



TAOGLAS®



Datasheet

Meteor

Part No:
FW.92.RNT.M

Description:

Penta-band cellular 2G/3G GSM/CDMA/UMTS
Flexible Whip Monopole Antenna
850/900/1800/1900/2100MHz

Features:

Robust Inner Steel Core
RP-N-type Male Connector
IP65
RoHS Compliant

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|-------|-------------------------|----|
| 1. | Introduction | 3 |
| 2. | Specifications | 4 |
| 2. | Antenna Characteristics | 5 |
| 3. | Radiation Patterns | 7 |
| 4. | Mechanical Drawing | 9 |
| 5. | Packaging | 10 |
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| | Changelog | 11 |

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1. Introduction



The FW.92 is a flexible cellular whip antenna with IP65 housing and an RP-N-type male connector. It has a wide response and high peak gain. It is ideal for outdoor environments which require high gain on both lower and upper bands. Its unique characteristic is it has stable above 3dBi peak gain on all five common 2G/3G GSM/CDMA cellular bands used worldwide (when attached to a 30cm*30cm metal plate). The antenna radiates best attached to a metal plate but it can still perform without as evidenced by the table below.

This antenna delivers wider coverage areas and more reliable connections for professional customers in the automotive and industrial sectors. The whip is made up of a flexible inner steel core covered by TPU so extremely resistant to collisions and maintaining its original shape and RF performance.

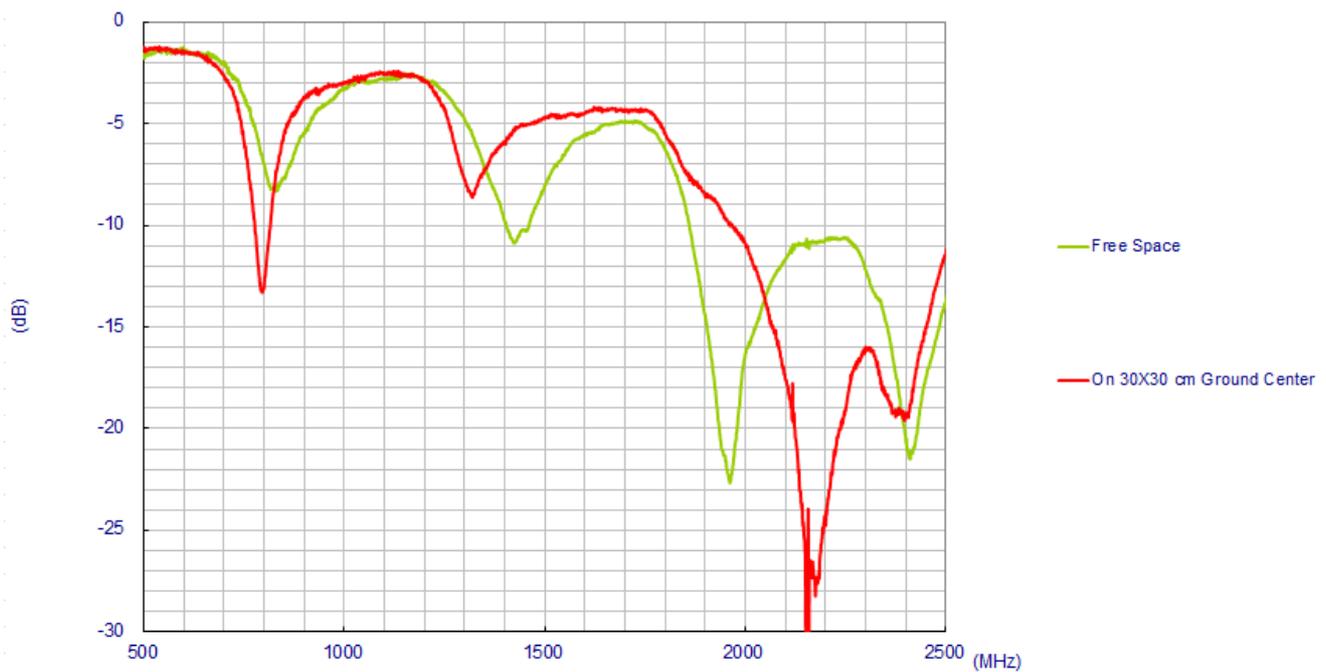
Customized frequency and gain versions can be supplied.

