SPECIFICATION

Part No. : **FW.43.B.SMA.M**

Description : **Meteor**
ISM Band 433MHz
Flexible Whip Monopole Antenna SMA(M) Straight

Features : External ISM Band 433MHz
Monopole Antenna
Designed for Outdoor Use
60%+ efficiency*
0dBi peak gain*
Robust Inner Steel Core
Antenna Length: 323mm
SMA Type(M) Straight Connector
IP65 dust and water-resistant
*Tested on 30cm*30cm Ground Plane
RoHS ✓





1. Introduction

The FW.43 is a flexible 433MHz whip antenna with a SMA type (M) connector for outdoor use. It features excellent efficiency (>60%) and peak gain (>0 dBi) at 433MHz on a 30x30 cm ground plane.

Common applications are wireless sensor monitoring, smart metering, remote asset monitoring, and security systems.

The FW.43 has an excellent omnidirectional radiation pattern, ensuring wide coverage. The antenna's high efficiency means that it allows your radio to consume less power than with a lower efficiency antenna when transferring data. It also means a better signal strength and better sensitivity in areas of low signal levels. The antenna performs at its best while attached to a ground plane with dimensions of at least 30x30 cm

The FW.43 whip is made of a flexible inner steel core covered by PE so it is extremely resistant to abrasion and maintains its original shape and RF performance even after shock. This rugged design and IP67 waterproof rating on the housing ensure high reliability.

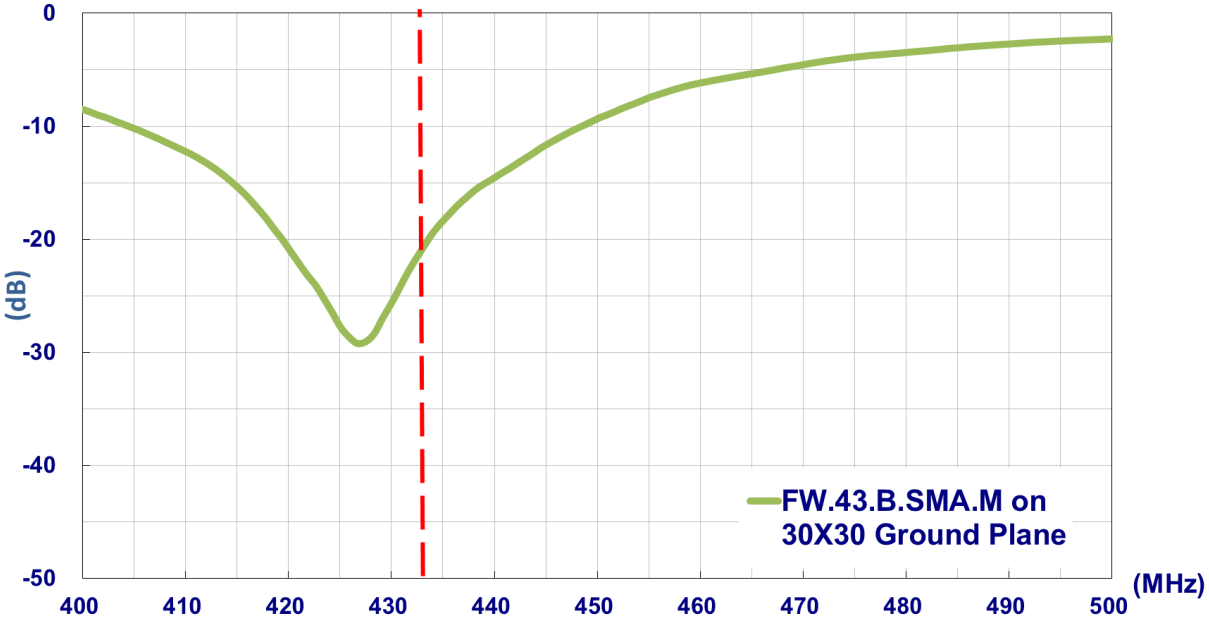
This antenna comes with SMA(M) connector as standard. Other custom variants can be provided subject to NRE and MOQ. Contact your regional Taoglas office for details.

