# TP9000EX Thor1 T4 Hand Held Radio

## DATASHEET

















### **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:**

recimical operations.				
General data:	VHF	UHF	Transmitter:	
Frequency band Max. Number of channels Channel Spacing	145-174 MHz 16 12.5 / 20 / 25 KI	406-470 MHz	Output Power Transmission of spurious Antenna & cabinet	Programmable 0.5 - 2 Watt < 0,25 $\mu$ W or - 36 dBm
Frequency error Bandwidth	± 2 ppm	64 MHz	Max. Deviation  Modulation distortion	± 5 KHz / 25 KHz channel < 5 % @ ± 3,0 KHz
Operation mode Antenna Impedance	Simplex/Semi-E 50 ohm	'	Signal / noise relation LF frequency response	40 dB 300 - 3000 Hz
Temperature range Dimensions incl. 3000mAh battery	-20 °C to +55 °C H = 137, B = 64, 250 g.		Battery:	
Weight incl. battery	230 g.		Operational time (fully charged battery & 2 W TX-output)	5 % TX, 5 % RX & 90 % Standby 3000 mAh battery : 16 hours
Receiver:				•
1 15 6	46,35 MHz		Signalling:	
I. IF-frequency     IF-frequency     Sensitivity at 20 dB SINAD	450 KHz 0,45 μV		CCIR, ZVEI, EEA & EIA	En- & decoder up to 3 sequencies of each 8 tones, programable tone lenght, lenght of first
(EMF) (25 KHz channel spacing) at 12 dB SINAD EMF:	0,3 μV 2 x 0,5 Watt			tone & pre-ample. Individual call,
LF output power LF distortion LF frequency response	< 10 % 300 - 3000 Hz 45 dB		CTCSS	En-/ Decoder. The channels can be programmed individually with different CTCSS tones.
Signal / noise ratio Co-Channel attenuation Neighbour channel selectivity	-3 dB > 70 dB > 70 dB		Side connector:	16 pin for accessories
Attenuation of Spurious Intermodulation selectivity	> 66 dB > 90 dB			
Blocking Transmission of spurious	2 nW equivalen	it to -57 dBm	IEC IECEX (S.) ( C	UHF SOLAS COMPLIANT
(antenna & cabinet)	Programmable			EC-60945 IP67 ON-BOARD

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

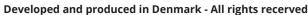
#### **Applied standards**

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

#### Classifications

(antenna & cabinet) Squelch tresshold level

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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