

If the signal strength is insufficient, UNILOG 300 can be equipped with an external antenna. Two types of external antennas may be used, an omni directional antenna and a directional antenna.


Wigersma & Sikkema has selected a few models of external antenna's suitable for use with UNILOG 300. All models are supplied with mounting materials.

This manual only discusses installation of an external antenna. Read the corresponding UNILOG 300 manual before installing UNILOG 300 and put into use.

Omni directional

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| <p>Dr. Neuhaus 316244 Order number: NN2253 Cable length: 5 Meter Frequencies: Dual Band 900/1800 MHz Gain: 2 dBi Height app.: 310 mm</p> |  A vertical, silver-colored omni-directional antenna with a mounting bracket and a cable. |
| <p>D-D-S 20-XS108CH-F/F10 Order number 5 m Cable: NN2254 Order number 10 m Cable: NN2255 Frequencies: Tri Band 900/1800 MHz, 1900 MHz Gain: 2 dBi 900 MHz, 4 dBi 1800 MHz Height app.: 240 mm</p> |  A vertical, black omni-directional antenna with a mounting bracket and a cable. |
| <p>D-D-S 20-HP08-5M/10M Order number 5 m Cable: NN2256 Order number 10 m Cable: NN2257 Frequencies: Quad Band 850/1900 MHz, 900/1800 MHz Gain: 3 dBi Dimensions: round 80 mm, height 30 mm, drill hole 17 mm</p> |  A circular, black omni-directional antenna with a cable. |

Directional

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| <p>Hirschmann MCA2190 Order number: NN2265 Cable length: 5 Meter Mast and wall mounting Frequencies: Tri Band 900/1800 MHz, 1900 MHz Gain: 9 dBi Height app.: 170 mm</p> |  A square, grey directional antenna with a mounting bracket and a cable. |
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Explosion safety instructions (Ex)



WARNING

UNILOG 300 is approved for use outside the explosion-hazardous environment. UNILOG 300 is equipped with intrinsically safe circuits, which may be connected to equipment set up in explosion-hazardous environments.

Should you have any questions or need clarification regarding explosion safety with respect to UNILOG 300, please contact Wigersma & Sikkema (for this, please see the data at the last page).

General additional instructions on explosion safety:



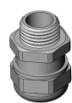

1. If a mounted connection cable must be loosened and reinstalled for any reason whatsoever, you must check whether the cable is installed correctly, whether there are any loose wires and whether the gland has been properly tightened. You should also check to see that the Ex protective cover has been tightened in place over the connection (figure 1).
2. When closing the casing always check to see that the seal is clean and that the sealing edge of the cover connects properly to the casing over the entire length. You should also check to see that all six screws are in place and tight. If the casing is open, you should ensure that no moisture enters the casing.
3. If there are any defects, UNILOG 300 should be repaired by Wigersma & Sikkema.



Additional instructions with regard to explosion safety requirements regarding UNILOG 300 battery operated

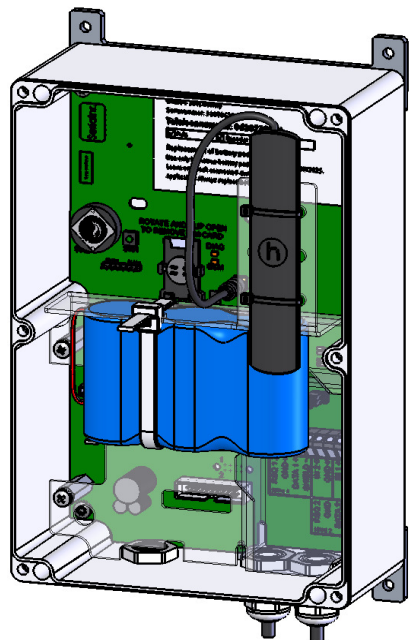

4. Replacing the external antenna with a type other than the one recommended is not permitted.
5. Shortening the cable of the external antenna is not permitted.
6. Prevent damaging the cable of the external antenna during installation. If the cable is damaged, the antenna should be replaced as a unit with a non-damaged unit.

