



COMMUNICATION

34 - 1º B
INPRATEX SL

ASAFI
34-1º B

INPRATEX



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EXPLOSION PROOF PRODUCTS AND SOLUTIONS FOR HAZARDOUS AREAS.

Equipment supply, Engineering and Manufacturing.

Inpratex provides a wide range of custom-made products and solutions for different industries operating in hazardous and potentially explosive environments.



Inpratex SL is based in Eibar (Gipuzkoa, Spain). We are specialists in supplying equipment, in engineering and in the manufacture of products for industries working in Hazardous Areas.

Our engineering team provides solutions combining the limitations related to the use of the equipment with the potentially dangerous environment in which it must be used.

Inpratex supplies ATEX/IECEx equipment and custom-made solutions for manufacturing and process industries.



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COMMUNICATION





ATEX-certified Analog fixed telephones, suitable for extreme environmental conditions in explosive atmospheres caused by gases and vapours, and by dust in suspension.

Professional ATEX-certified walkie-talkies, designed and manufactured to prevent ignition of the explosive atmosphere around them. Their certification allows them to work inside potentially explosive areas.

Certified Howl-call phones for communication inside tunnels and in mines, or in those confined spaces where it is extremely complicated to receive or send communication signals. Communication systems that don't need an external power supply to be able to communicate in such difficult areas as inside of mines, tunnels, collectors, offshore platforms and in general all those places where a safe communication is needed in zones with risk of explosion.

All our communication devices are ideal for use in refineries and pipelines, chemical and pharmaceutical industries, ports, airports, etc...

ANALOG PHONES

WALKIE TALKIES

HOWL-CALL TELEPHONES

EXRESISTTEL EXPLOSION-PROOF TELEPHONE (ANALOGUE)

Zones 1, 2, 21, 22

Full catalogue available on our website: www.inpratex.com

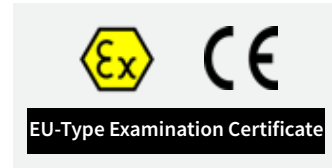
ATEX COMMUNICATIONS

ZONES 1, 2 (gas) & 21, 22 (dust)



Communication devices for uses in firedamp-endangered industrial areas must be particularly adjusted to their extreme operating conditions. This ex telephone has been specially designed for applications in the petrochemical industry, as well as offshore installations, mills and port facilities. It is resistant to high temperature differences, humidity, sea water, dust and extensive mechanical strain.

The ExResistTel is certified for areas susceptible to explosive dusts and gases. It is equipped with a 21-key stainless steel keypad that has been especially designed for use with gloves.

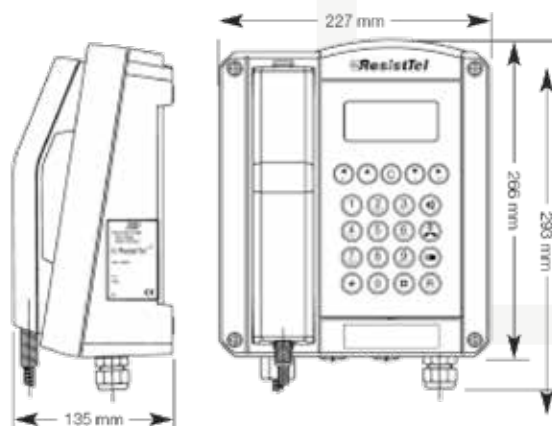


ITEM REFERENCES

Designation:	Model:	Item No.:
ExResistTel	With keypad and display	4A0101
ExResistTel	With keypad and display, protection class I	4A0102
ExResistTel ZB	Without keypad and display	4A0103

TECHNICAL SPECIFICATIONS

Marking:	<p> II 2G Ex e mb [ib] IIC T5 Gb</p> <p> II 2D Ex tb [ib] IIIC T80°C Db</p> <p>-25°C ≤ Ta ≤ 60°C</p> <p> II 2G Ex e mb [ib] IIC T6 Gb</p> <p> II 2D Ex tb [ib] IIIC T100°C Db</p> <p>-25°C ≤ Ta ≤ 40°C</p>
Certificate:	EU-Type Examination Certificate
Supply voltage:	24 V...66 VDC
Supply current:	15 mA...100 mA DC
Housing:	Glass fibre reinforced polyester
Ingress protection:	IP66 / IK09
Weight:	Approx. 5,5 kg
Display:	Two-line alphanumeric display with pictograms. Visual field approx. 78 mm x 26 mm
Keypad:	Metal keypad with ice protection. 21 keys with ABC lettering for name entries
Cable entries:	1xM20x1,5 plastic cable gland / 2xM20x1,5 plastic plugs



