# RF23 - EPM handheld transceiver nemá být vidět

Type designation: **RF23**
PN (RN): **2300.100.40**

N/A

## Operation features

**a) in all modes of operation**
• automatic transceiver self-test after power-up with failure indication on the display (BITE);
• programming with operational data using PK23 fill gun set;
• emergency erasing of operational data in fixed frequency channels, including encryption unit codes and FH network data, including TRANSEC and COMSEC;
• tone dialing (1000 ± 200) Hz, in VHF III band (1750 ± 25) Hz;
• acoustic signaling turning on/off by the transceiver operator;
• enabling of the display and keypad illumination;
• display contrast setting;
• battery pack voltage signaling;
• transmitter power signaling on the display;
• "receive-only" operation with suppressed transmission;
• operation mode with increased modulator sensitivity and reduced AF power;
• automatic transition from increased power to nominal power in case of supply voltage drop;
• service information displaying - firmware;
• simple control;
• displaying of position, time and speed on LCD with updates from GPS;
• AF connector configuration;
• AF connector status monitoring;
• remote transceiver control via PRC20 protocol;
• easy dismantling of the GPS antenna and connecting of external active or passive antenna via SMA connector;
• can be used with modular carrier system bags.

**b) when operating at fixed frequency**
• up to 10 preset channels from the entire frequency range, number of preset channels decreased when occupied with FH networks;
• simplex or semi-duplex operation;
• 150 Hz subtone squelch or signal squelch (only signal squelch in VHF II);
• voice operation via built-in encryption unit compatible with RF13, RF20, RF2350, RF2050 in VHF I;
• transmission and reception of short coded messages - FLASH with opposite transceiver identification;
• programming of radio channel parameters from the keypad;

• preset channel scanning;
• data transmission according to MIL-STD-188-220 (NET);
• operation frequency setting in 6.25 kHz, 8.33 kHz, 25 kHz or 1 MHz step;
• bandwidth for 16 kbit/s digital transmission of voice and data according to STANAG 4204, 2nd edition.

**c) in FH mode**
• up to 6 preset networks;
• operation in the 30.000 MHz to 87.975 MHz frequency band;
• secure TRANSEC operation and encrypted COMSEC operation;
• simplex or semi-duplex operation with frequency hopping;
• compatible with RF20, RF2350, RF2050 transceivers;
• selectable frequency hopping operating mode - FH, DFF, FCS, MIX and IFF with rapid transition to HLC/HLG or HLA;
• communication on the channel with a continuous carrier;
• establishing of communication with transceivers in fixed frequency operation mode through HLC/HLG monitoring;
• 121.500 MHz (HLA) frequency monitoring and transition to HLA with suppressed transmission;
• late net entry with synchronization request;
• master transceiver switching according to the network situation;
• transmission of warning message to all network participants;
• mutual authentication;
• selective communication of MASTER with a selected SLAVE transceiver;
• send and receive short text messages with a maximum length of 156 characters;
• preparation, saving and reading of up to 10 short text messages;
• transmission over notification (BREAK IN) by all transceivers;
• INTERLEAVING switching off for close-to-the-limits communication;
• data transmission at adjustable rates – 7100 bit/s, 4800 bit/s and 2400 bit/s (P2P);
• data transmission according to MIL-STD-188-220 (NET);
• G-track, sending position reports via radio channel;
• own position sending by SMS.

# Technical parameters

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|---|---|
| **Frequency range** | 25.0000 MHz to 145.9875 MHz |
| **Nominal input output impedance** | 50 Ω |
| **Frequency ranges** | |
| **HF** | 25.000 MHz to 29.975 MHz |
| **VHF I** | 30.000 MHz to 108.000 MHz |
| **VHF II** | 117.975 MHz to 140.000 MHz |
| **VHF III** | 140.025 MHz to 145.9875 MHz |
| **Modulation type** | |

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|---|---|
| **HF** | FM |
| **VHF I** | FM |
| **VHF II** | AM |
| **VHF III** | FM |
| **Channel spacing** | |
| **HF** | 25 kHz |
| **VHF I** | 25 kHz; 12.5 kHz; 6.25 kHz |
| **VHF II** | 25 kHz; 8.33 kHz |
| **VHF III** | 25 kHz; 12.5 kHz |
| **Number of operation channels at 25 kHz channel spacing** | |
| **HF** | 200 |
| **VHF I** | 3121 |
| **VHF II** | 882 |
| **VHF III** | 239 |
| **Preset channels** | 10 |
| **Number of channels monitored in all special operation modes** | 3 (two selectable, third fixed – 121.500 MHz) |
| **Maximum number of programmable networks** | 6 |
| **Nominal supply voltage** | 7.4 V |
| **Limit supply voltage** | 6.5 V to 9.5 V |
| **Frequency band with special modes of operation** | 30.000 MHz to 87.975 MHz |
| **Types of special operation modes** | |
| **FH** | frequency hopping |
| **DFF** | digital fixed frequency |
| **FCS** | free channel search |
| **MIX** | mixed operation FH and FCS |
| **IFF** | iso-fixed frequency |
| **Time to initial synchronization** | max. 5 s |
| **Synchronization hold with transceiver off and battery pack attached** | min. 48 h |
| **Synchronization hold with battery pack disconnected** | min. 50 s |

