

PLUS WRP001 WIRELESS REPEATER



PLUS WRP001 Wireless Repeater provides extra communication range by supporting up to 13 hops (12 repeaters in series).

By increasing network redundancy with unlimited number of repeaters and taking advantage of mesh network topology, it permanently provides the best wireless link and improves reliability.

Dimensions: 120 x 90 x 50 mm

Weight: 312 g (11 oz)

Material: ASA+PC-FR (UL 94 V-0) / Polycarbonate

Protection Index: IP65

KEY FEATURES

UP TO 12 REPEATERS IN SERIES
FOR EXTRA-LONG RANGE

WIRELESS SITE SURVEY FUNCTION
FOR EASY INSTALLATION AND FAST DEPLOYMENT

UP TO 4 KM COMMUNICATION DISTANCE (LOS)
WITH 128-BIT AES ENCRYPTION FOR DATA SECURITY

MULTI-HOP MESH NETWORK
WITH SELF-FORMING, SELF-HEALING AND SELF-OPTIMIZING FEATURES

SITE SURVEY FEATURE

SIMPLE AND INTUITIVE USB CONFIGURATION
TEKON CONFIGURATOR SOFTWARE

DS.PLUS.WRP001_E01D

TECHNICAL SPECIFICATIONS

RADIO SPECIFICATIONS	868MHZ	915MHZ
Range ¹	Up to 4Km LoS	
Frequency band ²	868 to 869 MHz	902 to 928 MHz ³
Number of channels	16	50 ⁴
Receiver sensitivity ²	-99 to -104 dBm	-97 to -110 dBm
Transmit power ²	0 to 27 dBm	8 to 27 dBm
Transmission rate ²	19 to 76,8kbit/s	
Encryption method	AES 128 (Advanced encryption Standard)	
Modulation	GFSK	
Antenna	Articulated dipole antenna	
Antenna connector	SMA	
Antenna impedance	50Ω	

WIRELESS NETWORK

Maximum repeaters	12
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INTERFACE

Indication	Frontal Panel LED Internal Service LED
Switches	External - Site Survey activation Internal - Load factory defaults Service LED
Configuration	Internal micro USB connector

MECHANICAL INTERFACE

Internal push-in terminals
Bucins PG-7
∅ Min:2.5 ∅ Max: 6.5
1.5mm ² (0.0591in ²)
Micro USB internal connector

POWER SUPPLY

External	5 to 24V DC ± 5% ⁵
USB	Only in configuration
Maximum Current	500mA DC @ 5V DC / 100mA DC @ 24V DC
Reverse Polarity	

OPERATING ENVIRONMENT

	ENVIRONMENTAL CONDITIONS	STORAGE CONDITIONS
Temperature	-30 to 80°C	
Relative humidity	N/A	≤ 95% (non- condensing)

CASING

Dimensions	120 x 90 x 50 mm
Weight	312 g
Material	ASA+PC-FR (UL 94 V-0) / Polycarbonate