EX TELEPHONE FERTEL 3 (ANALOGUE)

Zones 2, 22

Full catalogue available on our website: www.inpratex.com

ATEX COMMUNICATIONS

ZONES 2 (gas) & 22 (dust)



Analogue desk/wall telephone for applications in potentially explosive areas (zones 2 and 22). This telephone comprises a housing made of impact-resistant thermoplastic and is certified according to ATEX. In the field of the chemical and petrochemical industry potentially explosive atmospheres occur during production procedures caused by e.g. gases, vapours or mist.

The impact-resistant thermoplastic housing as well as the use of stainless steel screws add further special advantages to the FernTel 3.

Moreover, the telephone may effortlessly be converted from a wall-mounted device to a desk telephone and vice versa.



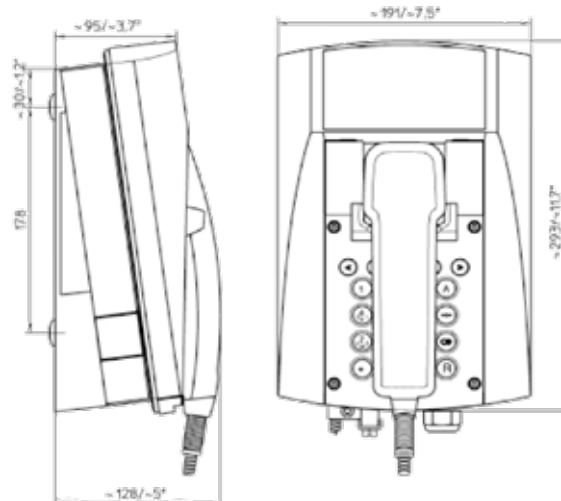
EU-Type Examination Certificate

ITEM REFERENCES

Designation:	Model:	Item No.:
FernTel 3	Without display, with spiral cord	4A0201
FernTel 3	With display, with spiral cord	4A0202
FernTel 3	Without display, with armoured cord	4A0203
FernTel 3	With display, with armoured cord	4A0204

TECHNICAL SPECIFICATIONS

Marking:	II 3G Ex nA ic IIC T5 Gc II 3D Ex tc ic IIIC T80°C Dc
Certificate:	EU-Type Examination Certificate
Ringing frequency:	Settable: 16 Hz to 68 Hz
Supply voltage:	24 V...66 V DC
Housing:	Impact-resistant thermoplastic
Weight:	Approx. 2,3 kg
Operating temperature:	-20°C to +55°C
Ingress protection:	IP65
Cable entries:	1xM20x1,5 plastic cable gland / 1xM20x1,5 plastic plug



EX HOWL-CALL TELEPHONE

Zones 0, 1, 2

Full catalogue available on our website: www.inpratex.com

ATEX COMMUNICATIONS

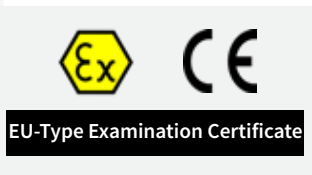
ZONES 0, 1, 2 (gas) & Mines



Battery and network-independent telephone system for applications under rough conditions, even in potentially explosive or firedamp-endangered areas.

Without any external power supply or complex equipment, it can be installed in blast furnace areas, in tunnel building or mining areas, offshore, on an oil rig, in a deep-sea vessel, or in any place that is not (yet) connected to any energy source. This dynamic telephony represents an ideal opportunity for connection.

The howl call telephone is a battery-free and network-independent telephone with highly efficient dynamic transmitter and receiver capsules offering remote communication without power supply.



