



MTP850Ex

ATEX TETRA Terminal

High performing communication and user safety



Part of Motorola's market leading range of ATEX TETRA terminals, the MTP850Ex provides high quality communication with comprehensive user safety and class leading ATEX specifications allowing use when in environments containing potentially explosive gas and dust.

Motorola is a world leader in the development and deployment of TETRA communication solutions, and the MTP850Ex ATEX TETRA radios deliver safe and reliable communications for users with a powerful set of features to harness the capability of TETRA.

High Performance Communication

The MTP850Ex delivers best in class audio performance in the typical noisy environments where specialist users from industry or public safety operate.

Comprehensive User Safety

The MTP850Ex can be used in explosive gas and dust environments due to its high level of protection. Operational safety is further enhanced with a range of features including:

- State of the art integrated GPS receiver providing the ability to locate personnel through the radio, improving user safety and resource management.

- Internal "Man Down" alert - this fully integrated solution triggers an emergency procedure when the carrier of the radio remains motionless for a set period or falls down.

Simple but Powerful User Interface

The simplified keypad with large button surface makes the MTP850Ex easy to use with gloves. Combined with the large scalable display fonts and icons, the MTP850Ex facilitates operation in difficult environments with limited visibility.

Data Applications Capability

The integrated WAP browser and Multi-Slot packet data enables rapid access to critical information in the field. Applications are further enhanced with the ability to have simultaneous Short Data Service (SDS) and Multi-Slot packet data services via the TNP1 protocol.

KEY FEATURES

High Performing Communication

- Strong rugged design for optimum reliability in harsh conditions
- Powerful, high quality audio for the most demanding environments
- Full range of supporting ATEX certified accessories for a customized solution

Comprehensive User Safety

- ATEX & IEC-Ex gas and dust approvals
- Integrated GPS for user location
- Internal "Man Down" alarm

MTP850Ex ATEX TETRA PORTABLE SPECIFICATION SHEET

ATEX SPECIFICATIONS

| ATEX Rating | | IEC Ex Rating | |
|-------------|-------------|--|----------------------|
| Gas | Dust | Gas | Dust |
| MTP850Ex-2D | II 2G Ex ib | IIC T4 II 2D Ex ibD 21 IP6x T90°C | Ex ibD 21 IP6x T90°C |
| | | (Approved for Zone 1 & 2, Equipment Group II, Gas Group C, Temperature Class T4, -20°C to +50°C) | |

SPECIFICATIONS

PHYSICAL

| | |
|-----------------|--------------------------------|
| Dimensions (mm) | 135 x 55 x 38 |
| Weight (typ) g | 400 |
| Battery | 725 mAh, 7.2V |
| | 12 hrs, typ, 5/5/90 duty cycle |

RF SPECIFICATIONS

| | |
|------------------------------------|------------------------------|
| Frequency Bands (MHz) | 380 – 430 |
| | 806 – 870 |
| Switching Bandwidth TMO (MHz) | 50 (380-430) |
| | 19 (TX: 806-825, RX:851-870) |
| Switching Bandwidth DMO (MHz) | 50 (380-430) |
| | 19 (851-870) |
| RF Channel Bandwidth (kHz) | 25 |
| Transmitter RF Power | 1W |
| RF Power Control | 3 Steps of 5 dB |
| RF Power Level Accuracy | +/- 2 dB |
| Receiver Class | A & B |
| Receiver Static Sensitivity (dBm) | -112 minimum, -115 typical |
| Receiver Dynamic Sensitivity (dBm) | -103 minimum, -107 typical |

VOICE SERVICES

| | | |
|------------------|--|------------------------|
| Talkgroups | 2048 (TMO) & 1024 (DMO) | |
| Phone Book | 1000 persons | |
| Scan Lists | 40 lists, 20 talkgroups / list | |
| TMO Services | Group Call | Late entry |
| | Private Call | Half / Full Duplex |
| | Telephony | Full Duplex |
| | DGNA | up to 2047 groups |
| DMO Services | Group Call | Late entry |
| | Private Call | |
| | Compatibility | Gateway & Repeater |
| Emergency | Smart Emergency | DMO / TMO / DMO to TMO |
| | Hot Mic | Configurable timers |
| | Location | Send on emergency |
| | Target Address | Individual or Group |
| | Alarm | Emergency Status |
| Language Support | English, Korea, Chinese (Simplified and Traditional) | |
| Other Services | Ambience Listening | Transmit Inhibit |

INTERFACES

| | |
|------------------|--|
| RS232 PEI | For connection of data devices |
| Rugged Accessory | For programming and audio accessory connectivity |

ENVIRONMENTAL SPECIFICATIONS

| | |
|----------------------------|---|
| Operating Temperature (°C) | -20°C to +50°C (Hazardous Environments) |
| | -20°C to +60°C (Non-Hazardous Environments) |
| Storage Temperature (°C) | -40°C to +85°C (MIL STD 810 C, D) |
| Humidity | ETS 300 019-1-7 Class 7.3E |
| Dust and Water | IP65 per IEC 60529 |
| Shock, drop and vibration | ETS 300 019-1-7 Class 5M3 (MIL-STD 810 D/E/F) |

GPS SPECIFICATIONS

| | |
|-------------------------|--------------------------------|
| Simultaneous Satellites | 12 |
| Mode of Operation | Autonomous or assisted (A-GPS) |
| GPS Antenna | Integrated in TETRA antenna |
| Sensitivity | -152 dBm / -182 dBW |
| Accuracy | 5 meter (50% probable)** |
| Location Protocols | ETSI LIP |
| | Motorola LRRP |

DATA SERVICES

| | | |
|--------------------------|--|-----------------------------|
| Status Messaging | Alias Messages | 400 |
| Short Data Service (SDS) | Inbox | 100 messages |
| | Target Address | Individual or Group Address |
| | Voice Interaction | Send / receive during calls |
| Packet Data | Single or Multi Slot | 7.2kbps - 28.8 kbps gross |
| WAP | Integrated Openwave browser | |
| | WAP 1.2.x and WAP 2.0 compatibility for UDP/IP Stack | |
| PEI | AT Commands | |
| | TNP1; enables simultaneous SDS & PD | |

SECURITY FEATURES

| | | |
|--------------------------|--|--|
| Air Interface Encryption | Algorithms | TEA1, TEA2, TEA3 |
| | Security Classes | Class1 (clear), Class2 (SCK), Class3 (DCK, CCK & GCK*) |
| Key Provisioning | Secure provisioning tool (key variable loader KVL) | |
| | Over the Air Re-keying (OTAR) for SCK and Class 3 (CCK & GCK*) | |
| Network Access | Temporary Enable / Disable (Stun) | |
| | Permanent Enable / Disable (Kill) | |
| Authentication | Infrastructure initiated and made mutual by terminal | |

PERIPHERALS AND ACCESSORIES

| | |
|------------------|---|
| Audio | A wide range of audio accessories is available including ATEX certified speaker mics and headsets. |
| Power & Charging | Solutions for desk top charging and multi-way chargers |
| Carrying | A range of carrying solutions is available including carry cases, carry strap and belt clips |
| Programming | Comprehensive solutions available for radio configuration and encryption key loading via Motorola KVL |

The information contained in this brochure maybe subjected to change without prior notice.

*Product features may be subjected to infrastructure support

*Selected features are subjected to optional or future software upgrade

**Measured under specific controlled environment



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