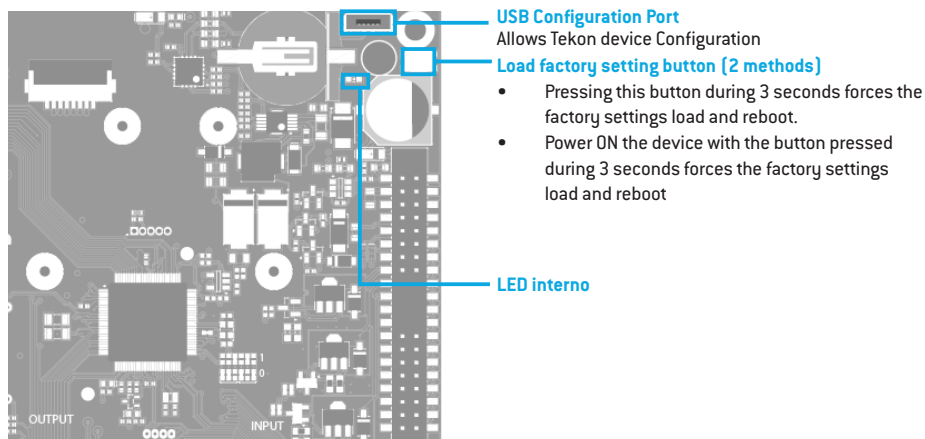
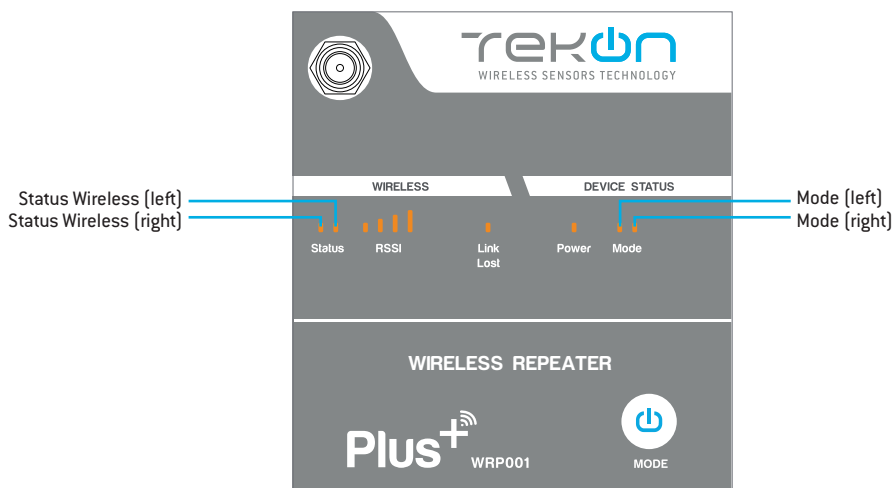
Protection index	IP65	
FACTORY DEFAULT SETTINGS		
	868MHZ	915MHZ
Frequency	869,525MHz	915,000MHz
Radio transmit power	27dBm	
Radio transmission rate	76,8kbit/s	
Wireless Channel	13	26
Wireless Network ID	13042017	

CERTIFICATIONS AND APPROVALS

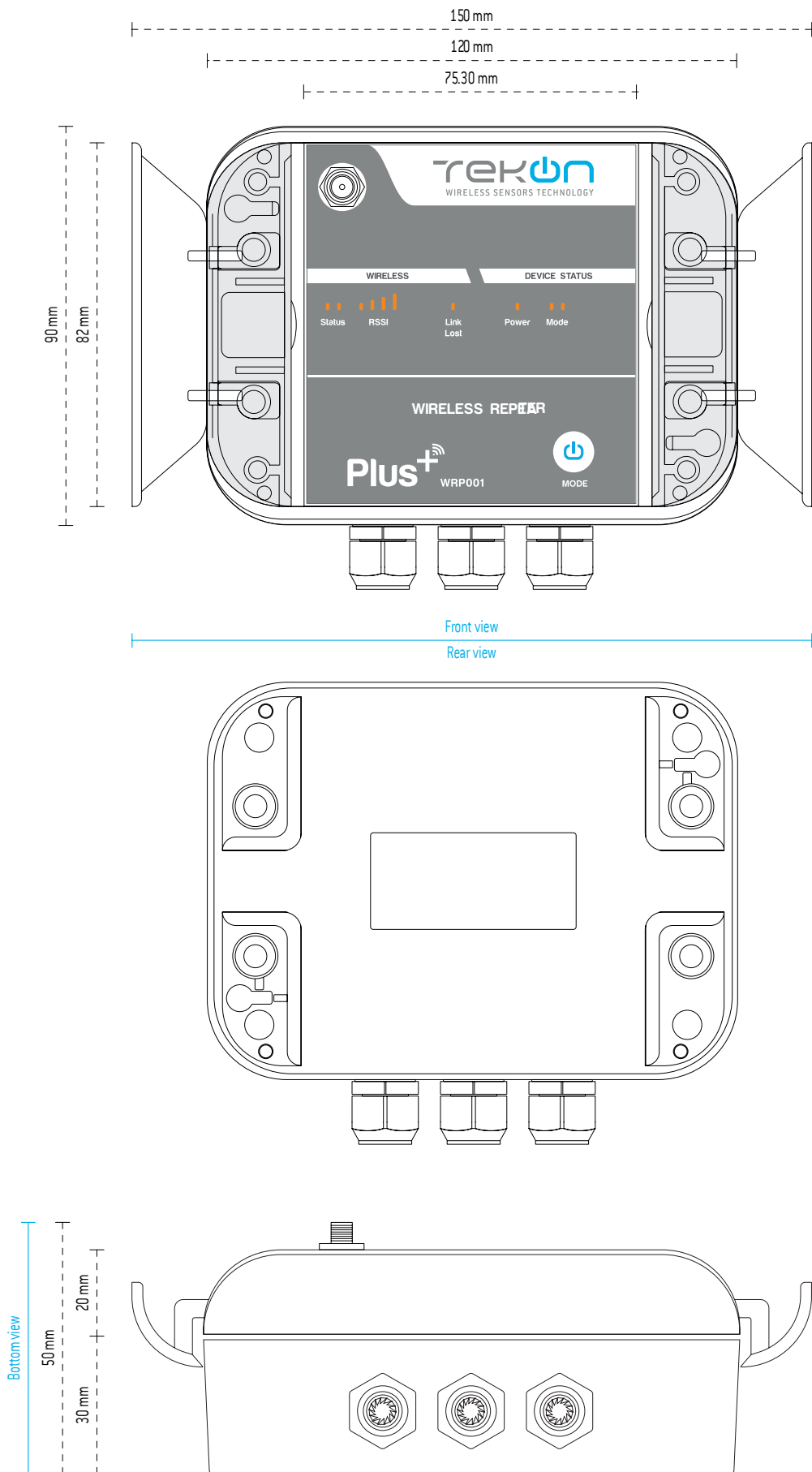
- EN 61326-1 - Class B - Industrial Requirements
- EN 300 220-2 V3.1.1
- EN 301 489-1 V2.2.1
- EN 301 489-3 V2.1.1
- EN 60950-1:206
- EN 61326-1:2013
- ETSI EN 301 489-1 V1.9.2