2. Specification

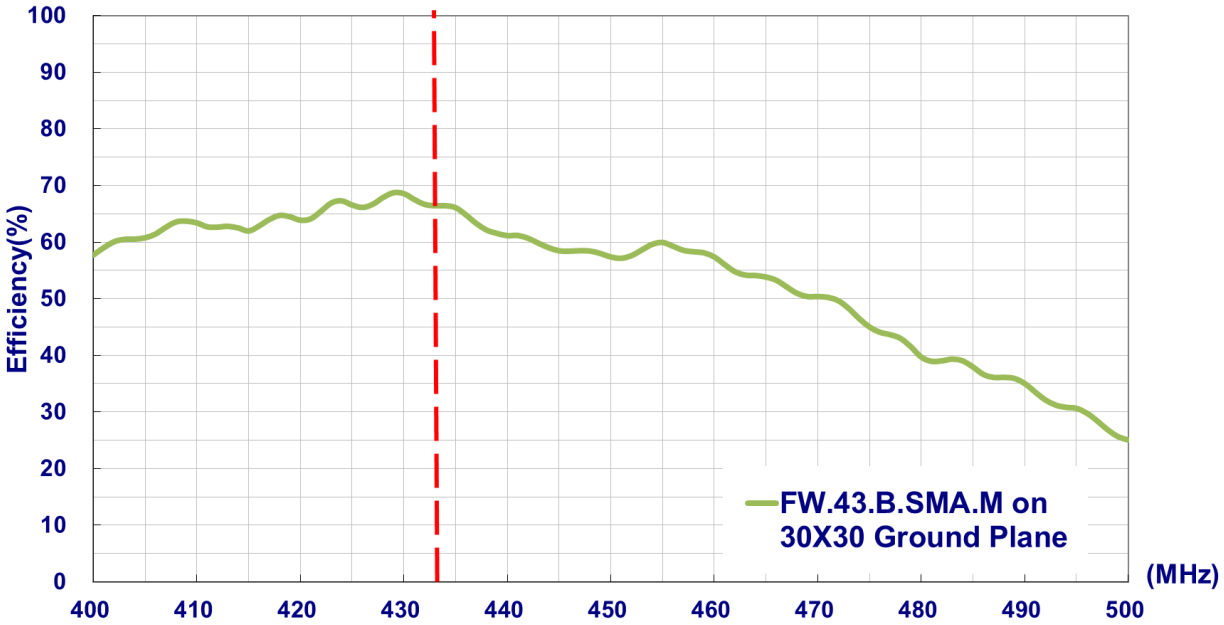
ISM Band 433 MHz	
Center Frequency	433 MHz
Design Environment	On 30*30cm ground
Efficiency	66.42 %
Peak Gain	0.46 dBi
Return loss	< -15 dB
VSWR	≤ 1.5:1
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omnidirectional
Input Power	2 W
MECHANICAL	
Dimensions	Length: 323 ± 10mm
Base Diameter	16 ± 0.6mm
Whip Diameter	6.2 ± 0.6mm
Casing	ABS
Connector	SMA Type(M) Straight
Weight	66g
Dust and Water Resistance	IP65
ENVIRONMENTAL	
Temperature Range	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