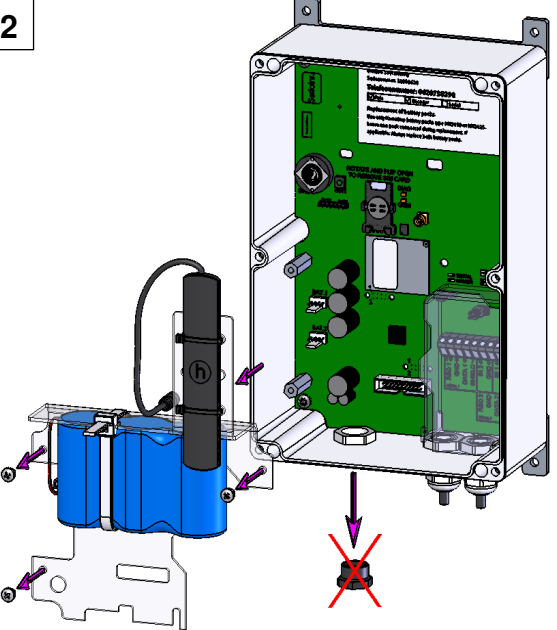
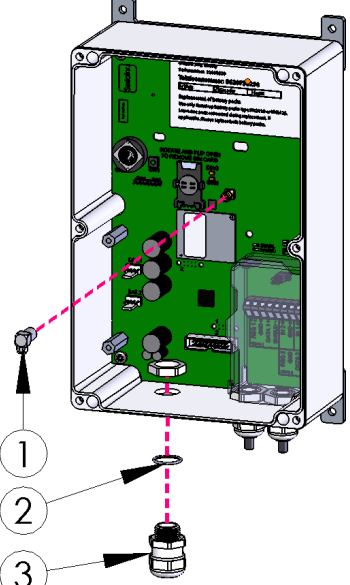
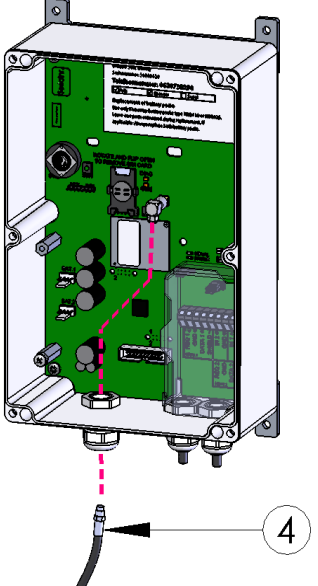
Installing the external antenna to UNILOG 300

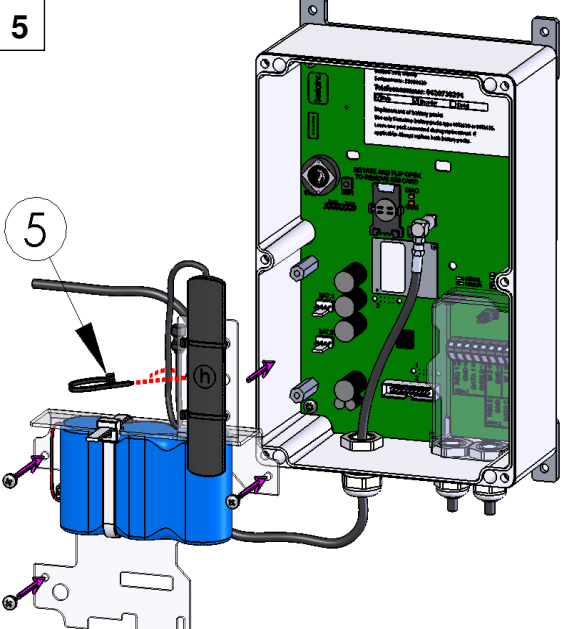
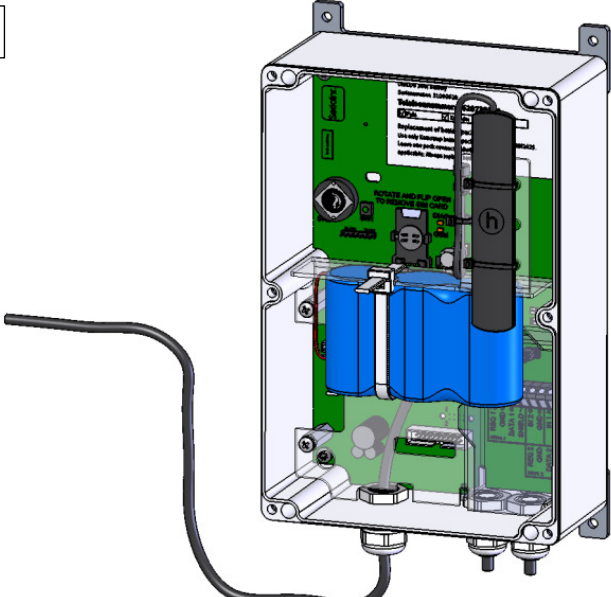
Mounting material

