

K-SERIES K100



RF PEAK POWER UP TO 10 MW
MODULATOR PEAK POWER UP TO 26 MW

This solid-state pulse modulator is designed to handle a wide range of different klystrons with a RF peak power from 3 MW to 10 MW. ScandiNova offers everything from a standard modulator to a turn-key RF system that includes all necessary system components from the wall socket to the accelerator, such as the klystron, diagnostics and low-level RF. Review our other pulse modulators in the modular K-Series.

| SYSTEM SPECIFICATIONS | UNIT | DATA | NOTES |
|----------------------------------|-------|---------|--|
| Klystron RF Peak Power | MW | 3–10 | Depends on choice of klystron |
| Klystron RF Average Power | kW | 10 | Maximum |
| Modulator Peak Power | MW | 26 | Maximum |
| Modulator Average Power | kW | 30 | Maximum |
| Pulse Voltage | kV | 115–190 | Typical range |
| Pulse Current | A | 90–140 | Typical range |
| Pulse Repetition Frequency Range | Hz | 0–500 | Typical range. Depending on max average power (see options). |
| Pulse Length, Top | µs | 0.5–10 | Typical range. Depending on max mod. power. |
| Flatness (Voltage) | %/µs | < 0.5 | Flat top. Depending on load (see options). |
| Modulator Voltage Stability, RMS | % | 0.02 | (see options) |
| Cooling (incl. RF parts) | l/min | 5–30 | Clean water |

| INTERFACE | DEFAULT | OPTION |
|--------------------------------|---------------------------|-----------------|
| Mains Power, 3 Phase | 400 VAC, 50/60 Hz | 208/380/480 VAC |
| Mains Power, Single Phase | 230 VAC, 50/60 Hz | 115 VAC |
| Control Interface | ModBus TCP | |
| Water Cooling Interface In/Out | ISO G1" | |
| Trig Input | Electrical and Optical | |
| Diagnostics | Pulse Voltage and Current | See Options |

Standard Modulator Includes

Control System (ScandiCat)
 Remote Control
 Local Control Panel
 Mains Power Distribution
 Cooling System
 Filament PS
 Klystron Socket
 Pulse Sensors
 Hard Wired Interlock System

Additional System Components

Low Level RF Amplifier/Generator
 Circulator & RF Loads
 Directional Coupler
 Waveguide Windows
 Vacuum PS
 Solenoid PS
 Klystron
 Extended cooling for Klystron,
 Solenoid etc.

Typical Klystron Loads

| CPI | Thales | Toshiba |
|------------|-----------|---------|
| VKS8262 D | TH2157 | E3772 |
| VKS8262 E | TH2157 A | E3779 |
| VKS8262 G | TH2157A-1 | E3779A |
| VKS8262 J | TH2163 A | E3783 |
| VKS8262 M | TH2165 | E3787 |
| VKS8262 S | Toriy | L3 |
| VKS8262 HS | K168 | L5822 |
| VKS8262R | K273 | L6145 |

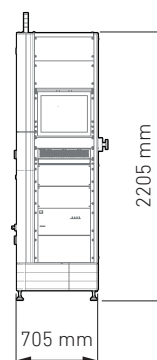
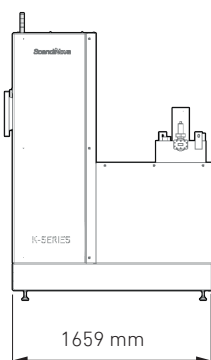
Options

Pulse/RF Diagnostics
 Enhanced PRF Range (up to 1000 Hz)
 Enhanced Stability (down to 0.004%)
 Enhanced Flatness (<0.25 %/µs)
 Neutron Resistant Switching

Size and Weight

Weight approx. 950 kg
 (excl. oil, klystron, solenoid)
 Oil volume approx. 200 l

*Information contained in this document
 is subject to change without notice.*



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