

Antenna(s): Installing and Connecting

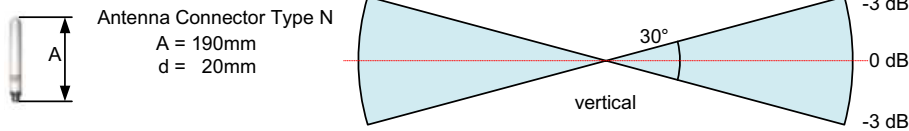
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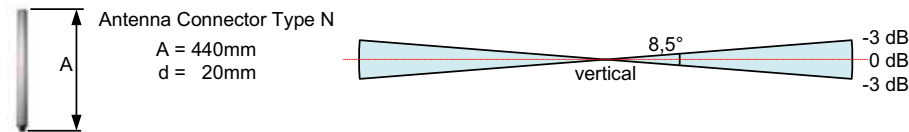
1 LPR Antenna Types

There are different antennas that can be installed depending on the required directional characteristic.

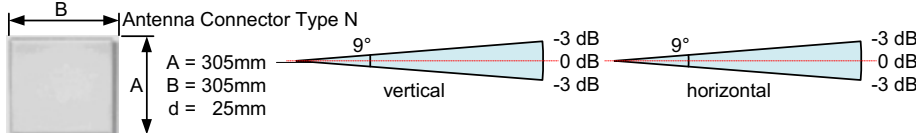
6 dBi Omnidirectional Antenna



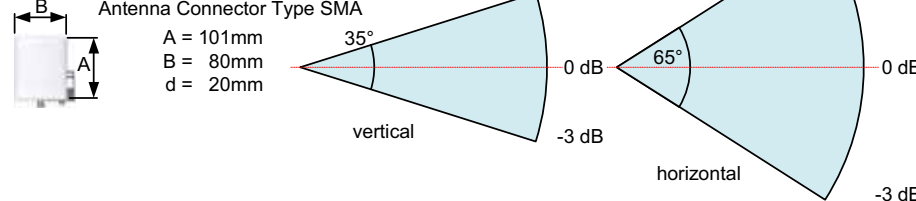
10 dBi Omnidirectional Antenna



23 dBi Planar Antenna



12 dBi Planar Antenna



10 dBi Sector Antenna

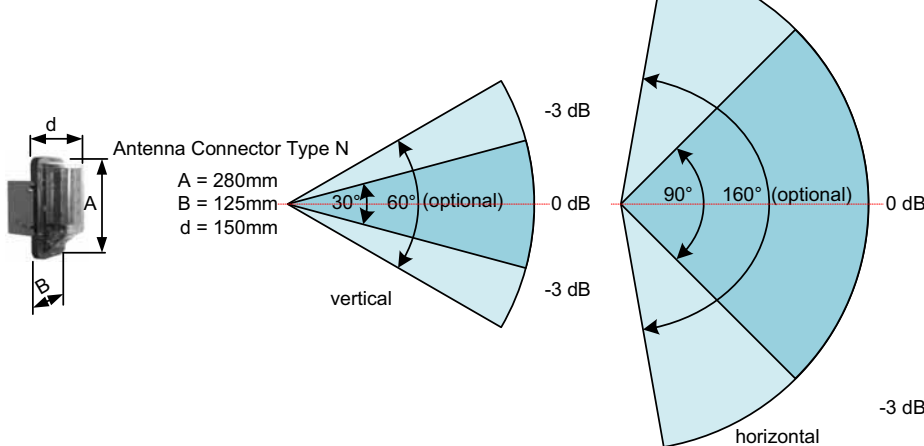
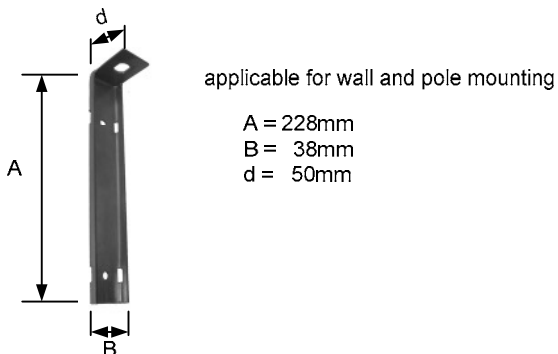


