

TP9000EX Thor1 T4 Hand Held Radio

DATASHEET



SIZE 1:1
PRINTET IN A4



HIGHLIGHT

- Intrinsically Safe - **ATEX**
- VHF & UHF
- 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, 5-TONE, CCIR, ZVEI, EEA & EIA
- Man-down function
- 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	UHF
Frequency band	145-174 MHz	406-470 MHz
Max. Number of channels	16	
Channel Spacing	12,5 / 20 / 25 KHz	
Frequency error	± 2 ppm	
Bandwidth	29 MHz	64 MHz
Operation mode	Simplex/Semi-Duplex	
Antenna Impedance	50 ohm	
Temperature range	-20 °C to +55 °C	
Dimensions incl. 3450mAh battery	H = 137, B = 64, D = 31mm	
Weight incl. battery	250 g.	

Receiver:

1. IF-frequency	46,35 MHz
2. IF-frequency	450 KHz
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

Transmitter:

Output Power	Programmable 0.5 - 2 Watt
Transmission of spurious	< 0,25 µW or - 36 dBm
Antenna & cabinet	
Max. Deviation	± 5 KHz / 25 KHz channel
Modulation distortion	< 5 % @ ± 3,0 KHz
Signal / noise relation	40 dB
LF frequency response	300 - 3000 Hz

Battery:

Operational time (fully charged battery & 2 W TX-output)	5 % TX, 5 % RX & 90 % Standby 3450 mAh battery : 16 hours
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Signalling:

CCIR, ZVEI, EEA & EIA	En- & decoder up to 3 sequencies of each 8 tones, programmable tone lenght, lenght of first tone & pre-ample. Individual call,
CTCSS	En-/ Decoder. The channels can be programmed individually with different CTCSS tones.

Side connector:

16 pin for accessories



The UHF version is type approved for On Board Communication according to EN 300 720 and fulfils the IEC 60945 marine standards. A perfect tool to fulfilment of the SOLAS requirement.

The Specifications are typical and subject to change without prior notice. 24.01.2019

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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