ITEM REFERENCES

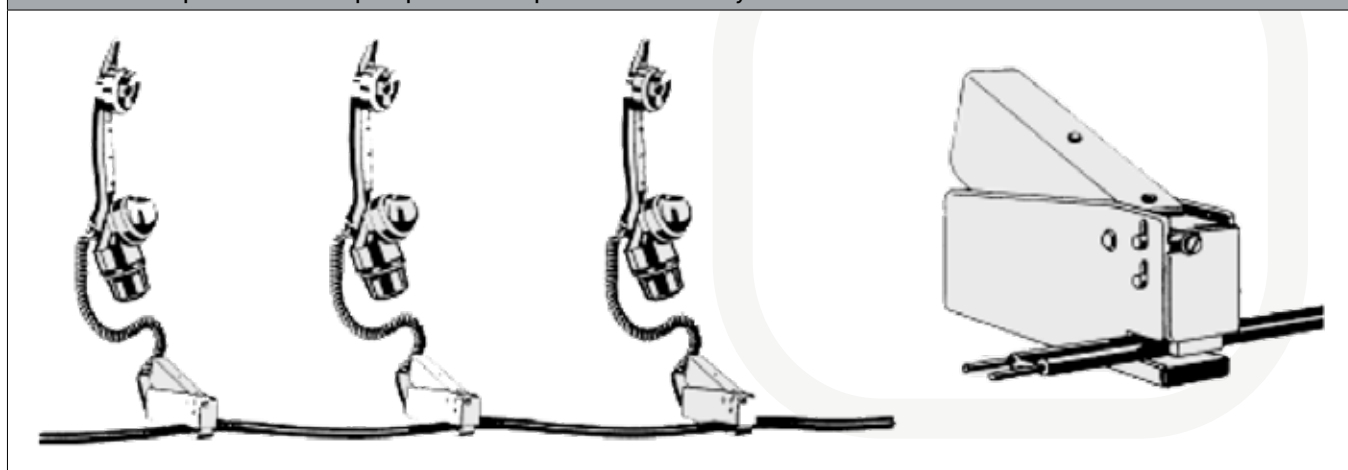
Designation:	Model:	Connected to:	Item No.:
5069 Ex hand telephone	Without prick pincer	-	4B0101
5069 Ex hand telephone	With prick pincer	Flat-band cable	4B0103
5220 Ex wall mounted telephone	Fixed cabling or hose line		4B0104

ACCESSORIES

Designation:	Item No.:
5077 Prick pincer, stainless steel sheet with 1 m cable (wall mounted telephone)	4B0204
Flat-band cable, 2-wire, tensile strength approx. 500 N (lengths on request)	4B0205

APPLICATION EXAMPLE

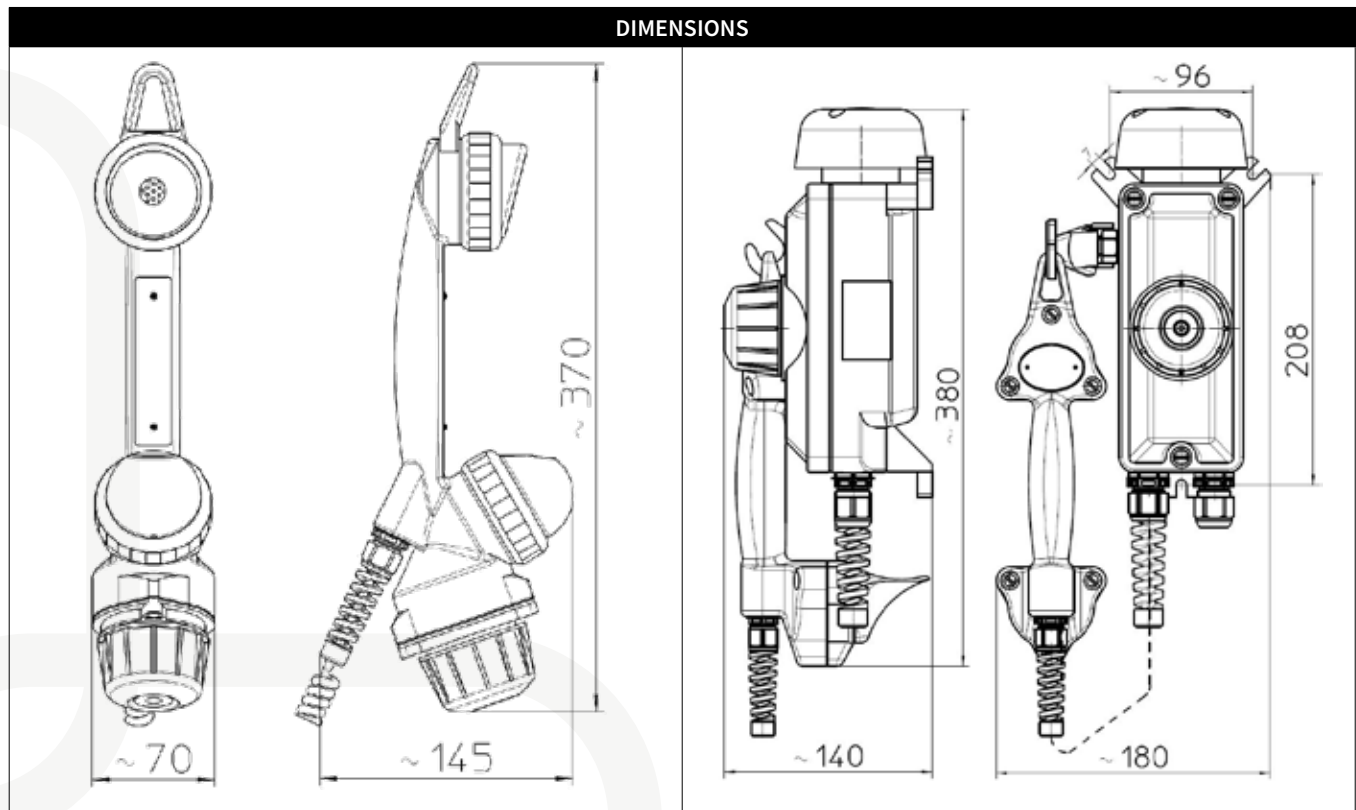
With movable telephone cable with "prick pincer" – the quick connection to any cable section



