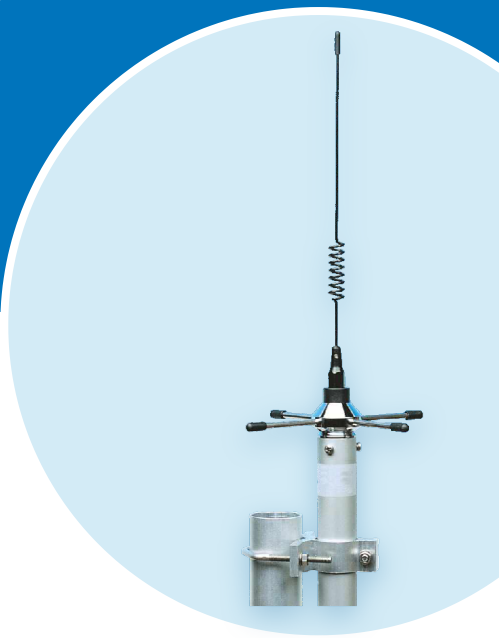
OrionM2M

BASE STATION ANTENNAS · 835–900 AND 870–960 MHz

GP 868 C · GP 900 C · GP 901 C

835–900 MHz — GP 868 C · 870–960 MHz — GP 900 C, GP 901 C



01 KEY FEATURES

- No tuning required across the whole operating band
- 360° omnidirectional pattern, 5.1 or 8.14 dBi gain
- Colinear antenna, linear vertical polarization
- Mast mounting Ø 35–60 mm, V-bolts included
- –40 to +80 °C, wind up to 180 km/h (GP 901 C — up to 150)
- N-female connector, gold-plated central pin

APPLICATIONS

- 868 and 915 MHz LoRaWAN gateways
- Water, heat and electricity metering
- GSM-900 and GSM-R networks
- BMS and industrial sites

02 SPECIFICATIONS

PARAMETER	GP 868 C 835–900 MHz	GP 900 C 870–960 MHz	GP 901 C 870–960 MHz
ELECTRICAL DATA			
Type (colinear antenna)	1/4λ + 1/2λ	1/4λ + 1/2λ	1/4λ + 2×1/2λ
Design frequency, MHz	835–900 (SWR ≤ 2)	870–960	870–960
Gain	3 dBd / 5.1 dBi	3 dBd / 5.1 dBi	6 dBd / 8.14 dBi
E-plane beamwidth (–3 dB) at 920 MHz	40°	40°	25°
Radiation angle	7°	7°	6°
H-plane radiation	360°, omnidirectional		
Polarization	linear vertical		
Impedance	50 Ω		
Max power (CW, 30 °C)	50 W		
Connector	N-female, gold-plated central pin		
MECHANICAL DATA			
Height (approx.), mm	600	555	800
Radial length (4 pcs, approx.), mm	90	75	75
Wind load at 150 km/h	13 N	13 N	23 N
Wind resistance, km/h	180	180	150
Wind surface, m²	0.015	0.01	0.02
Weight (approx.)	650 g		
Operating temperature	–40 to +80 °C		
Mounting	mast Ø 35–60 mm, V-bolts		
Antenna materials	aluminium, chromed brass, stainless steel 17/7 PH		
Bracket and hardware materials	aluminium, stainless steel		

03 ORDER INFO

MODEL	DESCRIPTION
GP 868 C GP 900 C GP 901 C Sirio Antenne, Italy	Colinear base station antenna, mast mounting

MODEL (MANUFACTURER P/N) — SELECT

- GP 868 C (2107006.00/868) — 835–900 MHz, 5.1 dBi
- GP 900 C (2107006.00) — 870–960 MHz, 5.1 dBi
- GP 901 C (2107606.00) — 870–960 MHz, 8.14 dBi

INCLUDED

- whip, base, 4 radials
- mast hardware Ø 35–60 mm (2 V-bolts)
- mast not supplied; parts list — section 05