¹ Range depends on the environment and line of sight. Always verify your wireless network's range by performing a Site Survey.
² According to the radio channel selection.
³ In some countries, the frequency band admitted is not so extended as the default range.
⁴ The radio frequencies admitted in Australia are available from channel 26 to channel 50.
⁵ It is recommended to use a power supply with short-circuit current protection or equipped with a fuse.

LED INTERFACE



TECHNICAL DRAWINGS



RELATED PRODUCTS



PLUS TWP4AI WIRELESS TRANSMITTER 868MHZ / 915MHZ

REF.: PA164510110 / PA164510120

- 4 configurable analog inputs (0..20 mA or 0..10 V) providing cable replacement features;
- 3 configurable digital outputs: generic, RF link lost indication and external power control;
- Configurable communication period and/or event trigger via digital input;
- Up to 4Km communication distance (LoS) with 868 MHz / 915 MHz and 128-bit AES encryption;
- Internal temperature, battery voltage and wireless link quality (RSSI) monitoring;
- Simple and intuitive USB configuration via Tekon Configurator (free software).



PLUS WGW420 WIRELESS GATEWAY 868 MHZ / 915MHZ

REF.: PA164510210 / PA164510220

- Scalable network up to 55 PLUS transmitters;
- Up to 4 Km communication distance (LoS) with 868 MHz / 915 MHz and 128-bit AES encryption;
- Multiple networks with extra gateways and extra long range with several repeaters;
- Multi-hop mesh network with self-forming, self-healing and self-optimizing features;
- Modbus RTU communication protocol via RS-485 interface;
- 8 analog outputs (4..20 mA current loop);
- Simple and intuitive USB configuration via Tekon Configurator (free software);
- DIN rail mounting.



PLUS TWPH-1UT TEMPERATURE WIRELESS TRANSMITTER 868 MHZ / 915MHZ

REF.: PA164510510 / PA164510520

- Universal sensor input (RTD PT100; Thermocouples J, K, N, R, S, T);
- 6 status LED;
- Ultra low power mode;
- Up to 4 Km communication distance (LoS) with 868 MHz / 915 MHz and 128-bit AES encryption;
- Multi-hop mesh network with self-forming, self-healing and self-optimizing features;
- Simple and intuitive USB configuration via Tekon Configurator (free software).

REVISION HISTORY

VERSION	
E01B	Addition of 915MHz frequency information in "Radio Specifications" and "Factory Default Settings" tables; Reform "Operating Environment" table; Revision of "Certifications and approvals" table; Remove "Led Indication" table to the installation guide;
E01C	Addition of information about the frequency range used in Australia.
E01D	Revision of "Certifications and Approvals" table.

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