EX HOWL-CALL TELEPHONE

Zones 0, 1, 2



Full catalogue available on our website: www.inpratex.com



ELEMENTS

Wall-mounted telephone 5220	Hand telephone 5069	Prick pincer 5077
		

TECHNICAL SPECIFICATIONS

Marking:	 I M1 Ex ia I Ma  II 1G Ex ia IIC T6 Ga	
Certificate:	Ex hand telephone 5069 EU-Type Examination Certificate	Ex wall mounted telephone 5220 EU-Type Examination Certificate
Weight:	Approx. 1 kg	Approx. 2,5 kg
Maximum output voltage:	Uo +/- 10 V	
Maximum output current:	Io +/- 155 mA	
Maximum output power:	Po 390 mW	
Ringing frequency:	f ~ 1540 Hz	
Talking frequency:	f ≤ 3000 Hz	
Talking voltage:	U ≤ 2 Vss	
Talking current:	I ≤ 10 mA	
Mode of operation:	100 % duty cycle	
Housing:	Polyamide (Black)	
Operating temperature:	-20°C to +40°C	
Ingress protection:	IP54	
Connection:	2-wire blue power cable	

ATEX RADIOS DTEX SERIES

Zones 1, 2

Full catalogue available on our website: www.inpratex.com

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COMMUNICATION

ATEX COMMUNICATIONS

ZONES 1, 2 (gas)



Professional range of ATEX IIA & IIC certified radios. The rugged DTEX Series delivers exceptionally loud audio coupled with outstanding audio clarity, plus the ergonomic controls are specifically designed for gloved hand use.

By combining the latest DMR digital technology and highest ATEX gas group ratings, the DTEX series delivers best in class range, safety and reliability. Exceeding MIL-STD-810 and a market leading IP68 rating (2-meters 4-hours) the fully submersible DTEX can be depended on to withstand the most extreme and hostile of environments.

- Commercial grade construction
- Digital and analogue modes
- Outstanding range and performance
- Crystal clear audio
- High contrast white on black OLED
- Simple end user programming app
- Extensive range of approved accessories



