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SMS Project Number:

Project Title:
Bracket

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UMRR Bracket Data Sheet

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UMRR Bracket Data Sheet.doc

Document state:
- In progress
- Ready for review
- Released
- Outdated
1 User Safety Warning Information

Read the instructions carefully before you start to work.

Installation
Please observe the following advices when mounting the brackets:
- Only use provided or approved equipment for installation. Use screws with metric thread M3x8.
- Only skilled and instructed persons shall install and connect the devices.
- Use proper hand protection as brackets may have sharp burrs.
- Don't wire any connections while power is applied to the sensor.
- Only use fully functional equipment (ladders, aerial work platform, ...) when working above ground. Staff shall be capable of working at heights.
- Use caution when installing the devices on or around active roadways. Pay attention to moving traffic.
- Mount the devices carefully to prevent them from shifting or dropping.
- The sensor must be mounted to a stiff and solid support. Vibration, oscillation or any kind of movement will reduce the sensor performance.
- Make sure that your installation methods are in accordance with local safety policy and procedures and company practices.

Operation
The brackets are designed to work under different environment conditions (temperature, rain, dust, ...). Regular maintenance such as cleaning or recalibration is not required.
2 Bracket Data Sheet

smartmicro offers a family of traffic Radar sensors called UMRR – Universal Medium Range Radar.

The brackets can be used to mount and adjust the sensor. Different kinds of brackets are available.

The material of all brackets is stainless steel type no. 1.4301.

2.1 Standard Brackets

Standard brackets allow for adjustments of the elevation angle. The azimuth angle must be set by choosing an appropriate mounting position. These standard brackets are available:

**BRACKET-050400** holder for UMRR-0A Type 29 and UMRR-11 Types 44, 45.
**BRACKET-030400** holder for UMRR-0A Type 30 and UMRR-11 Type 132.
**BRACKET-070600** holder for UMRR-0C Types 40, 42.

<table>
<thead>
<tr>
<th>Bracket type</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRACKET-030400</td>
<td>340g / 12 oz</td>
</tr>
<tr>
<td>BRACKET-050400</td>
<td>340g / 12 oz</td>
</tr>
<tr>
<td>BRACKET-070600</td>
<td>560g / 20 oz</td>
</tr>
</tbody>
</table>
2.2 Standard Bracket Photographs

Figure 1: Bracket-050400 with sensor front.

Figure 2: Bracket-050400 with sensor back.
Figure 3: Bracket-030400 with sensor front.

Figure 4: Bracket-030400 with sensor back.
Figure 5: Bracket attached to pole using straps.
Figure 6: Bracket-070600 with sensor front

Figure 7: Bracket-070600 with sensor back
2.3 Advanced Brackets

Advanced brackets allow for adjustments of both the azimuth and elevation angle. They feature an angle scale that indicates the angle settings in increments of 5°. Horizontal and vertical bar mount are supported. The bracket orientation may be selected straight or right angled. Available advanced brackets are:

**BRACKET-050500** holder for Type 29 sensor housing 05.
If used with JBOX, the adjustment range of the elevation angle is limited, but still sufficient for normal measurement scenarios.

Advanced brackets are available for all sensor types:
**BRACKET-050500** holder for UMRR-0A Type 29 and UMRR-11 Types 44, 45.
**BRACKET-030500** holder for UMRR-0A Type 30 and UMRR-11 Type 132.
**BRACKET-070800** (former BRACKET-070700) holder for UMRR-0C Types 40, 42.

*Compared to BRACKET-070700, the additional welding spots, two added triangular-shaped metal plates, and an overall increased material thickness further reduce vibration and improve stability.

<table>
<thead>
<tr>
<th>Bracket type</th>
<th>Weight (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRACKET-030500</td>
<td>965g / 34 oz</td>
</tr>
<tr>
<td>BRACKET-050500</td>
<td>965g / 34 oz</td>
</tr>
<tr>
<td>BRACKET-070800</td>
<td>1220g / 43 oz</td>
</tr>
</tbody>
</table>
2.4 Advanced Bracket Photographs

2.4.1 Straight orientation

![Figure 8: BRACKET-050500 with sensor front, straight orientation]

![Figure 9: BRACKET-050500 with sensor back, straight orientation]
Figure 10: BRACKET-050500 attached to pole using straps, straight orientation
Figure 9: BRACKET-030500 with sensor front, straight orientation

Figure 10: BRACKET-030500 with sensor back, straight orientation
Figure 11: BRACKET-070800 with sensor front

Figure 12: BRACKET-070800 with sensor back
2.4.2 Right angled orientation

Figure 11: BRACKET-050500 with sensor front, right angled orientation

Figure 12: BRACKET-050500 with sensor back, right angled orientation
Figure 13: BRACKET-050500 attached to pole using straps, right angled orientation
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