GP 868 C · GP 900 C · GP 901 C

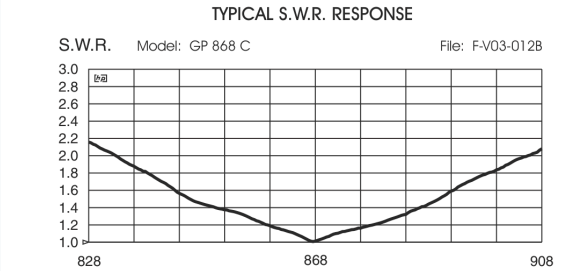
SWR, RADIATION PATTERNS, MOUNTING

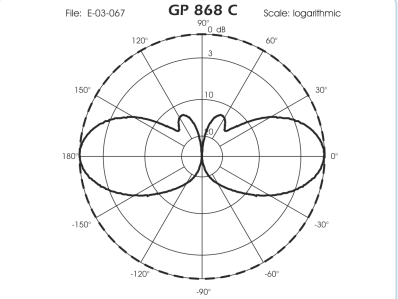
04 TYPICAL SWR AND RADIATION PATTERNS

GP 868 C

835–900 MHz · 5.1 dBi

Pattern at 868 MHz, E/H-plane

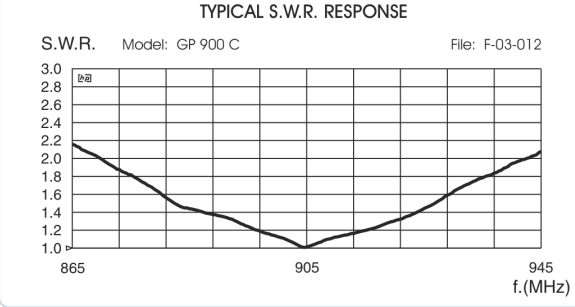


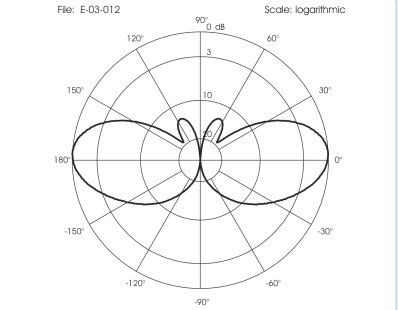


GP 900 C

870–960 MHz · 5.1 dBi

E-plane pattern, mid-band

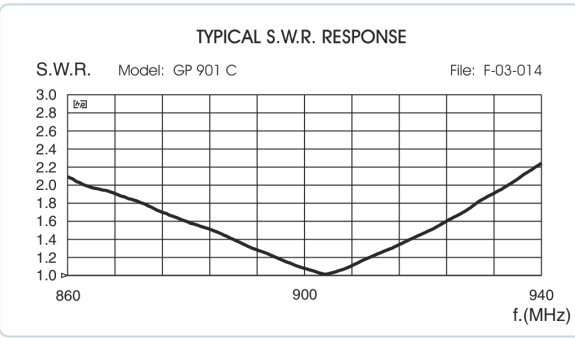


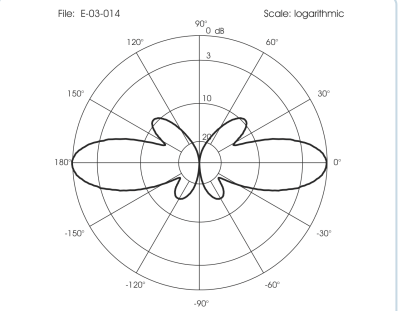


GP 901 C

870–960 MHz · 8.14 dBi

E-plane pattern, mid-band





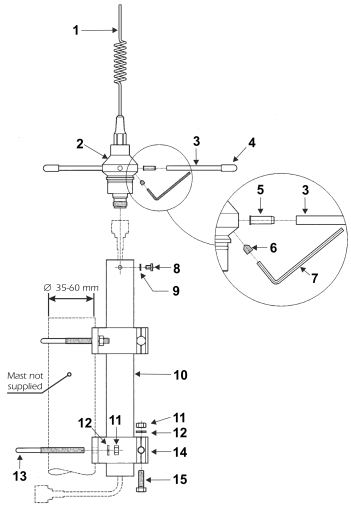
No tuning — each model covers its whole band without retuning for the frequency plan in use.

Omnidirectional in the H-plane — uniform coverage in all directions.

GP 901 C — narrower beam (25° vs 40°) and higher gain: more energy toward the horizon.

Photo, charts and drawing — manufacturer data (Sirio Antenne, manuals ID402 and ID151, rev. 31/05/2024).

05 MOUNTING AND PARTS LIST



POS.	PART	QTY
1	Black stainless steel whip	1
2	Chromed base	1
3	Ø 5 mm AISI 304 radials: 90 mm (GP 868 C), 75 mm (GP 900/901 C)	4
4	Ø 5 mm plastic caps	4
5	Ø 5 mm plastic pins	4
6	M4×5 AISI 304 screws, cone point	4
7	2 mm hexagonal key	1
8	M4×6 AISI 304 screws	3

POS.	PART	QTY
9	M4 AISI 304 washers	3
10	Aluminium tube Ø 29/32 mm, 250 mm long	1
11	M6 AISI 304 nuts	6
12	M6 AISI 304 washers	6
13	M6×206 AISI 304 V-bolts	2
14	Extruded aluminium brackets	2
15	M6×20 AISI 304 hex head screws	2

Mounting tools: 10 mm open-end wrench (M6 nuts, pos. 11), cross-point screwdriver. Mast mounting Ø 35–60 mm with two V-bolts; mast not supplied.