



## PT790 Ex

TETRA ATEX handheld radio



### Maximum safety

The PT790 Ex is the world's first TETRA handheld radio with the highest level of intrinsic safety: „ia“. Its robust design and safety functions considerably increase the occupational safety of users in the oil and gas industries, mining industry, and fire departments.

### Maximum occupational safety

To provide the maximum possible occupational safety, the PT790 Ex features a man down alarm sensor and an adjustable time alarm (lone worker function), and receives location data via GPS, GLONASS and BeiDou. The location data can be transmitted to the control room for further analysis.

### Robust and reliable

The PT790 Ex offers excellent performance even under harsh operating conditions. It is dust- and water-resistant in accordance with the IP67 protection class and it also fulfills the requirements set out by the American MIL-STD-810 G Standards.



# Technical data PT790 Ex

General data	
Frequency ranges	320 – 380 MHz / 380 – 430 MHz 405 – 475 MHz / 806 – 870 MHz
Dimensions (H x W x D) (with standard battery, without antenna)	141 × 55 × 40.7 mm
Weight (with 1800 mAh battery and antenna)	ca. 515 g
Operating voltage	7.4 V
Battery (lithium-ion battery)	1800 mAh (standard battery) 2400 mAh (optional battery)
Battery service life (5/5/90 duty cycle)	> 16 hours (1800 mAh) > 20 hours (2400 mAh)
Maximum audio power output	1.2 W

User interface	
LCD display	160 x 128 pixels, 65,536 colors, 1.8 inches
Call group number – TMO	6000
Call group number – DMO	4000
Phonebook	2000 entries
Group lists – TMO (use for scanning, scan lists)	200 (200 groups per list)
Group lists – DMO	50 (200 groups per list)
Number of short messages (SDS) (SDS / inbox, outbox, drafts)	400 / 50 / 50
Number of status messages	200
Programmable keys	19

Environmental conditions	
Operating temperature range (in safe surroundings)	- 30 °C to + 60 °C
Operating temperature range (in hazardous environment)	- 20 °C to + 50 °C
Storage temperature range	- 40 °C to + 85 °C
Relative humidity	ETS 300 019 Class 7.3E
Protection against dust and moisture	IEC60529 IP67
Shock and vibration resistance	MIL-STD-810 G
Explosion protection	II 1 G Ex ia IIC T3 IP5X Ta -20°C – +55°C I M1 Ex ia I IP5x Ta -20°C – +50°C II 1 G Ex ia IIC T3 IP5X Ta -20°C – +50°C II 2 G Ex ib IIC T4 IP5X Ta -20°C – +50°C II 1 D Ex ia IIIC T160°C IP5x Ta -20°C – +50°C II 2 D Ex ib IIIC T120°C IP5x Ta -20°C – +50°C

Radio characteristics	
Channel spacing	25 kHz
Transmitting power	1 W
Receiver class	ETSI EN 392-2 / 396-2 class A & B
Static receiver sensitivity	-116 dBm (typically -117 dBm) -115 dBm (typically -116 dBm) (800 Mhz)
Dynamic receiver sensitivity	-106 dBm (typically -108 dBm) -105 dBm (typically -106 dBm) (800 Mhz)

GNSS (GPS / GLONASS / Beidou)	
Sensitivity	≤ -148 dBm receiving sensitivity ≤ -167 dBm signal tracking sensitivity
Accuracy	≤ 2 m
Time to first fix (TTFF)	< 26 s (cold start) < 1.5 s (warm start)

All technical information was determined at the factory and in accordance with the corresponding standards. Subject to change on the basis of continuous development.



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