EU-Type Examination Certificate



ITEM REFERENCES

Model:	Channels:	Screen:	Frequency / Band:	RFPower:	Tier:	Gas group:
DT822	16	No	VHF / 136-174MHz	4W	II	IIA
DT825	256	OLED	VHF / 136-174MHz	4W	II	IIA
DT882	16	No	UHF / 400-470MHz	4W	II	IIA
DT885	256	OLED	UHF / 400-470MHz	4W	II	IIA
DT922	16	No	VHF / 136-174MHz	1W	II	IIC
DT925	256	OLED	VHF / 136-174MHz	1W	II	IIC
DT982	16	No	UHF / 400-470MHz	1W	II	IIC
DT985	256	OLED	UHF / 400-470MHz	1W	II	IIC
DT952	16	No	PMR/DMR446 / 446-446.2MHz	0,5W	I	IIC
DT953	256	OLED	PMR/DMR446 / 446-446.2MHz	0,5W	I	IIC

ATEX RADIOS DTEX SERIES

Zones 1, 2

Full catalogue available on our website: www.inpratex.com

GENERAL TECHNICAL SPECIFICATIONS	
Marking:	II 2G Ex ib IIA T4 Gb II 2G Ex ib IIC T4 Gb (depending on the model)
Certificate:	EU-Type Examination Certificate
Operating Temperature:	-20°C to +55°C
Storage Temperature:	-40°C to +85°C
Ingress protection:	IP68 (2m 4h Submersible)
Channels:	16 (non-display) / 256 (display)
Number of Zones:	8 (display)
Analogue Channel Spacing:	12.5/20/25KHz
Digital Channel Spacings:	12.5KHz
Battery:	1800mAh Lithium-Ion
Weight:	435g
Dimensions:	138 x 60 x 38 mm
Frequency Stability:	± 1.5ppm
Operating Voltage:	7.4v
Programmable Buttons:	3 (non-display) / 5 (display)
Battery Endurance (5/5/90 Duty Cycle @ 1W)	Analogue 14.5 hours Digital 18.5 hours

TRANSMITTER TECHNICAL SPECIFICATIONS	
Modulation Limiting:	±2.5kHz @ 12.5kHz ±4.0kHz @ 20kHz ±5.0kHz @ 25kHz
Conducted / Radiated Spurious Emissions:	Better than -36dBm
Adjacent Channel Power:	Better than 60dB
Audio Distortion (Typical):	3%



RECEIVER TECHNICAL SPECIFICATIONS	
Sensitivity (Typical):	Analogue 121dBm (0.2uV) for 12dB SINAD Digital 121dBm (0.2uV) for 5% BER
Intermodulation Response Rejection (ETSI):	> 70dB
Adjacent Channel Selectivity (ETSI):	> 70dB(12.5KHz) 60dB(25KHz)
Spurious Response Rejection (ETSI):	> 70dB
Audio Output Power:	1 watt
Audio Distortion (Typical):	3%
Conducted Spurious Emission (ETSI):	> -57dBm

ACCESSORIES					
CHPD/DT9	CHPHD/DT9	CHPHS/DT9	CLC/DT2	CLCDT5	CMP/DT9
CNB950EV2	CXR16/DT9	CXR5/DT9	EA12/DT9	PTT-C/DT9	PTT-E/DT9

ATEX TP9000EX THOR1 ANALOG T4 RADIO

Zones 1, 2, 21, 22

Full catalogue available on our website: www.inpratex.com

ATEX COMMUNICATIONS

ZONES 1, 2 (gas) & 21, 22 (dust)

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. This ATEX certified 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.

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.

Key features:

- IP67 Waterproof
- CTCSS, 5-TONE, CCIR, ZVEI, EEA & EIA
- Long operational time
- Power Output 2 Watt
- 16 Channels
- 3450 mAh battery

Antenna, Battery, Bolt Clip and Charger included



EU-Type Examination Certificate






ITEM REFERENCES

Model:	Channels:	Frequency / Band:	Bandwidth:	Article No.:
TP9000EX Thor1 VHF 64-88 MHz	16	VHF / 64-88 MHz	24 MHz	4C0501
TP9000EX Thor1 VHF 146-174 MHz	16	VHF / 146-174 MHz	28 MHz	4C0502
TP9000EX Thor1 UHF 406-470 MHz	16	UHF / 406-470MHz	64 MHz	4C0503

