

TP9000EX Thor1 Digital /Analog T4 Radio

DATASHEET



DMR tier 2 Compatible



HIGHLIGHT

- Intrinsically Safe - **ATEX**
- 64-88 146-174 406-470 Mhz
- GAS RATING
ATEX: II 2 G Ex ib IIC T4
IECEX: Ex ib IIC T4
- DUST RATING
ATEX: II 2 D Ex ib IIIC T110 °C
IECEX: Ex ib IIIC T110°C
- MINING RATING
ATEX: I M2 Ex ib I
IECEX: Ex ib I
- IP67 Waterproof
- Power Output 2 Watt
- CTCSS, dcs
- 16 Channels
- PC programmable
- Long operational time - 3450 mAh battery



..... A SAFE WAY TO COMMUNICATE

For safe operation in hazardous areas

TP9000EX is a unique product which combines mechanical robustness and the latest state of the art radio technology into a Hand Held Radio with a userfriendly design. The Radio is IP67 waterproof and can be used as the ultimate communication tool within chemical industries, fire brigades, emergency & rescue services, airports, off-shore industries, etc.

As option a range of accessories such as Speaker Microphone, Push-to-Talk units, headsets from TP Radio, or other quality brands of ATEX equipment are available.

GAS Protection: ATEX: II 2 G Ex ib IIC T4 / IECEx: Ex ib IIC T4

II (Electrical equipment for explosive gas atmosphere other than mines) 2G (zone 1) Ex ib (intrinsic safety) IIC (hydrogen/acetylene max 2W) T4 (135°C max. surface temp.)

Dust Protection: ATEX: II 2 D Ex ib IIIC T110°C / IECEx: Ex ib IIIC T110°C

II (Electrical equipment for explosive gas atmosphere other than mines) 2D (zone 21) Ex tD (Dust) A21 (certified for dust zone 21 by IP rating) IP6x (IP rating zone 21) ib D21 (zone 21) T110°C (110°C max. surface temp.)

Mining Protection: ATEX: I M2 EX ib I / IECEx: Ex ib I

I (Electrical equipment for mines) M2 (For mines - De-energised) EX (Explosion-proof equipment) ib (intrinsic safety) I (Methane)

Technical Specifications:

General data:	VHF	VHF	UHF	Transmitter:	
Frequency band	64-88 MHz	146-174 MHz	406-470 MHz	Output Power	Programmable 0.5 - 2 Watt
Max. Number of channels		16		Transmission of spurious	< 0,25 µW or - 36 dBm
Channel Spacing		12,5 / 20 / 25 KHz		Antenna & cabinet	
Frequency error		± 2 ppm		Max. Deviation	± 5 KHz / 25 KHz channel
Bandwidth	24 MHz	28 MHz	64 MHz	Modulation distortion	< 5 % @ ± 3,0 KHz
Operation mode		Simplex/Semi-Duplex		Signal / noise relation	45 dB
Antenna Impedance		50 ohm		LF frequency response	300 - 3000 Hz
Temperature range		-20 °C to +55 °C		Battery:	
Dimensions incl. 3450mAh battery		H = 137, B = 64, D = 35mm		Operational time (fully charged battery & 2 W TX-output)	5 % TX, 5 % RX & 90 % Standby 3450 mAh battery : 10 / 14 hours
Weight incl. battery		260 g.		Signalling:	
Receiver:				CTCSS / DSC	
DMR sensitivity		- 124 Dbm.		Side connector:	16 pin for accessories
Sensitivity at 20 dB SINAD (EMF) (25 KHz channel spacing) at 12 dB SINAD EMF:		0,45 µV			
LF output power		0,3 µV			
LF distortion		2 x 0,5 Watt			
LF frequency response		< 10 %			
Signal / noise ratio		300 - 3000 Hz			
Co-Channel attenuation		45 dB			
Neighbour channel selectivity		-3 dB			
Attenuation of Spurious		> 70 dB			
Intermodulation selectivity		> 70 dB			
Blocking		> 66 dB			
Transmission of spurious (antenna & cabinet)		> 90 dB			
Squelch treshold level		2 nW equivalent to -57 dBm			
		Programmable			



The UHF version is type approved for On Board Communication according to EN 300 720 and fulfils the IEC 60945 marine standards.

The Specifications are typical and subject to change without prior notice. 11.01.22

Conforms according to the Directives

ATEX 2014/34/EU, RoHS 2011/65/EU, MED 2014/90/EU & RED 2014/53/EU

Applied standards

EN 62368, EN/IEC 60945, EN 301.489, EN 300.086 & EN300.720 (analog part).

Classifications

IP67 Waterproof / Exceeds MIL 810 c,d,e,f

GAS Protection: ATEX: II 2 G Ex ib IIC T4 / IECEx: Ex ib IIC T4

Dust Protection: ATEX: II 2 D Ex ib IIIC T110°C / IECEx: Ex ib IIIC T110°C

Mining Protection: ATEX: I M2 EX ib I / IECEx: Ex ib I

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