2. Specifications

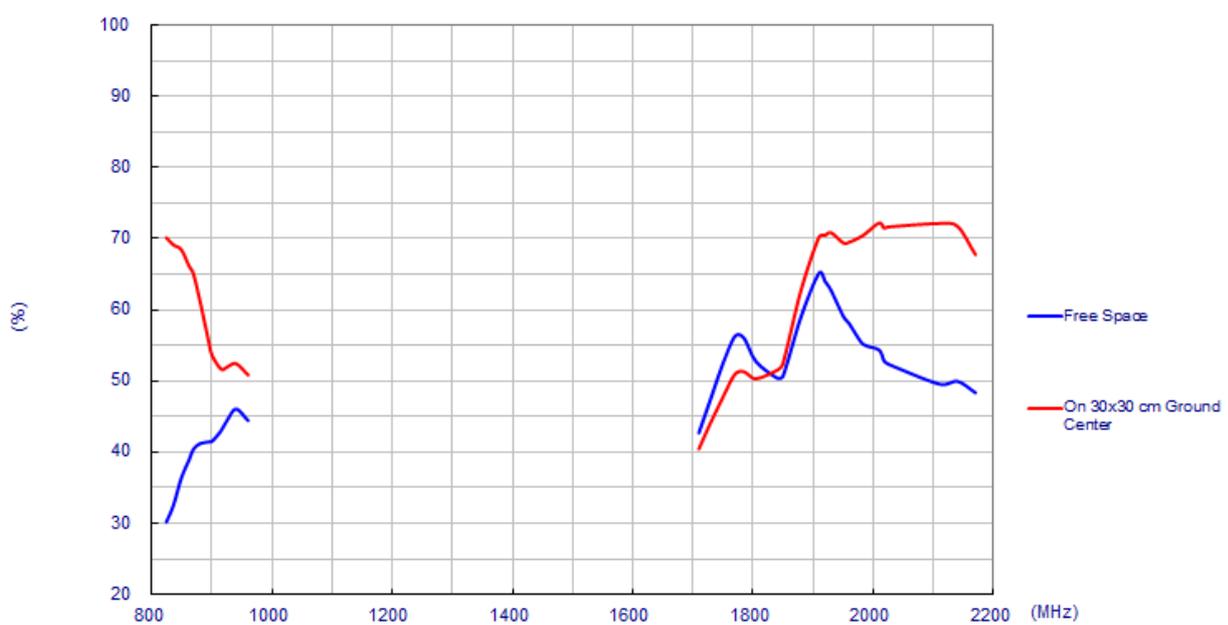
| CELLULAR | | | | | |
|----------------------------|----------------------------|---------|-----------|-----------|-----------|
| Frequency (MHz) | 824~896 | 880~960 | 1710~1880 | 1850~1990 | 1710~2170 |
| Peak Gain (dBi) | | | | | |
| Free Space | -0.2 | -0.1 | 3.0 | 3.3 | 3.3 |
| With Ground plane(30x30cm) | 3.3 | 3.4 | 3.9 | 4.0 | 4.0 |
| Average Gain (dBi) | | | | | |
| Free Space | -3.8 | -3.4 | -2.3 | -1.9 | -1.9 |
| With Ground plane(30x30cm) | -1.2 | -2.1 | -2.0 | -1.5 | -1.4 |
| Efficiency | | | | | |
| Free Space | 41% | 46% | 59% | 65% | 65% |
| With Ground plane(30x30cm) | 70% | 61% | 63% | 71% | 72% |
| Impedance | 50Ω | | | | |
| Polarization | Linear | | | | |
| Radiation Pattern | Omni | | | | |
| Input Power | 50 W | | | | |
| Tested Power | 10 W | | | | |
| Mechanical | | | | | |
| Dimensions | Height 274 ± 5 mm | | | | |
| Base Diameter | 20 ± 0.1 mm | | | | |
| Whip Diameter | 4 ± 0.2 mm | | | | |
| Casing | ABS | | | | |
| Connector | RP-N-type Male | | | | |
| Environmental | | | | | |
| Temperature Range | -40°C to 85°C | | | | |
| Humidity | Non-condensing 65°C 95% RH | | | | |

