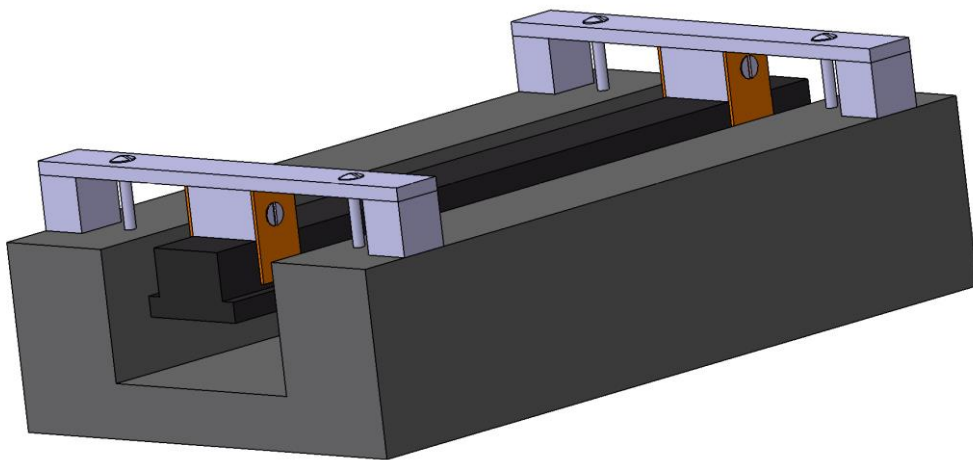


# PUR Sensor™ Installation with SL PUR-SLOT FILLER

## Installation Manual for Asphalt and Concrete Roads



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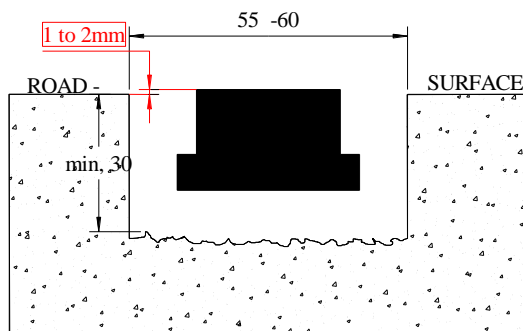


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1. Assemble all tools and materials for the installation. Make sure that all safety equipment is available and that all operators are properly trained in the use of any power tool.
2. Mark the location of the PUR sensor strip. Mark a cut being a minimum of **55 mm** wide and at **least 30 mm longer** than the length of the strip. At the same time mark the location for the conduit.



3. Cut the opening at least **35 mm** deep over the entire area. Exact procedures for this will be determined locally. Make the necessary cuts for the conduit. Use a jackhammer to remove the concrete to **at least 30 mm at all points deep** (see sketch slot dimensions). An electric jackhammer or a small pneumatic one will probably be better than a large pneumatic hammer. **The finished opening must be at least 55 mm wide and 30 mm deep over the whole length and at least 30 mm longer than the length of the strip (see sketch slot dimensions).**



4. Clean out all rubble and vacuum all dust.
5. **Make sure that the asphalt or concrete surface (slot walls and bottom) is absolutely dry and clean under all circumstances!**
6. Tape all sides of the slot. Also tape the surface of the PUR sensor in order to achieve a smooth and proper surface after the filling of the slot.



7. Position the PUR sensor beside the slot.
8. Clip the hanger bars on the sensor strip so that it can be positioned over the opening. Clip one hanger to the beginning and one to the end of the strip and at least one hanger bar every 25-30 cm. The hanger bars ensure the right leveling of the sensor strip to the road surface and avoid floating (when they are screwed to the street or are loaded). Check that all hanger bars are correctly clipped to the sensor strip. See draft on first page.
9. Position the PUR sensor strip into the slot. Be sure to achieve an even and nearly exact height for the whole slot. Fix the hanger bars to the road with screws or weights.
10. Run the conduit to the proper location. CAREFULLY pull the passive cables through the conduit. Once pulled in, check again if light is going through the feeder cables and sensor. Remove both end caps of the connectors and point one connector at the sun. You should see a light at the other connector's end.
11. Tighten all spaces leading outwardly.
12. Installation is done in two steps. First the slot is filled up to the half. Secondly, after curing, the slot is filled up completely to the street surface. Determine the volume that is needed for the first and second step. In total you need 2.2 kg SL PUR-SLOT-FILLER per meter PUR-Sensor. Prepare the necessary amount of "SL PUR-SLOT FILLER" for the first step. (Component 1=5 kg and Component 2=1 kg). If one unit needs to be portioned, use a separate can for mixing.  
**Do not use "SL PUR-SLOT FILLER" below 5°C!!!**  
 If you have temperatures below 10°C, both components should be kept warm until immediately before mixing.
13. For the first step, mix component 1 for at least 2 minutes with a heavy duty, slow speed electric drill and mixing paddle.  
 Add component 2 to component 1 and continue to mix for 2 more minutes.





14. Form the can and fill the mixed PUR-SLOT FILLER material into the slot. Pour only into **one** opening between the strip and the road. The material has to run under the strip and fill up the space below it completely. Fill up only until about 1 to 2 cm below the street surface, but be sure that the space under the sensor strip is completely filled.
15. Wait until the material is cured but still sticky on the surface. Remove the hanger bars.
16. Now mix PUR-SLOT-Filler for the second step and fill up the slot immediately to the street surface. Use a spatula to spread the material. Be sure that the slot filler is not higher than the surface of the sensor strip. But it is also necessary to be as high as the street surface. The material can be poured for about 10 minutes and can be treated with the spatula for about 20 minutes (at 20°C).
17. After the slot filler is not runny anymore, but not hard yet, remove the tape from the road and from the PUR sensor strip.
18. The complete curing time is about 45 minutes. Opening of the lane is possible after about 90 minutes.



## Materials & Equipment List

- Hanger bars (by Sensor Line GmbH)
- Necessary amount of SL PUR-SLOT FILLER, (Component 1=5 kg and Component 2=1 kg). Quantity required is about 2,2 kg/m PUR Sensor.
- Screws and dowel, or weights (for fixing the hanger bars onto the pavement)
- Hammer drill with drill bits
- Electric screwdriver
- Road saw with narrow blade
- Electric jackhammer or small pneumatic jackhammer
- Heavy duty slow speed electric drill
- Mixing paddle
- Textile tape useable on asphalt and concrete
- Textile tape 30mm wide to protect the sensor strip surface
- Spatulas
  
- Conduit inner diameter at least 20 mm

Faul 25.08.2014

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