3. Antenna Characteristics

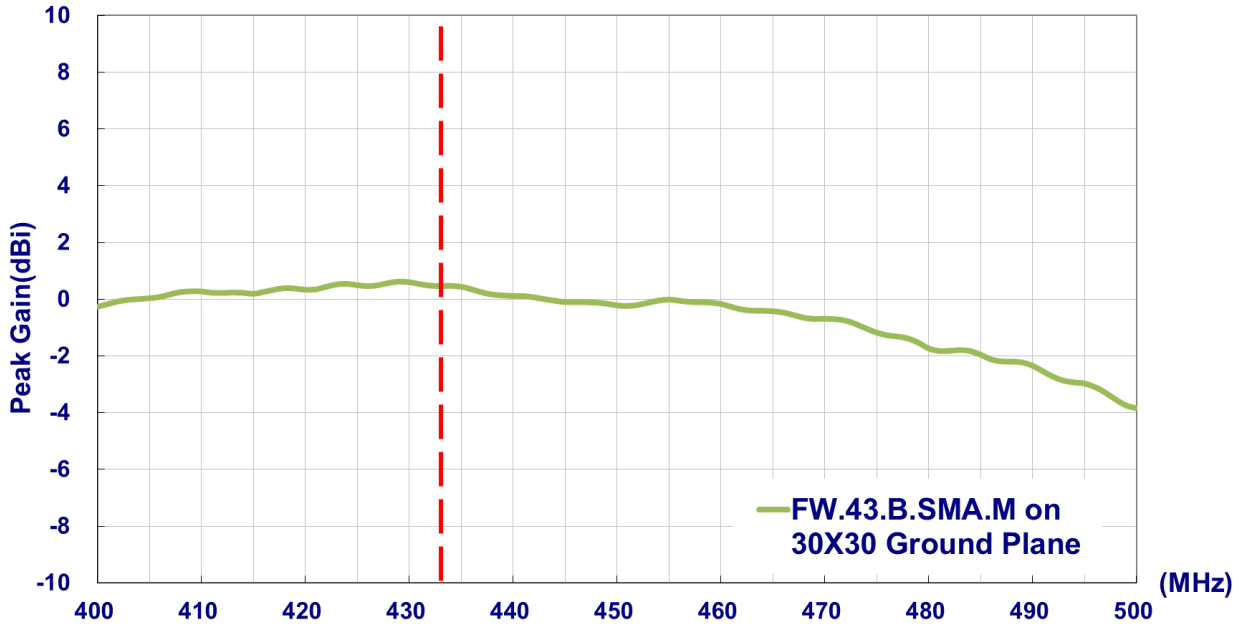
3.1. Return Loss



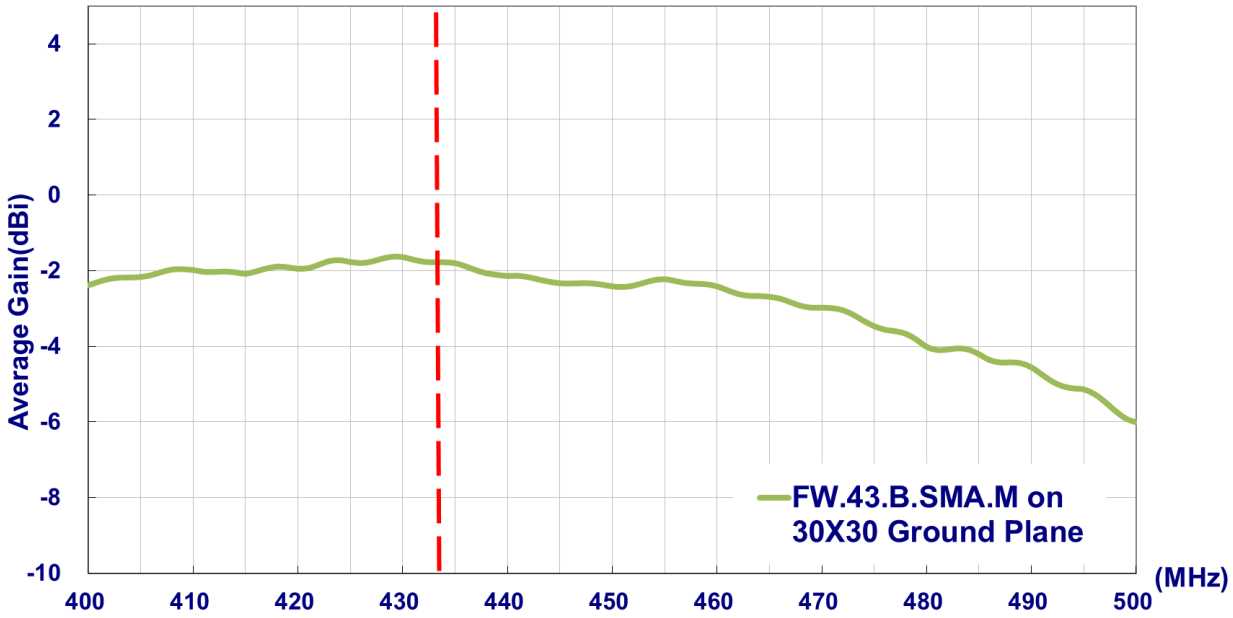
3.2. Antenna Efficiency



3.3. Peak Gain



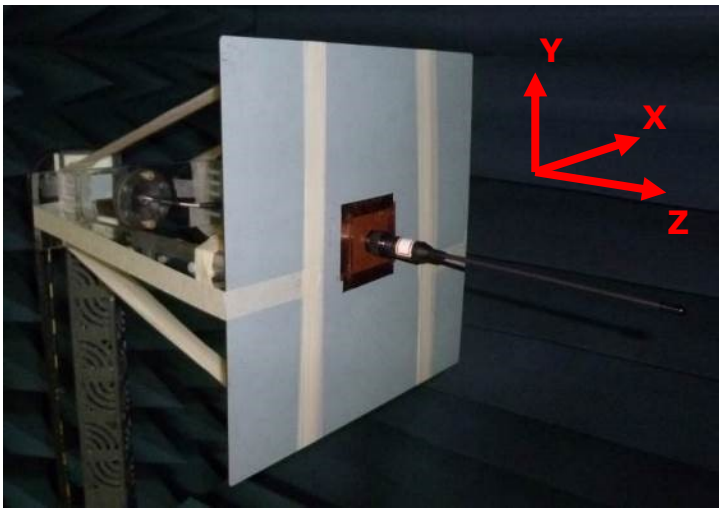
3.4. Average Gain



4. Antenna Radiation Pattern

4.1. Antenna Setup

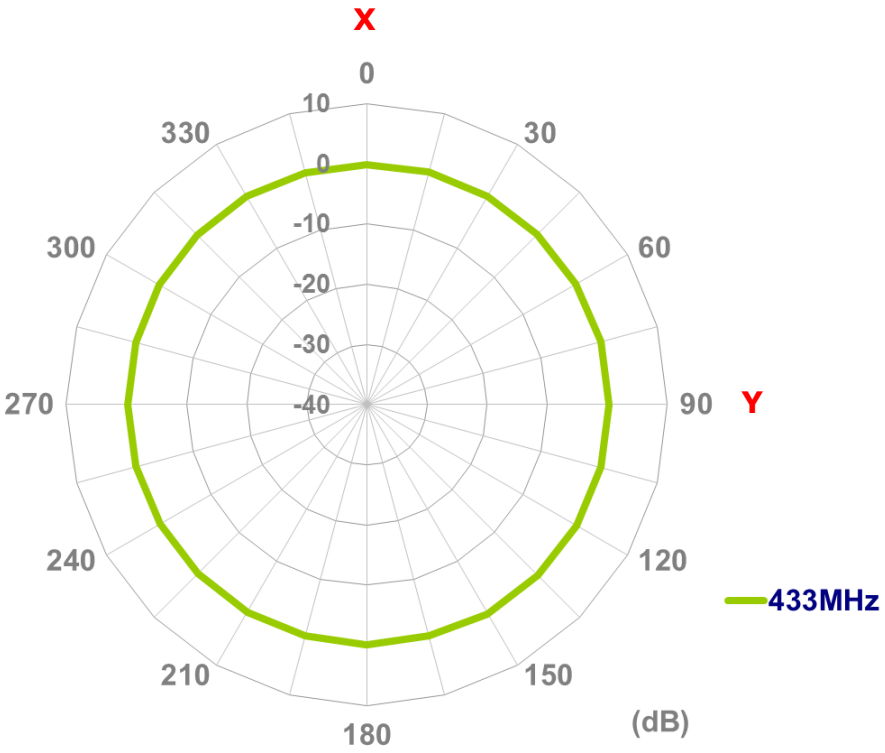
On 30x30 cm ground plane