3. Antenna Characteristics

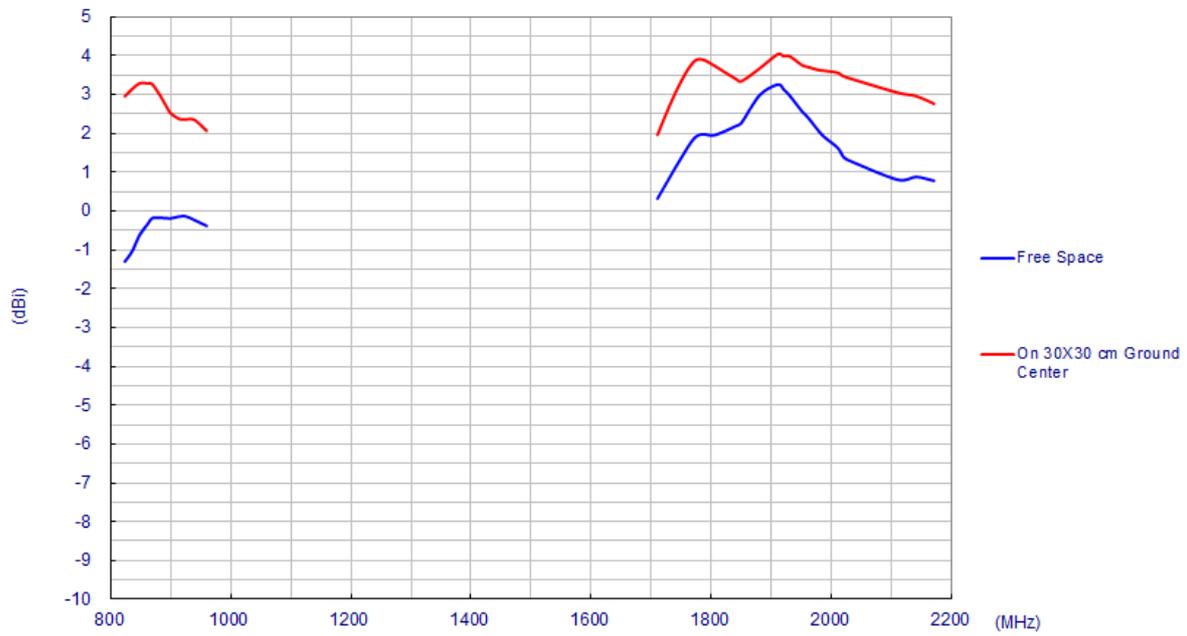
3.1 Return Loss



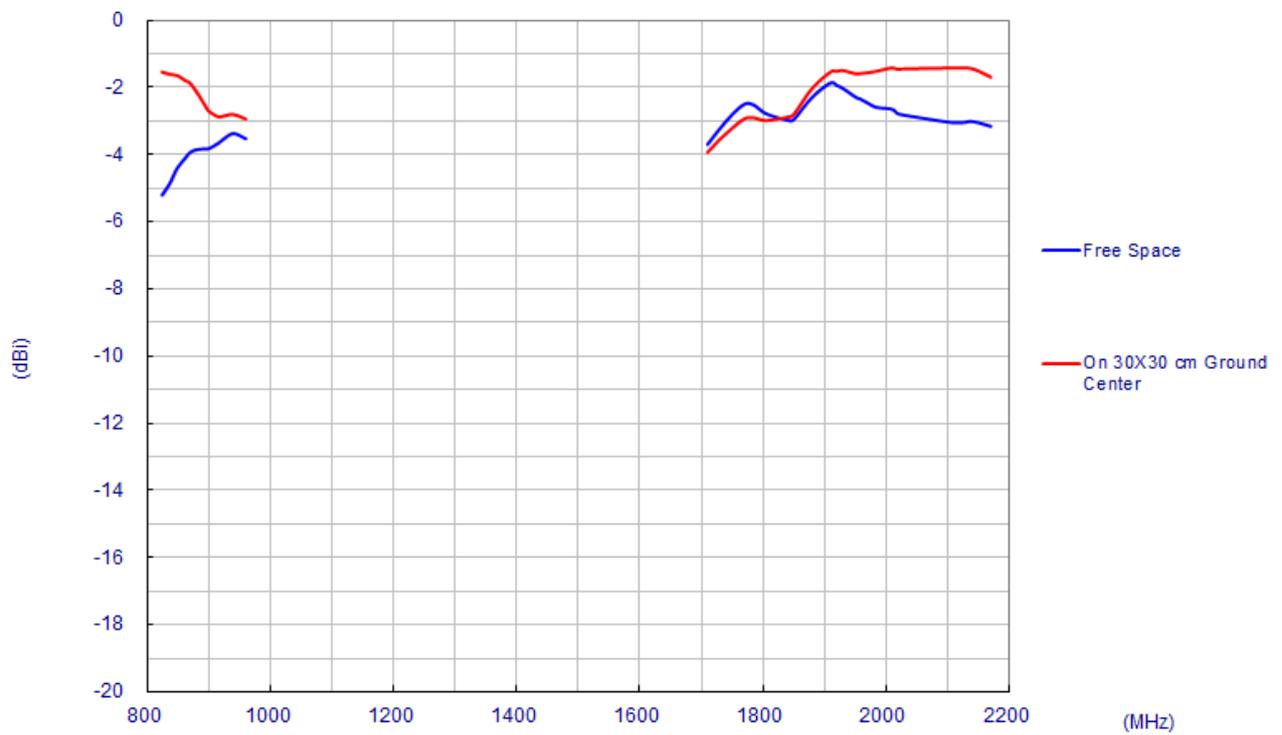
3.2 Efficiency



3.3 Peak Gain

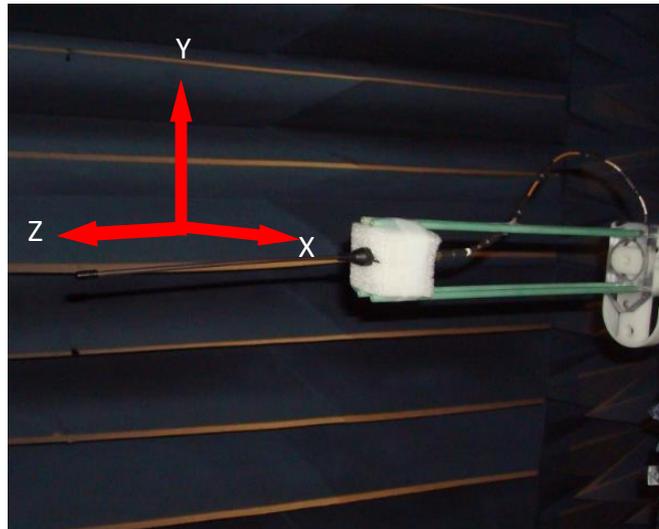


