

TECHNICAL SPECIFICATION

PYROMASTER SLAVE24



Firmware version:

1.7.x

Hardware version:

1324

Document revision:

1.6

1. **Features:**

1.1. Available operating modes:

- Manual (remote)
- Semi-Automatic (external trigger button)
- Sequential (remote or external trigger button)
- Automatic (remote or external trigger button)

1.2. Arming:

- locally (front-panel button)
- remotely (from Master unit)

1.3. Triggering/Firing:

- remotely (from Master unit)
- locally (external trigger button)

1.4. Channel count: 24

1.5. Max. sequences count: 24

1.6. Sequence designation range: 1 – 1023

1.7. Maximum duration of single sequence: 9:59,99

1.8. Maximum duration of automatic program: 9:59:59,99

1.9. Maximum resolution of programmed sequence: 0,01s (10ms)

1.10. Maximum resolution of automatic program 0,01s (10ms)

1.11. Adjustable channel activation time: yes (0,1s – 2,5s)

1.12. Channel queuing (for activation time above 0,5s): yes

1.13. Continuous time synchronisation with Master unit during ongoing show: yes

1.14. Igniter tests:

- Automatic (all channels)
- According to automatic program
- According to chosen sequence
- Manual (single channel)

- Remote (from Master unit)
- 1.15. Replicator igniter test: yes
 - 1.16. Replicator battery level measurement: yes
 - 1.17. External trigger button test: yes
 - 1.18. Igniter firing voltage: 24V
 - 1.19. Maximum igniter count per channel: over 20
 - 1.20. Igniter test current: max 3mA
 - 1.21. Measurement of resistance in the igniter test: yes (1-99 Ω)
 - 1.22. Preview, edit and deletion of automatic program directly in the unit: yes
 - 1.23. Preview, edit and deletion of sequences directly in the unit: yes
 - 1.24. Preview, adding and removal of Replicator units: yes
 - 1.25. Editing of Replicator channels directly in Slave unit: yes
 - 1.26. Replicator connection confirmation: yes
 - 1.27. Support for safety zones: yes
 - 1.28. Radio channel selection: yes
 - 1.29. Display backlit regulation: yes
 - 1.30. Battery charge display: yes
 - 1.31. Keyboard confirmation sound: yes
 - 1.32. Arm sound alert: yes
 - 1.33. Standby mode: yes
 - 1.34. Standby mode activation/deactivation:
 - Locally
 - Remotely (from Master unit)
2. **Radio link:**
- 2.1. Radio frequency: 869MHz
 - 2.2. Available radio channels: 9
 - 2.3. Maximum transmitter power: 500mW (27dBm)
 - 2.4. Receiver sensitivity: -116dBm @BER 10^{-3}
 - 2.5. Adjustable transmitter power: yes
 - 2.6. Range in dense urban environment (without direct line-of-sight): approx. 1-2km
 - 2.7. Range in open area (direct antenna line-of-sight): up to 10km
 - 2.8. Transmission type: bidirectional
 - 2.9. Transmission security: encryption, checksum, acknowledgements
 - 2.10. Automatic switch to wired communication: yes
3. **Wired link - Master Line:**
- 3.1. Physical layer: RS485 (differential transmission)
 - 3.2. Automatic line termination: yes
 - 3.3. Master Line input count: 1
 - 3.4. Master Line output count: 2
 - 3.5. Maximum unit count connected to single output: 32
 - 3.6. Maximum line length between neighbouring units: 1,2km
 - 3.7. Transmission type: bidirectional
 - 3.8. Transmission security: encryption, checksum, acknowledgements
 - 3.9. Signal booster feature: yes
 - 3.10. Splitter feature: yes
 - 3.11. Retransmission of radio signal on wired output: yes
 - 3.12. Retransmission of wired signal on radio link: yes
 - 3.13. Automatic switch to radio communication: yes

4. Wired link - Replicator Line:

- 4.1. Physical layer: RS485 (differential transmission)
- 4.2. Automatic line termination: yes
- 4.3. Replicator Line output count: 3
- 4.4. Maximum unit count connected to single output: 32
- 4.5. Maximum number of supported Replicator units: 32
- 4.6. Maximum line length: 1,2km
- 4.7. Transmission type: bidirectional
- 4.8. Transmission security: encryption, checksum, acknowledgements

5. USB communication:

- 5.1. USB device mode: yes
- 5.2. USB connector style: B
- 5.3. Automatic program upload: yes
- 5.4. Sequence upload: yes
- 5.5. Transmission security: encryption, checksum, acknowledgements

6. Protection:

- 6.1. ESD (Electrostatic Discharge) protection
- 6.2. Resistance to shock and weather conditions
- 6.3. Channel short-circuit protection
- 6.4. Safe igniter test (maximum test current control, igniter test forbidden in armed mode)
- 6.5. System auto-diagnostics
- 6.6. Self error prompts (e.g. arm error, controller error)
- 6.7. Replicator error prompts (e.g. arm error, low battery)
- 6.8. Error reports directly to Master unit
- 6.9. Data transmission encryption

7. Other:

- 7.1. Continuous operation on single battery charge: approx. 120h
- 7.2. Continuous operation in standby mode on single battery charge: approx. 330h
- 7.3. Battery charge voltage: 24V
- 7.4. Menu language: polish, english
- 7.5. LCD display backlight: yes
- 7.6. Membrane keyboard: yes
- 7.7. Front panel LED indicators: yes
- 7.8. LED channel activation indicator of each single channel: yes
- 7.9. External housing LED indicators: yes
- 7.10. External antenna: yes
- 7.11. Antenna connector style N
- 7.12. Housing: Peli case (durable, water-resistant)
- 7.13. Igniter connectors: metal, stringed
- 7.14. Weight: 7,6kg
- 7.15. Dimensions: 35x30x15cm
- 7.16. Working temperature range: -20°C do +40°C