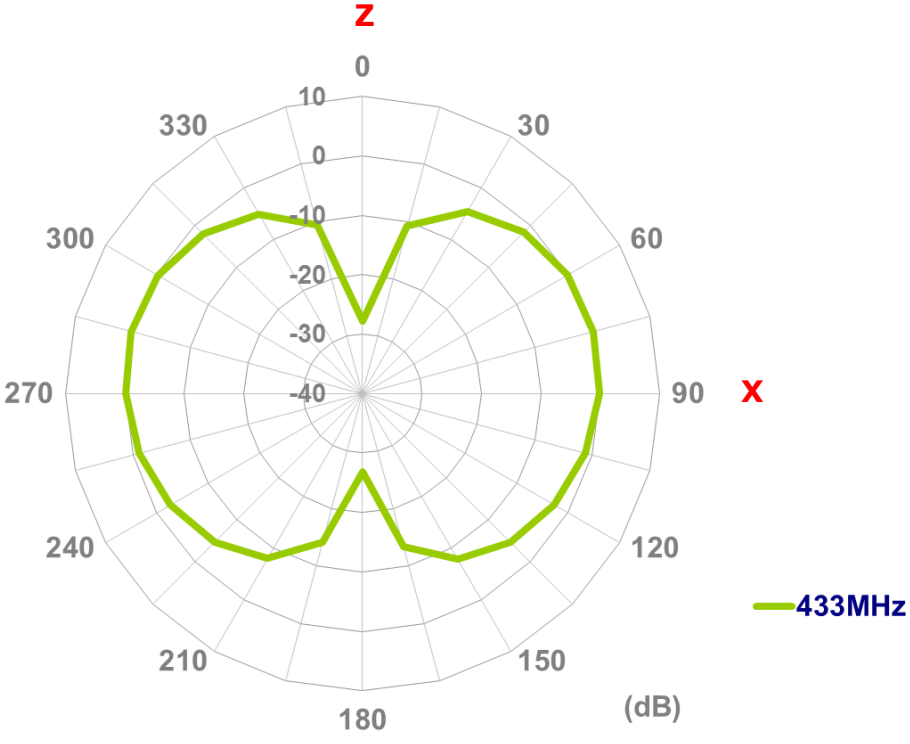
4.2. 2-D Radiation Pattern

On 30*30cm Ground Plane

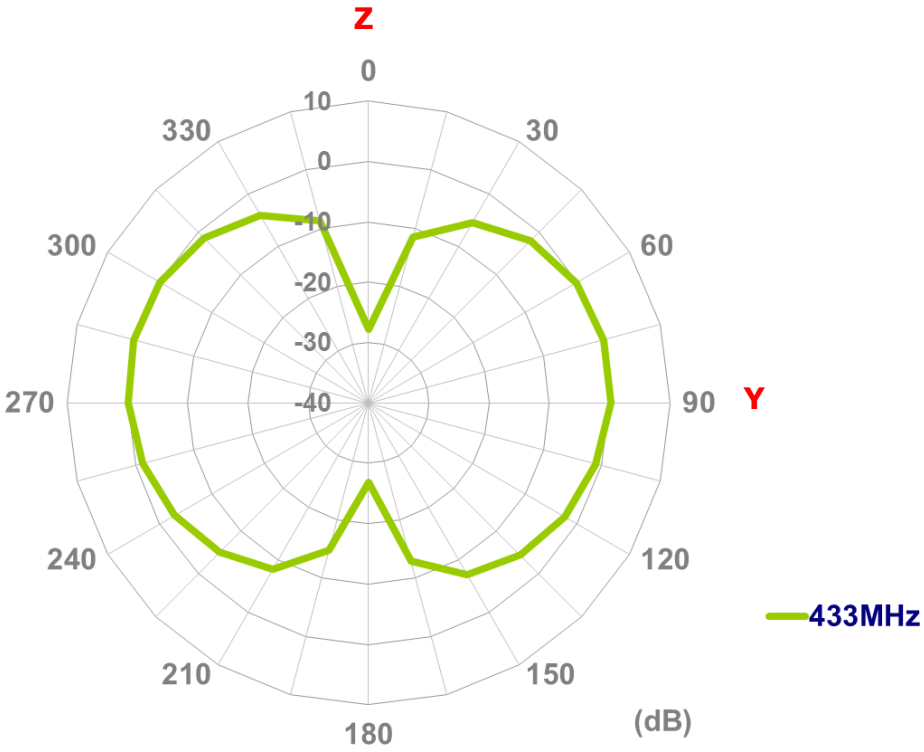
XY Plane



XZ Plane

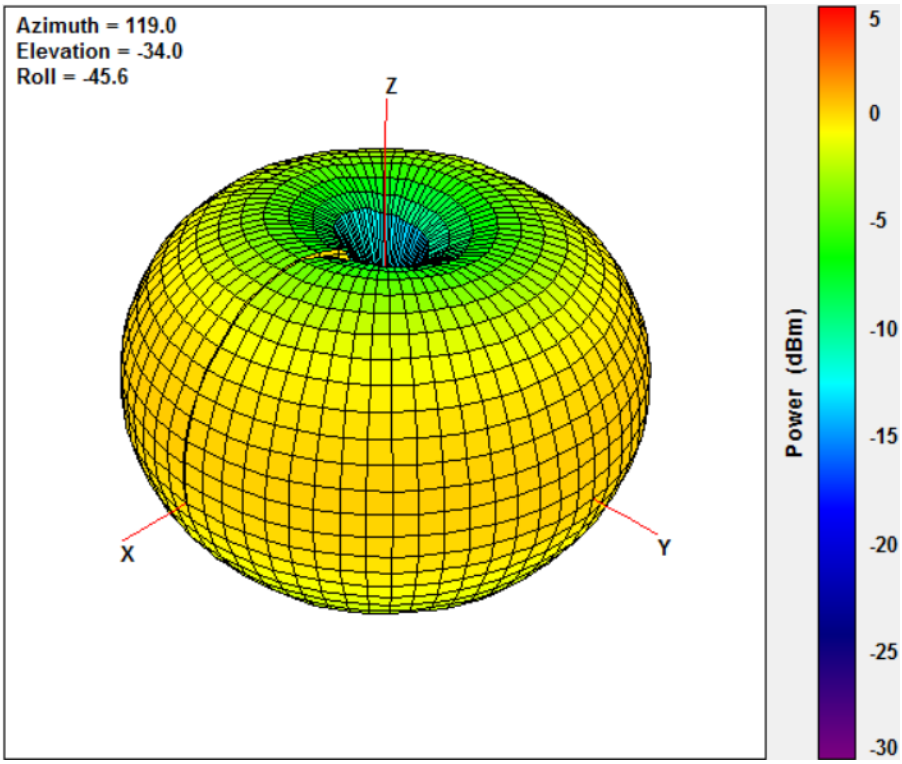


YZ Plane


Z
0
30
60
90
Y
120
150
180
210
240
270
300
330
10
0
-10
-20
-30
-40
(dB)
433MHz

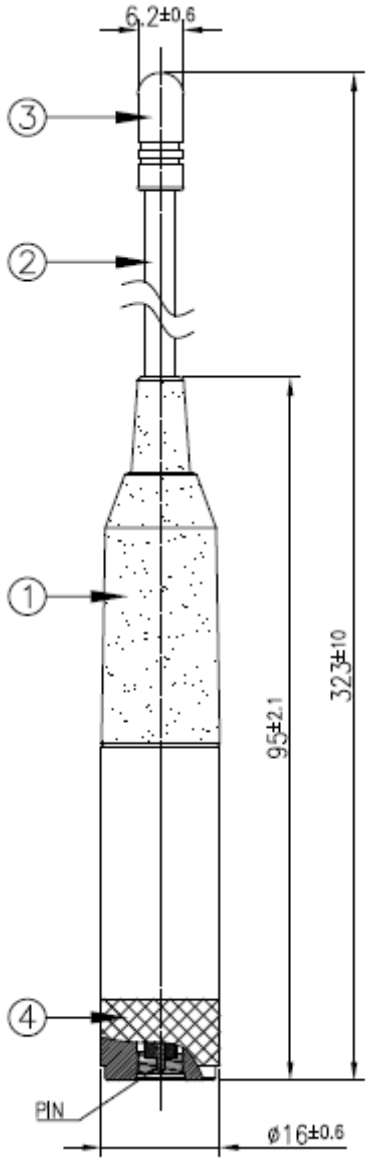
4.3. 3-D Radiation Pattern

