

# ABELL®

## General Specification

Frequency Range	VHF:136-174MHz
Channel Capacity	32CH/1600CH
Channel Spacing	25 kHz/12.5 kHz
Operation Temperature	-25 °C~ +60 °C
Frequency Stability	±1.5 ppm
Operation Voltage	7.2VDC
Antenna Impedance	50Ω
Microphone Impedance	2.2KΩ
Battery Life (5-5-90 duty cycle)	Li-ion DC7.2V 2400mAh
Dimension(height*width*thickness)	126mm×54mm×31.8mm
Weight	305g (with battery and antenna)

## Transmitter

Sensitivity	Analog	25K≤0.22uV(12dB SINAD) 12.5K≤0.25uV(12dB SINAD)
	Digital	0.22uV (BER 5%)
SNR (Signal-To-Noise Ratio)	25K≥45 dB 12.5K≥40 dB	
Adjacent Channel Selectivity	25K≥70 dB 12.5K≥65 dB	
Intermodulation	25K≥65 dB 12.5K≥65 dB	
Spurious Response Rejection	≥70dB	
Audio Output Power	≥1000 mW	
Rated Audio Distortion	≤5%	

## Receiver

RF Power	<3.5W ; rated:2.5W
FM Modulation	25kHz: 16KΦF3E 12.5kHz: 8KΦF3E
4FSK Digital Modulation	12.5kHz data 7K60FXD 12.5 kHz data and voice 7K60FXW
Digital Vocoder Type	AMBE+2TM
Digital Protocol	ETSI-TS102 361-1,-2
Harmonic	≥70 dB
Rated Audio Distortion	≤-45 dB@25kHz ≤-40 dB @12.5kHz
Frequency Stability	≤5%
Max. Frequency Deviation	5 kHz@25kHz 2.5 kHz @12.5kHz

• All specifications are subject to change without notice due to continuous development.

## Standard Accessories



Charger  
BC-780A



Li-ion battery  
AB-L2478Ex 2400mAh



Belt clip



Antenna



Hand strap

**Optional Accessories:** Multi AC adapter, Earphone, Programming cable.



**ABELL INDUSTRIES CO., LTD**

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Dealer Area



## A720T(Ex)/A780T(Ex) Intrinsically Safe DMR Two Way Radio

- ◆ Gas, dust, dual explosive-proof
- ◆ IP67 dustproof and waterproof
- ◆ DMR two slots, digital & analog dual mode
- ◆ Diversified remote emergency alarm
- ◆ Produced complying to intrinsically safe standards



### Intrinsically Safe standard:

Comply to the standard EX ib IIB T4, the radio can be used at the sites with inflammable gas, also at the sites with high level dust. A720T(Ex) is the dual explosive proof radio for both gas and dust, which fits for use in various fields, like firefighting, chemical, petroleum, and natural gas etc.

### Crystal clear voice:

Comply to ETSI DMR digital standard, with the digital noise reduction, and digital audio encryption technology, the radio provides crystal clear and loud voice, even at the noisy sites or with the weak signal received.

### High interference:

A720T(Ex) use the AFC discrete VCO design, which leads the discrete receive channel in narrowband, maintain the high level anti-interference parameters. Support the use in the complex electromagnetic environment.

### Harsh IP proof level:

Adopt the IP67 dustproof and waterproof design, the radio is submersible at the depth of 1 meter up to 30 minutes, function well. The wonderful sealing ensures the board inside un-eroded in the harsh usage cases.

### High performance explosive safe battery:

2400 mAh high performance Li-ion battery cell originated from Panasonic, with super strict explosive proof circuit, maintains both the safety and longer use time, the maximum standby time is up to 60 hours.

### Certificate complied:

Intrinsically safe CNEx192542X  
IP67 dustproof and waterproof  
FCC  
CE

Reference No.: CNEx19.2542X

## Explosion-proof Certification

Manufacturer: ABELL INDUSTRIES CO.,LTD  
2/F,Bldg14,ZhongXing Industrial City,ChuangYe Rd,NanShan Dist,ShenZhen

Product Name:Explosion-proof digital two way radio  
Model: A720T  
Explosion Mark: Ex ib IIB T4 Gb/Ex ib D21 IP6X T120°C  
Product Standard: Q/OB001-2019  
Final Assembly No.:A720T-00-00

After reviewing the above product drawings,technical documents and sample testing,confirm that the following standards are met:  
GB3836.1 - 2010 <<Explosive environment first part:Equipment general requirement>>  
GB3836.4 - 2010 <<Explosive environment forth part:Equipment protected by intrinsically safe "T">>  
GB12476.1 - 2013 <<Electrical equipment in flammable dust environment first part:general requirement>>  
GB12476.4 - 2010 <<Electrical equipment in flammable dust environment the forth part:Intrinsically safe"ID">>

Note:  
1.Lithium battery model for this product:AB-L2478Ex 7.2V 2400mAh,forbidden to disassemble or replace the battery or charging in an explosive environment.  
2.Do not use external plug-in devices such as headphones and USB interfaces that are not certified for explosion-proof in an explosive environment.  
3.The transmission power of this product is not more than 3.5W  
4.Shell dust level: IP6X

Director of the Centre: [Signature] Date of Issue: June 2019  
Validity period: June 2019-2 June 2024

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