ATEX TP9000EX THOR1 ANALOG T4 RADIO

Zones 1, 2, 21, 22

Full catalogue available on our website: www.inpratex.com

GENERAL TECHNICAL SPECIFICATIONS	
Marking:	 I M2 EX ib I  II 2G Ex ib IIC T4  II 2D Ex ib IIIC T110°C
Certificate:	EU-Type Examination Certificate
According to the directives:	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)
Operating Temperature:	-20°C to +55°C
Classifications:	IP67 Waterproof / Exceeds MIL 810 c,d,e,f
Channel spacing:	12,5 / 20 / 25 KHz
Frequency error:	± 2 ppm
Operation mode:	Simplex / Semi-Duplex
Antenna impedance:	50 ohm
Weight:	260g
Dimensions:	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
Signalling:	CTCSS / DSC
Side connector:	16 pin for accessories

RECEIVER TECHNICAL SPECIFICATIONS	
DMR sensitivity:	- 124 Dbm.
Sensitivity at 20 dB SINAD:	0,45 µV
(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

TRANSMITTER TECHNICAL SPECIFICATIONS	
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:	45 dB
LF frequency response:	300 - 3000 Hz

ATEX TP9000EX THOR1 ANALOG T4 RADIO

Zones 1, 2, 21, 22

Full catalogue available on our website: www.inpratex.com

ACCESSORIES

			
SCULL MIC HEADSET	HEADSET IN-EAR	HEADSET CONVERTER PLUG	BATTERY LI-ION
			
THROAT MIC HEADSET	HEADSET WITH BOOM MIC	HEADSET "SURVEILLANCE"	CLOSE-TALK
			
CHARGER	AC 100-240V	CARY CASE	SHOULDER HARNESS
			
PTT			

ATEX TP9000EX THOR2 DIGITAL/ANALOG T4 RADIO

Zones 1, 2, 21, 22

Full catalogue available on our website: www.inpratex.com

ATEX COMMUNICATIONS

ZONES 1, 2 (gas) & 21, 22 (dust)

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. This ATEX certified 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.

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.

Key features:

- IP67 Waterproof
- 16+16+99 Channels
- Long operational time - 3450 mAh battery
- Power Output 2 Watt
- CTCSS, dcs
- OLED Display

DMR Tier 2 Compatible
Antenna, Battery, Bolt Clip and Charger included



EU-Type Examination Certificate



ITEM REFERENCES

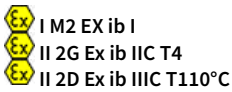
Model:	Channels:	Frequency / Band:	Bandwidth:	Article No.:
TP9000EX Thor2 VHF 64-88 MHz	16+16+99	VHF / 64-88 MHz	24 MHz	4C0601
TP9000EX Thor2 VHF 146-174 MHz	16+16+99	VHF / 146-174 MHz	28 MHz	4C0602
TP9000EX Thor2 UHF 406-470 MHz	16+16+99	UHF / 406-470MHz	64 MHz	4C0603

ATEX TP9000EX THOR2 DIGITAL/ANALOG T4 RADIO

Zones 1, 2, 21, 22

Full catalogue available on our website: www.inpratex.com

GENERAL TECHNICAL SPECIFICATIONS

Marking:	
Certificate:	EU-Type Examination Certificate
According to the directives:	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)
Operating Temperature:	-20°C to +55°C
Classifications:	IP67 Waterproof / Exceeds MIL 810 c,d,e,f
Channel spacing:	12,5 / 20 / 25 KHz
Frequency error:	± 2 ppm
Operation mode:	Simplex / Semi-Duplex
Antenna impedance:	50 ohm
Weight:	260g
Dimensions:	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
Signalling:	CTCSS / DSC
Side connector:	16 pin for accessories

RECEIVER TECHNICAL SPECIFICATIONS

DMR sensitivity:	- 124 Dbm.
Sensitivity at 20 dB SINAD:	0,45 µV
(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 threshold level:	Programmable

TRANSMITTER TECHNICAL SPECIFICATIONS

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:	45 dB
LF frequency response:	300 - 3000 Hz

ATEX TP9000EX THOR2 DIGITAL/ANALOG T4 RADIO

Zones 1, 2, 21, 22

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ACCESSORIES

			
SCULL MIC HEADSET	HEADSET IN-EAR	HEADSET CONVERTER PLUG	BATTERY LI-ION
			
THROAT MIC HEADSET	HEADSET WITH BOOM MIC	HEADSET "SURVEILLANCE"	CLOSE-TALK
			
CHARGER	AC 100-240V	CARRY CASE	SHOULDER HARNESS
			
PTT			

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