3.4 Average Gain



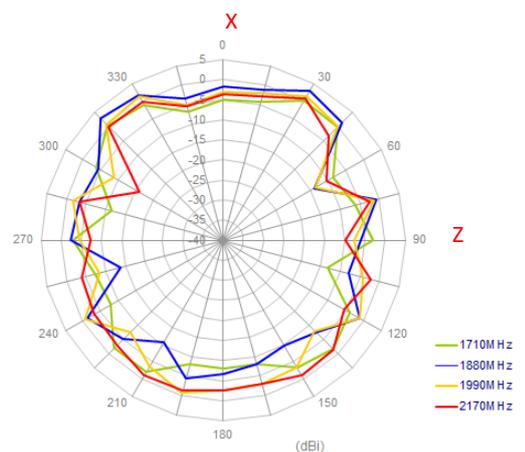
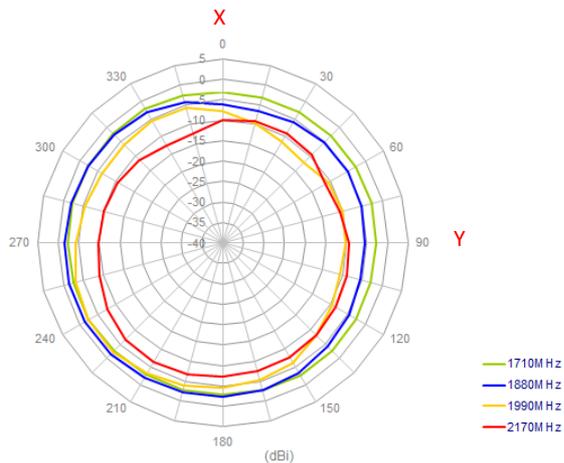
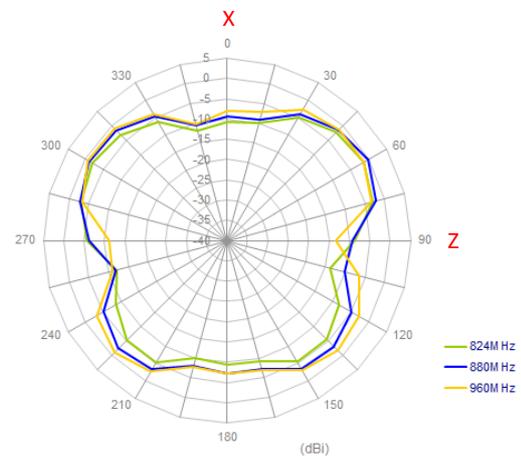
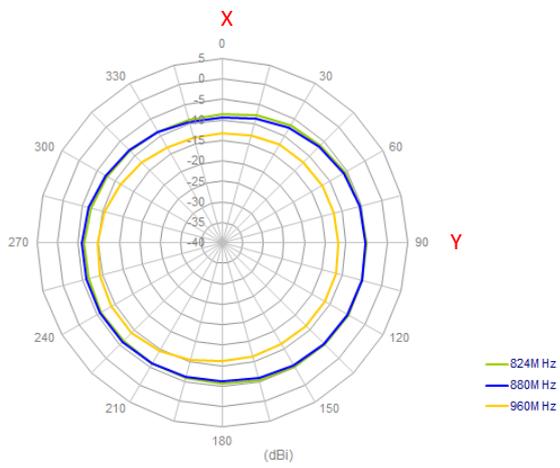
4. Radiation Patterns