Figure 1: Example of directional characteristic of typical LPR antennas

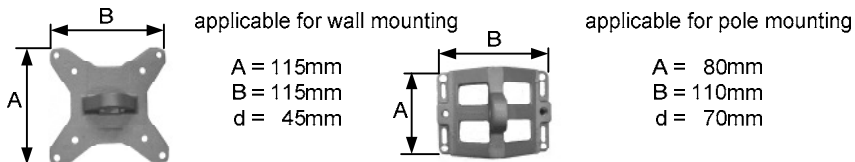
2 Adapter for different LPR Antennas

Depending on the required antenna, different adapters are available

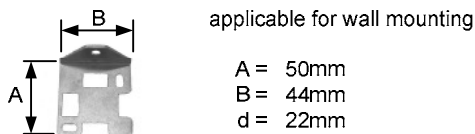
6 dBi and 10 dBi Omnidirectional Antenna



23 dBi Planar Antenna



12 dBi Planar Antenna



10 dBi Sector Antenna

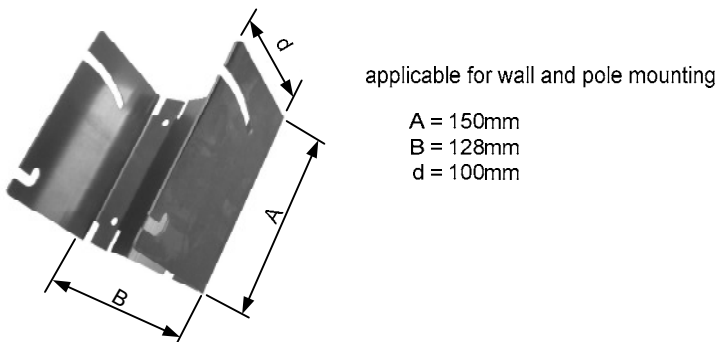
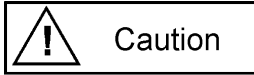


Figure 2: Available adapters for different antenna types

3 Connecting and Wiring up the Antenna and Cable



- When using several antennas, ensure that they are connected to the correct ports, as described in chapter "Compact Station: Overview and Installation".
- When installing the cable, ensure that electrostatic charging does not occur.
- Make sure that the cable is not kinked or trapped during installation. The minimum bending radius must always be maintained. With the standard antenna cables delivered, the minimum bending radius (center of radius to cable core) for standard cables is 10,5cm (for multiple bending under mechanical load) and 4cm (unloaded and static bending). The cable must not be attached in a way that alters its cross-section. On demand, cables with different flexibility characteristics are available.
- The antenna plug must not be removed (e.g. for installation purposes) or repaired because the specified electrical properties can only be achieved with mechanical installation assistance.
- When installing the antenna cable, ensure that the screw connection is seated properly. The antenna cable plugs should be finger-tightened before tightening with an appropriate tool to no more than 1.3 Nm tightening torque.

4 Installing the Antenna(s)

i Note

- The line of sight between the antennas on each unit must not be obstructed. Therefore, when installing the antenna fixture, ensure that no components are blocking the line of sight between the antennas. If necessary, contact the SYMEO technical department.
- Depending on the antenna type used, offsetting the corresponding antennas (either vertically or horizontally) may degrade the signal strength to the point that communication is lost. Accordingly, corresponding antenna pairs should be installed with as little offset with respect to each other as possible. If necessary, contact the SYMEO technical department.
- If you change the position of one antenna, this will affect the measurement data that is output.
- For installation of the planar antennas, it is important to keep the same orientation of polarization for corresponding antennas (see picture for 23 dBi planar antenna).



- ⇒ Install the antenna fixture according to the accompanying operating instructions.
- ⇒ Secure the antenna in the fixture.
- ⇒ Connect the antenna to the antenna cable.