



# BORN FOR SAFETY

## PT890Ex

### Intrinsically Safe TETRA Portable Radio



[www.hytera.com](http://www.hytera.com)



## ULTIMATE SAFETY

The PT890Ex intrinsically safe radio is certified to standards listed by IECEx. It has been developed to provide safe and reliable communication in hazardous environments by adopting the new materials, brand-new structural design and innovative IS circuit. With optimized RF solution and pioneering audio solution, it extends communication range and provides better audio. Moreover, the PT890Ex prepares for the unexpected before it really happens, thanks to lone worker, man down, and precise positioning.

### IECEx

Ex ib I Mb  
Ex ib IIC T4 Gb  
Ex ib IIIC T90°C Db  
IP66/IP67/IP68,  $-25^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

### ATEX

I M2 Ex ib I Mb  
II 2G Ex ib IIC T4 Gb  
II 2D Ex ib IIIC T90°C Db  
IP66/IP67/IP68,  $-25^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

### US

Class I, Zone 1, AEx ib IIC T4 Gb  
Zone 21, AEx ib IIIC T90°C Db  
IP66/IP67/IP68,  $-25^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

### CA

Ex ib IIC T4 Gb  
Ex ib IIIC T90°C Db  
IP66/IP67/IP68,  $-25^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$





## Built for Personnel Safety



### Lone worker

Lone Worker provides protection and reassurance for those who work alone especially in dangerous environments, such as oil pipeline walker. If the PT890Ex senses that the worker does not make any operation within a preset time, this radio will automatically alarm and report the location to the companion or control center for help.



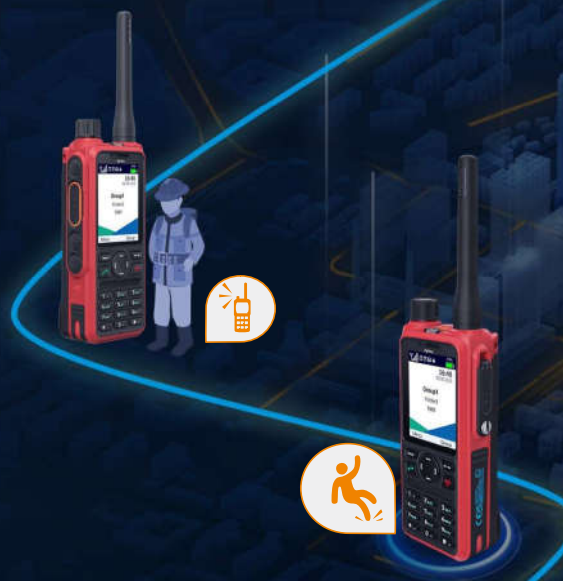
### Man down

Man Down is ideal for emergency situation. If the worker has fallen or is unconscious, or is unable to move, the PT890Ex automatically detects a sudden tilt towards the ground, and alarms and reports the location to the companion or control center for help. This is vital to prevent loss of life and dangers.



### Precise positioning

With the built-in positioning module, the PT890Ex supports the flexible combination of GPS, BDS, GLONASS and Galileo satellite systems. Also, the PT890Ex enhances positioning accuracy down to 1 meter, thanks to the dual-frequency positioning technology. Such reliable and accurate location information helps find the worker in need of assistance quickly in emergencies.





## Extended Radio Range

Thanks to the new-designed powerful IS circuits and RF optimization solution, PT890Ex features Class 3L transmitting power and industry-leading receiving sensitivity (−120 dBm), providing more smooth communications even at a distance or in the edge area, further enhancing personal safety and work efficiency.



## Long-lasting Battery

The standard 2150 mAh battery, together with the cutting-edge low power consumption technology, can outlast the shift. The workers can check the remaining battery and battery health on the radio and extend the battery life using the smart charger.



## Versatile Connectivity



### BT 5.3

The PT890Ex can connect to wireless IS accessories\* more quickly and stably, without the hassle of wires and cables. Moreover, the PT890Ex can run the BT-based applications developed by the third party to meet more scenarios.