4.1 Antenna Free Space

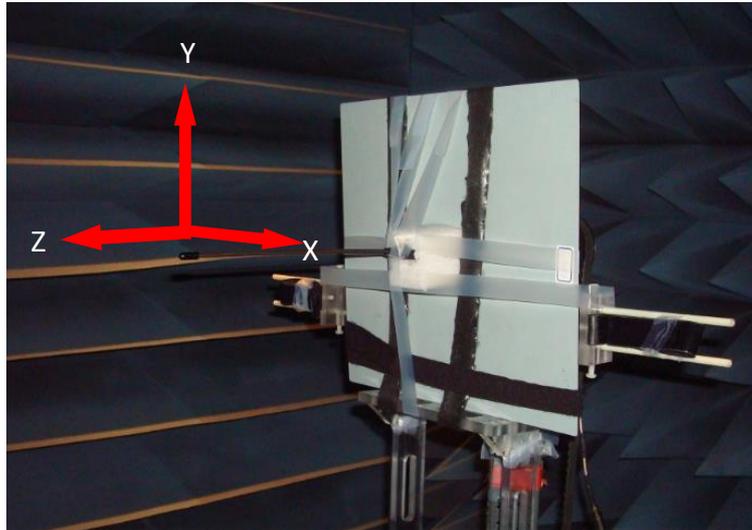


XY Plane

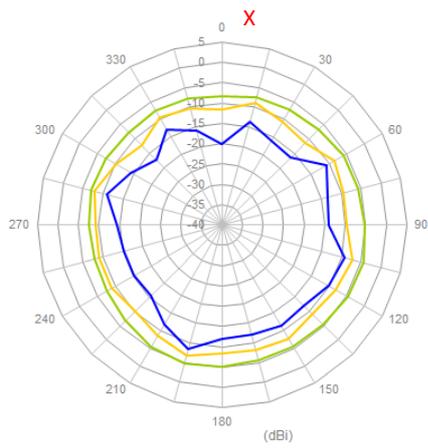
XZ Plane



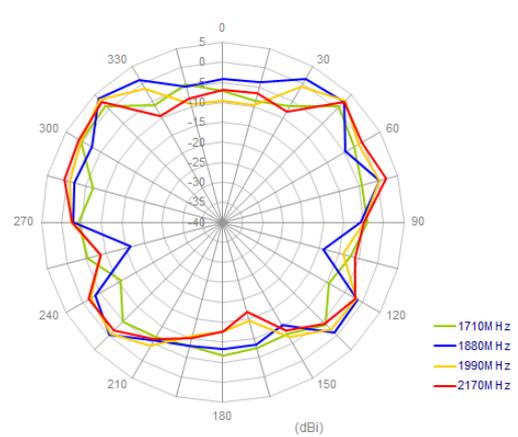
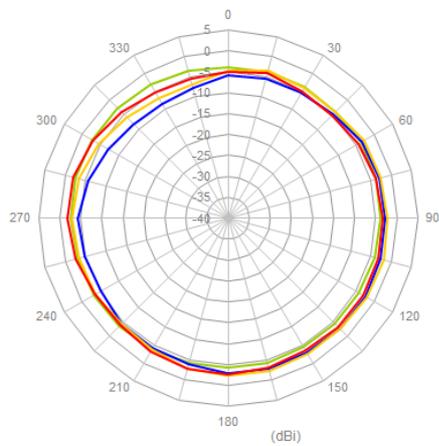
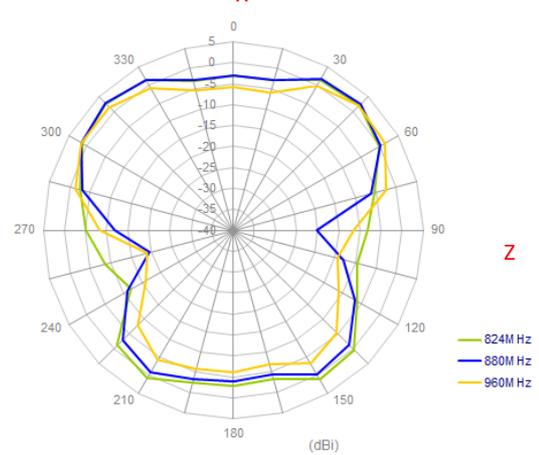
4.2 Antenna on Ground plane (30X30cm)