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| Cable tie 140x2.5 Number: 1 Article code W91275 | O-ring 12x1.5 Number: 1 Article code P90920 | HSK-K 5-10-gland Number: 1 Article code W90930 | Square connector C50 FME-SMA Number: 1 Article code W90862 |

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|  | PLEASE NOTE | Before installing the external antenna, first read the <i>Explosion safety instructions (Ex)</i> . |
| | | Treat the cable with care. Prevent the cable from sharp bends or the insulation from being damaged. If the cable is damaged, replace the entire antenna. |
|  | ESD | Electrostatic discharges can cause damage to internal electrical components if no precautions are taken. ESD is caused by static electricity and the damage caused is usually permanent. |

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| 1 |  | <p>Remove the cover from UNILOG 300. UNILOG 300 comes with moisture protection. This protection includes a ventilation membrane and a silica gel desiccant inserted in the cover. Treat the cover with care.</p> <p> When opening the casing, take moisture absorption by the two silica gel bags into account. Limit the duration of the work to half an hour maximum and prevent the bags from coming in direct contact with water. If necessary, store the cover in a closed and dry, folded up plastic bag during the work. If there is any doubt, replace the silica gel bags.</p> <p>PLEASE NOTE</p> |
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| <p>2</p>  | <p>Disconnect the batteries from the PCB by taking off the battery connector(s) (1). Unscrew the internal antenna connector from the PCB connector (2). Disassemble the battery holder including the batteries by loosening the cross-head screws (3). Next remove the stopping plug (4); the gland nut will be re-used.</p> |
| <p>3</p>  | <p>Screw the square connector (1) to the PCB connector to which the internal antenna was connected before. Position the cable connection from the square connector downward. Slide the O-ring (2) over the thread of the 4/8 gland (3) to the collar. Install the 4/8 gland and tighten it with the nut of the removed stopping plug.</p> |
| <p>4</p>  | <p>Lead the cable from the external antenna (1) through the 4/8 gland (2) and connect this to the square connector (3). Make sure the cable runs along the multi-pole connector (4). Tighten the 4/8 gland cap nut to such an extent that the antenna cable is properly secured.</p> |

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| <p>5</p>  | <p>Insert the cable tie in the battery holder hole next to the internal antenna (1). Carefully bend the cable of the internal antenna back (do not kink it) and attach it to the battery holder with the cable tie. Install the battery holder with batteries and antenna by inserting and tightening the three cross-head screws (2). Make sure the battery holder on the right hand side connects correctly to the cover of the terminals (3).</p> |
| <p>6</p>  | <p>Restore the connection between the batteries and PCB by fastening the battery connector(s) to the PCB (BAT.1- BAT.2) again (1). Check to see that the sealing edge of the cover connects properly to the casing over the entire circumference before closing the casing. Place the cover of the UNILOG 300 with the text <i>This side up</i> (inside of the cover) facing up. First tighten the six screws by hand and next tighten them crosswise with a screwdriver, seal them with the sealable screws if necessary.</p> |

Attach the external antenna in the most favourable location possible (reception of the GSM network can be checked with the service software MODEM NETWORK MONITOR). Make sure the cable routing is adequate. The antenna performs best if it is placed purely horizontally (directional antenna) or vertically (omni directional antenna).

If applicable, check accessibility by means of the central system. If the log functions and scheduler functions are activated in UNILOG 300, the clock should be synchronised.



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