2 connector pinout

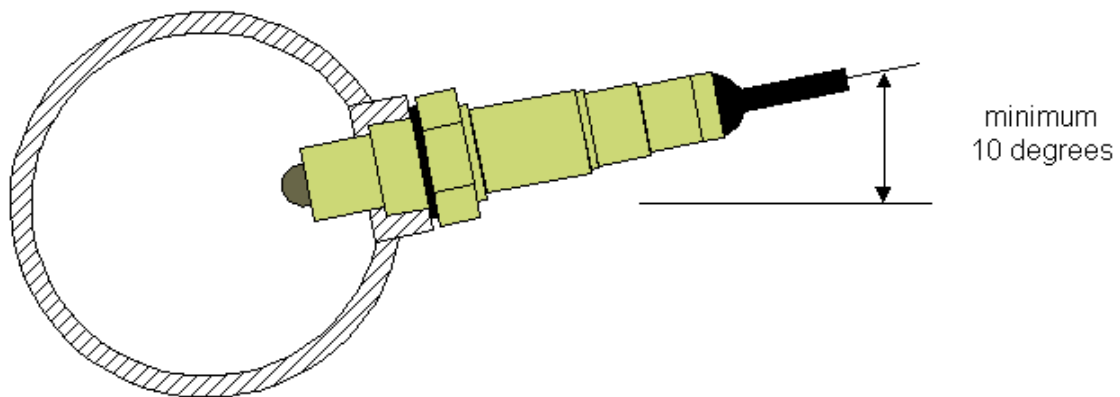
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LSU4.9 WideBand Oxygen Sensor Connector Pinout

Important warning: **DO NOT LEAVE THE LSU4 sensor in the exhaust (with engine running) when it is not powered by the controller.** Without heating, carbon deposit will damage the sensor in a short time. If the engine needs to run when the sensor is not powered for some reason (for, say, more than 5 minutes), remove the sensor and plug with a blind plug (18x1.5 mm thread), or with a failed sensor (a narrowband sensor is also perfect for this, same thread).

Preferrably install the LSU4 sensor only after the engine has started. Dumping fuel on the sensor (which often happens during initial unsuccessful cranking, and also in ALS application) will shorten sensor lifetime considerably (oil from a turbo will also shorten the sensor lifetime). The >1000h lifetime (Bosch datasheet) can only be achieved in optimal conditions (like cruising at $\lambda=1.0$).

The LSU4 sensor must be mounted with cable pointing up (min 10 degrees respect to horizontal). This prevents condensed water to collect in the sensing element that can cause sensor damage.



The receptacles might not be inserted in the 6pin LSU4 WBO2 connector so it is easier (or possible at all) to pull through the firewall.

- Make sure the purple backout plate is in the open position.
- Pull the cable through the firewall if necessary.
- Insert receptacles in the correct position. **Check the pin numbers on the connector housing.** Insert receptacles from the back, in the right angle, not perpendicularly (see the sensor connector). A small 5mm/3mm plastic (pneumatic) tube (with a small triangle-cutout) might be useful to push the pins (seal) to final position, without damaging the rubber-seal.
- Make sure the purple backout plate is in the closed position.
- Now it is possible to mate with the sensor.

blue (rcal)	5	●	●	6	black (nernst)
yellow (heater-)	3	●	●	4	red and orange (+12V)
white (Pump+)	1	●	●	2	green (pump- appr 4V)

LSU4.9 WBO2 connector pinout

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