### WLAN

The PT890Ex facilitates remote management through the WLAN, such as programming, upgrading\*, and log management\*. It is a smarter way to manage radios in batch without getting them back and forth between the field and the office, greatly reducing operational expenses.



### NFC

The PT890Ex can be easily recognized and managed via NFC tag as per actual requirements.

\* Not provided by Hytera.  
The radio adapts the third-party IS accessories.

\* Coming soon.

## Easy to Use

### About 390 g (with standard battery and antenna)

- Comfortable for long-time carry

### 2.4-inch LCD screen

- Intuitive to operate the radio or view the info

### Textured housing on the back

- Never slip down from your fingers

### Large LED indicator

- Easy to get the radio status

### Vibration pattern

- Never miss any call and message

### U-shaped groove

- Quick to attach and release the belt clip

### User-friendly UI

- 9-grid menu
- Conversational SMS interface
- Pop-up notification on home screen

### Purpose-built knob and keys

- Volume/channel selector knob
- Enlarged emergency key
- Three programmable keys
- Tactile and textured keys
- Four navigation keys

Parameter		Description
General	Frequency Range	320-380 MHz; 380-475 MHz; 806-870 MHz
	Dimensions (H x W x D)	130 mm x 55 mm x 37 mm
	Weight	About 390 g (with standard battery and antenna)
	Battery	2,150mAh IIC intrinsically safe Li battery(Typical)
	Operating Voltage	7.4 V DC
	Operating Time	TMO(5-5-90): 26H; DMO(5-5-90): 20H
Audio	Output Power	1.5 W (rated), 2 W (max.)
User Interface	Display	2.4 inches,320×240 pixels
	Talkgroup	TMO: 12000 DMO: 6000
	Talkgroup Folder	TMO: 200 DMO: 50
	Phone Book	2,000
	Inbox	≤550 entries
	Outbox	
	Draft	
	Status Message	200
RF	Channel Bandwidth	25 kHz
	Power Class	Class 3L* (1.8W) Class 4 (1W)
	Power Level Accuracy	± 2 dB
	Power Control	5 dB per step
	Receiver Class	ETSI EN 392-2/396-2 Class A and Class B
	RX Static Sensitivity	≤-118 dBm (typical: -120 dBm) (for 320-475 MHz) ≤-117 dBm (typical: -119 dBm) (for 806-870 MHz)
	RX Dynamic Sensitivity	≤-108 dBm (typical: -110 dBm) (for 320-475 MHz) ≤-107 dBm (typical: -109 dBm) (for 806-870 MHz)
Location	Satellite System	GPS, BDS, GLONASS, Galileo
	Sensitivity	Acquisition ≤ -149 dBm
		Tracking ≤ -165 dBm
	Accuracy	1 m (dual-frequency GNSS, 95% probable, -130 dBm, ≥ 22 operational satellites)
	Cold Start (Time to First Fix)	<35 seconds
	Hot Start (Time to First Fix)	<1 second
Environment	Operating Temperature**	-30°C to +60°C (ATEX/IECEx certified) -25°C to +60°C (in non-hazardous area)
	Storage Temperature	-40°C to +85°C
	Humidity	95%
	Waterproof and Dustproof	IP64/IP65/IP66/IP67/IP68 per IEC-60079-0:2017 & IEC-60529
	Vibration, Drop and Shock	MIL-STD-810H GJB150A
Connectivity	WLAN	2.4 GHz
	BT	BT 5.3
	NFC	ISO/IEC 15693

\*: License control.

\*\*: Performance may be limited at extreme temperatures.

ATEX/IECEx certification only valid when operated within -25 to +60°C

## Standard Accessories



Battery  
(Standard Capacity)



Charger



Power Adapter



Antenna



Belt Clip



Strap

## Optional Accessories



Remote Speaker  
Microphone



Earpiece



Carry Case



Intrinsically Safe  
Hamlet Heavy Duty  
Noise-cancelling Headset kit



Intrinsically  
Safe and Adjustable Earset



Intrinsically  
Safe Large PTT



Intrinsically  
Safe Multi-charger



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