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| **Hopping rate** | 100 hops/s |
| **Transceiver power consumption** | |
| **- transmission (nominal power)** | 1.6 A |
| **- transmission (reduced power)** | 0.65 A |
| **- transmission (increased power)** | 3.2 A |
| **- reception** | 0.25 A |
| **- stand-by** | 0.18 A |
| **Operating time (transmission [2 W] : reception : stand-by = 1 : 1 : 10)** | |
| **- with LP1302** | min. 14 h |
| **- with LP20** | min. 26 h |
| **TRANSMITTER PARAMETERS** | |
| **Nominal power of FM transmitter** | 2 W |
| **Nominal power of AM transmitter** | 1 W |
| **Reduced power of FM transmitter** | 0.2 W |
| **Reduced power of AM transmitter** | 0.1 W |
| **Increased power of FM transmitter** | 5 W |
| **Harmonics suppression** | min. 40 dB |
| **Spurious suppression at mistuning > 25 kHz** | min. 60 dB |
| **RECEIVER PARAMETERS** | |
| **Sensitivity** | 0.5 µV at 12 dB SINAD |
| **Non-linear distortion factor** | 10 % |
| **Loudspeaker output power** | 200 mW/8 Ω |
| **Audio bandwidth** | |
| **narrow band** | 300 Hz to 3000 Hz |
| **wide band** | 10 Hz to 11000 Hz |
| **MECHANICAL PROPERTIES AND RESISTANCE** | |
| **Resistance to immersion** | to 1 m |
| **Operating temperature range** | -40 °C to +70 °C |
| **Transceiver dimensions with the battery pack LP1302** | 97 mm x 217 mm x 44 mm [w x h x d] |
| **Battery pack dimensions** | |
| **LP1302** | 79 mm x 61 mm x 44 mm [w x h x d] |

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|---|---|
| **LP20** | 76 mm x 95 mm x 45 mm [w x h x d] |
| **Transceiver weight** | max. 0.85 kg |
| **Battery pack weight** | |
| **LP1302** | max. 0.3 kg |
| **LP20** | max. 0.45 kg |
| **GPS RECEIVER PARAMETERS** | |
| **Service** | L1-SPS |
| **Number of channels** | 50 |
| **RANGES** | |
| **Average ranges in medium undulating terrain at nominal power in FF and open voice operation** | 5 km with 1.1 m long tape antenna |

# Documentation

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|---|---|
| **RF23 operating instructions** | 2300.010.42 |
| **RF23 short operating instructions** | 2300.011.42 |

# Set

| **Type designation** | **PN (RN)** | **Name** |
|---|---|---|
| RF23 | 2300.000.41 | Neplatné pro EN verzi |

# Accesories

| **Type designation** | **PN (RN)** | **Name** |
|---|---|---|
| LP1302 | 7029.100.02 | Battery pack |
| | 2036.100.42 | 1.1 m long tape antenna |
| | 7020.116.01 | Battery pack bag |
| | 6000010032 | Transceiver bag |
| | 6000010012 | Set bag |

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|---|---|---|
| LP20 | 7029.100.11,<br>7029.100.13 | Battery pack |
| PP20 | 7029.100.50 | Battery holder |
| NU1302 | 7027.000.01 | Universal charger set N/A |
| NM1302 | 7028.000.01 | Mobile charger set |
| PC20 | 7046.000.12 | Small mains charger set |
| PD13 | 2036.100.10 | Long-wire antenna |
| RF13.8 | 2036.100.11 | Hang-up antenna |
| | 2328.100.01 | Handset |
| | 2328.100.11,<br>2328.100.12 | Headset |
| RM23 | 2313.100.40 | Handset with control |
| PK23 | 2320.000.40 | Fill gun set |
| | 6000010038 | Transceiver bag |
| | 6000010039 | Battery pack bag extended |
| | 1050.285.01 | Data cable (USB) |
| | 1050.285.02 | Data cable (RS232C) |
| | 4290330401 | TNC M/BNC F adaptor |
| | 2025.500.51 | CD for modem configuration |

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