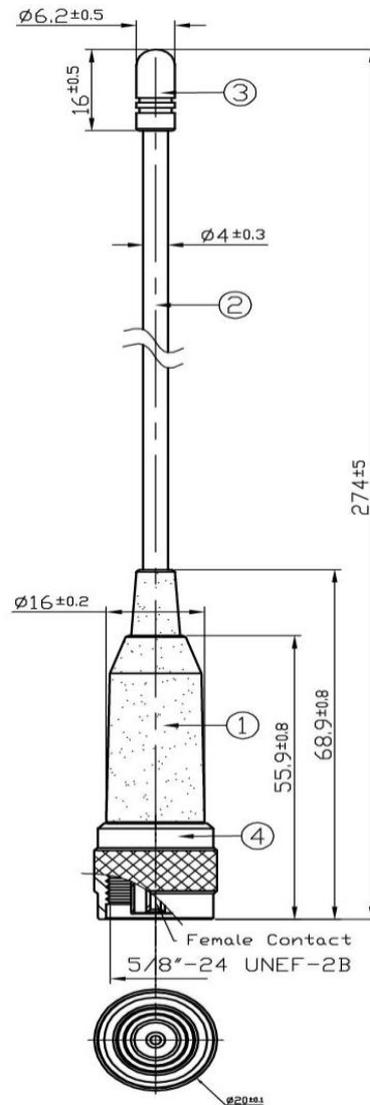
XY Plane



XZ Plane

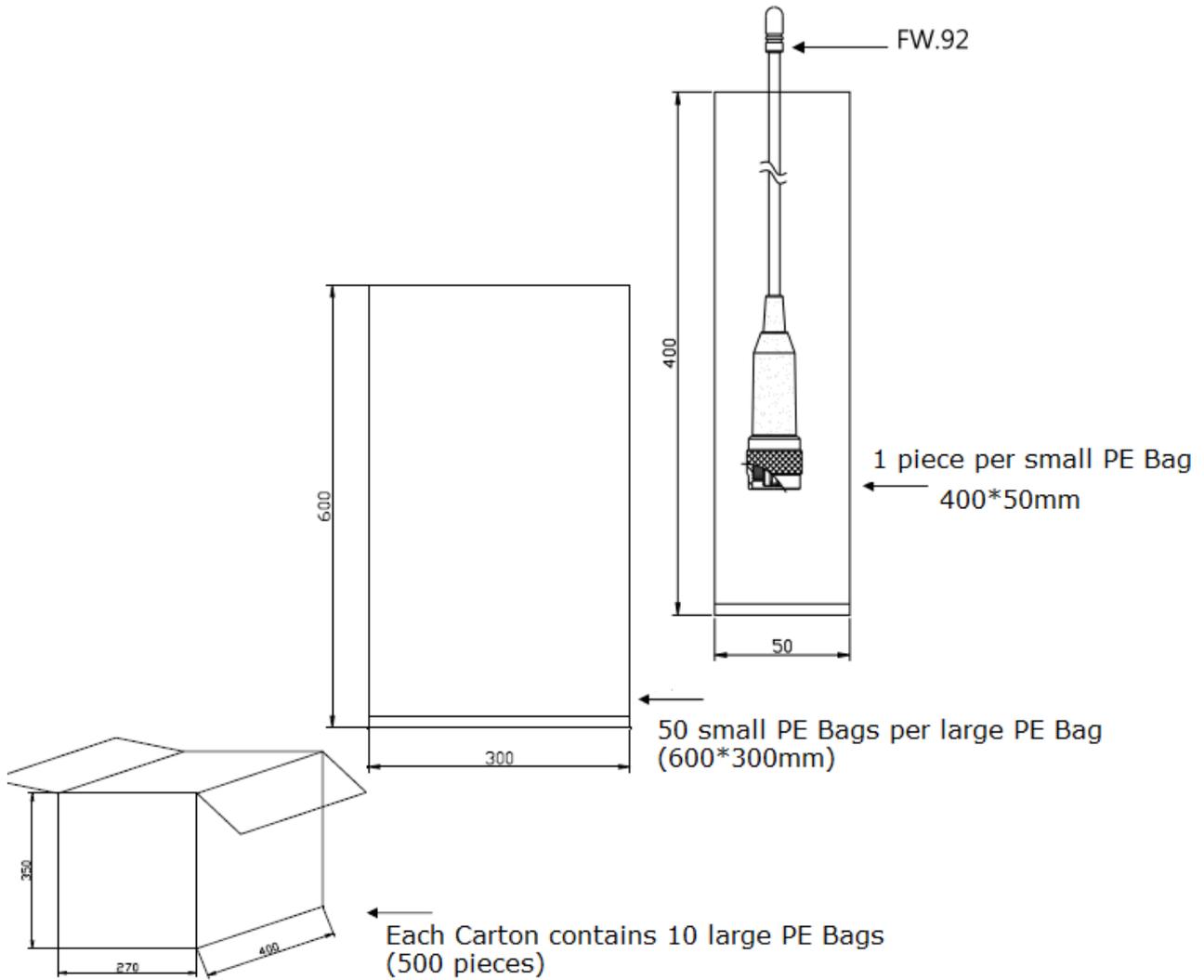


5. Mechanical Drawing (Units: mm)



| | Name | P/N | Material | Finish | QTY |
|---|---------------|----------------|-----------------|--------|-----|
| ① | Housing | 000111K0600XXA | ABS | Black | 1 |
| ② | Flexible Whip | 001111K0000XXA | Steel+PE Jacket | Black | 1 |
| ③ | Cap | 000711C0000XXA | ABS | Black | 1 |
| ④ | NTYPE(M)RP ST | 211011K000002A | Brass | Black | 1 |

6. Packaging



Changelog for the datasheet

SPE-12-8-090 - FW.92.RNT.M

Revision: B

| | |
|------------------|-----------------------|
| Date: | 2019-08-16 |
| Changes: | Updated to new format |
| Changes Made by: | Dan Cantwell |

Previous Revisions

Revision: A (Original First Release)

| | |
|---------|------------|
| Date: | 2012-07-17 |
| Notes: | |
| Author: | SS |

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