

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 - 3000 mAh battery



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	Transmitter:	
Frequency band	145-174 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	29 MHz	64 MHz	Modulation distortion	< 5 % @ ± 3,0 KHz
Operation mode	Simplex/Semi-Duplex		Signal / noise relation	40 dB
Antenna Impedance	50 ohm		LF frequency response	300 - 3000 Hz
Temperature range	-20 °C to +55 °C		Battery:	
Dimensions incl. 3000mAh battery	H = 137, B = 64, D = 31mm		Operational time (fully charged battery & 2 W TX-output)	5 % TX, 5 % RX & 90 % Standby 3000 mAh battery : 16 hours
Weight incl. battery	250 g.		Signalling:	
Receiver:			CCIR, ZVEI, EEA & EIA	En- & decoder up to 3 sequences of each 8 tones, programmable tone length, length of first tone & pre-ampl. Individual call,
1. IF-frequency	46,35 MHz		CTCSS	En-/ Decoder. The channels can be programmed individually with different CTCSS tones.
2. IF-frequency	450 KHz		Side connector:	16 pin for accessories
Sensitivity at 20 dB SINAD (EMF) (25 KHz channel spacing) at 12 dB SINAD EMF:	0,3 µV			
LF output power	2 x 0,5 Watt			
LF distortion	< 10 %			
LF frequency response	300 - 3000 Hz			
Signal / noise ratio	45 dB			
Co-Channel attenuation	-3 dB			
Neighbour channel selectivity	> 70 dB			
Attenuation of Spurious	> 70 dB			
Intermodulation selectivity	> 66 dB			
Blocking	> 90 dB			
Transmission of spurious (antenna & cabinet)	2 nW equivalent to -57 dBm			
Squelch treshold level	Programmable			



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. 21.11.2017

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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