On 30*30cm Ground Plane



@ 433MHz

5. Antenna Drawing



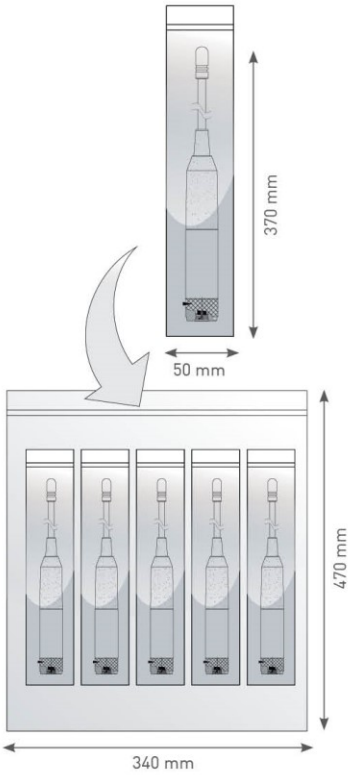
Unit: mm

	Name	Material	Finish	QTY
1	Housing	ABS	Black	1
2	Flexible Whip	Steel+PE Jacket	Black	1
3	Cap	ABS	Black	1
4	SMA(M)ST	Brass	Black	1

6. Packaging

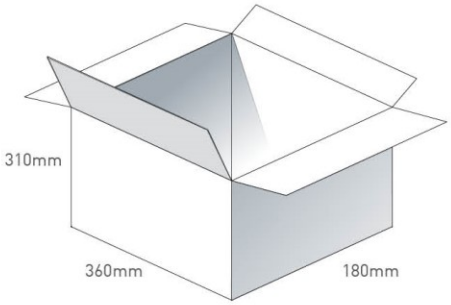
FW.43.B.SMA.M
Packaging Specifications

1 pcs FW.43.B.SMA.M per PE Bag
PE Bag Dimensions - 370 x 50mm
Weight - 66g

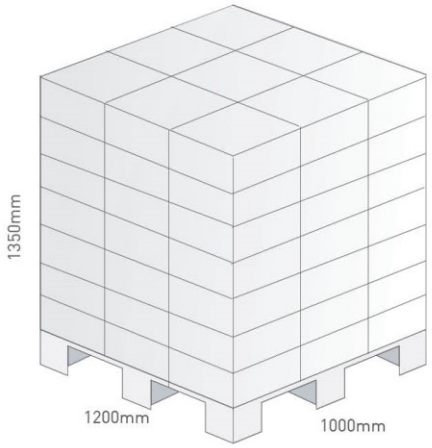


50 PE Bags per Large PE Bag
50 pcs FW.43.B.SMA.M per Large Polybag
Large PE Bag Dimensions - 470 x 340mm
Weight - 3.4kg

5 Large PE Bags per carton
250 pcs FW.43.B.SMA.M per carton
Carton Dimensions - 360 x 310 x 180mm
Weight - 17kg



Pallet Dimensions 1200 x 1000 x 1350mm
63 Cartons per Pallet
9 Cartons per layer
7 Layers



Taoglas makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice.

Taoglas reserves the rights to this document and the information contained herein. Reproduction, use or disclosure to third parties without express permission is strictly prohibited.

Copyright © Taoglas Ltd.